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COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR 2012

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

FIRST SESSION

SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES

FRANK R. WOLF, Virginia, *Chairman*

JOHN ABNEY CULBERSON, Texas
ROBERT B. ADERHOLT, Alabama
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NOTE: Under Committee Rules, Mr. Rogers, as Chairman of the Full Committee, and Mr. Dicks, as Ranking Minority Member of the Full Committee, are authorized to sit as Members of all Subcommittees.

MIKE RINGLER, STEPHANIE MYERS, LESLIE ALBRIGHT,
DIANA SIMPSON, and COLIN SAMPLES,
Subcommittee Staff

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Printed for the use of the Committee on Appropriations

PART 6—COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR 2012

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COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR 2012

THURSDAY, MARCH 17, 2011.

DEPARTMENT OF COMMERCE

WITNESS

HON. GARY LOCKE, SECRETARY, DEPARTMENT OF COMMERCE

OPENING REMARKS FROM CHAIRMAN WOLF

Mr. WOLF. Welcome, Mr. Secretary. Good afternoon.

There are going to be a series of votes coming up pretty soon. So we will just proceed.

We have a number of issues to discuss with you today with respect to the fiscal year 2012 budget. You are requesting $8.8 billion in a new budget authority that amounts to $868 million or about 11 percent higher than the House-passed Continuing Resolution for fiscal year 2011.

The largest increases in your budget include an additional $768 million for the National Oceanic and Atmospheric Administration, $145 million for the National Institute of Standards and Technology, $70 million for the International Trade Administration, and these increases are partially offset by reductions in Census totaling $199 million.

These funding changes are just a few within Commerce. Practically every account within Commerce is increasing in your request. You are also proposing a number of new initiatives in your budget as well as the termination of a few small but potentially significant programs.

The Congress unfortunately will not be in a position to provide such increases. The fiscal crisis facing the Nation is real and will require a level of austerity that goes beyond the President's budget. So we are going to ask you to help prioritize.

And this is not in the statement, but I am sorry to see you go, frankly. And it is probably not a good appointment in all honesty because I think you are engaged in this thing and your ideas with regard to exports. And now you are going to have a vacancy there for a long period of time.

But I want to congratulate you on your nomination. But when I heard it, I did not think it was such a good idea because of that very reason. But there are some questions we will have. These are not confirmation hearings obviously on China, but I will have some

questions with regard to China, to encourage more job growth in manufacturing in this country.

I will go to Mr. Dicks if he wants to make a comment and then we will go to your testimony.

OPENING REMARKS FROM REP. DICKS

Mr. DICKS. Well, thank you, Mr. Chairman.

And, Secretary Locke, it is good to see you and we congratulate you on your nomination to be Ambassador to China. We have worked together since you were King County executive and governor of Washington. And I think you have done a fine job as Secretary.

We have some great initiatives, the National Export Initiative, the Manufacturing Extension Partnership, just to name two. And we were pleased with your work on comprehensive—with NIST's effort on comprehensive cybersecurity.

I am concerned, and I hope you will have a chance to discuss this during the hearing, on the effects of H.R. 1 on NOAA procurement, acquisition, and construction. And we are concerned about the tsunami that has happened in Japan and what the effect of these budget cuts would be on our weather satellites and our buoys out in the ocean which I know are very important.

And I hope you could tell us what the impact of the $450 million cut will be in H.R. 1. I think you are in an ideal spot to be able to translate this, and this process is not over yet. We are still trying to make sure that we, you know, make appropriate cuts. And if there has been mistakes made, we still have a chance to review this in light of the current circumstances.

Thank you, Mr. Chairman.

Mr. WOLF. Thank you, Secretary. Proceed.

OPENING STATEMENT BY SECRETARY LOCKE

Secretary LOCKE. Thank you very much, Chairman Wolf and distinguished Members of the subcommittee. I am really pleased to join you today to talk about the President's budget request for the Department of Commerce for fiscal year 2012.

Since I joined the Department of Commerce two years ago, we have focused on delivering our services more efficiently and at less cost to the taxpayer. Those efforts have paid off.

The 2010 Census was completed on schedule and under budget, returning $1.9 billion to the taxpayers.

Our Economic Development Administration has cut the time it takes to grant awards from 128 business days to 20 business days.

Our Patent Office reduced an application backlog of almost 800,000 when the President assumed office. We have reduced by 10 percent last year even as applications surged by 7 percent.

And next month, we will be rolling out and starting a program allowing applicants to have their patents evaluated within one year for a very small extra fee.

Our efficiencies and cost savings are not one-time achievements. We have instituted comprehensive performance management processes throughout the Department which should help our reforms stand the test of time.

And it is in this context of proven savings and performance that I hope the committee will consider Commerce's fiscal year 2012 budget request.

Our 2012 budget request is lean. It cuts outdated programs, drives major efficiencies in others. And our budget incorporates $142 million in savings thanks to significant IT improvements, aggressive acquisition reform, and other administrative savings.

At the same time, it contains key investments that will help America win the future by spurring innovation, increasing America's international competitiveness, and supporting scientific research as well as supporting our coastal communities. These are core missions of the Department of Commerce.

On the innovation front, the Department of Commerce is responsible for providing the tools, systems, policies, and technologies that give U.S. businesses a competitive edge in world markets. And that is why we are requesting additional funds for our National Institute of Standards and Technology including an increase of more than $100 million for research into advanced manufacturing technologies, health information technologies, cybersecurity, and interoperable smart grid technology.

These investments in standards setting and in basic research, which are often too risky or too expensive for the private sector alone, have historically spurred waves of private sector innovation and job creation.

To further support innovation, our 2012 budget request calls for the U.S. Patent and Trademark Office to gain full access to its fees so that we can expand the already substantial reforms undertaken by Under Secretary David Kappos, working with line staff, labor, and career managers. These reforms will help get cutting-edge inventions and technologies into the marketplace much more quickly which will then create jobs.

The Commerce Department, through our International Trade Administration, is playing a lead role in the President's National Export Initiative, which seeks to double U.S. exports by 2015. American companies, especially small- and medium-size businesses, rely heavily on the federal governmental support available under the National Export Initiative. I hear about it everywhere I go.

These companies often face significant hurdles in getting access to working capital to produce the goods they want to sell abroad or simply finding reliable foreign customers and vendors for their American-made goods and services.

Our International Trade Administration helps many companies clear these hurdles. And last year, we helped more than 5,500 U.S. companies export for the first time or increase their exports. We coordinated an unprecedented 35 trade missions to 31 different countries.

These efforts are paying off with U.S. exports up 17 percent last year and indeed exports to China were up 34 percent last year. Our fiscal year 2012 budget envisions more funds for activities such as business-to-business match-making services and identifying and resolving trade barrier issues.

Finally, I want to touch on the critical work done by our National Oceanic and Atmospheric Administration or NOAA, an agency that

is a key source of scientific information which is also increasingly critical to America's economy.

Last year, NOAA played a pivotal role in responding to the BP Deepwater Horizon oil spill by providing targeted weather forecasts, oil spill trajectory maps, and by ensuring the safety of Gulf seafood.

This past week, NOAA issued its first tsunami warning just nine minutes after the tragic earthquake struck Japan. NOAA was able to so quickly sound the alarm because of strong congressional support.

In 2004, before the tsunami that struck Indonesia, NOAA had only six buoys in the Pacific to detect seismic and wave activity. Today thanks to congressional support, it has 39 buoys.

So the work that NOAA does to predict and respond to weather and natural disasters saves communities, saves them money and, most importantly, saves lives.

What I discussed is, of course, just a fraction of the work of the Commerce Department and I direct you to our written testimony for greater detail.

In the meantime, we are happy to answer any questions that you might have.

[The information follows:]

STATEMENT ON THE COMMERCE DEPARTMENT'S
FY 2012 BUDGET REQUEST BY COMMERCE SECRETARY GARY LOCKE
HOUSE APPROPRIATIONS SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES
March 17, 2011

INTRODUCTION

Chairman Wolf, Ranking Member Fattah, and distinguished Members of the Subcommittee, I am pleased to join you today to talk about the President's Budget request for the Department of Commerce for Fiscal Year 2012. I very much appreciate the commitment this subcommittee's members show to the Department and our mission.

Since I joined the Department of Commerce two years ago, we have been focused intently on two key priorities: helping American businesses be more innovative at home and more competitive abroad. Our FY 2012 budget request reflects those priorities with investments to spur innovation, increase our international competitiveness and support scientific research and our coastal communities.

Our innovation agenda is focused on building a foundation for private-sector economic growth and empowering entrepreneurs and businesses large and small to invent, grow and hire.

That's why our Economic Development Administration (EDA) is working to help local communities identify their own unique strengths and develop regional economic clusters. Rather than pursuing a one-size-fits-all approach, EDA is supporting private-public partnerships' bottom up strategies to respond to changing regional conditions and has more than halved the response time for its grant applications – Our Economic Development Administration cut the time it takes to award a grant from 128 to 20 business days.

To make it easier for groundbreaking ideas to move from research labs – or an inventor's garage – and into the marketplace, we're reforming the U.S. Patent and Trademark Office (USPTO) to accelerate patent examination and improve patent quality. We overhauled management processes at the USPTO, and cut the application backlog by 10 percent, even as the volume of applications has increased by 7 percent.

As the Department works to strengthen American businesses at home, we've also played a lead role in the President's National Export Initiative (NEI), working to connect more U.S. businesses to the 95 percent of consumers who live beyond our borders.

It's important to note that although the United States is a strong exporter, only 1 percent of our companies export and of those that do, 58 percent only sell to one market. We can and must do better.

While the quality and costs of American companies' goods and services ultimately determine their success in the international marketplace, many firms – especially small and medium-size enterprises – rely heavily on the federal government support available under the NEI.

These companies often face significant hurdles in:

- Getting access to working capital to produce the goods they want to sell abroad;
- Navigating complex foreign customs, rules and regulations;
- Forging relationships with key foreign governmental and business decision-makers; and
- Ensuring they get a fair shake when competing with other foreign firms for lucrative government procurement contracts.

The Commerce Department is working successfully with our partners throughout the Administration to help companies clear these hurdles.

Last year, U.S. exports of goods and services increased nearly 17 percent over 2009 – the largest year to year percent change in 20 years. This puts us on pace to achieve the President's goal of doubling American exports over five years. During the first year of the NEI, the Department assisted more than 5,500 U.S. companies export for the first time or increase their exports. Small and midsize businesses made up 85 percent of those successes. Our International Trade Administration (ITA) coordinated an unprecedented 35 trade missions to 31 different countries, with nearly 400 companies. Participating firms anticipate $2 billion in increased exports from these missions. In addition, ITA's Advocacy Center has assisted U.S. companies competing for international contracts, and other U.S. export opportunities, worth $18.7 billion in U.S. export content, supporting an estimated 101,000 jobs. We've recruited nearly 13,000 foreign buyers to visit major trade shows here in the United States, facilitating approximately $770 million in export successes and supporting over 4,100 domestic jobs. And, ITA has successfully resolved 82 different trade barriers in 45 countries that were adversely impacting a broad range of industries. This includes successfully encouraging Russia to enact a WTO-compliant law that provides authority for its customs officials to interdict suspected counterfeit goods.

In addition, through the work of the Minority Business Development Agency, Commerce assisted more than 6,600 minority business enterprises in attaining almost 1,000 contracts and over 500 financial awards, with a combined dollar value of $4 billion.

Part of the reason why we have been so successful at increasing our assistance to U.S. businesses is that the Department's senior leadership is focusing everyone on delivering their services more efficiently, more effectively and at less cost. We can also help American companies thrive by making the Commerce Department run better, which has been a top priority of mine and my entire management team.

Consider the 2010 Census, an undertaking that many experts identified as "likely to fail." The experts were proved wrong, as the 2010 Census was completed on schedule and under budget, saving taxpayers $1.9 billion.

A year after I arrived at Commerce, the Department stepped into a pivotal event with the explosion of the BP Deepwater Horizon oil rig on April 20, the largest oil spill in U.S. history. Within hours the National Oceanic and Atmospheric Administration (NOAA) responded by mobilizing ships, aircraft and personnel to provide targeted weather forecasts and oil spill trajectory maps and EDA applied resources to help Gulf communities. ESA provided the data

needed to estimate the economic impact while NOAA protected Gulf seafood through closures and careful reopening of fisheries in Federal waters. We learned through the BP Deepwater Horizon oil spill and other events that we cannot have healthy economies without healthy communities and healthy ecosystems and that good science and stewardship is good business.

The destruction and loss of life resulting from last week's catastrophic disaster in Japan are heartbreaking. Our thoughts and prayers are with the Japanese people, and as the President has said, we're going to stand with them as they recover and rebuild from this tragedy. Nine minutes after the March 11th earthquake struck, NOAA issued its first Tsunami Warning for Japan, Russia, Marcus Island, and Northern Marianas Islands as part of the coordinated global response to this tragic natural disaster. Shortly thereafter, timely watches, advisories, and warnings were extended to vulnerable coastal areas of Alaska, British Columbia, Washington, Oregon, and Hawaii well ahead of the arrival of the first waves. The NOAA-developed Deep-ocean Assessment and Reporting of Tsunami (DART®) stations detected and tracked the tsunami as it traveled from Japan across the Pacific Basin. The NOAA-issued tsunami warnings along with its education efforts allowed communities both here and across the globe to take action that saved lives and reduced property damage.

America is still in the process of economic recovery, and we at the Commerce Department must continue to build upon the past two years of successes. The President's FY 2012 budget request for the Commerce Department makes tough choices – many of them reductions to programs that we might like to continue under normal economic conditions. But we also have the responsibility to prioritize investments in those things that are critical to winning the future. The President's request recognizes that this is only possible when the United States out-educates, out-innovates, and out-builds our economic competitors. For that reason, the FY 2012 request for the Department of Commerce makes several targeted reductions and is focusing on organizational effectiveness in order to focus on investments in innovation, international competitiveness and science as well as supporting our coastal communities – to spur job creation here at home and improve American competitiveness in the global marketplace.

REDUCTIONS

With his FY 2012 request, President Obama pledged to root out ineffective, outdated, or duplicative programs to cut or reform, taking further steps toward reducing our long-term deficit. In all, the Department's FY 2012 budget proposes ending, reducing, or restructuring more than 15 lower-priority programs

First, this budget cuts what is ineffective and outdated. For example, the Emergency Steel Loan Guarantee program made its last guarantee in 2003, and its elimination alone results in $43 million in savings. Other reductions reflect the need to transition to new funding models, as in the National Institute of Standards and Technology's Baldrige Performance Excellence Program. To transition the program to be completely privately funded, the program's funding is reduced by $2 million.

Secondly, hard choices were made among competing priorities. The termination of the Public Telecommunications Facilities, Planning, and Construction (PTFP) program saves $20 million,

and streamlines the current structure under which both the PTFP and Corporation for Public Broadcasting programs fund equipment for non-commercial television and radio stations.

Lastly, this budget strives for efficiency. The proposal to restructure the International Trade Administration saves $20 million through the streamlining of administrative functions, closing some overseas posts, and focusing on high priority markets and industries.

By eliminating the Trade Adjustment Assistance for Firms program, discontinuing the Trade Adjustment Assistance for Communities program, and ramping up the Economic Adjustment Assistance (EAA) program, our Economic Development Administration will be able to get funding out more quickly and at a much lower cost to areas disrupted by import competition or other factors. EAA is the most flexible program in EDA's toolbox, tailoring economic recovery strategies to communities' needs with far lower overhead costs than Trade Adjustment Assistance. The elimination saves $15.8 million.

We also took a hard look at our statistical programs and products within this budget, eliminating six statistical programs and reducing funding in three others at the Census Bureau, for a savings of $16 million. We targeted programs, such as the separate publication of E-Business statistics that had, over time, been incorporated into other data collection efforts, thereby achieving greater efficiency.

But by far, our top saving initiative focuses on reforming the way the Commerce Department does business. We are doing more while spending less. We plan on saving $142.8 million in FY 2012 as part of the President's Administrative Efficiency Initiative. The Department is digging into how we handle acquisitions and other administrative functions to find places where we can leverage our buying power. We have a six-point plan to reform acquisitions in order to deliver greater savings, greater results and greater efficiencies. Specific measures include saving taxpayers $57 million in FY 2012 through bulk buying and other smart purchasing strategies, stronger metrics to measure and increase performance, a new approach to requirements definition and validation, an enterprise-wide approach to identifying and managing high-risk projects, and a new Center of Excellence to best serve every bureau within the Department. Lastly, we anticipate savings in information technology through data center consolidation and slowing the replacement cycle for computer hardware.

INVESTMENTS

At the same time the FY 2012 budget makes some tough but responsible choices that will put government on a sounder financial footing, it also reflects this Administration's commitment to invest in areas that will help create jobs here at home and better position America in an increasingly competitive global economic environment. Because of the savings discussed above, the Department is able to reinvest $39.2 million to strengthen valuable programs. The budget does this by focusing investments in innovation, international competitiveness, science, and support for coastal communities.

Innovation

In his State of the Union address, the President said: "The first step in winning the future is encouraging American innovation," and he promised to deliver a budget that would ensure the nation's ability to achieve that goal. The Department of Commerce is responsible for providing the tools, systems, policies and technologies that give U.S. businesses a technological edge in world markets. Key components of the Department's innovation tools are: the National Institute of Standards and Technology's cutting edge research laboratories; the U.S. Patent and Trademark Office's protection of intellectual property that fosters the entrepreneurial spirit; the EDA's regional innovation clusters; and the National Telecommunications and Information Administration's efforts to accelerate the adoption of a wireless interoperable network for public safety, optimize the use of federal spectrum and increase broadband access.

The National Institute of Standards and Technology is a key agency identified in the President's Plan for Science and Innovation, the Administration's Innovation Strategy, and the America COMPETES Reauthorization Act – which Congress approved with broad bipartisan support at the end of last year. For FY 2012, the Department is requesting $763.5 million for NIST laboratories, which includes an increase of over $100 million for research into advanced manufacturing technologies, health information technology, cybersecurity, interoperable smart grid technology, and clean energy research and development.

In FY 2012, NIST will also expand its extramural programs to support technological innovation through a request of $75.0 million for the Technology Innovation Program, an increase of $5.1 million, to continue to fund high-risk, high-reward research competitions in areas of critical national need such as advanced robotics and intelligent automation, manufacturing, energy, and healthcare. NIST is also launching a new Advanced Manufacturing Technology Consortia (AMTech) Program, a public-private partnership program for industry-led research and development (R&D) aimed at increasing the nation's return on scientific investment, collapsing the timescale of technological innovation, and ultimately expanding the value added captured by the domestic economy for emerging technologies. The $12.3 million requested for the program will provide grants to industrial consortia to develop roadmaps for research that will broadly benefit our nation's industrial base.

NOAA's atmospheric and ocean, coastal and Great Lakes research programs turn scientific discovery and innovation into products and services for our communities and businesses. The President's budget request for 2012 includes $212 million for the Office of Oceanic and Atmospheric Research (OAR). NOAA is proposing to strategically realign this existing core research line office to better support the goals of the America COMPETES Reauthorization Act of 2010. OAR will refocus its work to serve as an innovator and incubator of new science, technologies, and applications, and an integrator of science and technology across all of NOAA.

Prime examples of NOAA's work in advancing innovative technologies for weather forecasting is the adaptation of naval radar technology for use in severe weather and tornado forecasting. Multi-function Phased Array Radar, developed by the Navy for use on ships, is being adapted by NOAA and its partners, for severe weather forecasting. This work is improving the average lead time for tornado warnings. NOAA is also leading the way in weather and climate modeling and

research. Since the 1980s, NOAA has more than doubled the accuracy of hurricane track forecasts. And public and private sector decision makers look to NOAA for climate products such as the air freezing index to provide home builders with information on which to design home foundations. Also, in FY2012, the President's budget invests $2 million to advance our capabilities to understand and forecast atmospheric conditions to support wind energy generation in the United States.

The USPTO's work in fostering innovation is a crucial driver of job creation, economic recovery, and prosperity. American innovators and businesses rely on the legal rights associated with patents in order to reap the benefits of their innovations. Processing patent applications in a quality and timely manner establishes a business environment that cultivates new ideas, technologies, services, and products by ensuring their protection. The USPTO has committed to taking action on a patent application within 10 months by 2014 – a significant reduction from the slightly over two years on average it currently takes to first address a patent application. The current backlog of over 700,000 patent applications stands as a barrier to innovation and economic growth. The USPTO has committed to reducing the patent backlog to less than 353,000 by 2014. The FY 2012 budget for USPTO continues to request full access to fees, which is estimated at about $2.7 billion for FY 2012. The request allows USPTO to levy a 15 percent surcharge to optimize patent and trademark quality and timeliness. Doing so will aid intellectual property policy, protection, and enforcement worldwide.

The FY 2012 budget also supports innovation and economic opportunity by ensuring taxpayer investments in broadband are managed responsibly and achieve results. In FY 2012, the National Telecommunications and Information Administration (NTIA) will continue its work in fostering greater access to and use of broadband services throughout the nation. NTIA completed the award of its broadband grants at the end of FY 2010 and now the funded projects are being implemented. The projects will be built between now and FY 2013. The FY 2012 budget includes funding for proper oversight of the program to guard against waste, fraud, and abuse by the grantees – many of whom have never received a Federal grant before.

The Department will also receive about $1.5 billion to support the President's Wireless Innovation and Infrastructure Initiative (WI3). NTIA, along with the Federal Communications Commission, will find 500 MHZ of spectrum within ten years that can be applied to commercial purposes in support of WI3. Of this funding in FY 2012: $1.4 billion would be for NTIA to establish and develop a nationwide interoperable public safety broadband network; $100 million would be for NIST to work with industry and public safety organizations to conduct research and develop standards, technologies, and applications to advance public safety communications; and $20 million for EDA to accelerate the development of innovative wireless applications that can accelerate job creation and promote the competitiveness of the regional economy.

International Competitiveness

The Department of Commerce embraces its core mission to improve U.S. global competitiveness and foster domestic job growth – and to do so while protecting American security. The President's FY 2012 budget request will increase U.S. exports, ensure effective export control and trade compliance, and make certain that trade remedy laws are enforced.

Exporting is good for American business, good for American workers, and good for American jobs. That is why President Obama announced the National Export Initiative (NEI) and set the goal of doubling U.S. exports over five years to support several million American jobs and foster long-term sustainable economic growth.

We jump-started the NEI in FY 2010 by pursing new relationships with the business community. In addition, as previously mentioned we led a record 35 trade missions to 31 countries with 400 companies to promote industries including renewable and nuclear energy, as well as infrastructure, construction, and aerospace. One recent example of a successful trade mission involved Suniva, based in Atlanta, Georgia, which manufactures high-efficiency silicon solar cells and high-power solar modules using low-cost manufacturing techniques. The company is focused on the mass adoption of high-efficiency photovoltaic technology and the significant economic, social, and environmental benefits it brings to the world community. The company found potential partners on a clean energy trade mission to India in 2009. They returned the next year with the ITA and secured several long-term customers with an estimated value of $18.7 million.

With a relatively small and strategic federal investment in export promotion, we can build upon our aggressive efforts to help American companies sell their American-made goods overseas. The FY 2012 budget request for the ITA includes an increase of $78.5 million to support NEI-related efforts, which will encourage new companies to export, and help current exporters expand to more markets,. These efforts mean leading more trade missions; helping U.S. companies win more foreign procurement bids; bringing more foreign buyers, distributors, and partners to U.S. trade shows; and providing more business to business matchmaking services to U.S. companies. In addition, a key part of the NEI involves ITA's continued work to assist companies and create trading opportunities by identifying, overcoming, and resolving trade policy issues and ensuring that our trading partners fully meet their obligations under our trade agreements.

The Bureau of Industry and Security (BIS) advances U.S. national security, foreign policy, and economic objectives by ensuring an effective export control and treaty compliance system, and by promoting continued U.S. leadership in strategic technologies. A major Administration-wide effort to reform the current morass of bureaucracy that constitutes our export control regime is underway. Our focus, quite simply, is to build higher fences around fewer items – to focus resources on protecting those products that are truly sensitive. The FY 2012 budget recognizes the important role of BIS programs and supports the national security mission with a request of $111.2 million. This includes an increase of $10.8 million for an Export Enforcement Enhancement initiative that increases staff for counter proliferation, counterterrorism, and national security programs and investigations.

Another key priority for the Department is strengthening the nation's cybersecurity infrastructure, which is vital to the economic and national security interests of the United States. The FY 2012 Budget requests an increase of $81.3 million for cybersecurity, of which $37.9 million secures Commerce Department systems and $43.4 million supports NIST's work on the U.S. government and national security infrastructure.

Science

The Department of Commerce also supports science with a focus on generating and providing timely data and analysis to support effective decision making by policymakers, businesses, and the public. Before discussing other science-related initiatives, I'd like to speak on the NOAA's Joint Polar Satellite System – JPSS.

For FY 2012 we are requesting $1.07 billion for Joint Polar Satellite System (JPSS), an increase of $687.8 million over the FY 2010 enacted. This large increase reflects the impact of not receiving our FY 2011 request for this vital program. Even with this large increase, we are looking at a 12-18 month delay in the delivery of the first satellite and a very high likelihood of a gap in our polar satellite coverage. Continued inadequate funding only further jeopardizes this program. JPSS is essential for the nation and provides the backbone of all National Weather Service forecasts beyond 48 hours. Without JPSS, our ability to provide timely and accurate weather forecasts and severe storm warnings for both civilian and military users will significantly diminish, thereby placing lives, property, and critical infrastructure in danger. While we all wish that the predecessor NPOESS program had not had the history it did, the Administration created a new structure that works, and we need this funding to ensure we can continue to provide this essential service the nation. I look forward to working with you to resolve this issue.

Finding the resources for JPSS was not easy. It was one of the tough choices the Department had to make and is one of several major science-related initiatives in the FY 2012 request. The President's FY 2012 request supports steps needed to improve the understanding of our climate and proposes a no-cost reorganization within NOAA: establishing a Climate Service line office. NOAA spends over $350 million on climate science and decision support, with the majority of spending spread across three different line offices. The current arrangement complicates coordination and the ability for NOAA to provide information to decision-makers who can use it – whether it's local governments looking at meeting a growing community's water needs, state governments looking at building a new road or bridge, or businesses looking at long-term site locations and investments. This new line office will allow NOAA to more effectively and efficiently provide reliable and authoritative climate data, information, and decision-support services. The climate service is primarily about providing one place for people to go to access and be able to use the data we are already gathering – at no additional cost to taxpayers. A streamlined Climate Service would increase NOAA's ability to more efficiently and effectively respond to the demands we are hearing from businesses and communities for science based climate information to help them make sound investments that lead to economic growth and innovation, and improve public safety.

The Bureau of Economic Analysis (BEA) provides the tools to identify the drivers of growth and fluctuation, and to measure the long-term health and sustainability of U.S. economic activity. One of the most valuable services the Department provides both the business community and policy makers are timely, accurate, and reliable economic data to inform their decision making. These key decision makers would benefit from innovative statistical tools updated for the dynamic changes in the U.S. economy to make evidenced-based choices about growing their businesses and creating policy that fosters economic expansion. To answer this demand, BEA

will focus in FY 2012 on producing new economic statistics and tools to enhance its evaluation of the economic performance of U.S. industries. The FY 2012 request invests an additional $10.3 million to create these new products, which includes a new suite of statistics showing the purchasing power of American households and how it varies across different households and over time. This will give small businesses information they need to grow.

The U.S. Census Bureau is the premier source of information about the American people and our economy. More than just numbers, this information supports important policy decisions that help improve the nation's social and economic conditions. Census completed the 2010 Census and has turned to releasing that data. In the FY 2012 request, the Census Bureau turns its attention to early planning for the 2020 Census with a focus on cost containment, including an Internet option, and identifying research-based design options. The FY 2012 budget includes $69.3 million to begin a three-year research and testing phase for the 2020 Census – with a goal of designing a census that costs less per household while maintaining quality. The FY2012 budget also includes money to ramp-up for the Economic Census, which collects data every five years from all businesses in America to provide information that is used throughout the private and public sectors and that is vital to producing accurate economic statistics.

The Census Bureau's demographic statistics programs provide policymakers with social and economic data needed to make effective policy and program decisions as well as provide source data used to create the U.S. official measures of employment, unemployment, consumer prices, poverty, and widely used measures of income and health insurance coverage. The American Community Survey (ACS) provides the primary source of demographic and economic data for small geographic areas. As the federal government's most comprehensive demographic survey, ACS results are used to distribute over $400 billion in federal funds. The FY 2012 budget requests $8.8 million to complete the expansion of the ACS sample size to improve the reliability of the data at the tract level.

Coastal Communities

The Department of Commerce has the responsibility to sustainably manage our nation's oceans and coasts to promote economic sustainability and to ensure that future generations will also have the ability to enjoy and earn their livelihoods from these same resources. Impacts to water quality, fish stocks, and coastal habitat all impact our coastal communities through potential reductions in local fishing businesses that are the heart of so many coastal communities, tourism, and storm protection.

The National Marine Fisheries Service (NMFS) manages living marine resources throughout the nation's coastal zone and protected areas. We are faced with the challenge of ending overfishing, improving fisheries management, and putting fisheries on a path to sustainability. Working with the Regional Fishery Management Councils, in FY 2010, five fisheries stocks were rebuilt. Based on estimates, rebuilding U.S. stocks has the potential to increase the annual commercial dockside value by 54 percent, which is an estimated $2.2 billion. The FY 2012 Budget requests $1.0 billion for NMFS, $7 million less than the FY 2010 enacted. Within the request, $54 million is to provide start-up costs for fisheries recently shifting to catch share programs, and to develop new catch share programs that incentivize more effective fisheries

management. Recognizing the importance of increasing the number and timeliness of stock assessments, a total of $67 million, including $15 million to expand annual stock assessments which provide the scientific basis for setting appropriate catch limits.

Our oceans, coasts, and marine resources are a source of untold wealth. America has 95,000 miles of shoreline and the world's largest Exclusive Economic Zone at 3.4 million square nautical miles. The oceans and coasts provide many goods and services to the nation, including food from wild fisheries and aquaculture, goods from maritime commerce, ship and boat building, energy, minerals, tourism, recreation, and pharmaceuticals. Nearly 80 percent of U.S. import and export freight is transported through seaports. The FY 2012 budget requests $559.6 million for NOAA's National Ocean Service (NOS), including $8.0 million to support a National Working Waterfronts grant program to assist fishing dependent coastal communities adversely impacted by changes in regulations or environmental conditions that affect fishing resources on which the community depends and $20 million in grants to support regional partnerships for the development of comprehensive coastal and marine spatial planning.

Organizational Effectiveness

The Department of Commerce is also committed to organizational effectiveness and is undertaking a number of initiatives to streamline government and improve how we deliver existing services to businesses and other customers. Through CommerceConnect, we are working to connect our infrastructure of web portals and customer service technologies, call centers, field offices in 18 cities, and training for customer-facing staff among the Commerce Department bureau's and their 70+ business-supporting programs. We recognize that the needs of any given business do not stop within Commerce's organizational boundaries. We are working with other federal, state and local governments, and non-profit partners to build customer service infrastructure to connect businesses to the right resources. CommerceConnect is designed to break down silos and make government and partner programs more effective in serving America's businesses and entrepreneurs.

CONCLUSION

Ultimately, the FY 2012 budget request for the Department of Commerce is a roadmap for winning the future by helping American companies be more innovative, export more, and create and sustain the jobs of the future. The budget strikes a balance between the necessity of responsible reductions that reduce spending with targeted, crucial investments in foundational research and development on technologies that will lead to private sector job creation and help America out-innovate and out-build its economic rivals.

Thank you for the opportunity to appear before you today. I look forward to answering your questions.

Mr. WOLF. Thank you, Mr. Secretary.

Mr. Fattah, you have a statement you want to——

Mr. FATTAH. I will reserve. Thank you.

Mr. WOLF. Sure. Thanks.

TSUNAMI WARNING NETWORK

A couple of issues and I kind of will jump around. But first we extend our sympathies to the citizens of Japan. The tsunami that struck there on March 11, 2011, has caused extreme devastation and we wish them the best in their recovery.

I think I can speak for other Members, but I certainly speak for myself that we will support, and I think I speak for this entire committee, efforts to provide relief and technical expertise and other forms of support to Japan during this period of recovery.

There has been much discussion since the terrible tsunami in Japan about our country's ability to forecast tsunamis. I want to assure everyone that H.R. 1 does not cut funding for the tsunami network.

In fact, there are no specific cuts to any program in NOAA. Rather, if H.R. 1 is enacted, the Department of Commerce will be required to submit a spending plan to the committee for approval. The committee will work with NOAA to ensure that life and safety programs are not cut.

For the record, and I will give you a letter before you leave, Mr. Secretary, the funding levels for the National Oceanic and Atmospheric Administration in H.R. 1 is $4.4 billion. This amount is $456 million or 12 percent above the fiscal year 2008 level but $410 million or nine percent below the fiscal year 2010 level.

Between fiscal year 2008 and fiscal year 2010, NOAA funds increased by 22 percent higher than any other program in this bill. NOAA's base funding for tsunami warning network has been about $28 million since fiscal year 2008.

In addition to this base funding, following the Indonesian tsunami in 2004, NOAA received three supplemental appropriations to improve its tsunami warning programs and activities. The Congress provided $17.2 million in Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Tsunami Relief, 2005. That was Public Law 109–13 for NOAA to enhance tsunami warning capabilities and operations.

NOAA received another $50 million in the Deficit Reduction Act of 2005, Public Law 109–171, for tsunami warning and coastal vulnerability programs.

Finally, NOAA received another $10 million in the Security and Accountability For Every Port Act of 2006, Public Law 109–347, for outdoor alerting technologies in remote communities.

I have been, and we are going to put a copy of the letter in, involved when frankly not many people did very much. We wrote—I believe you were governor. Were you governor in—when were you governor?

Secretary LOCKE. From 1997 to 2005.

Mr. WOLF. Yes. We wrote you. We wrote every governor all along the East Coast and the West Coast. We called the UN. And we are going to submit a copy of the letter we wrote urging the governors to act on tsunami activities, because many were not doing what

they should have done, to move ahead aggressively with tsunami preparation.

So I will personally tell you we did everything possible and the staff did, Mike and the staff, to make sure, because when I saw the scenes of what took place in Indonesia, we forced governors and we forced administrations and forced localities not only on the West Coast but also on the East Coast from all the way to Maine all the way down to Miami to aggressively move ahead. So we have been involved in tsunami funding issues for a number of years. And we will submit the letter in the record.

And I believe very strongly in the need for this program and I personally will assure that these important life-saving programs such as the NOAA Tsunami Warning Network and associated programs are not cut.

But I want you to take the letter. And if you would go back and check your files—if you have access to your files—you will probably find the letter that I sent you urging you as governor, because the governors were not doing a very good job, to move ahead aggressively.

NOAA SATELLITE BRIEFS TO CONGRESS

The other thing I want to raise before we get into the questions, we have been told by the staff for the record no one from NOAA, and this is with regard to satellites, no one from NOAA or the Department of Commerce has spoken with the Republican side about funding for the satellites.

We run this subcommittee hopefully in a bipartisan way. I was chairman of it in a different life for six years. We never made these issues partisan. We just did not.

Now, I will tell you last year, there are many times the Democratic administration would not even come up and talk to me. I mean, I was really not approached. There was an election. It changed. Some people like it. Some people do not.

But if we are going to have a bipartisan—really to go up and just talk to one side, which is very appropriate, and not talk to the other, it is inappropriate.

So I am just asking you, and you ought to tell the head of NOAA, if they are going to come up and go to one side, they owe it to the Republican staff and if they are going to talk to the Republican staff, they ought to talk to the Democratic staff. But they ought to treat this in truly a bipartisan way.

So for the record, and you are welcome to comment, no one for NOAA or the Department of Commerce has spoken to the Republican staff about funding for the satellites. The subcommittee with the allocation we receive for H.R. 1, the House passed year-long supplemental, provided anomalies to three only accounts, the Bureau of Prisons, the Broadband Technology Opportunities Program, and the NOAA satellites. So much for people even thinking about that.

I must also point out that the Senate CJS Subcommittee, which received a higher allocation than we did, did not provide, and the last time I knew the Democrats were controlling the Senate, Mr. Reid, a person who I know and like, a good person, controls the

Senate, and they did not provide any additional funding for the satellites in its failed CR bill.

So if there's going to be integrity on this thing, your office and your CFO and the people in congressional relations, when they come up to talk to the Republican side, I urge them to tell Mr. Fattah exactly what you told us. I mean, treat everybody fairly.

And if you are going to come up to talk to Mr. Fattah's people, then I would ask you out of respect to come up and do the same thing to our staff. And why didn't they do that?

Secretary LOCKE. Are you asking for——

Mr. WOLF. Yes, sir.

Secretary LOCKE. Thank you very much, Mr. Chairman.

I was not aware that there has not been reciprocity and I certainly would encourage our staff to talk with all sides because we need as many members of the congressional committees to understand the budgets and the programs and the policies of the Department of Commerce.

Mr. WOLF. And would you not agree that this is not a political issue?

Secretary LOCKE. Oh, very much so. I very much agree that it is a nonpartisan issue. The funding for any agency is a bipartisan issue.

Mr. WOLF. Okay. And could you let us know what response you get from the head of NOAA when you talk or to your congressional relations office about this?

Secretary LOCKE. I will very much let you know.

Mr. WOLF. Good. I appreciate it very much, sir.

Here is the letter which I will submit for the record. "Wolf urges Administration to take lead on tsunami early warning systems. Washington, D.C., Rep. Frank Wolf,"—this is December 29, 2004—"Chairman of the Commerce, Justice, State Appropriations Subcommittee sent a letter today to Vice Admiral Conrad Lautenbacher, Under Secretary of Commerce for Oceans and Atmosphere, urging the Administration to take the lead in developing an enhanced tsunami prediction and warning capability for the U.S. and the world. [. . .] I am writing today in light of the recent tragic . . .," and we will just submit it for the record.

But this committee was very much involved and I personally was because when I saw those scenes, and when I watched what is taking place in Japan today, my heart goes out to those people. So we will make sure that that issue will be dealt with.

And if there is anybody that thinks it is not being dealt with, just give us a call, area code (202) 225–5136. And if they cannot reach us, just call the Capitol switchboard and they can track me down. Now, we will just submit that letter for the record there.

[The information follows:]

CONGRESSMAN
FRANK WOLF
10TH DISTRICT OF VIRGINIA

Wolf Urges Administration To Take Lead On Tsunami Early Warning System

Wednesday December 29, 2004

Washington, D.C. – Rep. Frank Wolf (R-VA), chairman of the Commerce-Justice-State (CJS) Appropriations Subcommittee, sent a letter today to Vice Admiral Conrad C. Lautenbacher, undersecretary of Commerce for Oceans and Atmosphere, urging that the Administration take the lead in developing an enhanced tsunami prediction and warning capability for the U.S. and the world.

The CJS subcommittee oversees funding for the National Oceanic and Atmospheric Administration. The full text of the letter follows.

VADM Conrad C. Lautenbacher, Jr., USN (Ret.)
Undersecretary of Commerce for Oceans and Atmosphere
Washington, DC 20230

Dear Admiral Lautenbacher:

I am writing in light of the recent tragic tsunami in the Indian Ocean, and I want to express my support for this Administration being a leader in developing enhanced tsunami prediction capabilities for the entire United States and the world.

First, I encourage the National Oceanic and Atmospheric Administration (NOAA) and other Federal partners to work together to develop a comprehensive tsunami warning system that could accurately predict a similar event in all coastal areas of the United States and its territories. NOAA should also coordinate with Federal, State, and local partners to develop a warning system that will allow for safe evacuation of areas that may be affected by a tsunami.

Further, I support continued efforts by the Administration to work with international partners to develop a Global Earth Observing System, which should include a worldwide tsunami prediction and warning capability. I understand that the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific, and Cultural Organization passed a resolution last summer welcoming studies on the development of a tsunami prediction and warning system for the Indian Ocean and other vulnerable areas, and I encourage the Administration to support this effort through its partnerships with other countries and international entities, including the World Bank. It is critical for the United States to continue to provide leadership in this area so that a worldwide observing and predicting system can become a reality.

Please report to the Committee within 90 days on your efforts to better predict tsunamis that may affect this country and on the Administration's efforts to work with the international community

to develop a global observing system. I look forward to working with you to ensure that the Nation and the world have the systems in place to prevent another tragic loss of life like we have witnessed in areas affected by this recent tsunami in the Indian Ocean.

Sincerely,

/S/

Frank R. Wolf
Chairman
Subcommittee on Commerce, Justice, and State, the Judiciary and Related Agencies

cc:
Donald L. Evans, Secretary of Commerce
Colin L. Powell, Secretary of State
Andrew H. Card, Jr., White House Chief of Staff
John H. Marburger, III, Director, Office of Science and Technology Policy Joshua B. Bolten, Director, Office of Management and Budget
Paula J. Dobriansky, Undersecretary of State for Global Affairs

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FEDERAL BUDGET CONCERNS

Mr. WOLF. You know, I think you know, I think we all have to be careful when we come—I am going to get this—kind of cleanse this to get this off my chest, too, because I know it would have come out later on. Any cuts that are coming, some may be in areas that I do not particularly like. I gave a statement on the Floor of the House, and I said I worry about the poor.

In Proverbs, it says when you give to the poor, you give to God. And I worry about the poor. But this Administration has failed to come forward to deal with the fundamental issue that Senator Warner and Senator Durbin and people like that, and Saxby Chambliss, are trying to do to get control of the entitlement issue.

And Ruth Marcus from the *Washington Post* did a story titled "Waiting for Waldo." The President of the United States appointed the Bowles-Simpson or Simpson-Bowles Commission. I have said I will support their recommendation. There are some things in there that I may not completely agree with. Hopefully it will be done in such a way that we can have an amendment process to argue these things out knowing that we have to come to whatever numbers. If you want to change something, then you would have to offer something.

But the President has failed to come forward, so to say—and last month in February, the shortest month of the year, we had the largest, I think, deficit we have ever had for one month. It is a deficit for one month that we used to have for years that people used to complain about.

And I think you have done a good job. Personally I was really sorry, glad because I think you will be tougher in China than the current ambassador was and maybe the previous Administration, because we have had conversations, and I know what you care about, so I was kind of glad, but I was sorry to see you appointed as Ambassador to China because I think what you have done at Commerce and the idea of increasing exports, so you are going to be out of the Cabinet.

But the next time you say, say there is this congressman named Wolf, maybe it is Fox, Wolf, say I forget his name, but he is saying the President has to come forward to deal with the deficit and he ought to do it by the end of this year.

And if we come forward in a bipartisan way, if Tom Coburn and Dick Durbin can sign that, and I have listened to Mr. Fattah, he said he could and I could, if we could do that then, but we really need the President to provide that leadership.

So as we agonize about some of these cuts, and some are difficult and some I am not anxious about doing, but until you deal with the entitlements—Willy Sutton, the bank robber, said he robbed banks because that is where the money is. The money is in Medicare, Medicaid, and Social Security.

And also I hear the President, just to get it off my chest, talking about how great it was working with the Republicans and Democrats in September. We got this tax bill passed. It shows you we can work together. That is like giving candy away. Anybody can work together to give things away.

In that, and one thing with regard to the payroll tax, with regard to Social Security, that will cost the Federal Government $112 billion. You gave Jimmy Buffett and Warren Buffett a Social Security tax break. Neither of them needed it. Neither of them wanted it. You would have been better giving it to the poor or putting it in math and science and physics and chemistry and biology.

So the President has got to come forward on this issue and work with Speaker Boehner and work with Mr. McConnell and Mr. Reid and the Speaker and former Speaker, have everyone come together in a bipartisan way to get these ideas out. And if we do that by the end of the year, then I think we can resolve a lot of the issues that have come up.

And I have taken more time. I am just going to go to questions and go to Mr. Fattah since he did not have an opening statement.

OPENING STATEMENT BY REPRESENTATIVE FATTAH

Mr. FATTAH. Thank you, Mr. Chairman.

And let me say just so there is no confusion, my office, you know, because we have not been on the subcommittee as long as the Chairman has been and we are trying to learn about these various agencies, so we are asking agencies—and I am traveling. Like I was out in your district. I visited the Center for Missing and Exploited Children. I am trying to see and learn as much as I can about all of the agencies.

So if my staff invited NOAA up to talk to me, it was not as if NOAA was seeking to somehow just come see me versus see you or whatever. That was a request made. You know, as we are making it, I met with any number of people who are affected by the bill only so that I can be as prepared as possible to work in a bipartisan way with the Chairman, because I am convinced that we can have a bipartisan bill.

So I do not want the Secretary to bear the burden for the zealousness of my staff trying to make sure that I am adequately informed. And I do not believe that in any way that NOAA would be seeking to give—if they were going to provide one side information, you would want to provide it to the majority because in this House, the majority has its way and in the minority, we get to have our say.

So I do not think that they would be—they would be ill advised if they just provide information to me. So I want to clarify the record in that respect.

And this hearing, Mr. Secretary, has been moved from 2:00 to 1:30 and I was off campus giving a speech and we had some security issues getting back on campus with some traffic. So I apologize for being a few minutes late.

I know that the Ranking Member of the full committee is here, and I know my seniority, so I will be glad to yield to Ranking Member Dicks first and then we will go on from there.

Mr. DICKS. Let me just say there has been a lot of discussion about this, and I appreciate the Chairman's leadership on this issue over the years. And he has always been extremely fair.

What we are worried about is the level of these cuts in NOAA and whether that will affect the weather service.

NOAA FUNDING LEVELS

Mr. DICKS. Okay. Here are the numbers. The request in 2011 for operations, research, and facilities is $3.3 billion. H.R. 1 cuts it to $2.8 billion.

Will that have a negative effect on the weather service and on our buoys and on our tsunami early warning system? I am told that would be a 28 percent cut.

Secretary LOCKE. Well, Congressman Dicks, let me just say that if we are looking at, for instance, just the 2010 enacted budget and if you exclude all the extra spending that was associated with the census, first of all, let me just say that the 2012 President's request for Commerce is roughly $822 million above the 2010 enacted budget of which the President has requested almost $687 million for JPSS, the satellite program, which only leaves about $135 million for all other programs and activities within the Department of Commerce.

Now, if we then look at H.R. 1 and to the operations, research, facilities portion of NOAA's budget, that is where the weather service and other programs, tsunami programs are located, H.R. 1 specifically reduces the level of funding for that segment of NOAA's budget by 16 percent from the 2010 enacted level and——

Mr. DICKS. And that number is $450 million?

Secretary LOCKE. I would have to get you the exact figure.

Mr. DICKS. Yes. We do not have your——

Secretary LOCKE. I do not have that in front of me. But obviously we can always try to prioritize and we will try to be as efficient as possible. But you just cannot avoid the math, 16 percent cut, and that includes not just—I mean, if we were to keep all the tsunami programs intact, we would have to make those cuts elsewhere, whether it is in hurricane forecasting or ocean navigation for ships, et cetera, et cetera.

And right now, and I do want to thank the Congress and the chairman's leadership in the past in the aftermath of the tsunami that hit Indonesia. As I indicated, at that time, we only had six buoys in the Pacific and now we have some 39, thanks to the leadership of the chairman and other Members.

[The information follows:]

NOAA FUNDING LEVELS

NOAA Operations, Research, and Facilities account is set at $2.9B, $454.3M (14%) less than the FY 2010 Discretionary Appropriation of $3.3B.

Mr. DICKS. Seven of those buoys——

Secretary LOCKE. But seven of those are down for maintenance. And under the Continuing Resolution, we do not know if there is funding or what the level of funding will be as others come on line for maintenance and will they also have to go down. What do we do about—you know, tsunami warnings involve satellites. It involves the research centers, the stations. It is not just the buoys that have to be maintained and the interpretation of the data.

If we ensure that nothing surrounding tsunami warning systems is touched, then we are going to have to take the 16 percent savings or reduction in costs some place else, whether it be on the hurricane forecasting, and the list goes on and on.

Just from a math level, there is no way that we can avoid compromising the programs that safeguard our country. We are going to have to make some very, very tough choices if that is the decision of the Congress.

But the 16 percent cut off of current levels and right now we are not even issuing contracts for the maintenance or the upgrading of the buoys that are out of commission.

Mr. DICKS. The other account here in NOAA is procurement, acquisition, and construction. And in 2010, that was $1.3 billion. The President's request was $2.1 billion. And the H.R. 1 amount is $1.4 billion. That does not sound as bad to me, though it is a cut from the fiscal year 2011 request of $728 million.

So that is another very significant—and does that have any effect—procurement, acquisition, and construction—on the weather service or early warning systems?

Secretary LOCKE. Well, in H.R. 1, there is a slight increase——

Mr. DICKS. Is that where the satellite is?

Secretary LOCKE. That is where the Satellite Program resides. And because the 2011 budget has really not been enacted or the President's 2011 budget has not been acted on, there was a substantial increase for the next phase of the satellites contained in the 2011 budget.

So assuming that there is nothing in the 2011 budget for the satellites, then that cost is now pushed on to the 2012 budget which is why the President has asked for $687 million for the phase of the Satellite Program.

But under H.R. 1, we are only basically given $95 million extra to accomplish that task unless we cut back everything else in the rest of the procurement, whether it is on ships and other capital projects within NOAA.

The problem with not moving forward, and we are already behind schedule on the Satellite Program, and your committee and other committees of Congress have looked at that Satellite Program extensively, we have had to cut back the number of satellites. And even with that reduced number, the costs have grown.

And that is why a whole bunch of blue ribbon commissions have called for the complete restructuring of what used to be called the NPOESS Program, now called the JPSS, in which the Defense Department is no longer in charge. It is now a collaboration between the Department of Commerce and NASA.

But we are already behind schedule and there will be a gap between the existing satellites that provide that weather forecasting and when the JPSS satellites will come on board. And our accuracy of——

Mr. DICKS. And that weather forecasting is important to early detection, right?

Secretary LOCKE. We are now able to provide forecasting as far out as seven days, whether it is for hurricanes, major snowstorms, and so forth, especially over Alaska and other parts of the East Coast.

Once that gap occurs, for however long it takes until the satellites are in orbit, our ability to accurately predict with confidence weather patterns, whether hurricanes or major snowstorms, will be reduced down to three to five days.

Mr. DICKS. Thank you, Mr. Chairman.
Mr. FATTAH. Thank you, Mr. Chairman.
Mr. WOLF. Thank you.

GULF OIL SPILL

Mr. Bonner.

Mr. BONNER. Mr. Secretary, I echo the comments made by Chairman Wolf and the ranking member and others that we are grateful for your service to our country and we are proud that the President has asked you to take on this important role as our next ambassador to China. We wish you good luck during the confirmation hearings.

I get a little concerned as I was thinking about focusing on the oil spill because you mentioned it in your testimony, and I am going to come to that, but I must tell you as tragic as it is, and it is of epic proportions, the story line that is playing out in Japan and our collective hearts of the country and prayers are with the people there, the earthquake, the tsunami, the nuclear issues that they are dealing with.

And, yet, it is very frustrating to hear that we either have to support satellites for tsunamis or satellites for hurricanes because some of us live along hurricane alley.

It is hard to believe Chairman Wolf mentioned this. I mean, last month, the deficit was $223 billion. And it was not that many years ago when that would have been the deficit for the whole year.

And while you said the budget is lean and we have made cuts to outdated programs, I do not know if that is a part of the testimony or if you could provide us some of the areas that you have chosen to cut that are outdated, secretary after secretary, administrator after administrator comes up to this committee and other committees talking about the cuts that they are prepared to make and, yet, they still add up to pennies on the dollar in terms of what we have.

In many ways, it is appropriate that we are sending one of our best over to China because you are basically going not only to represent our country, you are also going to the banker for us to plead our case as 42 percent of the money that we are spending right comes from other—not all from China, but much of it from China. So we are facing serious challenges here as well.

You know, you know this because you were governor and when you are governor, you represent the whole state. And I guess when you are the county administrator or whatever Mr. Dicks said your earlier positions were, your jurisdiction has increased and now you represent the whole country. We represent the country and, yet, we—because of the body that we serve in and, yet, the people in our respective districts send us here, give us the privilege of representing them. And I will tell you, you mentioned it in your testimony about the Deepwater Horizon, as a Nation, we have a propensity to move on to the next tragedy, the next disaster, the next hurricane or whatever it is. But our area, the Gulf Coast is still struggling.

And I hope that if you can speak for the Administration or, if not, you can carry this message or this request back to the Administration, I think all of us along the Gulf Coast will admit that Lou-

isiana bore the largest environmental impact from the oil spill, but the economic impact, which the Commerce Department has been very focused on.

My congressional district was Ground Zero. And I hope that as the different agencies and departments, the Homeland Security and Justice Department, all your colleagues around the cabinet table, I hope they understand that as we are looking at long-term recovery for an area, this is not parochial just to south Alabama.

You know, a couple years ago, we were all wringing our hands about what might happen if Greece fails. And Greece is about a $356 billion GDP a year.

But if you go from the Keys in Florida all the way to the tip of Texas, the five Gulf Coast states, it is $2.8 trillion impact one year GDP. So it is a big part of the national economy.

And I just hope that you can convey the best—I hope it is something you believe as well, that as you are looking to make the area whole on the environmental loss, that we do not forget the economic loss because it has been substantial, especially in tourism-dependent economies like mine and Congressman Miller's from Pensacola, Florida, and others.

So that is really not as much of a question as a request. Please, whatever you can do in your remaining days and weeks as secretary of Commerce, remind others in the Administration that the economic loss is critically important to address as well as the environmental loss.

And the question part of this would be can you give us from your perspective what has been one of the lessons learned?

I mean, not only are we watching the tragedy play out in Japan, but with what is going on in Egypt and Libya and the price of gas shooting through the roof, I know you are not the secretary of Energy, but we are all concerned about the fragility of this economy, of this recovery. And here we are. We have got moratoriums on deep water drilling. Nuclear policy may be up in question now.

What would you say from your seat as a key member of the President's cabinet would be a lesson learned from the federal response to the worst environmental oil spill in the history of the world last year?

Secretary LOCKE. Well, thank you very much, Congressman Bonner, for that.

And let me just say that having been a governor, having presided over the dot com bust as well as the huge recession that struck the entire country and the aftermath of September 11th and having been a budget chairman writing budgets for the State of Washington, we have had to make tough choices. And it is a matter of setting priorities.

And I very much agree with Chairman Wolf and the other Members of the committee that we have to make these tough choices. There is not enough money. There will never be enough money to satisfy everyone's wish list.

And let me just say that the President is very committed to trying to reduce our deficits. You know, he did create those fiscal commissions. And I have heard him speak with Members of Congress and the governors saying that he is very serious about trying to tackle the issue of the entitlements.

Then when we talk about the current debates over the budget, it represents really a very small fraction of the entire federal spending and that to really get to the deficits and to get our country on a path of long-term prosperity, we have to look at those other issues including Medicare, Medicaid, and Social Security.

And he is very eager to do that in a bipartisan fashion working with the Members of the Congress. That is why his budget proposal for 2012 does call for a freeze on discretionary domestic spending and actually reduces spending by some $400 billion and as a percentage of GDP would be the smallest in terms of discretionary domestic spending since President Eisenhower was in office.

Nonetheless if we are to really focus on making sure that American companies and the American economy can withstand some of these challenges from external forces, whether it is environmental disasters or other economies, we have got to make sure that our economy is strong and robust.

And that means focusing on innovation, research, and development. That means, as the President says, we need to out-educate, we need to out-innovate, we need to out-build the rest of the world. And that, of course, in this tough fiscal climate requires some hard choices.

That is why the President has really focused on enhancements. For instance, keeping the budget flat, making deep cuts in other portions of the programs, of the budget, the Federal Government, while having enhancements in other areas, or whether it is in education, expanded R&D, and making the R&D tax credit permanent, whether it is in collaborations with the private sector, to really spur some of the innovations that will create new jobs and new technologies that will help us. This includes regulatory reform, to try to simplify and redo some of the regulations that we have to make sure that they are not a burden on job creation.

And I think what you see in the President's 2012 budget request is that balance, holding domestic discretionary spending flat, not calling for pay raises for federal employees, making deep cuts in a whole host of different programs while putting investments in those areas that will actually create jobs down the road.

And, you know, you talk about the Gulf states. We have had to put additional funds in there to try to stimulate the economy and to help the economies adjust to the Deepwater Horizon disaster. That may not have immediate payoff right away, but it is laying the foundation for job growth and economic diversification in the out-years, the same way with some of the programs in the Recovery Act.

There were some projects that were immediate job creators and others were laying the foundation for job creation and competitiveness for American companies two or three years down the road to make sure that we are turning our economy around so that as we begin to recover, we are not focused on the same old industries or the same economic recovery as past recessions which turned out not to be very smart, focusing on debt and consumption and focusing on real estate speculation.

And so now we are looking at the better industries of the future, like broadband, 120,000 miles of laying fiber optic cable so that people in the rural parts of America can sell their products and

services and market their bed and breakfasts and their products all around the world and sell to the world instead of waiting for customers to come to them.

Mr. BONNER. I hope we can count on you to deliver the message to the President. You know, he is the one who made a commitment to the Nation that they were going to stand by the people in Gulf Coast. And we are going to hold him to that commitment. And it includes economic loss as well as environmental loss.

And I hope that we can also count—I mean, it is great to say we are concerned about the deficit and we are going to work with this there. It is good to have you reiterate those words, but I think Chairman Wolf, I think Mr. Dicks and others have said we really are going to need the President to step in that ring with us. It is going to require strong leadership from the White House as well as from Congress.

Thank you very much.

Secretary LOCKE. Thank you.

Mr. WOLF. Before I go to Mr. Fattah—do you want me to go to you, Mr. Fattah? No. I am going to go to you.

When are you leaving? When do you expect to be going to China? When are you stepping down?

Secretary LOCKE. That is up to the Senate.

Mr. WOLF. Oh. But, I mean, as soon as they confirm you, are you off and then——

Secretary LOCKE. Well, we are trying to work that out.

Mr. DICKS. You cannot hold two jobs at once.

Mr. WOLF. What is your expectation?

Secretary LOCKE. We really do not have a date yet. The paperwork has not been filed, has not been completed. Plus I may be going to China before the rest of the family. The kids are in school in the Montgomery County school system until the third week of June.

Mr. WOLF. Okay. But, I mean, you will be, as soon as you are confirmed to be ambassador to China, you will be gone and I think that will be controversial. So it would be within the next month or two do you think?

Secretary LOCKE. I cannot give you a time frame, Congressman. I really do not know what their schedule is and how soon their processes will take.

Mr. WOLF. Okay. Mr. Fattah.

U.S. MANUFACTURING

Mr. FATTAH. Thank you, Mr. Chairman.

Mr. Secretary, I wish you well in whatever position you are in and going to. And I know you will represent our country well.

Let me start here on manufacturing. What is the leading manufacturing country in the world?

Secretary LOCKE. The United States is.

Mr. FATTAH. There is a belief that somehow we are not, that there are Members of Congress, there are people who write editorials who believe we do not make anything in this country. Now, I have over 5,000 manufacturers in the Philadelphia area alone. We were able and honored to have you visit one of our companies, Penn Reels. They make world-class fishing reels and have no com-

petitors anywhere in the world that can compete with them. It is in my district. But we also have—I mean, we have great manufacturers, but all over the country.

And now the Department has a program called the Manufacturing Extension Partnership Program working with manufacturers in states like Michigan; I have heard from and all over the country.

And I know that the President's budget in fiscal year 2012 makes a request of, is it $140 million? And if you could just talk a little bit about the work of the Department to assist American manufacturers continue to lead the world in making products, that would be my first question.

Secretary LOCKE. Well, first of all, we are very, very proud of the MEP Program, the Hollings Manufacturing Extension Partnership.

And it has been shown that for every dollar of federal investment, we actually help generate some $32.00 in new sales growth. We actually helped some 34,000 manufacturers last year and more than 17,000 jobs were created.

What we do is go in and partner with the states and look at the processes of manufacturing facilities to help them reduce their costs, to be more efficient, to be using less inputs, whether it is electricity or chemicals so that they are more lean and mean and, therefore, more viable and competitive. And then we also help them sell their products around the world. So the President has asked for a 12 percent increase in that particular budget.

But the other things that we are doing to help American companies is, for instance, the Patent and Trademark Office. We are on a mission to get the—now it takes almost three years to get a patent. I mean, if you are a really small inventor, that is unacceptable. You cannot raise capital. You cannot get people to invest in your new idea, your invention. It could be a life saver.

If you cannot prove to them and show them that you have a patent, it is like going to the bank and saying give me a loan to remodel the house, but I cannot prove to you that I have title to the property and you are going to have to wait three years. You are just not going to get that financing.

So starting next month, we are starting a program in which we will virtually guarantee that for a small extra fee that we will issue a patent or make that patent determination within one year and that——

U.S. MANUFACTURING—EXPORTS

Mr. FATTAH. Mr. Secretary, I am sorry. Is it true that only one percent of American companies export?

Secretary LOCKE. That is true. Only one percent of U.S. companies export and exports make up only about 12 or 13 percent of our GDP. It is significantly much lower than, for instance, countries like Germany which have high wages and strong unions and, yet, they export a lot more.

One percent of U.S. companies export. And of that one percent, 58 percent export to only one country, typically Mexico or Canada. So 58 percent of all U.S. companies that export export to only one country.

And through our efforts of the International Trade Administration and working with the Export-Import Bank, Small Business Administration, Department of Agriculture, and other federal agencies, we are on a mission to especially help small- and medium-size companies export to two or three extra countries.

Mr. FATTAH. Well, in my early life in the Congress a few years ago, we had all of these entities come together in Philadelphia to meet with some of our manufacturers. Peanut Chews are made in Philadelphia. They are the best candy in the world. And now they are sold in 45 different countries because of the work of some of these agencies.

So it is something that all of our manufacturers need to learn about, these services that are provided. You know, we have the Overseas Private Investment Corporation. Export-Import Bank, I met with a manufacturer this morning from my district whose company was involved in providing the drill that got the Chilean miners out, but needed a loan guarantee to do some work in Iraq and got it done, got the insurance and the bonding through the Export-Import Bank.

So these are entities that are available and we need to make sure that they have the kind of support that they need.

NATIONAL DEBT

Let me move on. I do want to make some comments about this debt. Because I have been here for a minute. I was here when we voted to balance the budget under the Clinton administration. I voted to balance the budget then. We raised some taxes. We cut some programs. It was a bipartisan vote of Democrats and Republicans and Republicans were in the majority. And in the waning days of that administration, we were very proud of the fact that we were paying off the national debt. We had Alan Greenspan testify at the beginning of the Bush administration that at the end of that eight years we could pay off our entire national debt, and what that would mean for our economy.

But the Bush administration took a projection of a $3 trillion surplus, it is like a weather forecast, and they decided they wanted to do a tax cut and gave away $1.5 trillion. And then we went to war. Two wars we have been in for a decade. And unlike any other time in our country's history we did not pay for it. We did not have a war bond, or a war tax. We just added that to the debt. And then we increased domestic spending.

So when President Obama was sworn into office the national debt was over $10 trillion. We were losing 800,000 jobs a month. So this is not a partisan, there is no partisan ownership of the debt. This is the United States of America's debt. We should pay it off. We should not leave it for our children. We, and it is not just entitlements. We should reign in entitlements, but that is really about future obligations. That is not about the debt. The debt is already here and now. And we have the lowest tax rates, the lowest since 1950 because we have a generation of adults who decided that we want to have all of this and we do not want to pay for it. And that is why we are in debt.

So even when we reign in entitlements, and I am for doing whatever we have to do, I can support the President's Commission, I

can support the Chairman's Commission, it is not going to do anything about the debt. The national debt, this mortgage on our country that is, when Bush came into office it was $5 trillion. When he left, when the new President was sworn in, the one that they want to heap this blame on, it was $10 trillion. All right? And now we have to address it. That is our job. And as a Congress I have never heard this fidelity to a President's budget. It has always been known to me that the President proposes a budget and we dispose of a budget. That is what we do. That is our committee. We decide what we are going to spend money on.

And so I just want to, I want to thank you for your leadership. We have had twelve months of net increases in jobs. We need to get out of the partisan foolishness and focus on our responsibilities. One is to pay our bills rather than when you go over to China. I do not want you visiting our bankers, all right? Because we need to have a much stronger discussion with them. When I talk to manufacturers in my district they say that every time they get a product into the Chinese market they reverse manufacture it and before you know it they, because there does not seem to be a lot of adherence to this intellectual property notion, right?

So we have to think about what we are doing as a country. I agree with the chairman on this, that whatever we have to do on NOAA we should do, and to make sure that we can deal with warnings. But we do not have to wait for a buoy out there to tell us about the debt. We do not have to wait for any NOAA satellite to tell us. We know what the debt is. We know how we got it. And we know that at the end of the day we have to pay the bill for it or our children and our grandchildren have to pay the bill. Thank you.

Mr. WOLF. Thank you, Mr. Fattah. Mr. Graves? Mr. Yoder.

DEPARTMENT OF COMMERCE FUNDING LEVELS

Mr. YODER. Thank you, Mr. Chairman. Mr. Secretary, thank you for being here today. I appreciate the opportunity to ask you a few questions. I was listening to your testimony at the beginning and was trying to understand your request for your 2012 budget submission through the President's 2012 request. You say that was $822 million greater than your 2010 expenditures?

Secretary LOCKE. That is correct.

Mr. YODER. Okay. And——

Secretary LOCKE. That is if you take out the unusual spending for the Census that was part of that 2010 budget. So, I mean obviously, the 2010 Census is over and we are not going to be continuing that to the same degree that we had. So if we back out a lot of those extraordinary one-time costs so that we are not really comparing apples and oranges the President's budget request for 2012 is roughly $822 million above the 2010 enacted budget.

Mr. YODER. And how much is the 2010 enacted budget?

Secretary LOCKE. The 2010 enacted budget, if you take out the 2010 Census, was $7.9 billion.

Mr. YODER. Okay. So you are asking for, what is that? What percentage increase are you asking off of your current expenditures?

Secretary LOCKE. I would have to do the math on that. I am sorry.

Mr. YODER. But $822 million off of roughly $8 billion?

Secretary LOCKE. Correct.

[The information follows:]

DEPARTMENT OF COMMERCE FUNDING LEVELS

The proposed FY 2012 Budget request of $8,761 million is $822 million more than the 2010 enacted budget level ($7,939 million) when the $6 billion is excluded for the Decennial Census. To clarify, the percentage increase is roughly 10.4% over 2010 levels.

Mr. YODER. So about a 10 percent increase, just——

Secretary LOCKE. Yes.

Mr. YODER [continuing]. Roughing it here? And I, in entering into this conversation we have had——

Secretary LOCKE. Of which the vast majority is for the JPSS Satellite System. $687 million, almost $700 million of that $822 million is for the satellite work.

DEPARTMENTAL EFFICIENCY

Mr. YODER. Okay. Well in light of particularly some of my colleagues comments prior to my questions in relation to this horrible debt burden that we have, and many of the speakers have already laid this out, and I know you understand it and I know you are concerned about it as well as every American is, I am troubled by departments and agencies that come forward in light of these conversations asking for additional spending. And so I am wondering, instead of asking the Congress to borrow another $822 million from the next generation, have you done as a Secretary, or have you had your heads of departments, look for efficiencies? We all know businesses and families across this country have cut spending. They have had to do more with less. Most of our constituents are getting by with less money. And many of them would love a 10 percent increase, even if it was for a major project, a satellite project. Or in their regards, you know, some home improvement project. They would love to be able to increase their discretionary spending in that regard.

So I guess my question is, what is the, what work have you done to try to find that $822 million internally? And do you feel that there is waste and inefficiency in the Department of Commerce?

Secretary LOCKE. Well first of all let me just say that we are very proud of our emphasis on efficiency and trying to save money. As I indicated in the very beginning, we returned or saved the American taxpayers almost $1.9 billion on the 2010 Census. Some of that, of course, was because of reserves that we did not have to tap into. We did not have hurricanes or major natural disasters that impacted the Census. That was money that had been set aside in case of those catastrophes that did not have to be used.

Also the 2010 Census was written up by the GAO and the Inspector General as perhaps the project most likely to fail in the federal government. It indicated that we had to set aside reserves to really look at things like the computer systems that were cobbled together because the previous administration had let out a contract for hand held computers. We paid out virtually all the money and got absolutely nothing in return. Absolutely useless for following up with households that did not mail back the Census form. And so

we had to scramble and go back to a paper and pencil system and cobble together a new computer system. It had never been completely tested so there was a great fear that it would not work. And thanks to the incredible management of the folks at the Census Bureau, the system held together. We had to make a lot of adjustments in how we use the computer system but it held together and it worked.

Then we embarked on an emphasis on management, and emphasized to the American public with advertising campaigns the need to send back the questionnaire. Virtually half the savings was from that, having a very successful effort of the American people to return the questionnaire so that we did not have to hire people to go door to door. And that is how we were able to achieve the $1.9 billion savings, or returning it to the taxpayers.

In the Economic Development Administration we have cut the time it takes to process an Economic Development Grant, whether for a scientific park, an industrial park, or wastewater treatment facility, or even a port project, from six months to one month without spending extra money.

Our Patent and Trademark Office, has been able to reduce the backlog by 10 percent even though patent applications have gone up.

And on program after program we are achieving savings. We are embarked on a major acquisition reform that we believe will save some $50 million in the next budget cycle. We have made savings of some, $255 million. Which includes, for instance, IT eliminating programs that we do not think really work. And for instance, on international trade we can help American companies grow, sell more of their products around the world, by focusing on international trade and export promotion. But the President has also asked for an enhancement so that we can staff some of these offices, foreign offices, where the people's sole job is to find buyers and customers for U.S. companies. We are also proposing to close down and pare down some of the staff in those areas that are not areas that would see great growth or have great potential for exports.

So we are trying to prioritize. We are really trying to go to our strengths and cutting back on those things that are not as productive.

FREE TRADE AGREEMENTS

Mr. YODER. Mr. Secretary, I appreciate that answer and appreciate your thorough response and the work that you have been doing to try to find reductions. I just think it would be difficult to go home to constituents and tell them I know you having to cut back, and you have lost your job, but we have got to continue to increase spending. And so while it sounds like you have done a number of things in the right direction, my encouragement would be to continue to try to find that $822 million from additional savings. It sounds like you are heading down the right track. It just appears we need to go further. And I would find it difficult to support additional spending given the state of the debt and the state of many of our constituents who are some of them struggling to survive. So I appreciate that.

My next question relates to trade and I noted in your testimony that you have expanded the amount of goods and services that have been exported, and you have taken some good credit for some things that you are doing in that regard. I guess my question would be, how much of the expansion in exports is related to our currency, the dollar value in the global marketplace, and in terms of when we are trading with other partners how much of that export is related to undervalued currency, such as in China? And how much is related to programs that we are doing as a Department of Commerce? And then with that as a follow up, where are we on the free trade agreements and why are those taking so long? A lot of folks ask me at home why those thing continue to lag within the administration.

Secretary LOCKE. Well I cannot give you, I do not think any economist could actually attribute the growth in exports to the movement of the currency, the Chinese currency, to the various programs, or to just changing world conditions. I can tell you that, for instance, when the President was in India he was able to help land over $11 billion worth of trade deals and sales resulting in supporting some 50,000 American jobs. We have led a record number of trade missions bringing hundreds of companies with us and immediately they were able to report $1 billion of increased sales.

But the federal agency and all the federal government's, or all the agencies within the federal government are working at a very intensive and collaborative fashion to really help promote exports, helping especially small- and medium-sized companies. And we are not trying to do it using just federal dollars. We are actually partnering, for instance, with the National Association of Manufacturers, letting them identify their top companies that they think would benefit from assistance from the Department of Commerce finding buyers and customers for them. We were actually working with UPS and FedEx, where they are identifying their customers that they feel are most likely to take advantage and benefit from our programs to sell to more countries. It is in their economic self-interest because the more their customers are shipping, the more revenues for those private sector companies. This enables us to meet our goal of helping double exports without having to use scarce federal dollars.

These are all part of a collaborative effort. But we can tell you that we are on track to meet the President's goal of doubling U.S. exports over the next five years. When the President first announced that there were many who were skeptical that it could be done. All it takes is a 14 percent increase in exports every year, and when you compound that, add that on top of the previous year, over five years you will be able to achieve that goal. Last year we were up 17 percent. Exports to China were up 32 to 34 percent. Agricultural exports are the second highest in U.S. history and we have a trade surplus there. Tourism, foreign tourists coming into the United States is considered an export. It is foreign money buying American products and services. Instead of occurring let us say in Germany it actually occurs on American soil when those German visitors come to America. Those were up 11 percent last year over 2009 and expected to grow an additional 7 or 8 percent this coming year. So all of these things are having an impact.

That is why the trade agreements are important and that is why we are very pleased that we were able to reach an agreement with Korea. You know, the President did set an initial timeframe, a deadline, a goal of concluding the Korea Free Trade Agreement in November in time for the G–20 meeting that was being held in Korea. But he walked away from that deal because he did not feel it was good enough. And thankfully he turned down what was then on the table because it enabled him to go back in a stronger position and get a deal that both the auto workers and the auto dealers support. And so it was a much better deal. And it shows that if we are not bound by an arbitrary deadline, or a linkage with other trade deals, that we are able to negotiate from a position of strength. And that is why the President wants to conclude an agreement with Panama and Colombia but does not feel that we should be tied to a particular deadline because that just gives those on the other side of the negotiating table greater strength. If they know that we have to reach a deal by a certain time frame then they will hold out and we will not get the best that we can get.

TELECOM SPECTRUM

Mr. YODER. Well I appreciate that very thorough answer as well, and many have made the deadline argument as well in the issue over the Middle East and our military efforts there. And so it is interesting in some regards deadlines are useful and in other cases they are not. And so the next question I have I guess relates, and one more, Mr. Chairman, and then I will yield back, relates to just an issue with GPS.

Recently the FCC allowed a waiver for a company to repurpose satellite spectrum immediately neighboring that of GPS for use in extremely high powered ground based transmissions. And I just want to, I know you have, I think it is the NTIA that manages the telecom spectrum, I want to sort of put this in your radar so to speak and see if you could help us with this. Because there are some companies that produce GPS products in the GPS industry that have serious concerns that this planned use is incompatible with existing GPS use. And I want to know if you are familiar with that, and if you have any comment? Or maybe you could get some information back to us?

Secretary LOCKE. As I understand it, Congressman, that relates to a specific company.

Mr. YODER. Yes.

Secretary LOCKE. And I understand that the FCC did grant a provisional authorization in the issue at hand, provided that some of those technical issues could be worked out. And I do know that our folks at NTIA are working with that particular company to address that issue so that that provisional authorization can move forward.

Mr. YODER. Thank you, Mr. Chairman. I yield back.

WORLD MANUFACTURING LEADER

Mr. WOLF. Thank you. Before I go to Mr. Serrano? Mr. Serrano is not there? Okay, I think he came in, am I wrong? Or who should I go to? Okay. I was right? All right, I just wanted to, I have a comment here, on the manufacturing. Earlier this week the *Financial*

Times reported that China officially has displaced the U.S. as the world's leading manufacturer, the first time a country has topped America in 110 years. So you might want to take a look at that *Financial Times* report. And what we will do is get a copy of that and put it in the record at this point.

[The information follows:]

FT.com
FINANCIAL TIMES

China noses ahead as top goods producer

By Peter Marsh in London
Published: March 13 2011 22:22 | Last updated: March 13 2011 22:22

China has become the world's top manufacturing country by output, returning the country to the position it occupied in the early 19th century and ending the US's 110-year run as the largest goods producer.

The change is revealed in a study released on Monday by IHS Global Insight, a US-based economics consultancy, which estimates that China last year accounted for 19.8 per cent of world manufacturing output, fractionally ahead of the US with 19.4 per cent.

China's reversion to the top position marked the **"closing of a 500-year cycle in economic history"**, said Robert Allen of Nuffield College, Oxford, a leading economic historian.

Deborah Wince-Smith, chief executive of the Council on Competitiveness, a Washington-based business group, said the US "should be worried" by China taking over a position that the country had occupied since about 1895.

"This shows the need for the US to **compete in the future** not on the basis of commodity manufacturing but on innovation and new kinds of services that are driven by production industries," she said.

The last time China was the world's biggest goods producer was in about 1850 when the country was close to the end of a long period of population growth and technological ascendancy. Buoyed by the industrial revolution, the UK then became the top maker of factory goods and held this position for almost 50 years, following which the US began a long run as the world's premier manufacturing nation.

Nicholas Crafts of Warwick university, an expert on long-term economic change, said: "This marks a fundamental shift in the global division of labour [involving goods production] which is unlikely to be reversed in the near future."

Economic historians believe China's share of world manufacturing output in 1830 was nearly 30 per cent, after which it fell to about 6 per cent in 1900 and half this figure in 1990.

Since then, China has been rapidly catching up on the US, helped by low labour costs that have caused a massive shift of manufacturing to China, strong inward investment by foreign companies and a fast-expanding economy.

Alan Tomelson, research fellow at the consultative US Business and Industry Council, a research group, described the switch in the top rules as a "wake-up call" for the US. He said it had been driven by China's push over the past decade to transfer resources to a domestically based manufacturing sector helped by "unfair" government subsidies and an artificially weak renminbi.

China makes more than the US, but takes nine times as many people to do so

Mark Killion, IHS's head of world industry services, said, however, that the findings from the latest data were far from bleak for US manufacturing. "The US has a huge productivity advantage in that it produced only slightly less than China's manufacturing output in 2010 but with 11.5m workers compared to the 100m employed in the same sector in China."

Also, Mr Killion pointed out that much of China's manufacturing output was driven by the Chinese subsidiaries of US companies and was based around US-derived technologies, especially in fields such as electronics.

The IHS data – worked out on the basis of current-year dollars – show that world manufacturing output in 2010 was $10,078bn, which represents "real", inflation-adjusted growth of 9.7 per cent on the equivalent number in 2009, indicating a strong recovery from the recession.

The figures are derived from data gathered by national statistical agencies around the world and have been published several months ahead of the equivalent comparative figures that will come out from government bodies such as the UN and World Bank.

China's output figure in dollars in 2010 was boosted slightly by the 3 per cent appreciation of the renminbi against the dollar between 2009 and 2010.

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China tops US in manufacturing: study

(AFP) – 3 days ago

WASHINGTON — China topped the United States as the world's largest manufacturer for the first time last year, according to a study Monday by economic research firm IHS Global Insight.

China accounted for 19.8 percent of global manufacturing in 2010, compared with 19.4 percent for the US -- $1.995 trillion worth, compared with $1.952 trillion, according to IHS.

But by measures of productivity, China remained far behind the United States, with US manufacturing workers generating more than eight times the value per person than China's.

"In other words, the US manufacturing sector is producing roughly the same amount of output in 2010 with 11.5 million workers as opposed to its Chinese counterpart with around 100 million workers," IHS said.

Japan remained a distant third last year, generating $1.027 trillion by manufacturing, followed by Germany, with $618 billion.

But the most telling indicators were the pace of growth: over 2008-2010, China's manufacturing sector grew at a pace of 20.2 percent per year, while the United States grew at 1.8 percent and Japan at 4.25 percent.

Germany and fifth-ranked South Korea both contracted, and sixth-ranked India grew at 7.3 percent annually.

IHS pointed out that at one-third of the total economy, China's manufacturing sector is far larger as a portion of output than any other country. In the United States, by comparison, the share is just 13 percent of all production; in the other top-ranked countries, it is 15-20 percent.

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Workers assemble cars at the Shenlong Auto plant in Wuhan, central China's Hubei province

The Chosun Ilbo

Print

China Regains Status as World's Top Manufacturer

China has dethroned the U.S. and regained its status as the world's largest manufacturing country for the first time since the end of the 19th century, according to a report by the Financial Times.

The British daily, citing IHS Global Insight, reported on Monday that China garnered a 19.8 percent share of the global manufacturing market last year, edging out the U.S. with 19.4 percent. Last year's total manufacturing production worldwide is estimated at US$1.078 trillion.

While China is back on top after 110 years, this does not mean the death knell for the U.S. manufacturing industry, the FT pointed out. The industry in the U.S. is still competitive, with production per capita nine times greater than that of China, and a considerable volume of Chinese-made goods are produced by local factories of American corporations.

englishnews@chosun.com / Mar. 15, 2011 10:38 KST

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HUFFPOST BUSINESS

China Edges Ahead Of U.S. In Manufacturing, Report Says

The Huffington Post Yepoka Yeebo First Posted: 03/14/11 06:16 PM Updated: 03/14/11 06:16 PM

After over a century of dominance, U.S. manufacturing has dropped into second place behind China, according to estimates released Monday by IHS Global Insight.

After being ravaged by the recession, American manufacturing rebounded in 2009, and grew 12.6 percent in 2010, representing an estimated $1.95 trillion of the American economy, according to the report. IHS examined data from the U.S. Bureau of Economic Analysis, and the National Bureau of Statistics of China. The U.S. fell behind China in the total dollar value of manufacturing output, according to the report.

In China, the manufacturing sector grew 18 percent last year, contributing more than $2 trillion to the economy. The sheer scale of Chinese manufacturing, and the Chinese Yuan becoming more valuable as a currency helped tip the balance, according to IHS Global Insight.

"The U.S. went through a historically severe recession, while China continued to expand," said Mark Killion, economist at IHS Global Insight. "We knew that it would occur anyway, but decline in the U.S. and the rise in China brought this much closer," said Killion.

Analysts warned against considering the news a death knell for American manufacturing.

"The U.S. were world leaders for much of the 20th century, but there wasn't much competition," said Jack McDougle, senior vice president of the Council on Competitiveness, a non-partisan group of business and labor leaders. McDougle stressed that, the IHS Global Insight report found that the U.S. still leads the way when it comes to productivity, with 11.5 million American workers producing roughly the same amount of output as as 100 million Chinese workers.

McDougle said that this was, in part, because much of American manufacturing is focussed on higher value products, which mean high-tech manufacturing methods, better management and more skilled workers. "American manufacturing jobs pay, on average a total of $70,000 a year

including benefits," he said citing figures from the U.S. Bureau of Economic Analysis. "The value that they create is much higher."

Manufacturers like General Electric, for example, were realizing this, and moving production of some household appliances back to the U.S., said McDougle, and many Chinese manufacturers still had to rely on U.S. technology, he added. "The sky is not falling."

And the U.S. still has a far larger economy than China, said Carl Weinberg of High Frequency Economics. "Our economy is two-and-a-half times the size of theirs," he added.China's gross domestic product for 2010 is an estimated $6 trillion, compared with an estimated U.S. GDP of $15 trillion.

The National Association of Manufacturers contend that the U.S. is still the world's biggest manufacturer. In a post on *Shopfloor*, a manufacturing industry blog, Fank Varago, vice president of international economic affairs at the NAM criticized the data used by IHS Global Insight:

> "First, the report did not measure the physical quantity or volume of manufacturing, but rather measured current dollar output which is impractical due to price changes and exchange rate changes. Real Gross Domestic Product (GDP), and its manufacturing component, Real Manufacturing Value-Added, are the correct ways to measure economic output, because they are adjusted to remove the effect of price and exchange rate changes and measure real output."

FINANCIAL TIMES

Emerging economies flex manufacturing muscle

March 14, 2011 2:00 pm by Peter Marsh

China has superseded the US as the world's leader in manufacturing output, ending America's run of more than a century as the top player in factory production. Brazil has also increased its manufacturing muscle, jumping to sixth position in terms of output last year, from eighth in 2009.

The changes in the rankings of the world's biggest manufacturing nations – revealed in a study by the IHS Global Insight economics consultancy – underline how emerging economies have grabbed a much bigger share of world manufacturing production in the past decade.

In 2000 the world's rich nations – western Europe, North America and Japan – were responsible for 72 per cent of global total factory output, down only slightly from the 80 per cent registered in 1990. Last year, by contrast, the rich nations accounted for a little more than half of world goods production. The so-called bric nations were responsible for just over a quarter of the total, up from 11 per cent in 2000.

In the changes over the past decade:

- China has been the most significant player. Its share of 6.9 per cent of total manufacturing in 2000 almost tripled in the following decade to reach 19.8 per cent last year. As a result the US, the top country in manufacturing since it ousted the UK from this role at the end of the 19th century, was pushed into second place with a share of 19.4 per cent
- Other bric nations account for much smaller divisions of world output, with a share of 2.7 per cent for Brazil and with both Russia and India last year responsible for 2.2 per cent of the total
- Brazil last year increased its factory production by an inflation-adjusted 9.9 per cent, enough to displace Britain from the top seven in the league table. In 2000 Brazil was in 10th position in the rankings while India and Russia, now in joint 10th place, were numbers 14 and 21 respectively

The causes of the changes:

Some of the changes have been helped by currency factors. The dollar's weakness

against most major currencies in the past year has inflated slightly the value of other nations' output figures when translated into the US unit.

On the other hand the dollar's fall should in theory have given US-based companies some increase in competitiveness that might have been expected them to lift production to offset somewhat the imbalance linked to these changes.

The future:

What might happen in the coming decade? China's manufacturing growth is now taken for granted, and it seems likely that the country will continue to increase its share of the world total in the next few years, although perhaps at a lower rate than in the past.

For Brazil, Russia and India, all much more minor countries in terms of manufacturing compared to China, there is plenty of opportunity to expand. Between now and 2020 it will be surprising if they fail to continue their ascent up the league table.

World manufacturing production 2010

	Country	Man. Output ($bn)	Change on 2009 (%)
1	China	1,995.40	12.3
2	United States	1,951.60	6.6
3	Japan	1,027.40	18.6
4	Germany	618	11.1
5	Italy	315.2	5.8
6	Brazil	273.7	9.9
7	France	253.3	4.7
8	South Korea	239.2	12.8
9	United Kingdom	235.2	3.8
10=	India	217.8	10.7
10=	Russia	217.8	9.7
12	Canada	194.8	7.7
13	Mexico	180.6	10.5
14	Indonesia	180.4	4.4
15	Spain	164.9	2.4
	World Total	100,783	9.7

Share of world manufacturing output (%)

Country	2000	2010
China	6.9	19.8
Brazil	2.1	3.1
Russia	0.8	2.2
India	1.2	2.2
Total for 4 countries	11	26.9

Position in manufacturing league table

Country	2000	2010
China	3	1
Brazil	10	6
Russia	21	10
India	14	10

Source: IHS Global Insight

Note: output is measured in current year dollars, translated from local currency at market exchange rates. The change on 2009 is adjusted for inflation and currency movements

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China Tops U.S. to Become the World's Leading Manufacturer

Posted By 2point6billion.com On Tuesday, March 15 @ 4:26 pm In Markets | 1 Comment

By Jennifer Park

Mar. 15 – After over 100 years of dominance, the United States gave away its place as the world's top manufacturer to China last year, according to data released by IHS Global Insight on Monday.

China assumed a 19.8 percent (US$1.995 trillion) share of total manufacturing in 2010, a dramatic increase compared to that of 6.9 percent a decade ago. This past year, U.S. manufacturing placed second with a 19.4 percent (US$1.952 trillion) share. Japan came in at a distant third with total manufacturing valued at US$1.027 trillion, followed by Germany in fourth at US$618 billion.

Despite these results, it may be too hasty to assume the decline of the U.S. manufacturing sector just yet, since the country's productivity rate remains far ahead of China in that respect. It was shown that China required 110 million workers to produce approximately the same amount of goods that 11.5 million American workers could produce. Moreover, the United States is still ahead of China in terms of production methods.

Also important to consider when calculating the relative value of U.S. versus Chinese manufacturing is the contribution of the Global Financial Crisis, which brought about a devaluation of the U.S. dollar, and China's relatively recent decision to start allowing its national currency, the yuan, to appreciate.

Nevertheless, it is hard to deny that the much-predicted growth in China's production and manufacturing sector has now become a reality and is projected to continue growing. China's rapid manufacturing increase of 20.2 percent per year compared to the 1.8 percent growth experienced by the United States supports this projection.

Article printed from 2point6billion.com – Foreign Direct Investment in Asia:
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URL to article: **http://www.2point6billion.com/news/2011/03/15/china-tops-u-s-to-become-the-worlds-leading-manufacturer-8832.html**

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China.org.cn

China surpasses US as world's top manufacturer

By measures of output, China edged by the United States to become the world's largest manufacturing country last year, ending US dominance over the last 110 years, according to a study Monday by economic research firm IHS Global Insight.

China accounted for 19.8 percent of global production in 2010, slightly higher than the 19.4 percent of the United States, the report said.

Yet this doesn't mean death for US manufacturing, since its production efficiency is still quite competitive, the report pointed.

"In other words, the US manufacturing sector is producing roughly the same amount of output in 2010 with 11.5 million workers as opposed to its Chinese counterpart with around 100 million workers," IHS said.

A large portion of China's manufacturing is driven by the local plants of US companies and technologies, IHS added.

China's business press carried the story above on Tuesday. China.org.cn has not checked the stories and does not vouch for their accuracy.

Back Print

Finfacts Ireland
Business & Finance Portal
Ireland's Top Business Website
Founded 1997

GLOBAL ECONOMY

China became the world's biggest manufacturer in 2010; US loses crown held since 1895

By Michael Hennigan, Founder and Editor of Finfacts
Mar 14, 2011 - 4:18 AM

Printer-friendly page from Finfacts Ireland Business News - Click for the News Main Page - A service of the Finfacts Ireland Business and Finance Portal

A materials flow chart of Stegman Tool Company, Inc., Troy, Michigan.

China became the world's biggest manufacturer in 2010, overtaking the US which had held the crown since 1895.

US consultancy IHS Global Insight estimated that in 2010, China accounted for 19.8% of global manufacturing output, compared with the US share of 19.4%.

China was the world's biggest manufacturer until it was overtaken by Britain in 1850 and then the US became the dominant manufacturer from 1895.

In 2000, the advanced countries in Western Europe, North America and Japan, accounted for 72% of global manufacturing output, down from 80% in 1990. By 2010, the wealthy nations accounted for a little more than half of world goods production. The BRIC countries (Brazil, Russia, India and China) accounted for just over a quarter of the total, up from 11% in 2000.

China's share of factory output was 6.9% of total manufacturing in 2000; its share has tripled in a decade.

The US with 11.5m workers is hugely more productive than China which has 100m employed in the same sector.

China's manufacturing base is skewed towards a dependency on cheaper goods in such sectors as textiles, apparel, appliances, as well as certain commodities. Textile, apparel and appliances together make up 25% of Chinese manufacturing, compared to 13% in the United States.

The US manufacturing base is dominated by sectors such as aircraft, special industrial machinery, medical and scientific equipment and media-related industries, including software.

China's electronics sector is dominated by foreign-owned firms.

In 2010, the UK slipped 2 places behind France, which was in 7th place in terms of global share. According to the league table, Italy was in fifth position and Brazil in the sixth rank, with China, the US, Japan and Germany in the top four slots.

In the US, services overtook goods as the dominant sector in the economy in 1958 and now accounts for almost 70% of economic output.

Last September, Xi Jinping, Chinese vice-president and the heir apparent to Hu Jintao, said foreign-invested enterprises accounted for 22% of tax revenues, 28% of added industrial value, 55% of foreign trade and 45m jobs in China.

A report published last month says China's economic development as measured by its gross domestic product is still sustained primarily by industry. Exports and investment deliver the bulk of growth - - and have done so for the past four decades. However, services have become steadily more important since the 1980s, bringing their share of economic output close to that of the secondary sector.

World manufacturing production 2010

	Country	Man. Output ($bn)	Change on 2009 (%)
1	China	1,995.40	12.3
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4	Germany	618	11.1
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Total for 4 countries	11	26.9
Position in manufacturing league table		
Country	2000	2010
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India	14	10

Source: IHS Global Insight

Also last month, Mark Perry, a professor of economics at the University of Michigan, Flint - - a key automotive manufacturing centre, said in The Wall Street Journal (via blog post) that taken on its own, US manufacturing would rank today as the sixth largest economy in the world, just behind France and ahead of the United Kingdom, Italy and Brazil.

Prof. Perry said: *"Our world-class agriculture sector provides a great model for how to think about the evolution of US manufacturing. The US produces more agricultural output today—with only 2.6% of our work force involved in farming - - than we did 100 years ago, when farming jobs represented almost 40% of the labor force. Likewise, we're able to produce twice as much manufacturing output today as in the 1970s, with about seven million fewer workers. That means yesterday's farmhands and plant workers can become today's computer engineers, medical doctors and financial managers."*

Deborah Wince-Smith, the president and CEO of the Washington DC-based business group, the Council on Competitiveness, told a House Energy & Commerce Subcommittee in early March that the multiplier effect of American manufacturing makes it the cornerstone of any robust economic recovery.

The comments came during her testimony to the Subcommittee on Commerce, Manufacturing, and Trade during a hearing titled, "Made in America: Innovations in Job Creation and Economic Growth."

"The US manufacturing sector is a key engine of innovation, wealth generation, job growth and national security," Wince-Smith said. *"America cannot retain its position of leadership in the global marketplace without a robust and vibrant industrial base."*

The Council's chief executive also articulated the vision of America's leading CEOs on the path to manufacturing competitiveness, found in the Council's most recent publication, *Ignite 1.0*. The report features specific recommendations from over three dozen chief executives on a broad set of topics that include energy policy, capital costs and US education in science and technology.

Ignite 1.0 is the first in a three-part series to be released by the Council's flagship US Manufacturing Competitiveness Initiative (USMCI). The initiative will draw insights from university presidents and labor leaders in the second and third installments in the series. The USMCI is focused on developing a comprehensive National Manufacturing Strategy to deliver to Congress and the Administration at a national summit in December 2011.

Meanwhile, the US Business and Industry Council said in a recent report (pdf) that migration of prime contractors overseas inexorably pulls much of their supply chains with them. The export of blue-collar production work leads to the export of white-collar manufacturing-related work, as companies seek the advantages of locating researchers and designers near the factories they service.

In fact, there is a continuous feed-back loop between R&D efforts and the factory floor, with the two functions, R&D and production, operating in tandem, And the report says as is well documented, R&D and other technology work often produce a clustering effect, which draws labs and similar facilities from other industries in search of new synergies. The notion that the United States will retain high-end design functions while letting production migrate overseas is wishful thinking. Without major globalization policy changes, this vicious cycle of manufacturing flight cannot be turned into a virtuous cycle of manufacturing resurgence.

The report says that the United States should focus any new trade agreements on high-income countries capable of

serving as final consumers of US exports. Washington's recent focus on third world countries capable of serving only as re-export platforms has been a substantial contributor to today's current trade deficits. In particular, the United States should seek a free trade agreement with Europe that excludes agriculture. Washington should also take stronger measures to open Japanese and Korean markets, including unilateral tariffs if necessary.

Charlie Szews, Oshkosh Corporation CEO discusses the state of employment in the US manufacturing sector:

US China-Trade

The US trade gap with China was $273bn in 2010, up from $84bn in 2000.

Data from the US-China Business Council reveal how in nine years the amount of goods imported from China has tripled in size.

In 2000 the value of goods imported was at $100bn but by 2009 that figure was at $296bn. In comparison the US exported $69bn worth of goods to China.

Table 1: China's Trade with the United States ($ billion)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
US exports	16.3	19.2	22.1	28.4	34.7	41.8	55.2	65.2	71.5	69.6
% change	24.4	18.3	15.1	28.5	22.2	20.6	32.1	18.1	9.5	-2.6
US imports	100.0	102.3	125.2	152.4	196.7	243.5	287.8	321.5	337.8	296.4
% change	22.3	2.2	22.4	21.7	29.1	23.8	18.2	11.7	5.1	-12.3
Total	116.3	121.5	147.3	180.8	231.4	285.3	343	386.7	409.2	366.0
% change	22.6	21.4	21.2	22.8	28	23.3	20.2	12.7	5.8	-10.6
US balance	-83.7	-83.0	-103.1	-124.0	-162.0	-201.6	-232.5	-256.3	-266.3	-22

Notes: US exports reported on FOB basis; imports on a general customs value, CIF basis
Source: US International Trade Commission

The Re-emergence of China

According to the late eminent economic historian, Angus Maddison (1826-2010), until 1800, about three fifths of the world's commerce and production took place in and around China and India. So did much of the world's scientific and technological progress, including the Chinese invention of paper, explosives, and printing, and medieval India's launch of modern mathematics. In the early 1830s, when President Andrew Jackson sent the first US envoy across the Pacific to Siam (Thailand), Asia still accounted for over half of global GDP (gross domestic product).

It's important to understand that the current post-Mao Zedong modernisation of China, is not a simple story of a backward country achieving an economic miracle. A vast unified country over a span of two thousand years, overwhelmingly dominated by one ethnic group, the Han, was a pioneer in bureaucratic modes of governance. Maddison says that in the tenth century, it was already recruiting professionally trained public servants on a meritocratic basis. The economic impact of the bureaucracy was very positive for agriculture

They nurtured it with hydraulic works; printing enabled the distribution of illustrated agricultural handbooks; farmers settled in promising new regions; a public granary system to mitigate famines was established. They fostered innovation by introducing early ripening seeds which permitted double or triple cropping. New crops were introduced - - tea in the T'ang dynasty, cotton in the Sung, sorghum in the Yuan, and new world crops such as maize, potatoes, sweet potatoes, peanuts and tobacco in the Ming.

From the nineteenth century, internal rebellions and colonial intrusions resulted in China's share of world output falling from one third in 1820 to one twentieth by 1952. Its real per capita income fell from 90% to less than a quarter of the world average. Nineteen foreign powers established colonial enclaves; three wars were fought with Japan and two with France and the UK, the Boxer rebellion in 1900 involved action with an international force including Americans from their new colony of the Philippine Islands; Russia seized 10% of Chinese territory in the 1850s in what is now Eastern Siberia and in the first years of the Chinese republic from 1912, it helped detach Outer Mongolia. After all these foreign wars, the victorious powers exacted large financial indemnities.

Professor Maddison, a British-born economic historian with a compulsion for quantification, spent many of his 83 years calculating the size of economies over the last three millenniums. In one study he estimated the size of the world economy in AD 1 as about one five-hundredth of what it was in 2008.

In his research, he sought to reconstruct thousands of years' of economic data, in particular in his 2007 book *"Contours of the World Economy 1-2030 AD."* **He claimed that per capita income around the globe had remained largely stagnant from about 1000 to 1820**, after which the world became exponentially richer and life expectancies surged.

In another influential book, *"Chinese Economic Performance in the Long Run,"* in 1998, he tracked the history of Chinese growth since 960. The book demonstrated that China's recent rise was merely a return to economic superpowerdom, as the Middle Kingdom had already dominated the world economy for many centuries.

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China displaces US as world's top manufacturing nation

14 March 2011

China has ended a 110-year-long US leadership, overtaking the country as the world's top manufacturing nation in 2010, reports quoting a research report by US-based consultancy IHS Global Insight said.

China last year accounted for 19.8 per cent of the world's manufacturing output while the US accounted for 19.4 per cent, according to the study.

The findings, however, were far from bleak for US manufacturing, said Mark Killion, IHS's head of world industry services.

"The US has a huge productivity advantage in that it produced only slightly less than China's manufacturing output in 2010 but with 11.5 million workers compared to the 100 million employed in the same sector in China," Killion said.

According to him, much of China's manufacturing output was driven by the Chinese subsidiaries of US companies and was based around US-derived technologies.

China's manufacturing base is dependent on cheaper goods in sectors such as textiles, apparel, appliances, which together make up 25 per cent of Chinese manufacturing, compared to 13 per cent in the United States.

The US manufacturing base, on the other hand, is dominated by high denomination sectors such as aircraft, industrial machinery, medical and scientific equipment and software and media-related industries.

China's electronics sector is dominated by foreign-owned firms.

The US will, however, now have to look for innovation-based production and services if it is to return to pre-eminence on the manufacturing front.

"This shows the need for the US to compete in the future not on the basis of commodity manufacturing but on innovation and new kinds of services that are driven by production industries," Deborah Wince-Smith, chief executive of the Council on Competitiveness, a Washington-based business group, said.

Robert Allen, a leading economic historian with Nuffield College, Oxford, said China's return as world's top manufacturer marked the "closing of a 500-year cycle in economic history."

"This marks a fundamental shift in the global division of labor, which is unlikely to be reversed in the near future," Nicholas Crafts of Warwick university, an expert on long-term economic change, was quoted as saying.

Alan Tomelson, research fellow at the conservative U.S. Business and Industry Council, a research group,

But many economists say China's push over the past decade to transfer resources to a domestically based manufacturing sector has been helped by "unfair" government subsidies and an artificially weak renminbi.

US had replaced the UK as the world's biggest manufacturing nation in 1900s while China remained the number one goods producer in the 1850s.

According to economic historians, China had a 30 per cent share of world manufacturing output in 1830, which came down to around 6 per cent in 1900 and to about 3 per cent in 1990.

China has since successfully used its labour cost advantage and manufacturing skills, attracting overseas investments and causing a massive shift of manufacturing to that country.

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Insightful Analysis and Commentary for U.S. & Global Equity Investors

China Passes The US As Largest Manufacturer

Posted: March 14, 2011 at 5:41 am

IHS Global Insight claims that China surpassed the US as the world's largest manufacturing nation last year. China had 19.9% of the world's market. The US had 19.4%. Several media outlets claim that America was in first place for 110 years. America is humiliated once again by Chinese success. Surely the success of China in manufacturing will help it drive ahead of the US in GDP with twenty or thirty years.

China will find that its industrial success is only partially good news. It has actually begun to face some of that recently. The People's Republic's position as the low-cost producer of finished goods has begun to be usurped by nations such as Vietnam, Mexico, and in some cases South Korea. None of them can match the size of China's industrial machine. They can, however, take a lot of factory production away from China as a group. China may have 20% of the market now, but that may not last. Remember, the fears about Japan taking over the U.S. economy during the 1980s? That never happened.

China has already begun to be stung by increased labor costs. There is a shortage of skilled workers in some of the most populous regions in the country. Firms like Foxconn have started to move production inland in the hope of tapping less expensive labor markets. Eventually, the cost of workers will rise there, too. Chinese workers, meanwhile, have fought and gotten double digit increases in compensation in some cities. These workers have more money to spend on food, housing, and middle class lifestyles. That will push China's inflation higher. This may lead to more inflation which will drive up the cost of manufacturing further.

China will also become an occasional victim of the economic cycles of the rest of the world. As its portion of the world's manufacturing market grows, the Chinese economy will become more and more affected by the slow, recessionary parts of the cycles. Highly skilled employees will now expect their wages to remain steady even China's income from exports slows.

China may have become the word's manufacturing champion, but it is a mixed blessing.

Douglas McIntyre

BUSINESS & LEADERSHIP

China passes US as largest manufacturer

14.03.2011

Categories: World Economy, Manufacturing
Tags: China, US,
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The US has lost the tag of the world's biggest manufacturer as China passes it out in terms of output, according to a report in the Financial Times today.

The US has held the title of the world's largest goods producer for about 110 years but new data from IHS Global Insight shows that China has now stolen back the position it held in the early 19th century.

The US-based economics consultancy estimates that China last year accounted for 19.8pc of world manufacturing output, slightly ahead of the US which manufactured 19.4pc of the world's produced goods.

Although some analysts believe the US should be worried by the data, the IHS said the news is not as bleak as first appears.

"The US has a huge productivity advantage in that it produced only slightly less than China's manufacturing output in 2010, but with 11.5 million workers compared to the 100 million employed in the same sector in China," said Mark Killion, IHS's head of world industry services.

Categories: World Economy, Manufacturing
Tags: China, US,
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U.S. Manufacturing Remains World's Largest

Posted by: Frank Vargo under Economy on March 14, 2011 @ 10:52 am

U.S. manufacturing remains the world's largest manufacturer, despite an inaccurate report in today's *Financial Times* that China has passed the United States. American manufacturing, in fact, is so large that if it were a self-standing economy, it would be the eighth largest in the world.

There are a number of errors in the data provided to the *Financial Times* by a private sector consultant. First, the report did not measure the physical quantity or volume of manufacturing, but rather measured current dollar output which is impractical due to price changes and exchange rate changes. Real Gross Domestic Product (GDP), and its manufacturing component, Real Manufacturing Value-Added, are the correct ways to measure economic output, because they are adjusted to remove the effect of price and exchange rate changes and measure real output.

The United Nations Statistics Division compiles global data on manufacturing value-added, and its most recent data shows the United States continues to lead, with close to 21 percent of all global manufacturing output in terms of constant dollars (real manufacturing value-added in 2009). China is the second largest, with about 15 percent of global manufacturing. No official data are available for 2010 yet, but given the gap between the top two manufacturers, China will not have surpassed the United States in 2010.

The second problem is that the consultant did not rely on official data in making its estimates. Rather than use the United Nations official data which is agreed upon by most economists as reliable, the consultant appears to have made its own assumptions. Using the consultant's growth assumptions for China and the United States in 2010, and applying them to the official 2009 data shows that even in current dollars the United States remained the worlds' largest manufacturer in 2010.

The U.S. Department of Commerce, which compiles the manufacturing value-added data, says that preliminary 2010 estimates will not be available until next month. In an effort to clarify the erroneous information provided to the *Financial Times*, the National Association of Manufacturers shared the data that shows the U.S. remains the world's largest manufacturer.

Frank Vargo is the NAM vice president of international economic affairs.

Rating: 5.0/**5** (2 votes cast)

5 Comments for this entry

- *Peter Marsh*
  March 23rd, 2011 on 7:38 pm

  I've just seen Frank Vargo's comments on the Financial Times story which said that China was now the biggest manufacturer in the world, overtaking the US. I am the author of the FT article & I spoke to Frank before the article was published. I hope you will allow me to make a few comments.

  Frank says there are a number of errors in the data which I used. He does not mention this but the data came from IHS Gobal Insight which is an economics consultancy with a good reputation for providing robust data.

  I've known the people at this consultancy for some time and based a number of stories on figures they have provided. I have not heard from others in the past saying the data they use are inaccurate or suffer from methodological flaws.

  Frank also says it is not a good idea to use current year data denominated in dollars when looking at world GDP or its constituents .Of course it is possible to count world or national GDP, and manufacturing value-added output ,in any currency unit , based on the currency values of any year.

  But the convention is that when statisticians or economists count up world GDP in a specific year & divide this between the different countries, then they normally use the currency values of that same year, with the values for different countries translated into dollars at current market rates.

  It's possible to see this simply by consulting World Bank or UN reports. This is how such data are normally measured when we are interested in taking a snapshot of GDP (or the constituents of this) in a single year. If we want to consider the year-on-year change in such values then we use real, inflation adjusted values. But this was not what this specific article was about.

  Frank also says the consultancy did not use "official" data. What IHS did was to take national accounts data from the different countries and then subject them to the same analytical treatment as the UN or other "official" bodies would do. The consultancy did this in a more timely fashion, however, and got their data out into the public domain (at least via the FT) rather earlier than the UN statisticians.

  His contention is that everyone should suspend judgment on this matter until the UN publishes its data for 2010. That should happen in a few months. I agree it will be interesting to see the UN version of the same data.

  However the UN system suffers from a problem that the UN statisticians do not seem able to distinguish between industrial output and manufacturing output for China. (Industrial output is manufacturing plus other forms of output including construction and energy.)

So the UN data for China do not give a clear view for China manufacturing output. Therefore there is no point in waiting for the UN data because they will not give the answers of interest as to how big Chinese manufacturing output is compared to that of other countries.

By the way, the statisticians at the World Bank do this job rather better.They are capable of differentiating between industrial and manufacturing output for China. But again the World Bank data for 2010 will not be available for some time.

Of course all data are subject to revision. So the "final " data for 2010 may show some differences compared to the data that are in the IHS figures. But for the time being the IHS numbers are the best we have.

If for some reason later data are revised to show that the US is actually still no 1 in manufacturing in the world, then almost certainly it will fall behind China very soon. That is logical when you consider China has more than 3 times more people than the US with technology and production standards rapidly improving.

Rather than dismiss the IHS data as wrong , Frank and the NAM would do better (I think) to address the wider issues at stake here.One of the interesting aspects to the discussion is that China and the US create roughly equal amounts of manufacturing goods (with China just ahead, according to the IHS numbers) but with the US employing a workforce about 1/10 the size of that in China.

The productivity advantage is worth highlighting even if it turns out to be true (as the best available data would now suggest) that the US has indeed lost its 110-year-old lead on the rest of the world in this particular part of the world economy.

For anyone interested there is a fuller version of the story on ft.com which gives the full league table of the top 15 countries in manufacturing in 2010—see http://blogs.ft.com/beyond-brics/2011/03/14/emerging-economies-flex-manufacturing-muscle

Peter Marsh , FT manufacturing editor. tel 44 20 7873 3436 =peter.marsh@ft.com

- *jxie*
  March 15th, 2011 on 11:50 pm

FWIW, in 2010 China's mining, manufacturing, and utilities was at 16 trillion yuans. China does break down to manufacturing value-added in its stats, but it takes a while to release that. The latest available data is for 2007.

"Constant dollar terms" in your context really means "constant 2005 dollar terms", right? If I understand it correctly, in 2005 $1 exchanged for 8.28 yuan, and that is the base for the "constant 2005 dollar terms" calculation. Moreoever, you need to factor in that the accumulative inflation rate from 2005 to 2010 in China is a bit higher than that in the US.

So, $1 in 2010, in "constant 2005 dollar terms", actually is valued at somewhere between 8.4 and 8.5 yuan in 2010. That is about 28% higher than the real exchange rate, based on which many consider yuan is already undervalued.

- *Martian150*
  March 15th, 2011 on 12:00 am

  Quoting Mr. Frank Vargo:

  "Please revisit the data and look at row 690 as well as 691. There you will see something interesting — they are identical, even though row 690 is ISIC C-E (Mining, Manufacturing and Utilities) and row 691 is purported to be manufacturing. China does not report manufacturing separately from Mining, Manufacturing, and Utilities, for reasons I have not been able to discover. This is particularly curious, since the World Bank does differentiate these."

  ———

  I am surprised to discover that row 690 is identical to row 691. Since you have raised reasonable doubt, I am withdrawing my challenge to your claim that "U.S. manufacturing remains the world's largest manufacturer."

  Thank you for the insight.

- *Frank Vargo*
  March 14th, 2011 on 3:42 pm

  Actually, no. The data do not show China was ahead since 2008.

  I can understand why you think the data say that, but that is not so. Please revisit the data and look at row 690 as well as 691. There you will see something interesting — they are identical, even though row 690 is ISIC C-E (Mining, Manufacturing and Utilities) and row 691 is purported to be manufacturing. China does not report manufacturing separately from Mining, Manufacturing, and Utilities, for reasons I have not been able to discover. This is particularly curious, since the World Bank does differentiate these.

  So, if you go to rows 3470 and 3471, you will see the U.S. is listed as $2,334 for Mining Manufacturing and Utilities and $1779 for manufacturing only. Since China does not list manufacturing separately, I think you will agree it is not accurate to compare China's Mining Manufacturing, and Utilities with America's manufacturing.

  If you compare U.S. mining, manufacturing, and utilities with China's you will see the U.S. was $2.334 trillion in 2009 compared with China's $2.05 trillion.

  But the more fundamental point is the comparisons need to be in constant dollar terms, to measure actual quantities of manufacturing, not price and exchange rate changes.

But even using the figures you cited, the U.S. is still ahead of China. I hope you find this helpful.

- *Martian150*
  March 14th, 2011 on 1:41 pm

  According to the U.N., China has been the world's largest manufacturer since 2008.

  To verify for yourself that China has been the world's largest manufacturer since 2008, click on the link to U.N. statistics:

  http://unstats.un.org/unsd/snaama/dnllist.asp

  Under the category of "GDP and its breakdown at current prices in US Dollars," select "All countries for all years – sorted alphabetically."

  After opening the spreadsheet, look at cell #691 for "China (manufacturing)." Look at the two right-most columns on the spreadsheet. It will show that China's manufacturing sector produced $1.87 trillion dollars in 2008 and $2.05 trillion in 2009.

  In comparison, look at cell #3471 for "United States (manufacturing)," the U.N. data show that U.S. manufacturing accounted for $1.79 trillion dollars in 2008 and $1.78 trillion in 2009.

  The U.N. data conclusively show that China has been the world's largest manufacturer since 2008.

TSUNAMI WARNING NETWORK

Mr. WOLF. Mr. Serrano.

Mr. SERRANO. Thank you, Mr. Chairman. I want to bring you back for a second. Let me join my colleagues in wishing you well. I know it is a great honor when any President calls on you to represent our country. And certainly for China that is a, it is not just any appointment. And it is a very important appointment to us at this time in our history and in their history. And so I congratulate you for your past service and what I know will be excellent future service.

Let me take you to the Caribbean for a second. You know, for years I have been talking to folks about the possibility of creating a tsunami warning center in the Caribbean, specifically in Puerto Rico. And as recent as yesterday a 5.4 earthquake hit the northern part of the Caribbean creating tremors in the Virgin Islands, Dominican Republic and Puerto Rico. Also a center of that nature would serve not only to deal with the issue of the Caribbean but certainly in our coastal areas of the fifty states, the southern part, and the Gulf Coast.

So to be very brief, the state government, the local government of Puerto Rico, has already allocated half of the dollars it would take to build the center. And yesterday Resident Commissioner Mr. Pierluisi, along with myself and Dr. Christensen from the Virgin Islands, put in legislation to try to accomplish this. So my question to you is, what are the chances that—on one hand we have been talking about cuts, cuts, and cuts, and I understand that—but I am asking you to spend a little money. What are the chances that within the existing budget we could find the dollars to pay for the second part that the state government has already allocated to create the tsunami warning center in the Caribbean and Puerto Rico?

Secretary LOCKE. Congressman, I have to tell you that I am not familiar with that request or a proposal by that local entity to contribute half the cost of an additional tsunami warning center. I would be happy to look into it.

[The information follows:]

TSUNAMI WARNING NETWORK

NOAA currently manages a Caribbean Tsunami Program. The overall improvement strategy to enhance local response to local events is the following:

- Accelerating the TsunamiReady Program for Puerto Rico (PR) & the U.S. Virgin Islands (USVI) by hiring an outreach manager for the Caribbean (accomplished in FY10);
- Achieving TsunamiReady status for 46 communities in PR and USVI by FY14; improving Tsunami Detection and Forecasting by upgrading seismic networks, sea-level stations and communications by FY13, and accelerating Tsunami Inundation Mapping/Modeling for PR/USVI—to be completed by FY13; and
- Working to improve forecasts and warning products, which are issued in three and half minutes (avg.) from seismic events for Puerto Rico and Virgin Islands, and eleven minutes (avg.) from seismic events for the Greater Caribbean.

NOAA will further improve the Caribbean Tsunami Warning System based on recommendations cited in: 1P.L. 109–479 (Tsunami Warning and Education Act of 2007); and the National Academies of Science (NAS) and NOAA Tsunami Program Assessment Reports.

- Improve tsunami detection, forecasting, warnings, notification, outreach, and mitigation to protect life and property in the United States; and to enhance

and modernize the existing Pacific Tsunami Warning System to increase coverage, reduce false alarms, and increase the accuracy of forecasts and warnings, and to expand detection and warning systems to include other vulnerable States and United States territories, including the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico areas.

• From NAS Report: NOAA should explore further the operational integration of GPS data into Tsunami Warning Center TWC operations from existing and planned GPS geodetic stations along portions of the coast of the U.S. potentially susceptible to near-field tsunami generation including Alaska, Pacific Northwest, Caribbean and Hawaii.

Mr. SERRANO. Okay. Are you at least familiar with past requests to look at that area as a possible tsunami warning center?

Secretary LOCKE. Yes. I am familiar with a request for additional tsunami warning centers throughout many parts of the country and parts of the region.

Mr. SERRANO. Well after praising you so much I cannot take that back and I will not. So let me just say that I would love, before you leave, to put things in motion just to at least to have the discussion with the Commonwealth of Puerto Rico, with members of Congress, with this committee, as to the possibility of having this warning center. Because what we have seen in Japan and what we have seen in other parts of the world it is no longer a luxury. And as our chairman said, it is a necessity everywhere we can set on up. And that part of the world is really not taken care of, that part of the country. So could we at least set in motion some conversations?

Secretary LOCKE. I am more than happy to have those conversations. But again, it all depends on the level of funding for the budget. Because if we enhance, you know, if the funding is under H.R. 1 then it is very difficult to make enhancements in certain parts without making deeper parts in another part. Even protecting one area of the operations research facilities budget portion of NOAA which is where the tsunami and weather forecasting and National Weather Service all reside. Under H.R. 1 it is a 16 percent reduction from the 2010 enacted level. So if we keep one part completely whole it means deeper cuts in other aspects of our weather and operations programs.

Mr. SERRANO. Thank you on that. Mr. Chairman, I see your hand on the——

Mr. WOLF. I was going to say, yes, that is an area. And when we did the letters, too, we checked in the East Coast. And it is a problem down in the Caribbean, and particularly because the beaches are flat, they are not up on bluffs. And so there is a problem there. And I was going to, but I am going to save it for some other time, to kind of comment a little bit more on that. But I would second what the gentleman says of having you take a look at that.

POVERTY MEASUREMENT

Mr. SERRANO. Thank you, Mr. Chairman. Rather than read my statement here to the question, let me just ask you to comment on the new poverty measure that has been discussed at the Commerce Department. That is a continuing issue in this country. We find everyday that in the greatest economy in the world we still have areas of folks with issues of food availability and poverty in gen-

eral. What can you tell us about this new way to measure, if you will?

Secretary LOCKE. Well that is something that is under discussion and just trying to inform the American policy makers, whether it is state, local, federal level, to even nonprofit organizations, just trying to understand and look at different ways in which we understand the impact of poverty and what it means and how to measure that. I think it simply gives policy makers more ammunition in making very tough decisions. We are looking at defining what is considered poor in America, and revising a one-size-fits-all formula that was actually developed in the 1960s. It could change the estimates, actually lowering the estimates or even raising the estimates. So it is not with any prejudged determination or particular outcome, but just really having a more accurate way in which we understand what poverty constitutes.

2010 DECENNIAL CENSUS

Mr. SERRANO. Right. Mr. Chairman, I know we are on close to some votes and I want my colleagues to ask some questions. Can I just ask you a quick question, Mr. Secretary? H.R. 1 and the cuts that are included in H.R. 1, could that in any way impact on the rest of the Census information coming out? I know that is already underway, or was that included in past dollars that we allocated?

Secretary LOCKE. Well no, work is already underway for the 2020 Census. Our goal is to make sure that the cost of administering the 2020 Census per household is lower than it was for the 2010 Census. So that really means that we have got to look at the greater use of technology, and we need to start some of that planning. We need to start with the private sector on the viability of these technologies. We cannot get into the position like we were for the 2010 Census when we contracted for handheld computers, and they did not work, and then we had to scramble to really make up for it. And that actually added to the cost.

We also need to look at other ways of trying to get reliable information. And we also need to test some of these theories. And on the American Community Survey, that is something that the business community relies on heavily. And we want to be able to use some of the theories and methodologies and almost test them during the annual American Community Survey in preparation for the 2020 Census.

Mr. SERRANO. Right but I was, very briefly, I was referring specifically to the fact that you probably have the rest of the year to give out information on the 2010 Census. If H.R. 1 becomes law, heaven forbid, sometime soon, does that affect that? Or was that information included in dollars that have been allocated before? In other words, can you finish the work of the 2010 Census or will H.R. 1 impact that?

Secretary LOCKE. Well actually what would be of greater impact would be if a continuing resolution were not passed. As long as we are continued at the existing levels then we quite frankly should be able to disseminate the information from the 2010 Census to the states for the redistricting purposes and for the reapportionment purposes.

Mr. SERRANO. Thank you. Thank you, sir.

Mr. WOLF. Mr. Honda.

Mr. HONDA. Thank you——

Mr. WOLF. There is a vote. It just began. Mr. Honda.

TSUNAMI WARNING NETWORK

Mr. HONDA. Thank you. Let me also add my congratulations to you, Secretary Locke. I am sure that, the community is very, the Asian American community is very proud of you. I am sure your family is too, and I acknowledge that your dad, he is watching and he is probably feeling real proud about you, too. So I just want to add that.

And you have done a great job. You are going to do a great job as Ambassador, not because I am saying so, but because in Silicon Valley there was quite a few articles after the summit that had indicated that finally, they said, that we have a Secretary of Commerce that gets it. Meaning that the Secretary of Commerce gets what is going on in technology, and the businesses, and specifically in Silicon Valley. But I think in general across this country. And I think Congressman Wolf's district is also a very similar district as mine in terms of technology.

The question I had, Mr. Secretary, was around Census and I guess I just want some sort of a quick answer on to be able to be prepared for 2020 will there be a chart that is going to be used as a benchmark where we can pace ourselves and look at all the points that we need to hit before 2020? Having gone through the 2010 the Administrator had to bear the brunt of the criticism on things that had not occurred prior to him being appointed. So I want to avoid that, and be assured that someone in the Department will lay out a, something like a PERT chart, program evaluation review chart. That is one question.

The other one is about the tsunami detection. I appreciate Chairman Wolf's letter that responded to the Indian Ocean tsunami, but also anticipated the future. And I think that that is a good thing to do. And I understand that there are thirty-nine buoys out there now?

Secretary LOCKE. About thirty-nine, yes.

Mr. HONDA. Yes. Seven down to be——

Secretary LOCKE. Seven or nine that are down for maintenance.

2020 DECENNIAL CENSUS

Mr. HONDA. The question I would have is in order for us to provide the additional coverage globally and provide that early detection, do you have any numbers that would reflect the costs of doing that in order for us to be able to anticipate and avoid great costs to other countries and ourselves? And that in my mind is not cutting for savings, but it would be investing for future cost avoidance. I was wondering whether you had any sense about that?

Secretary LOCKE. Well let me just first answer the question with respect to the planning for the 2020 Census. Planning is already underway and we are already trying to stand up advisory committees to really look at what needs to be done for the 2020 Census, what lessons can be learned from the 2010 Census? How do we really reduce the cost per household from what we spent on the 2010 Census? And how do we really use technology, whether it is

the internet, and other technologies to reduce the costs? So that planning is underway and I am sure that they are developing a timeframe or a time schedule of various deliverables and projects and we would be happy to share that with you.

[The information follows:]

2020 Census Preliminary High Level Schedule

Phase	Fiscal Years	Activity	Dates
Options Analysis	FY 2009 – FY 2011	Establish Planning Infrastructure	October 2008 – September 2009
		Develop & Baseline Strategic Plan and Program Management Priorities	October 2008 – September 2009
		Develop & Baseline Research and Testing Priorities	October 2009 – September 2010
		Develop & Baseline the Business Plan	October 2009 – September 2010
		Develop & Baseline the IT Integration Plan including alignment with the Enterprise Architecture	October 2010 – September 2011
Research & Testing	FY 2012 – FY 2014	Develop & Baseline Research and Testing Plans	October 2011 – September 2012
		Develop & Baseline Program Management Processes	October 2011 – September 2014
		Develop & Baseline System Engineering Processes	October 2011 – September 2014
		Determine Strategy for Major Acquisitions	October 2012 – September 2014
		Conduct Research & Testing and the Field Tests	October 2012 – September 2014
		Stand up and Operate a Virtual LCO at Headquarters	October 2012 – September 2017
		Stand up and Operate a Test LCO	October 2013 – September 2017
		Develop & Baseline Supplemental Research and Testing Priorities	January 2013 – September 2014
		Determine & Refine Initial Operational Designs	September 2014 – September 2015
Supplemental Research & Testing	FY 2015 – FY 2018	Develop & Baseline Supplemental Research and Testing Plans	October 2014 – September 2015
		Conduct Supplemental Research and Testing	October 2014 – September 2018
		Begin Critical Planning for the 2020 Census	October 2014
Operational Development & Systems Testing	FY 2015 – FY 2018	Develop & Baseline Operational Requirements	October 2014 – September 2017
		Systems Development and Testing	October 2015 – September 2018
		Select & Baseline the Operational Design	October 2015 – September 2016
		Conduct Operational and System Tests	October 2016 – September 2017
		Plan 2020 Census Program of Evaluations and Experiments (CPEX) Program	September 2017 – December 2019
		Update & Re-Baseline the Operational Design	October 2017 – September 2018
		Establish Field Infrastructure	January 2018 – December 2019
Readiness Testing, Execution & Close Out	FY 2019 – FY 2023	Systems Readiness Testing	October 2018 – September 2021
		Address Frame Updating	January 2019 – August 2020
		Enumeration Activities	January 2020 – August 2020
		Execute 2020 CPEX Program	January 2020 – September 2023
		Census Day	April 2020
		Data Processing	January 2020 – March 2021
		Deliver Apportionment Counts	December 2020
		Deliver Redistricting Data	February 2021 – March 2021
		Deliver other Data Products including Census Coverage Measurement Results	May 2021 – September 2023
		Closeout the Census	September 2020 – September 2023

Mr. HONDA. Thank you.

Secretary LOCKE. That would be used as measurements or metrics. With respect to tsunamis let me just say that, while it is on a lot of people's minds in light of the tragic events in Japan, we know that it is not just the West Coast but as Chairman Wolf indicated it is also on the Eastern Coast as well. And as Congressman Serrano indicated, not just the north but also down in the Caribbean. And we need obviously more buoys and more detection facilities, more centers. It is all a matter of budget. And we do know that obviously from what we saw, and thanks to Chairman Wolf's leadership after the Indonesian tsunami, that when you have more buoys we were able to have faster response. We were able to issue the warning within nine minutes after that earthquake struck Japan last week.

But it is not just buoys. It is not just the centers. It is the satellites. It is all the technology that goes with it and making sure that everything is maintained and up to date and all linked together. That is what makes the tsunami warning system effective, and helps save lives.

IMPACT OF BUDGET CUTS

Mr. HONDA. Thank you. And I think the line of questioning here on this panel is along the lines of looking at deficits and debts. But I think my sense is in this committee, subcommittee, that there is also a sense that there is going to be a great return on investments if we make it properly. And with the current cut again on a 2011 that will have a major negative impact not only on jobs that I am sure that the Department of Commerce is set and can create if we continue the 2011 without the cuts. I was just curious about if there is anything off the top of your head as to the impact on job creation and the kinds of things that we have talked about here. Not only saving lives and avoiding future costs, but the kinds of jobs that we would be looking at that we could be losing just because we are looking at cuts for cuts sake.

Secretary LOCKE. Well I think that first of all with respect to the public safety aspects of the weather service, whether it is the satellites, predicting hurricanes or tsunamis, or just snowstorms, it is like a police department or a fire department of a local community. When you make cutbacks, there will be consequences. You cannot foresee those now, but you know that your response times will be down. You will have less police officers on the street to respond to incidents or reports of crime. Those are the consequences when you make those cuts. These are tough choices. And obviously you all as members of the Congress, the House and the Senate, in deliberation with the White House have to make these tough calls.

Let me just say that that is why the President's budget, 2012 budget, is focusing on laying the groundwork and the conditions for job growth. So many of the economists have indicated that the Recovery Act did have an impact in creating jobs, or at least avoiding more layoffs of people and losses of jobs. And whether it is in farming, or in manufacturing, or in business sometimes you have to spend a little bit more in order to prime the pump and get more revenues and increase your business. You advertise a little bit more to get more market share. And what the President's budget

for 2012, while holding discretionary spending constant and freezing domestic spending over the next several years, does put selected enhancements and increases in programs that he believes will actually incentivize job creation and get our economy back on its feet faster.

Programs in R&D, research and development, things that the private sector is not able to do on its own but with government assistance will create those next products and technologies that can be commercialized that can then create more businesses, help existing businesses grow, and create jobs, to investments in education. You know, you look at the number of engineers that other countries including China and in Asia are producing. Where are the engineers for America? And not every job requires a four-year degree. Some of it is community college education, which is why we have more investments in community college programs. Because for instance, when the President visited Silicon Valley he talked to some companies who said that they would be more than glad to move their manufacturing facilities back from China to the United States if they had engineers. Not four-year degree engineers, but the kind of the engineers that work on the assembly line that can help in the innovation and the production and the lean manufacturing of those products.

So that is why the President is calling for investments in education, in R&D, including making permanent the R&D tax credit and expanding it. To encourage more manufacturing and more innovation here in America to create jobs. And I think a lot of the economists have indicated that many of the programs in the Recovery Act did in fact make a difference in avoiding further job losses and in fact creating jobs.

Mr. HONDA. Thank you. And Mr. Chair, I appreciate the time.

Mr. WOLF. Sure. Mr. Schiff may have to, if you want to ask another question, because you may have to leave to go back home to his district. So why do we not, go ahead.

WEATHER SATELLITES

Mr. SCHIFF. Thank you, Mr. Chairman. Mr. Secretary, congratulations also on the new post. And I would just urge you as a representative of a district that relies heavily on intellectual property to urge the Chinese government to step up its enforcement particularly in the criminal law area on intellectual property theft.

But what I wanted to ask you about today, you mentioned the central importance of the new JPSS in developing National Weather Service forecasts. The satellite will replace satellites currently in orbit that are aging fast. Due to problems in previous programs and delays in getting JPSS funding because of the continuing resolution we are likely to be going without this coverage for a year or more. Accurate long-term weather forecasts and storm warnings are such an integral part of so many sectors of our economy that this is truly worrying. What is the chance we will be able to maintain this coverage? And what will happen to our weather forecasts if we do not have a budget with the needed funds this year?

Secretary LOCKE. Well, there will be a gap. I mean, even with the 2012 budget there will be a short gap. Even if it were funded at the full level there will be a short gap. And if it is not funded

that gap will lengthen. And what does that gap mean? We have certain satellites in orbit now that are degrading. That will basically cease being operational. And so until the new satellites are launched and operational we will not have the information that we need to provide as accurate a forecast as we now provide.

Mr. WOLF. Excuse me, Mr. Secretary? We are down to three minutes. So if you might, will you call Mr. Schiff, too?

Secretary LOCKE. Yes.

Mr. WOLF. Next week? And go through this. And then if you will come back, we are coming back.

Mr. SCHIFF. Thank you, Mr. Chairman.

Mr. WOLF. Thanks. Thank you, Mr. Secretary. We will be back in about twenty minutes.

Secretary LOCKE. Okay. Thank you.

[Recess.]

CYBERSECURITY

Mr. WOLF. The hearing will begin and we will not be interrupted since they were the last votes. And we will try to move, you know, fairly fast. And I am going to jump around a lot because there are a number of budget issues. You know, we can work with your staff and get some answers, too. But your Bureau of Industry and Security is responsible for controlling the export of dual use goods and technologies. At the same time other countries are attacking Department computer systems to get similar types of information. Has the Department ever conducted a strategic analysis of where these breaches, like for instance China, and export control issues, are coming from? And who is trying to acquire what technologies, and why? And if you have not, and I sense that you have not, and I sense that the previous administration has not, would you do that? Would you do a study for us and report it to the committee, and maybe classified? And we would, you know, however you told us to treat it we would treat it. But if you could do that for us, but have you ever done one like that?

Secretary LOCKE. Mr. Chairman, I believe that we actually have done a lot of analysis of the attacks on not just BIS but many of our other sites throughout the Department of Commerce. And—

Mr. WOLF. And why they are doing it? Why they are going after, what they are going after, government-wide?

Secretary LOCKE. Well I am not sure that, we could indicate to you, perhaps privately, all the research that had been assembled by all the federal agencies with respect to who is doing what, and perhaps what their motives are. But obviously it is of concern to us, the frequency of the attacks against our systems. Which is why the President's 2012 budget does call for significant enhancements in cybersecurity.

Mr. WOLF. But I mean, we are also looking at it as a way of knowing what they are targeting. Not only the cyber issue, but what they are targeting and what technologies they are trying to gain.

Secretary LOCKE. That might, with respect, be more appropriate for other agencies that actually have technical information that others might want. We are understanding that the attacks against

our systems are simply to understand and get all the information that we have, in terms of whether it is policy and——

Mr. WOLF. But are you, but is it, well let us, let us give you a letter and let us——

Secretary LOCKE. Sure.

Mr. WOLF [continuing]. You know. But we would like to see you do a study to see why they are going after. I mean, are they going after NASA because they are trying to do something? I mean, obviously they may just be using a vacuum cleaner on certain occasions. But other occasions it is targeted. And what countries are doing the targeting? And we will also deal with the FBI, too. But what countries are doing the targeting? And what they are actually targeting, and why are they targeting it with regard to technologies?

Secretary LOCKE. I believe that information does exist. It is not a study that has been initiated by the Department of Commerce with respect to why people are attacking the systems of, let us say, NASA or defense agencies. But I am sure, we would be more than happy to share whatever information the federal agencies have with you on that regard?

MANUFACTURING AND THE ECONOMY

Mr. WOLF. Okay. General Electric CEO Jeff Immelt was recently appointed by the President to chair his Jobs Council, has publicly stated that for the U.S. to have a sound economy at least 20 percent of U.S. jobs should be from manufacturing yet we have less than half that number today. What level of manufacturing do you believe is healthy and necessary for a sound economy?

Secretary LOCKE. Well I do believe that we do not manufacture as much as we can and that we should. That is why there are a host of initiatives within Commerce and the other agencies and throughout the federal government focusing on that. The President has called for, for instance, increasing the R&D tax credit and expanding that, making that permanent.

Mr. WOLF. But do you have a percentage? Immelt said 20 percent of our workforce should be in manufacturing.

Secretary LOCKE. I do not have that percentage.

Mr. WOLF. Could you look and see if you can think about it, and——

Secretary LOCKE. Yes, we would be more than happy to get back to you on that.

[The information follows:]

MANUFACTURING AND THE ECONOMY

The U.S. is the world's dominant manufacturing economy. One reason the U.S. has a lower share of workers in manufacturing compared to other nations is because U.S. manufacturing labor productivity has outpaced that of our competitors. In February, U.S. manufacturing employment was 10.8% of total private employment. Expanding employment in the manufacturing sector is a top priority of the Administration, as evidenced by the National Export Initiative.

Mr. WOLF. We understand that the Director of National Intelligence has commissioned a classified study on the state of the U.S. manufacturing base. Are you working with him on this effort?

Secretary LOCKE. Our folks at the Department of Commerce are working with the not only, well, we are part of a collaborative ef-

fort on all of these assessments on manufacturing, including working with, for instance, Ron Bloom, who is the Special Advisor to the President within the White House, on manufacturing policy.

Mr. WOLF. And will that be classified or not?

Secretary LOCKE. I do not know.

Mr. WOLF. Okay. Can you tell us, or——

Secretary LOCKE. We would be more than happy to report back. I do not know that off the top of my head if that assessment will be classified.

HUMAN RIGHTS TRAINING

Mr. WOLF. Previously this subcommittee directed the Department to provide human rights training to ITA employees. The program lapsed for several years. What is the status of the human rights training program now? And how many employees got training last year?

Secretary LOCKE. I believe that program is ongoing, and I believe that we have in fact stood up a 24/7 online training component as well. I believe almost two-thirds of our employees last year received that training and participated in those training efforts. But I could get you the exact training. Oh, actually I have it here. More than 600 commercial service staff were trained out of about 900. And these were in commercial missions to fifty countries. And they participated, we had some twenty-six worldwide training events. But again, we also now have, for not all who can attend these training sessions, we now have a 24/7 access, an online learning module that all employees, that we are making available to all the employees.

Mr. WOLF. Available, or is it mandatory?

Secretary LOCKE. Well we do have comprehensive training protocols. And if they are not able to attend the in-person then we are making those online learning modules available as well.

Mr. WOLF. But available, or mandatory? That was the question.

Secretary LOCKE. I will find out for you there.

HUMAN RIGHTS TRAINING

During 2010 and early 2011, 603 client-facing CS staff were trained (target for this timeframe was 300), representing 50 countries at 26 worldwide training events.

To ensure global, 24x7 access to the content and to reach those that could not attend an instructor-led session, an online learning module was developed. ITA is requiring that all CS client-facing staff who have not taken the instructor-led course take the online module this fiscal year.

DEPARTMENT REORGANIZATION

Mr. WOLF. There have been press reports that the White House will be proposing a major reorganization at the Department of Commerce and some related agencies. The committee has not seen any proposals so we are unsure exactly what will be included. However, one of the proposals is to move the U.S. Trade Representative into the Commerce Department. Some have voiced concerns about doing this. Would you tell us about the proposed reorganization? What are the goals? And what can you tell us specifically about it?

Secretary LOCKE. Well there is actually no proposal yet. The individuals conducting the effort, Jeff Zients, who is the Deputy at

OMB, is still talking to people and meeting with the various agencies and meeting with stakeholders. The reorganization is focusing on the export and trade promotion agencies of the federal government at this point.

Mr. WOLF. Do you expect a legislative proposal will be sent to Congress this year?

Secretary LOCKE. I cannot speak for Mr. Jeff Zients. I do know that the President has asked, or signed an executive order asking, that the results and the recommendations be delivered to him within ninety days.

Mr. WOLF. And that would take legislation, is that correct?

Secretary LOCKE. It depends on the extent of the recommendations and the proposed reorganization.

Mr. WOLF. How do you, can you explain?

Secretary LOCKE. Well there are some things that are executive agency. For instance, the Trade Representative's Office. I mean, if nothing happens, if it is moving other things within the Office of the Trade Representative, that might be done by executive order. If it is dealing with the statutory agencies like Commerce or other agencies then I am sure that would require congressional action. But nothing has yet been produced. Nothing has been shown to any of the agencies now involved in export or trade promotion. Right now Mr. Zients and his team are simply talking to people and gathering facts and assessing people's viewpoints.

BIS FUNDING LEVELS

Mr. WOLF. Now the Department is, this is the Bureau of Industry and Security, the Department is requesting $111 million for the Bureau of Industry and Security. This amount is about $11 million higher than the 2010 enacted level. The increase of about $11 million will support thirty-seven additional positions on the Office of Export Enforcement. Of this amount $10 million will support counterproliferation and export enforcement activities with respect to their work with sensitive U.S. dual use goods and technologies. An increase of $3 million will support an increase in the number of staff involved in counterproliferation, counterterrorism, and national security programs. Both of these increases are in response to the recommendation of the 2000 Report of the Commission on the Intelligence Capabilities of the U.S. To what extent can you tell us in this open session what worries you more, rogue states or lone terrorists?

Secretary LOCKE. Let me just say that we need to make sure that when U.S. companies export, they are not exporting to inappropriate destinations. And that even if they export to destinations that are deemed friendly to the United States that those exports are not reexported to countries that wish to do us harm. And that is why the President has called for enhancing our security measures to make sure that any items that might have military application do not go to those ultimately who wish to do the United States and our allies harm.

U.S. PTO PLANNED FUNDING CARRYOVER

Mr. WOLF. The U.S. Patent and Trademark Office is again proposing language to allow it to spend fees in excess of appropria-

tions, so-called buffer language. PTO is also requesting authority to collect $2.7 billion in fees while at the same time their spending proposal is for only $2.6 billion. The difference of about $107 million is being proposed by the PTO as a reserve to be carried over from fiscal year 2012 to 2013. PTO anticipates carrying over $342 million in fiscal year 2013. Please explain why PTO is expecting to carry over this level of funding? Why would not PTO spend these funds to work now, and work down the backlog?

Secretary LOCKE. We are trying to expend as much money as we can as fees come in. But we need to try to maintain a steady state, just like any company would have, to have a steady state of operations so that if the following year we suddenly have a drop in applications we do not want to rely on that money coming in the door at that point. Because we need to make sure that we have people and the staff available to handle all those applications that came in a year ago, two years ago, three years, and four years ago. So it is really trying to have an even flow of revenues and expenditures so that we can gradually ramp up and hire additional staff and use more technology to process all of these patent applications that have been waiting in a much faster timeframe.

U.S. PTO PATENT AUTOMATION

Mr. WOLF. In 2005 GAO reported that PTO had spent over $1 billion between 1983 and 2004 for patent automation activities which did not achieve a fully integrated electronic patent process. Between fiscal year 2006 to October of 2010 PTO spent another $47.9 million on another IT modernization effort on a system that has not been effective. So PTO is now developing its new end-to-end patent system and its budget includes funds to continue these efforts. And we understand that Under Secretary Kappos, he said that he is confident that PTO is on the right path with this. The arrangement might be fine with him at PTO, or it might not. But if it is, what happens when he leaves?

Secretary LOCKE. Well that is why we have undertaken a completely comprehensive review and change is how we are doing everything, focusing on both the line staff and career managers. The career staff who, you know, basically are the heart and soul of the Patent and Trademark Office. And the politicals come and go but we need to make sure that we have a highly energized, committed, dedicated career force that are people to sustain things.

Mr. WOLF. But do you have the technical expertise? Because the same thing happened at the FBI on their computer system. They would bring somebody in, they would go. The cost overruns were very, very high. Are you confident? Have you the absolutely confidence in people that if he leaves, or should he leave, that it will continue? Because you have had these occasions where the money was pretty much not giving you what you thought you were going to get for it.

Secretary LOCKE. And that has always been a concern of mine, and that is why we are embarked on a Commerce-wide review of our entire acquisition programs. Making sure that the people who design these and make these requests are actually realistic and that the people who go out and do the procurement are able to ask

the questions as well and not just accept the wish lists of those seeking the systems.

But going back to the Patent and Trademark Office, there has been a substantial change in the entire leadership, the top leadership at the Department, or the Patent and Trademark Office, with career people in place. We are very confident, very pleased with the caliber of people that we have. And if you look at it it is not just David Kappos but the line staff and the managers who have been really responsible for driving the organizational management changes that have resulted in a dramatic reduction of the backlog even as the number of applications has increased dramatically as well.

We believe we have this new culture of career and line staff and even political appointees who are united in the mission of reducing the backlog, making sure that our investments in technology really work and pay off. So I am confident that even if Mr. Kappos were to leave that the reforms that he has initiated, with the support of line staff and labor and the management teams, will survive.

Mr. WOLF. I want to go a few more, and Mr. Fattah will go over. But the PTO and China, I believe we are putting ourselves at a disadvantage by making U.S. patent applications available online. I understand that making applications available online is required by law. But I think we should be publishing abstracts only. Please provide me with the underlying authority whereby U.S. posts its patent applications online.

Secretary LOCKE. I will have to get back to you and get you that legal authority, sir.

[The information follows:]

U.S. PATENT AND TRADEMARK OFFICE

Congress provided for publication of patent applications at eighteen months from their filing date in the Domestic Publication of Foreign Filed Patent Applications Act of 1999, Sec. 4502(a), now in statute as 35 U.S.C. 122(b). This publication requirement is consistent with other major Patent Offices around the world.

Mr. WOLF. What thoughts do you have? How can we stop China from counterfeiting the products that they copy from the patent applications that are available online?

Secretary LOCKE. Well I think that intellectual property violations in China and other countries is a major concern. American companies are losing billions of dollars of lost sales and opportunities as a result of piracy, counterfeiting, and/or lack of aggressive enforcement of intellectual property rights. It is a high priority for the Department of Commerce with respect to China and other countries. It is obviously going to be a major issue for the next ambassador to China. And we do have ongoing programs between the Department of Commerce, our Patent and Trademark Office, our General Counsel Office, in trying to improve the rule of law with exchange programs in China. But——

TRADE ENFORCEMENT WITH CHINA

Mr. WOLF. But Mr. Secretary, President Obama had a state dinner for Hu Jintao when he had the 2010 Nobel Prize Winner in jail. And his wife was not even allowed out of her apartment. She was under house arrest. So I hope you do not go there with a

pollyannaish viewpoint that, you know, that we have these exchange programs, and we are doing this, and we are doing that.

I mean as of now, two years ago when I was there, there was one person working on human rights and these issues in the embassy and they had fifteen people working on trade. To think that you can trust the Chinese just because you have a program, I mean, I hope you are going to go over there with a more hard-headed approach with regard to that.

Secretary LOCKE. Well I think if you look back at everything that I have done at the Department of Commerce with respect to our negotiations, our actions against China in terms of the trade enforcement cases, to the sanctions against China on tires, all that we have done with respect to trying to get the Chinese successfully to back off on their government procurement contracts that favor their homegrown innovation, to our discussions at the Joint Commission on Commerce and Trade. I mean, we have not been pollyannaish at all.

Mr. WOLF. Have you been successful?

Secretary LOCKE. I think we have had success. Is it as much as we would like? No. Do we want more progress in China, and do we want faster progress in China? Obviously, yes.

Mr. WOLF. Do you trust the Chinese government on these issues?

Secretary LOCKE. It will always require constant vigilance and monitoring, sir.

Mr. WOLF. Was that a yes, or no, or maybe?

Secretary LOCKE. Well we are seeing progress in some fronts from the Chinese. Is it as much as we would like, no. Is it as fast as we would like, no.

Mr. WOLF. Does it raise the little question if the Nobel Prize winner is in jail, and they have all the Catholic bishops in jail, and the Protestant pastors in jail, and they are doing that? That there is an element of concern with regard to what they are doing on economic issues?

Secretary LOCKE. Well that is why we have consistently pressed the Chinese on these issues. That is why we have various forums by which we can raise these issues. We are making progress. Again, it is not as fast and as much as we would like. But that doesn't mean that we give up. And certainly we go in with a very realistic eye and view of what is happening and what needs to be done.

And, of course, that includes human rights. And you and I have chatted about this before. And the policy of the United States is very clear. We very much support more openness and democracy and respect for human rights, including people's ability to worship.

Mr. WOLF. I think you are going to get more letters from me in China as ambassador than you get as the Secretary of Commerce on these issues. Will you go worship at a house church when you are there?

Secretary LOCKE. I look forward to the opportunity of worshiping in China.

Mr. WOLF. But I said at a house church, at a non-recognized, not a government run but a house church. Will you go worship at a house church?

Secretary LOCKE. That is something that I will consider, sir.

Mr. WOLF. But why can't you just say—I mean, can you imagine if you were to say yes, how that would inspire the 50 million house church Chinese who are yearning? I wrote the previous administration. Nobody there would go. Why wouldn't you go to worship at a house church? You can worship at all churches. But why wouldn't you at one Sunday go with a house church?

Secretary LOCKE. Well, again, how I practice my religion is not something for the American people to examine.

Mr. WOLF. It isn't for the American people. It is to stand with those who are being persecuted, who are being hauled away. And the American embassy in China ought to be an island of freedom.

And if the American ambassador won't even—I will go to different denominations just to show up to be there. Woody Allen says up to 90 percent of life is showing up. Just in showing up and being there, particularly in a church where they are cracking down, and taking people away, and putting them in prison.

It doesn't raise my comfort. I am surprised. I knew it was a home run. You would have said, yes, I would be glad to worship at a house church when I go. So by your answer I get the indication that you will not worship at a house church.

Secretary LOCKE. That is not what I am saying, sir.

Mr. WOLF. What do you think your chances are, 50–50, 75–25?

Secretary LOCKE. It is not something that I think I should be stating in public.

Mr. WOLF. Mr. Ambassador, if you don't publicly identify with the persecuted in China, then more people will be persecuted. To say that you raise this issue privately but not publicly is a copout.

If you are a Catholic bishop in jail, you want the American ambassador to publicly speak out, not whisper privately in a private meeting. If you are in Tibet and you are in Drapchi Prison being tortured and you are a Buddhist monk or nun, you want the American embassy and the American ambassador to speak out publicly. If you are being persecuted as a Uighur you want the American ambassador to speak out publicly.

What you have said raises serious concern with regard to me now for you going to China, because if you won't stand publicly with the dissidents. Ronald Reagan said, "The words in the Constitution were a covenant with the people of the entire world." The people in Tiananmen. The words that were in the Constitution in 1787 really were the same words with regard to what should apply in China.

But now if you are going to be politically sort of well I am not going to do this, I am shocked. I am shocked to say that you would not even go and attend a house church. Particularly when we know a particular house church is being persecuted.

Secretary LOCKE. I did not say that, sir.

Mr. WOLF. Well I am asking you. Will you go and attend? I take out the word "worship," attend, show up, be there in a house church, one of the house churches that is being persecuted where they crack you down.

Secretary LOCKE. That is something that I will seriously consider.

Mr. WOLF. Will you advocate for the persecuted in China?

Secretary LOCKE. Yes.

Mr. WOLF. Will you visit the people that are picked up in prison? People who are dissidents who are picked up, had you been the ambassador now, would you have advocated for the Nobel Prize winner's wife?

Secretary LOCKE. I am not the ambassador now.

Mr. WOLF. I said had you been the ambassador.

Secretary LOCKE. That is something that I would have to consider.

Mr. WOLF. That is weak. That is very, very weak. If you were in prison, if you were a Buddhist monk, if you were a Protestant pastor, if you were a Catholic bishop, you would want the American embassy to advocate for you. And if the American embassy doesn't advocate for you.

Your embassy ought to be an island of freedom. And if it is not an island of freedom, your time in China will have been wasted. It will be a failure. And this administration does not have a very strong record of advocating, speaking out for human rights and religious freedom in China and in other places.

And I would hope, when I saw that you were appointed there, I thought well, you know, I think he understands that. I think he will be somebody who will advocate and speak out.

Secretary LOCKE. I believe that the position of the United States government with respect to human rights around the world, including China, is very clear. We very much support as a government greater religious freedom, including the house churches. And we encourage people to attend those house churches and all forms of worship within China.

Mr. WOLF. I am going to go to Mr. Fattah now. But, you know, during the Reagan administration, when the Secretary of State or people in the Reagan administration would go to Moscow, they would meet with the dissidents. They would invite the dissidents in to the American embassy. They would then visit the dissidents, the families of the dissidents who were in prison. They would even attempt sometimes to visit the dissidents that were in prison.

Do you think that is a good model?

Secretary LOCKE. I think that what others have done has been very commendable.

Mr. WOLF. Mr. Fattah.

WORLD MANUFACTURING LEADER

Mr. FATTAH. Thank you. I want to revisit something from the hearing before the break. Frank Vargo, the leader at the National Association of Manufacturers, says that, "The United States remains the manufacturing leader in the world. We are the largest manufacturer in the world despite the inaccurate reports that were referenced in the *Financial Times*."

And I am sure the Chairman was not aware of this when he referenced it, but that report in the *Financial Times* is built off inaccurate data. The United States still outproduces, substantially, China in manufacturing. We have 21 percent, they have 15 percent. And there is no possibility, even though there is some months of gap in the data, that they could overtake the United States.

So I want to start here, because this is about the United States winning. We have been winning as has been the case for 110 years

in manufacturing. And the objective here and the work of your Department, which has been extraordinary on behalf of manufacturers, has helped position us to continue to win.

And I don't mean win in a relative sense. I am not interested in 300 million Americans doing as well or better than 300 million of some other country. I mean no matter the size of the country. China is a much larger country. We still lead them. And we still lead the world. And we lead India with a billion people.

Now this is, you know, a competitive circumstance. And, you know, competition is great. But winning is the most important issue when we are talking about quality of life and wealth.

And so I want to make the record clear that even though this inaccurate report was made, that not only is it inaccurate in that we lead but we lead substantially. And that the United Nations statistic division compiles global data on manufacturing and verifies that we have 21 percent of all global manufacturing output. And that when compared, for instance, in this matter to China, they have 15 percent.

So what we want to do is we want to—I said this in the hearing the other day, and I will restate it now that the Manufacturing Extension Partnership program is my number one priority in this bill. And all of us have priorities.

My Ranking Member is very interested in a lot of issues. But he is very interested in the salmon and, you know, the $65 million that is being allocated there in terms of the work that you are doing in a state that you are quite familiar with in terms of salmon. And you heard my other colleague talk about the Gulf and the importance there.

So, you know, we all have our priorities. And the Chairman has his, which is admirable in the passion that he brings to the question of human rights in China. But if you are in the role of the Ambassador for the United States, you will be carrying the official position of the United States Government, which is set by the Administration.

And we understand that you would not—you would at all times adhere to that responsibility as previous ambassadors have done. And I would also note that previous ambassadors have gone on to do great things. President Bush was the former ambassador to China. He became President of the United States. And I note that we have another ambassador who may be headed at least into the competitive realm for that. So great things for those who are ambassadors to China after they move on from their post.

But notwithstanding all of this, I want to walk—go back to the issues of the Department relative to American business and commerce. It was reported in the *Wall Street Journal* in December that American businesses had their largest profits ever in the history that they have been recorded.

And I want to commend the Department for your work. And I want to give you a chance to outline some of the things that have been done under your leadership to help American business do business, not just here at home but abroad.

Secretary LOCKE. Well first of all let me just say that America still is the most productive manufacturing country in the world. When you look at the hundreds of millions of people in China that

are involved in manufacturing and how we are able to have that same amount of output value of manufacturing with just a fraction of the employees, it speaks volumes about the productivity and the ingenuity of American workers. And that if on a level playing field we can outcompete just anybody else.

Nonetheless, we need to focus on increasing manufacturing. And we need to focus on exports. And that is why the President's National Export Initiative seeks to double U.S. exports just in the next five years, creating several and supporting millions of new jobs in the process. And we know that jobs related to export on average pay 15 percent more than the typical wage in America. So it is a source of good paying jobs, family wage jobs.

The President is looking at corporate tax reform. He is working with many of the top people within Treasury and his economic council on corporate tax reform that would address some of these issues and create greater incentives for company's to bring their foreign earnings back to the United States.

But as the President indicated, he wants to do this without adding to the deficit, which means lowering the tax rate, and closing—expanding the base, and eliminating a lot of loopholes and various exemptions.

COMMERCE REVENUE OPPORTUNITIES

Mr. FATTAH. Well I want to commend both you and the President for the appointments to the Competitiveness Council, because obviously Brian Roberts from Philadelphia was appointed and also Ellen Kullman who is the CEO of DuPont, which is our neighbor right there in Delaware. So I know you got two great people from our region of the country. And I know that the Competitiveness Council is really drilling down on some of these issues.

You have done a lot of work on—the Administration has done a lot of work on helping small businesses. You have done 17 separate tax breaks, tax cuts for small businesses. And we see a real increase in small business activity.

And so I think that there is a lot more that we can look to in terms of the work that has been done to really position this very significant increase in profits. Now we have had 12 months of net increase in private sector jobs. And today's job numbers in terms of unemployment claims were very, very good, well below 400,000. So there is a lot of work that is being done.

I want to say that in terms of the questions of the appropriations, your overall budget is less than three-tenths of one percent out of every dollar that we are going to spend as a Federal Government. And yet it is the—it is the kind of seed corn, if you would, for the world's greatest economy.

That is, at the Commerce Department you are really at the very forefront of trying to make sure that our ability to continue to generate well over 130 million jobs and have the kind of profits that we have seen really is, in many ways, you know, we are making a small investment as a country.

But I want to ask you this question. Much of the services of the Department help business. Obviously it is the Commerce Department. I mean so even when we talk about the weather service, two thirds of our economy is weather dependent. I mean, it is very im-

portant about whether or not we invest in these satellites, because it is very important that we are able to forecast what is going to happen.

I am interested as you are doing some of your portfolio inside the Commerce Department, whether there are opportunities to gain revenues from some of the services that you are providing and ways in which the Department can still provide the immediate help to businesses, as you do, for instance, in the patent office revenues.

And whether you think that is a direction that we should move at least in terms of examining or given the fact that it is such a small amount in the federal budget, that that is really not something that we should focus a lot of our time on.

Secretary LOCKE. There are a variety of fee-for-service programs within the Department of Commerce, even within our International Trade Administration on Export Promotion. There is a highly valued and very well spoken for gold key program that is a very intensive matchmaking service where our foreign trade specialists will actually go find and line up eight, nine, or ten potential buyers or customers for a U.S. company.

We will actually do the pre-investigation due diligence work and make sure it is a reliable potential buyer or customer for that U.S. company. Then that U.S. company will let us go to the U.S. consulate or trade office in Belgium or in Budapest, Hungary, and sit there. We will bring those eight or nine or ten pre-vetted companies to that American company. It is almost like what we call speed dating. Many companies have said that their revenues and their sales have come from the matchmaking services that we provide.

Now that is a fee-for-service program. And, in fact, it is so highly thought of that both UPS and FedEx are helping pay for that service for companies, some of their customers that they identify are really ripe for more exporting from the United States. And so those are some of the programs that we have.

Now we, for instance have a lot of weather and other information and statistical data that we provide. And that is something that we are more than happy to look at and consider as to whether or not some of those should be on a fee for service.

But, you know, some of the information that we also provide is very valuable to the public and is used not just by commercial purposes. That very same information might be used by independent researchers or scientists. And so how you draw a line between public safety purposes, independent researchers versus those who might want to use that to make a profit, that is certainly an area that should be considered.

DEPARTMENTAL BUDGET CUTS

Mr. FATTAH. But it is not an area that I think we should rush into. But I do think that to the degree that we can make a—you know, that we can analyze it and that it makes sense.

Now, again, I don't think that the argument is that we are doing too much. I think that there is an argument perhaps that we should be doing more. I think we should be doing a lot more to help manufacturers.

I think we should be doing a lot more looking at the demographics of the country to make sure that women and youth, all we are seeing over here two years is a significant uptick in the number of women going into business. But we have, you know, other demographic realities in which we have had sectors in African-American and Latino communities and Native American communities in which they have not always had the access to capital and the opportunities presented. But that could be a significant part of our economic base.

So I think that we need to be doing—you know, we at least need to look at it. But I think we ought to be careful. You know, we don't want to—you know, we have to take care of the goose. And American business is the most profitable ever. We have the lead in manufacturing in a substantial way over countries with much larger populations. The administration has set in place more than a dozen and a half tax cuts for businesses.

So you have done a great deal. And with the Competitiveness Council, it has opportunities to do even more. I think that the regulatory reform that has been put in place will or at least they will look at regulations is an important one.

I want to ask you this question. The President, and you sit in the cabinet, has asked for two rounds of cuts earlier in this process. He first asked for the departments to look. And you came back with some $20 billion in cuts. And then there was $119 billion in cuts found by the cabinet members.

And even though Senator McConnell, at that point said that that was a paltry amount of cuts, I guess in comparison to the efforts that we are engaged in now, it was a very significant amount of cuts.

I want to know in those earlier rounds when the—under the President's direction, you know, rather they were—you already kind of cut some of the edges around at the Department. And now we are really getting ready to cut into very important areas.

We are trading off tsunami warnings versus hurricane warnings from satellites. We are in a touchy area. And we do have a responsibility to the public that is beyond the question of whether we cut a dollar here or a dollar there. So if you could respond about the earlier round of cuts that were dealt with in the administration.

Secretary LOCKE. Well let me just say that from day one the President has impressed upon all of us the need to really be as efficient and effective as possible, to be wise stewards of the American taxpayer dollars. And it is something that I have prided myself on as a former governor of the state of Washington where we had to go through some very painful budget exercises and make these tough, tough decisions. So I understand the dilemma that you all face.

I think that we cannot ever take the approach of making across the board cuts. There are some things you want to enhance while you make deeper cuts someplace else. And you go to your strengths. And those things that are not as efficient, as effective, not really providing the results, those perhaps ought to be eliminated as opposed to across the board cuts.

And I can tell you that in this 2012 budget we have made difficult decisions. But we have come up with almost a quarter billion

dollars of cuts, of efficiencies through acquisition reform, taking advantage of IT but actually eliminating programs. And the proposal is to, for instance, on the Malcolm Baldrige Award to eventually move that off to the private sector and the foundation. But we are going to do that over a period of time.

So we are willing to make those tough decisions. At the same time, I think that it is important that we, as the President has called for a freeze, a five-year freeze, on discretionary domestic spending. In that freeze there are enhancements. But those are offset by deep cuts elsewhere.

And I think that what the President has proposed by way of focusing on education, research and development, innovation, working with the private sector to hasten the discovery of new technologies, oftentimes technologies that they are not able to do on their own or the research that they are not able to embark on their own. We are able to incite, excuse me, incent that discovery, hasten it, which leads to new products, benefits to our quality of life and creation of jobs.

That is why I think that the President's 2012 budget is very strategic, very focused. And his motto is we want to out build, out educate, and out innovate the other countries, because we know that our competitors are very focused.

And that is why the President has also called for corporate tax reform that will lower the tax rate and provide the incentives for more manufacturing and economic growth to occur in this country.

Mr. FATTAH. Well I am glad that we have moved away from the notion that we can have—you know, there were earlier administrations and opinion leaders who were trying to convince us that we were going to have an information-based or service-based-only economy and that manufacturing was somehow better done elsewhere.

So to have an administration that is focused, and that is excited about manufacturing here in America, and is celebrating it, and that understands that it is connected to our long-term viability as a country. It is also connected obviously to our national security. I mean we can't just give away all of our manufacturing capability.

I think the work that you are doing is important. And I want to thank you. And, you know, I think that the work you have done both at the county level and as governor and obviously you have distinguished yourself as Secretary of Commerce. And I wish you well in your future endeavors.

Secretary LOCKE. Thank you.

WORLD MANUFACTURING LEADER

Mr. WOLF. I am going to read you something. And just because Mr. Fattah said he calls the NAM and he gets somebody to say something, it doesn't make it true. And so we are going to check on this and put this in the record.

Financialtimes.com, *Financial Times*, Peter Marsh, and we are going to get the full study. And I want it to be opposite. That is why I think this administration—we are looking for things where we differ. I think we differ strongly on this. This administration has not done a very good job with regard to manufacturing. This

administration has done a miserable job when it comes to the debt and the deficit.

But I read the article. It says, "China has become the world's top manufacturing country by output, returning the country to the position it occupied in the early 19th century and ending the U.S.'s 110-year run as the largest goods producer."

I don't want it to be that way. I have a manufacturing bill that we are trying to move through this Congress. It goes on to say that, "The change is revealed in a study released on Monday by IHS Global Insight, a U.S.-based economics consultancy, which estimates that China last year accounted for 19.8 percent of world manufacturing output, fractionally ahead of the U.S. with 19.4 percent."

China's return to the top is the "closing of a 500-year cycle in economic history," said Robert Allen of Nuffield College, Oxford, a leading economic historian.

Deborah Wince-Smith, chief executive of the Council on Competitiveness, a Washington-based business group, said the U.S. "should be worried" by China taking over a position that the country has occupied since 1895.

And then it goes on to say the figures were derived from data gathered by national statistic agencies around the world and have been published several months ahead of the equivalent comparative figures that will come out for government bodies such as the UN and the World Bank.

So just because a guy at the NAM says it, I mean, we are going to put this in the record. So, Mr. Fattah and Mr. Secretary, you may not be right. I want you to be right, but you may not be right. And just because something is said at a Congressional hearing based on a telephone call does not——

Mr. FATTAH. Mr. Chairman, if you would yield for one second.

Mr. WOLF. I will, but I want to finish.

Mr. FATTAH. I didn't make any telephone call. This is a statement that was made on March 14th.

Mr. WOLF. Well maybe——

Mr. FATTAH. It had nothing to do with our hearing.

Mr. WOLF. Maybe he was wrong.

Mr. FATTAH. And I am just saying, I don't want you to think that I went and made a phone call when I didn't.

Mr. WOLF. Well I did. But I don't think it now if you tell me. Also I think the gentleman lives in my district, and he is actually a friend of mine. But he may very well be wrong on this.

Also we having Rising Above the Gathering Storm, which I was involved with helping set up and working with Norm Augustine, is as United States share of global high-tech exports dropped from 21 percent to 14 percent while China's share grew from 7 percent to 20 percent, so high-tech 21 percent to 14 percent drop. China goes from 7 percent to 20 percent.

It says the national debt grew from $8 trillion to $13 trillion. Federal debt per citizen increased and then it goes on. China then talks about graduating more engineers, 700,000. We only graduated 70,000.

For the last five years, we have been working on this issue. And as chairman of this committee, we reversed the decline with regard

to the investment in math and science and physics and chemistry and biology, and all that.

But the Gathering Storm indicates that really what the Secretary said may not be right. And we will get the full data that comes with this.

But, Mr. Secretary, if you are the Secretary of Commerce, we don't want China to be number one. But they may have surpassed us. And there is a Simon and Garfunkel song, The Boxer, that says "a man hears what he wants to hear and disregards the rest."

We cannot disregard that. If somebody has a problem, you don't want to go whistling through the graveyard saying, well, it is not a problem. We are always number one when we are falling. I don't want to see us in decline. I want to see us ascend. I want us to be the dominant power for economic reasons and for freedom and liberty.

So Mr. Vargo from the NAM may very well be wrong. And we will submit that in the record.

Secondly, we will also submit points from the Gathering Storm with other data showing, expressing my concern with regard to the manufacturing base. I have a bill in. We have asked the administration to comment. We get no answer, so we are going to try to move ahead. Mark Warner is going to cosponsor it with me in the Senate.

[The information follows:]

Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future
http://www.nap.edu/catalog/11463.html

SOME COMPETITIVENESS INDICATORS

US Economy

- The United States is today a net importer of *high-technology* products. Its trade balance in high-technology manufactured goods shifted from *plus* $54 billion in 1990 to *negative* $50 billion in 2001.[1]
- In one recent period, low-wage employers, such as Wal-Mart (now the nation's largest employer) and McDonald's, created 44% of the new jobs while high-wage employers created only 29% of the new jobs.[2]
- The United States is one of the few countries in which industry plays a major role in providing healthcare for its employees and their families. Starbucks spends more on healthcare than on coffee. General Motors spends more on healthcare than on steel.[3]
- US scheduled airlines currently outsource portions of their aircraft maintenance to China and El Salvador.[4]
- IBM recently sold its personal computer business to an entity in China.[5]
- Ford and General Motors both have junk bond ratings.[6]
- It has been estimated that within a decade nearly 80% of the world's middle-income consumers would live in nations outside the currently industrialized world. China alone could have 595 million middle-income consumers and 82 million upper-middle-income consumers. The total population of the United States is currently 300 million[7] and it is projected to be 315 million in a decade.
- Some economists estimate that about half of US economic growth since World War II has been the result of technological innovation.[8]
- In 2005, American investors put more new money in foreign stock funds than in domestic stock portfolios.[9]

Comparative Economics

- Chemical companies closed 70 facilities in the United States in 2004 and tagged 40 more for shutdown. Of 120 chemical plants being built around the world with price tags of $1 billion or more, one is in the United States and 50 are in China. No new refineries have been built in the United States since 1976.[10]
- The United States is said to have 7 million illegal immigrants,[11] but under the law the number of visas set aside for "highly qualified foreign workers," many of whom contribute significantly to the nation's innovations, dropped to 65,000 a year from its 195,000 peak.[12]
- When asked in spring 2005 what is the most attractive place in the world in which to "lead a good life", respondents in only 1 (India) of the 16 countries polled indicated the United States.[13]

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Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future
http://www.nap.edu/catalog/11463.html

- A company can hire nine factory workers in Mexico for the cost of one in America. A company can hire eight young professional engineers in India for the cost of one in America.[14]
- The share of leading-edge semiconductor manufacturing capacity owned or partly owned by US companies today is half what it was as recently as 2001.[15]
- During 2004, China overtook the United States to become the leading exporter of information-technology products, according to the Organisation for Economic Co-operation and Development (OECD).[16]
- The United States ranks only 12th among OECD countries in the number of broadband connections per 100 inhabitants.[17]

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Mr. WOLF. I have even raised it with you. We want a repatriation program to put a policy in to bring these jobs back. I can't get anything out of the administration. I heard you talk about jobs, but I can't even get a comment on it. I can't even get anybody to write back. And then I will hear the President roll out and talk about jobs.

We have a bill in. And finally Mark Warner is going to—we are going to push this bill. And we are going to try to pass it to bring real manufacturing jobs back.

Secondly, on the deficit and the debt, the President has failed. Period. And I want to read for the record a letter that Senator Coats put in. Senator Coats today led a group of 23 Republican Senators in sending a letter to the White House calling on President Obama to show "strong leadership, address the financial crisis, and entitlement programs." This letter comes on the heels of Coats' return speech.

In the letter to the President, the senators wrote, "Federal expenditures on Social Security, Medicare and Medicaid are expected to double over the coming decade and represent an unsustainable portion of total government spending. In order to ensure the long-term viability of this program, it is imperative that you lead a bipartisan effort to address these challenges."

And then it goes on to say, and I will quote at the end and put the full letter in the record, "last year's National Commission on Fiscal Responsibility," which I have said that I will support. I didn't set it up. This idea came from Jim Cooper and Conrad and Gregg. And I hailed the President when he established it. But he has walked away from it.

"Last year's National Commission on Fiscal Responsibility and Reform marked an important first step in identifying a potential path forward." Durbin and Coburn together, "Strong leadership is needed now to advance possible solutions to ensure that our entitlement programs can serve both current and future generations. Without action to begin addressing the deficit, it will be difficult, if not impossible, for us to support a further increase in the debt ceiling. House Speaker John Boehner this month offered to partner with you in a nonpartisan effort. We join in the Speaker's offer, and urge you to lead."

[The information follows:]

United States Senate

WASHINGTON, DC 20510

March 16, 2011

The President
The White House
Washington, DC 20500

Mr. President,

The fiscal challenges facing our country today call for courageous leadership. Government spending is growing at an alarming rate, and the federal budget deficit has reached record levels. Congress will soon face a vote to increase the debt ceiling yet again, the fourth time in your Presidency and the 11th time in the last decade. Future generations will drown in a debt forced onto them by the inactions of Congresses and Administrations far before their time. The time to remedy these failures is now.

While Congress is currently engaged in an important discussion on annual discretionary spending levels, the more significant long-term problem facing our country is the continued growth of mandatory spending programs. Federal expenditures on Social Security, Medicare and Medicaid are expected to double over the coming decade and represent an unsustainable portion of total government spending.

In order to ensure the long-term viability of these programs, it is imperative that you lead a bipartisan effort to address these challenges. In 1983, President Reagan and Speaker Tip O'Neill recognized the pressing need for reform, showed political courage and worked together to craft a plan that has safeguarded Social Security for the past thirty years. A similar show of leadership from you and from congressional leaders of both parties is necessary to address the long-term fiscal challenges facing our country.

Last year's National Commission on Fiscal Responsibility and Reform marked an important first step in identifying a potential path forward. Strong leadership is needed now to advance possible solutions to ensure that our entitlement programs can serve both current and future generations. Without action to begin addressing the deficit, it will be difficult, if not impossible, for us to support a further increase in the debt ceiling. House Speaker John Boehner this month offered to partner with you in a nonpartisan effort. We join in the Speaker's offer, and urge you to lead this Congress and the nation in the critical effort to strengthen our country's long-term fiscal security.

Sincerely,

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March 16, 2011

Sandy Crawford

Pat Roberts

Roger Wicker

Mike Johanns

Rob Portman

Mr. WOLF. It is time for the President to lead this Congress and this Nation in the critical efforts to strengthen our country's long-term fiscal security. And the President has not led. And by not leading, he has abandoned the fight. He is walking away. He is walking away from the fundamental issue that will have an impact on our children, and our grandchildren, and all of us alive.

And then lastly, and then I want to end this hearing, because I am going to submit the rest for the record. What I want to tell you I am disappointed in your answer with regard to whether you would go to a house church or not.

China is the number one supporter of the genocide, the genocide in Sudan. I was the first Member of the House to go to Sudan and saw with my own eyes the genocide, what was taking place and still takes place against women, and men, and children in Darfur.

China, the country that you are going to be the ambassador to is the number one genocidal supporter of the Darfur government. And Bashir, the head of Sudan, is under indictment by the International Criminal Court. The Congress in the previous administration said what is taking place in Darfur is genocide. Genocide.

I am going to write you a letter after you get the ambassadorship. I am going to ask you where you are going. I will get a guy to call you. I don't know if you will take his call or not, but his name is Bob Fu, to call you and invite you to go to a Catholic church, a non-recognized church, a church connected to where maybe a bishop is in jail or under house arrest, for you to show—to start to show up. And if you don't want to worship, just to be there, to stand there, to identify.

I am not Buddhist, but I go with Buddhist monks. And when I went to Tibet, I went back into the monasteries to identify, to let them know that I cared enough. I cared enough so I went. So we are not going to ask you to worship. And I am not going to ask you what your language is, what your religion is. But I am going to ask you to go to Tibet and stand with the Buddhists who are being persecuted. And go into a monastery in Tibet.

And then I am going to ask you to go with the Muslims, the Uighurs, and go ride a triath of that area and stand with them. And then I am going to ask you to go to a Catholic church where there is a Catholic bishop in jail to stand with them. And then I am going to ask you to go to a house church. Where there is house church leaders who have been tortured, who have been taken away and are in prison.

And then I am going to ask you to visit the Nobel Prize winner's wife, to go visit her. And then I am going to ask you on the 4th of July to open up the doors of the embassy and let the embassy be an island of freedom where dissidents can come to stand with the American ambassador.

And if you do that, I will hail you. But we are going to give you the opportunity. And we are going to wear you down. We are going to write you day in and day out. We are going to ask you when the dissidents come back from here to send people out to the airport to meet him. We are going to ask you to go into the jails, because if you don't, you will have failed. If you do, you will be the most successful Ambassador.

And lastly, and I am not going to ask you—embarrass you to ask this question. But I hope when you leave, you won't do what many of the other American ambassadors do. I hope you won't go out and represent the Chinese government.

The hearing is adjourned.

The Hon. Jo Bonner
House Appropriations Subcommittee on
Commerce, Justice, Science and Related Agencies

ESA/Census - QUESTION: The FY 2012 Budget Submission for the Department of Commerce proposes to discontinue an important economic statistical series, the Current Industrial Reports program. This program has provided important information on key U.S. manufacturing and agricultural sector industries for over 100 years.

In testimony submitted to this Subcommittee, Professor Andrew Reamer of the George Washington Institute of Public Policy, George Washington University, stated that the loss of the Current Industrial Reports program "...would result in the substitution of less frequent, less detailed data, resulting in less reliable economic estimates."

The Department's Budget Submission indicates that this program is being discontinued to fund "higher priority" programs. In light of Professor Reamer's testimony, and given our continued sluggish economic recovery, is abandoning the CIR program a prudent decision at this time?

ANSWER: This decision was not taken without an in depth consultation with key data users on relative program priorities and specifically about the consequences of the elimination of the CIR program. Users weighed the loss of the CIR against proposed cuts of other programs and key stakeholders understand why we chose the CIR program given the amount of detail statistics we currently provide for the manufacturing sector. While few data users wanted to eliminate an existing data source, the availability of manufacturing product class data from the Annual Survey of Manufactures, and the continued collection of detailed product information in the Economic Census and in our monthly trade statistics program, helped mitigate the loss. Moreover, on balance we continue to measure the manufacturing sector (e.g. shipments and product class detail - the Annual Survey of Manufactures (ASM), the Economic Census, monthly new orders and inventories - the Manufacturers' Shipments, Inventories, & Orders (M3), capital and IT investments - Annual Capital Expenditures Survey (ACES), research and development - the Business Research and Development Survey (BRDIS), quarterly corporate profits - the Quarterly Financial Report (QFR), rates of capacity utilization for selected manufacturing groups - Quarterly Plant Capacity survey, etc.) in far more detail than any other economic sector.

QUESTION: In your Budget Submission, you indicate that you intend to measure the manufacturing sector through other current program data collection efforts such as the Annual Survey of Manufacturers (ASM), the Monthly Manufacturers' Shipments, Inventories, & Orders (M3), the Quarterly Financial Report (QFR), the Annual Capital Expenditures, Survey (ACES), and other products.

These listed programs generally only provide a single data point (value of industry-wide sales or shipments) and don't collect key data on such things as unit (quantity) production and shipment information. They do not provide data on sub-segments or product categories of an industry. To give one example, the ASM covering the paint and coatings industry provides only an industry-wide annual shipments number (value only), while the Current Industrial Reports provides details such as volume (gallons) and value (dollars) on categories as diverse and specific as automobile, light truck, van, and sport utility vehicle finishes.

Given this, how do you intend to obtain and disseminate critical information on such things as product mixes and unit costs that manufacturers and producers need in order to understand market trends and remain competitive, particularly against foreign competition?

ANSWER: The Current Industrial Reports (CIR) program provides product mixes and unit cost data for only selected manufacturing industries but not the entire manufacturing sector. The Census Bureau will continue to collect and publish information on detailed manufacturing products on an annual basis at the product class level (rather than the product level) for these 121 categories through the Annual Survey of Manufactures (ASM). The data in the CIR are consistent with the data in the ASM. The consistency of this relationship allows data users to continue to monitor, evaluate, and understand the market. Because the ASM does not collect data on quantity, unit cost data will not be available on an annual basis. However, the Economic Census for the manufacturing sector collects comparable data (value and quantity) that will allow users to derive unit cost.

The Census Bureau continues to measure the manufacturing sectors in far more detail than any other economic sector. For example, the Manufacturers' Shipments, Inventories, and Orders (M3), a principle economic indicator, provides monthly trends on economic conditions through measurement of current industrial activity while providing indication of business trends. The Quarterly Plant Capacity Utilization survey provides statistics on the rates of capacity utilization for the manufacturing sector. The Census Bureau produces a "Profile of U.S. Exporting Companies" that provides aggregated data on the U.S. exporting community (i.e. number of exporters, known value of the export trade, employment size, type of company (manufacturers, wholesalers, and others) and major foreign markets). These data, in combination with other surveys covering capital and IT investments, research and development, corporate profits, etc., provide a host of information to examine, evaluate, and monitor the performance of the manufacturing sector against foreign competition.

QUESTION: In previous years, Commerce has provided an explanation of the benefits and importance of this program that is at odds with the current

submission. For example, in its Budget Estimates for Fiscal Year 2011, Census indicated that The Bureau of Economic Analysis (BEA) uses Current Industrial Reports data to prepare the quarterly estimates of Gross Domestic Product (GDP). The Federal Reserve Board also prepares the monthly index of industrial production and the Bureau of Labor Statistics (BLS) develops price indexes using these data. The International Trade Administration (ITA) and the International Trade Commission use these data to monitor the effects of international trade on domestic production. If this program is discontinued, how will those agencies be able to meet these requirements currently supported by the Current Industrial Reports program? Has the Department consulted directly with these agencies regarding its plan to terminate the CIR program? If so, was concern expressed regarding the potential impact the loss of this data will have on their abilities to adequately perform their missions?

ANSWER: In deliberations on the FY 2012 budget submission, the Census Bureau consulted with the key data users on relative program priorities and specifically about the consequences of the elimination of the CIR program. Users weighed the loss of the CIR against proposed cuts of other programs and key stakeholders understand why we chose the CIR program given the amount of detail statistics we currently provide for the manufacturing sector. While few data users wanted to eliminate an existing data source, the availability of manufacturing product class data from the Annual Survey of Manufactures, and the continued collection of detailed product information in the Economic Census and in our monthly trade statistics program, helped mitigate the loss. Moreover, on balance we continue to measure the manufacturing sector (e.g. new orders, capital and IT investments, research and development, corporate profits, etc.) in far more detail than any other economic sector.

QUESTION: The same 2011 Census Bureau budget submission indicated that the Current Industrial Reports program covers the Census Bureau's responsibilities under the Trade Act of 1974, including Section 608 requirements to collect data on imports, exports and domestic production on a comparable basis. Commerce also noted that Section 608 also "requires the publication of Current Industrial Reports to enhance the comparability of imports, exports, and domestic production statistic and in order to revise on a continual basis the import, export and output classification systems to promote comparability with the International Harmonized System." In light of this, how does the Department proposes to meet these statutory requirements if the Current Industrial Reports program is discontinued?

ANSWER: The Census Bureau continues to show, on a monthly basis, exports of domestic merchandise and imports for consumption based on manufacturers' production. Data in Economic Census years will show manufacturing production data of these products along with the import and export data. In addition, we are

exploring the possibility of publishing annual import and export data at a product class level (i.e. 1,700 product categories) on the Annual Survey of Manufactures (ASM).

QUESTION: According to the Department's FY 2012 budget submission, eliminating the Current Industrial Reports program will save approximately 35 FTEs and $4.012 Million, or approximately 0.04 percent of the Department's FY 2011 budget request. In proposing to discontinue this program:

Has the Department considered off-setting expenses that will be required to develop alternate systems to collect and analyze these data in order to meet the statutory requirements noted above.

ANSWER: Given the plan to leverage existing data sets from other programs as cited above to meet the statutory requirements of the Trade Act of 1974, we did not consider off-setting expenses.

QUESTION: Has the Department identified the costs that will be imposed on other agencies of government, such as BEA and BLS, should they be required to develop other means of obtaining these data?

ANSWER: We did not explore the cost of agencies such as BEA or BLS developing other means of obtaining these data. We did provide the National Agriculture Statistics Service of the United States Department of Agriculture a reimbursable cost estimate for nine CIR agricultural related surveys.

QUESTION: Finally, has the Department conducted a formal or informal cost benefit analysis to consider the costs to U.S. manufacturing and agricultural competitiveness as a result of the discontinuation of the Current Industrial Reports and whether it exceeds the $4 Million that will be used for other objectives within the Department?

ANSWER: We did not conduct a cost benefit analysis to consider the costs to U.S. manufacturing and agricultural competitiveness because of the termination of the Current Industrial Reports program.

QUESTION: Is the Department conducting or implementing at this time any plans to discontinue the CIR in the absence of action or approval by the relevant appropriations committees, to include reassigning, or planning for the reassignment of, personnel or other resources currently dedicated to this program, discontinuing the development or fielding of surveys to collect data required under this program, or reprogramming any funding currently fenced to or otherwise allocated to the CIR program?

ANSWER: The Census Bureau is not implementing any plans to discontinue the CIR program in the absence of action or approval by the relevant appropriations committees.

QUESTION: The Department of Commerce's Strategic Plan for FY 2011 – 2016 includes as one of its objectives to "Improve understanding of the U.S. economy, society, and environment by providing timely, relevant, trusted and accurate data, standards and services enabling entities to make informed decisions." Additionally, it states, "...the Census Bureau assists in fostering economic growth by providing timely, accurate, accessible, and current measures of the population, economy, and governments, which help entrepreneurs and businesses to identify and exploit market opportunities that generate jobs. This information also helps to provide early signals of impending problems in key sectors throughout the economy and effective information to enable communities to build their capacity to attract businesses and sustain economic growth. Data collected from many monthly, quarterly, and annual surveys support effective decision-making, in both the public and private sectors, with the information assets needed to understand social, economic, and demographic trends."

In light of this, can you explain why you are recommending the elimination of a key report that supports this critical objective identified by your strategic planning?

ANSWER: While the CIR program collects and publishes information on detailed manufacturing products, slightly more aggregated information on over 1,700 product class categories are available on annual basis from the Annual Survey of Manufactures. In addition, detail manufacturing product data will continue collection in the quinquennial Economic Census. Furthermore, the Census Bureau's monthly, quarterly, and annual survey programs on manufacturing new orders, capital and IT investments, plant capacity, research and development, corporate profits, and trade statistics will continue to provide key measures in the performance of the manufacturing sector.

The Hon. Chaka Fattah
House Appropriations Subcommittee on
Commerce, Justice, Science and Related Agencies

QUESTIONs for the Record
Hearing on the FY 2012 Budget Request
for the Department of Commerce

QUESTION: Would NOAA have added costs as a result of ending and then restarting an acquisition process, if the Department does not receive sufficient funding this year?

ANSWER: Yes, NOAA would incur added costs of developing the Joint Polar Satellite System (JPSS) due to inefficiencies associated with the loss/reinstatement of critical contractor personnel, and the need to continue the contractor government workforce longer than planned in order to meet the revised launch schedule. NOAA's estimates of the JPSS program's cost and schedule were developed on the premise of receiving the FY 2011 budget request of $1.060 billion at the beginning of FY 2011. Each day the program is without the necessary funds adds delays to the program development and overall cost of the program.

QUESTION: For the Procurement, Acquisition, and Construction account, how low a fiscal year 2011 funding level would require restarting the acquisition process?

ANSWER: NOAA's request for the JPSS program in FY 2011 was $1.060 billion. With the lack of funding for JPSS from the full-year Continuing Resolution, NOAA is only able to support fielding and testing of the ground system to support the NPOESS Preparatory Project launch in October 2011, and is currently developing an operating plan for FY 2011 to maintain a minimal level of effort on the JPSS-1 spacecraft and instruments. NOAA is reassessing the next steps, which could include an effort to restart the JPSS acquisition process.

Since the NOAA satellite acquisition program is the largest component of the Procurement, Acquisition, and Construction (PAC) account, and the account also includes funds for a number of important NOAA programs such as critical facilities repair and replacement, weather radar and ship replacement, there is limited flexibility for applying additional funds to the JPSS program. The President's FY 2011 budget for programs in the PAC account is $2.191 billion. Of that amount, $2.02 billion was for satellite and related acquisitions. The JPSS request of $1.060 billion is included in that satellite acquisition amount.

QUESTION: The NOAA Inspector General noted last December that the Department lacks cohesive policies and procedures for program management and oversight of major systems acquisitions. What is the Department doing to address

the IG's concerns and findings in this area, and particularly with regard to the satellite program?

ANSWER: In the past year the Department of Commerce has instituted several department-wide processes, which are geared to improve the coordination, cooperation and communication among DOC Bureaus. To achieve this objective, the Office of Acquisition Management has defined its oversight responsibility to the NOAA Satellite Program; established a process to strengthen acquisition processes DOC-wide; and began to institutionalize a targeted focus on effective program management.

The Department of Commerce's Office of Program Evaluation and Risk Management (OPERM) is conducting an assessment of the Program Management Capability of NOAA's Satellite Programs. The assessment will cover seven (7) program management process areas (Project Monitoring and Control, Project Planning, Requirements Management, Supplier Agreement Management, Integrated Project Management, Quantitative Project Management, and Risk Management). The objective of the assessment is, in collaboration with NOAA personnel, to target areas for improvement that will reduce project cost and schedule risks. The intent is that the framework of this assessment process will be used to assess all future major system acquisitions.

As a pre-curser to the implementation of results of the assessment, the Office of Acquisition Management has designated individuals responsible for oversight of the various programs associated with NOAA's Satellite program in order to create transparency and the free-flow of information and communication between NOAA and the Department of Commerce. Through attendance at monthly Program Management Review meetings and quarterly Deputy Secretary Program Briefings, program risks and management issues are continuously surveyed and open lines of communications established. Through this process, the department can mitigate or proactively resolve issue.

In addition, in June 2010, the Office of Acquisition Management established the Acquisition Management Review (AMR) process. AMRs are conducted across all contracting offices within the Department of Commerce. The purpose of the Acquisition Management Review (AMR) is to evaluate the effectiveness and efficiency of the individual contracting offices and provide suggestions to improve any noted weaknesses or deficiencies. The expected outcome is to identify areas which require management attention and mitigate risk in those areas; thereby increasing the effectiveness and efficiency of the Department of Commerce acquisition process. The AMR requires DOC procurement organizations to perform continuous self-assessment through procurement performance-based measurements, including the results of employee and customer surveys.

Recently, under the leadership of the new Senior Procurement Executive, the Office of Acquisition Management has begun to institutionalize a targeted focus on effective program and project management within the Department of Commerce. The Office of Acquisition Management is currently implementing the infrastructure that will emphasize

three basic elements of: 1) establish a resource allocation process that produces realistic program costs and schedule estimates, and balances requirements across all departments; 2) establish an acquisition process that produces required, affordable & timely products; and 3) establish a requirements process that produces clearly defined, stable, validated and affordable requirements. These three elements will be inter- and intra-departmentally coordinated and supported in order to achieve successful program and project management results.

QUESTION: The Department has recently issued a draft aquaculture policy, to "enable the development of sustainable marine aquaculture within the context of NOAA's multiple stewardship missions and broader social and economic goals." Please explain the specific goals the Department is hoping to accomplish through this policy, as well as the metrics for determining whether the goals have been met.

ANSWER: The United States is the third largest consumer of seafood in the world and demand exceeds domestic supply from wild stocks. Currently, the United States imports 84 percent of its seafood, and about half of those imports are from aquaculture. The current trade deficit in seafood is approximately $9 billion. Growth of domestic aquaculture would support fishing and agricultural communities and new aquaculture-based industries in the United States. Currently, the U.S. aquaculture industry (currently valued at about $1 billion/year) is dominated by the production of freshwater fish for human consumption. The marine aquaculture segment (about 20 percent of current production) is mainly comprised of shellfish farming, but also includes farming of finfish and algae in coastal waters and on land. Aquaculture in the United States can make major contributions to the local, regional, and national economies by providing employment and diverse business opportunities from coastal communities to the agricultural heartland.

The purpose of the Department of Commerce's (DOC) draft aquaculture policy is to "support the development of sustainable marine aquaculture within the context of the DOC's goals of encouraging economic growth and employment opportunities in the United States and of enhancing United States competitiveness in, and exports to, global markets". The policy applies to a broad range of responsibilities at DOC relating to trade, technology, innovation and entrepreneurship, economic development, and environmental stewardship.

NOAA also issued a separate, draft Aquaculture Policy to enable and foster the development of sustainable marine aquaculture in the U.S. As a DOC bureau, NOAA will participate with the other DOC bureaus to implement this policy. Through this policy, NOAA is setting the framework for domestic aquaculture that will add to the U.S. seafood supply, support coastal communities and important commercial and recreational fisheries, and help to restore habitat and endangered species – while protecting our marine ecosystems and wild species. Together, the two policies provide a national approach for supporting and enabling sustainable aquaculture.

Measures by which to track achievements toward the goals of the DOC and NOAA Aquaculture policies are outlined in NOAA's Next Generation Strategic Plan (NGSP) which calls for increased research focused on sustainable aquaculture activities; increased numbers of aquaculture facilities that are ecologically sustainable; and implementation of the national aquaculture policy and NOAA aquaculture priorities. In addition to these metrics, the 2008 GAO report has called for "filling the [four] gaps in knowledge" on offshore aquaculture, namely (1) alternative fish feeds, (2) best management practices to minimize environmental impacts, (3) data on how escaped aquaculture fish might impact wild fisheries, and (4) strategies to breed and raise fish while effectively managing disease.

The FY 2012 budget requests $8.4 million for NOAA's aquaculture program, an increase of $2.4 million from the FY 2010 request. This increase supports one of the Policy's and GAO's suite of priorities and will be used by NOAA Fisheries to develop aquaculture feeds that require less fish meal and fish oil.

CommerceConnect

QUESTIONS: The Department is developing an initiative, known as CommerceConnect, designed to support U.S. business innovation, entrepreneurship, and job creation. Please explain the ways in which this effort will support and enhance job creation generally. Does the Department expect that this initiative will result in efficiencies and cost savings for the Department, both in the short-term and long-term? In what ways will savings be achieved? Will this effort also enhance cooperation between the Department and other government agencies?

ANSWER: CommerceConnect is a customer service initiative that improves the efficiency and effectiveness of the Department's program execution through a one-stop delivery format. We help businesses grow to create jobs by establishing targeted access to business-focused programs, products and services offered by the Department and other Federal, state and local enterprise assistance providers.

CommerceConnect touches businesses through a broad spectrum of contact points including a website, call center and cross-trained bureau field office staff. In addition, Commerce bureaus are also engaged in providing access to CommerceConnect through their websites and promotional activities.

This initiative will result in cost savings and efficiencies in both the short- and long-term. In the short-term, the Department will cross-train over 250 (over 130 year-to-date) existing Commerce field staff to understand the full portfolio of business assistance services offered by the Department, and how to analyze businesses' needs so they can effectively match them to the portfolio of solutions. By using existing staff and resources, we are providing better service to businesses..

Long-term, the Department is looking holistically at its existing customer service delivery infrastructure and assessing opportunities for integration or consolidation to achieve economies of scale. For example, the Department currently has at least 13 stand alone customer relationship management systems (CRM) that do not interface or share data and information. We believe we can drive additional program performance and achieve cost savings through economies of scale by more effectively integrating or consolidating these siloed systems. We also believe that similar economies of scale opportunities exist related to the Department's multiple externally-facing call centers and perhaps training activities as well. The potential for improved service delivery and ease of business access to the Department's resources is very high. However, it is noted that in some cases there will be necessary additional up-front costs such as the migration of data from legacy CRM systems to achieve long-term cost savings.

Through the CommerceConnect initiative the Department is also improving our coordination with other Federal agencies. For example, CommerceConnect currently refers a significant portion of all business inquiries outside the Department to other business assistance programs at the Federal, state and local level. By developing a close working relationship with these other agencies, we facilitate targeted referrals to Non-Commerce assistance programs -- dramatically improving the effectiveness of Federal government service delivery. CommerceConnect is also actively exploring ways that we can integrate our customer service delivery infrastructure across Federal agencies. For example, we have initiated discussions with the Small Business Administration and Ex-Im Bank about integrating or interfacing with our CRM systems.

Cybersecurity

QUESTION: The Department's fiscal year 2012 budget request includes several initiatives related to cybersecurity. Please describe how these initiatives are expected to improve cybersecurity both inside and outside the Department. What is the Department doing to address the information security weaknesses that have been noted by the Inspector General and others?

ANSWER: The $5M cyber security budget request focuses on enhancing enterprise-level forensics support, cyber security for national security systems, and funding to effectively utilize services available through OMB's Trusted Internet Connections (TIC) initiative. This forensics capability enhancement is designed to reduce the Department's vulnerability to cyber attacks by quickly and effectively isolating and correcting information technology (IT) security incidents and providing real-time, enhanced monitoring of critical network segments. Funds are requested to acquire experienced and capable IT Security expertise to develop improved IT forensics and investigative capabilities. The investment in cyber security for national security systems will improve identity management and operational security improvements to the Department's national security systems. Due to classification issues, additional information on this portion of the request can be provided upon request via a "classified" briefing to Subcommittee staff. Under OMB Memorandum 08-05, Federal agencies are required to reduce their risk of exposure to Internet-based cyber attacks by reducing the number of external

connections used by the Department. The Department's TIC initiative aims to reduce its current estimated hundred access-point connections to a controlled eight Trusted Internet Connections access points. The Department's TIC initiative investment is aimed at service enhancements as well as supporting centralized Department-level monitoring of cyber security-related data generated through the use of TIC telecommunications services.

The $23M budget request was the result of a cross-Department cyber security strategic planning effort that identified cyber security priorities for DOC. This budget request will fund cyber security improvements in enterprise-wide security capabilities and functions. One portion of this request will fund a Department-wide continuous monitoring infrastructure to implement and monitor key information technology security controls on IT assets across the Department. Security functions provided by this infrastructure include patch management, vulnerability scanning and remediation, asset management, configuration management, host based intrusion prevention and improved anti-virus. A second portion of this request will fund an enterprise security operations center that will provide support for Department-level security operations, situational awareness, and response. Together, these capabilities will better enable the Department to effectively detect, analyze, respond to, remediate, and manage IT risks.

The Department has been strongly focused on addressing IT security weaknesses identified by the Office of the Inspector General (OIG). The Department developed a Cyber Security Development Program in response to an OIG audit of IT security workforce. OIG acknowledged this step in its December 2010 Top Management Challenges report. The same report also mentioned the Department's plans for establishing enterprise-wide continuous monitoring and security operations center capabilities and acknowledged that these steps should enhance the Department's ability to secure its systems. In response to improvements that have been made in the past couple of years, at the recommendation of the Inspector General, the Secretary of Commerce lifted the finding of a material weakness in IT security at the beginning of FY 2011; that finding had been in place since 2001. Additional improvements have been made in security of the Department's financial systems. Whereas in FY 2009 the Department was found by OIG to have significant deficiencies in five classes of IT security controls, in 2010 the significant deficiency finding was narrowed to only two classes of IT security controls. The Department's CFO and CIO are jointly taking ownership of a commitment to eliminate the significant deficiency findings from those remaining classes of controls, have been consistently monitoring bureau progress toward this goal, and have been providing regular updates to the DOC's Deputy Secretary. Lastly, the Department has identified several key cyber security metrics based on chronic weaknesses identified by the OIG and has integrated these into bureau-level Balanced Scorecards, which is the performance management tool used by the Department's Secretary and Deputy Secretary for monitoring and managing bureau performance. Senior bureau leaders are responsible for providing quarterly updates to the Office of the Secretary against these (and other) Balanced Scorecard performance measures.

With respect to improving cybersecurity outside the Department „ the National Telecommunications and Information Administration (NTIA), requests an increase of $1 million and 5 FTEs to bolster the Department of Commerce's leadership role in the evolution of innovation-promoting policies for the Internet both domestically and internationally. Of this amount, $247,000 and 1 FTE will support Cybersecurity issues. NTIA will use these resources to: advise the Administration on appropriate policies to ensure commercial cybersecurity; conduct a government-industry study analyzing the reliability and resilience of commercial broadband communications networks; work with other agencies to establish policies regarding the creation of a voluntary cybersecurity best practices program; expand international outreach on cybersecurity; convene interagency working groups on cybersecurity to inform policy recommendations; and carry out other activities to help establish consumer and business confidence in the security of cyberspace essential to the country's economic and social well-being.

In addition, the National Institute of Standards and Technology (NIST) request of an increase of $43.4 million for its cybersecurity initiative includes funding for NIST to apply its IT research and standards expertise and its strong track record for industry collaboration to significantly improve the security and interoperability of the nation's cyberspace infrastructure and emerging technologies. In particular, $14.9 million would be used to develop improved security techniques, support the creation of consensus security standards, increase the interoperability and usability of security technologies, and expedite the secure adoption of emerging information technologies. This will include cryptographic technologies and capabilities, multi-factor authentication for assuring online identities, security automation, usability of security, security measurement and modeling of large-scale systems, critical infrastructure testbeds, cloud computing cybersecurity standards, and secure adoption of virtual technologies. Further, $24.5 million of the request would support the National Strategy for Trusted Identities in Cyberspace (NSTIC), with a goal of developing a vibrant Identity Ecosystem where individuals, businesses, and other organizations enjoy greater trust, privacy and security as they conduct sensitive transactions online – and that can serve as a platform for innovation in the United States. Of that amount, $7.0 million would support the National Program Office, and $17.5 million would support the NSTIC Grant Program to conduct pilot projects of trusted authentication systems for various applications such as government services, e-commerce, and health IT. Finally, the NIST Cybersecurity initiative includes $4.0 million to fund the National Initiative for Cybersecurity Education (NICE). This would expand the NICE program from one that trains the federal workforce to a larger national education program focused on identifying and addressing gaps in cybersecurity education across the nation.

QUESTION: - The budget request includes an initiative within the Bureau of Industry and Security for additional staffing. What kind of work will these staff be involved in? What is the gap in export enforcement that will be addressed by these additional staff? Will this funding help enhance national security?

ANSWER: The Bureau of Industry and Security (BIS) requests an increase of $10.4 million and 28 FTEs to continue to improve its response to the Administration's various

mandates in the arena of counter-proliferation and export enforcement. Doing so will place BIS in a better position to execute its critical mission of ensuring that sensitive U.S. dual-use goods and technologies are not misused by proliferators, terrorists and others working contrary to the national security interests of the United States, and will significantly enhance outreach and education efforts directed to promote and encourage compliant exports. Export Enforcement (EE) has several significant ongoing investigations and operations which highlight the current need for more investigators and program enhancements to pursue these national security imperatives.

The Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction (WMD Commission) has recommended enhancement of the U.S. Government's counter-proliferation efforts. BIS is seeking additional resources to increase the number of positions in the Office of Export Enforcement (OEE) to support increased counter- proliferation, counterterrorism and national security programs and investigations. Seized Computer Evidence Recovery Specialist (SCERS) enhancements are also required to support this initiative, as recent investigations have yielded useful results by utilizing these analytical technologies.

One of the core recommendations of the WMD Report was the expansion of BIS Special Agent resources in the field. An expanded presence will result in better access to industries and technologies with associated proliferation concerns, which have thus far been difficult to reach due to the limited OEE footprint across the country. EE has conducted an exhaustive study to determine the locations where the greatest need exists to accomplish its national security mission. That study determined that OEE should expand its investigative presence in the following states: Oregon, Ohio, Arizona, and Georgia. This expansion would create four Resident Agents in Charge (RAC) offices in the designated locations. It is critical that EE establish a presence in each of these locations. The priority order of expansion will be determined by ongoing investigations and initial opportunities to co-locate with existing Federal law enforcement offices. This increase in OEE's investigative coverage will allow the agency to more efficiently execute its duties within new regional areas of responsibility, enhance its ability to prevent the proliferation of dual-use goods and technology contrary to the national security interests of the United States.

The WMD Commission identified BIS's contributions to the national security effort and recommended greater interaction with the intelligence community. The personnel resources described in this request will help BIS satisfy that recommendation. Effective enforcement requires intensive analytical capability. BIS seeks to increase the number of analyst positions within the Office of Enforcement Analysis (OEA) to support increased coordination and liaison with the intelligence community in support of counter-proliferation, counterterrorism and other national security programs.

American Recovery and Reinvestment Act

QUESTION: Two years ago, the Commerce Department received $7.9 billion in additional funding in the American Recovery and Reinvestment Act. What impact

has this funding had on the economy, in terms of new jobs created and existing jobs preserved?

ANSWER: The Administration took a number of unprecedented, immediate steps to help curtail the economic downturn and avert a second Great Depression. The American Recovery and Reinvestment Act (ARRA) was at the heart of this effort, and the evidence is clear that it has been successful.

ARRA was purposefully designed to create jobs and spur economic activity across a variety of industries. Whether these jobs are for educators, construction workers, researchers, municipal servants, or others, they have all been critical to driving economic growth and recovery in the two years since the passage of ARRA. This is borne out by the fact that the non-partisan Congressional Budget Office has found that ARRA has raised real GDP by as much as 3.5 percent and employment by up to 3.5 million jobs. Similarly, the latest report on the impact of ARRA from the Council of Economic Advisors finds that it has created or saved as many as 3.6 million jobs, and that private payroll employment has increased by 1.1 million just within 2010. In addition to these immediate-term benefits, the programs and projects put in place by ARRA will drive job growth in the long-term by supporting new industries and investments whose impact will be felt for years to come.

The Department fully complies with the ARRA requirement to review ARRA recipient reporting for accuracy and completeness. Recipient reporting includes the number of direct jobs funded by ARRA in the quarter reported on. While these reported jobs are not cumulative, DOC can report that for the most recent quarter ending December 31, 2010, DOC recipients reported that ARRA dollars funded 2,955 direct jobs in just that quarter alone.

NTIA's Broadband Technology Opportunities Program (BTOP) is a $4.7 billion grant program designed to: provide access to broadband in unserved areas of the United States; improve access in underserved areas; provide broadband technologies to schools, hospitals, libraries and other strategic institutions; improve broadband capabilities for public safety agencies; and stimulate demand for broadband. BTOP investments will result in significant job creation and economic growth over the approximately three-year life of these grants and will lay a foundation for long-term economic opportunity. In the short-term, these projects will require workers to lay fiber, install equipment, and construct facilities. In the long-term, expanded broadband infrastructure will help attract businesses, promote innovation, improve education and health care, and make the public safer and more secure.

Many of the public computing centers and sustainable broadband adoption projects funded by BTOP are providing critical training to vulnerable populations on the use of computers and technology to help people both find new jobs and be prepared to succeed in information technology jobs.

An analysis by the National Economic Council estimates that broadband investments will create tens of thousands of jobs in the near-term. Since the announcement of awards, many BTOP projects have begun drawing down funds, breaking ground, purchasing equipment, and training students and workers. Grantees either have begun installing equipment or placed orders for significant equipment purchases that will have positive downstream effects for the economy.

As of the end of 2010, the grantees reported that broadband projects had created or retained approximately1,200 jobs. Due to the additional requirements associated with environmental and historical preservation studies and approvals that impact the start of broadband construction projects, we expect to see significant increases in job creation and retention figures reported by grantees through the end of FY 2011.

EDA successfully obligated 100% of its $147 million ARRA funds in September 2009, one year ahead of the Congressional deadline. In total, EDA competitively selected 68 projects for ARRA funding. According to grantee estimates at the time of award, EDA's ARRA projects are expected to leverage $5.9 billion in private investment and create approximately 31,422 long-term jobs.

As of April 7, 2011, 65 of EDA's 68 Recovery Act Investments have broken ground, which means 91.18 percent of EDA's ARRA investments have started. These 65 investments are worth $142,738,559, which is 97.10 percent of the $147 million in ARRA funding EDA obligated.

As of this date, eight of EDA's Recovery Act investments have been completed, which means 11.76% of EDA's Recovery Act investments have been completed. These eight projects are worth $13,406,144 which is 9.12 percent of the $147 million in ARRA funding EDA obligated.

Short-Term Job Impacts

Per Section 1512, EDA's Recovery Act grantees are required to submit quarterly reports to FederalReporting.gov detailing the impact that the investment is having on the local economy. Based on information reported in these reports, EDA's Recovery Act grantees have created the following number of short-term jobs per quarter:

- Q3 (2009) – 26.27 FTEs (FTEs created/retained as of September 31, 2009)
- Q4 (2009) – 81.05 FTEs (FTEs created/retained as of December 31, 2009)
- Q1 (2010) – 144.35 FTEs (FTEs created/retained as of March 31, 2010)
- Q2 (2010) - 283.58 FTEs (FTEs created/retained as of June 30, 2010)
- Q3 (2010) – 402.12. FTEs (FTEs created/retained as of September 31, 2010)
- Q4 (2010) – 450.44 FTEs (FTE created/retained as of December 31, 2010)

Per OMB direction, Federal Agencies have been advised not to total recipient reporting data across quarters to prevent possibility of double counting jobs. EDA's Recovery Act grantees are currently in the process of reporting information for Q1 (data between January 1 – March 31, 2011). Final estimates on the FTEs created through this period

should be available at the end of April. In cases where updated information becomes available, FTEs can change based on revised recipient reports.

QUESTION: The Census Bureau is continuing its work on the American Community Survey, designed to serve as the most comprehensive data source available to governments and businesses about the American people and economy. How is the fiscal year 2012 budget request designed to assist these efforts, and how will Americans benefit from these efforts? Will these efforts help to reduce the cost of the next decennial census in 2020?

ANSWER: The FY 2012 request for the American Community Survey (ACS) will allow the Census Bureau to conduct the ACS at an expanded sample size of 3.5 million households. The ACS has replaced the long form from the Decennial Census and provides the only source of comprehensive demographic data for all areas of the United States. This investment to expand the ACS sample size will increase the reliability of ACS data, especially for small and medium-sized towns and communities (areas with a population of 20,000 or less). This increased reliability will greatly benefit entrepreneurs and businesses by informing their decisions about where to expand their operations and providing better data on the changing economic, social, and demographic trends of their workforce and customers. Additionally, improved reliability of small area data will lead to more efficient allocations of more than $400 billion in Federal funds to communities ensuring even the smallest of towns, communities, rural areas, and tribal lands get their fair share of funding for schools, transportation projects and job training. Finally, improved reliability will also result in better decision-making at the local level, such as placement of schools or fire stations, by local governments in locations where they are most needed.

The ACS research and evaluation program may inform the 2020 Census research and testing program related to such topics as alternative modes of data collection (including internet data collection), operational control systems, and software and system development. The infrastructure of an ongoing ACS also offers an opportunity for using 2020 Census planning funds more efficiently by leveraging that infrastructure for some 2020 Census testing activities. The early research and testing plans for the 2020 Census are very much focused on redueing the cost of the next Census.

QUESTION: The Department's fiscal year 2012 budget request proposes to eliminate funding for the Trade Adjustment Assistance for Firms program. Does the Department believe that this program is not effective? With the continuing loss of manufacturing jobs, isn't the work of this program more important than ever? Does the Department expect that the centers involved in this work be able to receive EDA Economic Adjustment Assistance funding to help continue their work?

ANSWER: The Obama Administration is fully committed to helping workers, farmers, firms and communities impacted by trade. We are doing the Commerce funding through a different vehicle this time – the Economic Adjustment Assistance program, which can get money out more quickly and with far lower overhead costs, meaning more help for the communities that need it.

Through the Economic Adjustment Assistance model, we can focus resources on helping the entire community adapt to the changing conditions rather than focusing on a particular firm.

Here are just a few examples of investments through EDA's other programs that are helping companies and communities compete in the global marketplace:

- Northeast Ohio has long struggled with severe job loss in its auto manufacturing industry caused by intensifying international competition. In 2004, 34 manufacturers in Northeast Ohio announced that they would lay off 3,400 workers. In response, EDA invested $735,000 in 2005 in Economic Adjustment Assistance (EAA) funds (and an additional $1.5 million in 2008) in Northeast Ohio's JumpStart program to help the region transform into an innovation- and entrepreneur-based economy. JumpStart provides development assistance to early stage entrepreneurs to maximize company growth and job creation. EDA's EAA investment has helped JumpStart achieve strong results in the region – including the generation of an additional $90 million in regional economic output and the creation of 644 jobs (source: Cleveland State University, Economic Impact of Jumpstart Inc. on Northeast Ohio, 2009). Northeast Ohio's progress has been recognized nationally, which has given JumpStart the opportunity to pilot new work engaging with communities outside of Northeast Ohio to catalyze their entrepreneurial ecosystems.
- Following the devastating impact of Canadian lumber imports on Montana's timber industry, EDA invested $2.7 million in 2009 in the State of Montana to capitalize a Revolving Loan Fund (RLF) to provide timber and wood businesses with the financing they need to become more competitive.

QUESTION: The budget request for the Census Bureau proposes to achieve savings by eliminating certain statistical reports, including the Current Industrial Reports (CIR). Is the Department confident that the elimination of these reports will not have negative consequences? Would the loss of the CIR program result in the substitution of less frequent, less detailed data, resulting in less reliable economic estimates?

ANSWER: In deliberations on FY 2012 submission, the Census Bureau consulted with the key data users on relative program priorities and specifically about the consequences of the elimination of the CIR program. Users weighed the loss of the CIR against proposed cuts of other programs and key stakeholders understand why the CIR program

is proposed for elimination given the amount of detail statistics we currently provide for the manufacturing sector. While few data users wanted to eliminate an existing data source, the availability of manufacturing product class data from the Annual Survey of Manufactures, and the continued collection of detailed product information in the Economic Census and in our monthly trade statistics program, helped mitigate the loss. Moreover, on balance we continue to measure the manufacturing sector (e.g. new orders, capital and IT investments, research and development, corporate profits, etc.) in far more detail than any other economic sector.

The Hon. Frank R. Wolf
Chairman, House Appropriations Subcommittee on
Commerce, Justice, Science and Related Agencies

QUESTIONs for the Record
Hearing on the FY 2012 Budget Request
for the Department of Commerce

Commerce Reorganization Proposals

QUESTION: There have been press reports that the White House will be proposing a major reorganization of the Department of Commerce and some related agencies. The Committee has not seen any proposals so I am unsure exactly what will be included. However, one of the proposals is to move the U.S. Trade Representative into the Commerce Department. Some have voiced concerns about moving this office into the Commerce Department, in essence burying it within a big bureaucracy.

1. Please describe the goals of the reorganization.

ANSWER: As the President said in the State of the Union address, winning the future will take doing what we can do now to prepare America to compete in the global economy for decades to come. That means out-educating, out-innovating, and out-building our competition; restoring fiscal responsibility to remove the burden of deficits and debt; and reforming our government so that it is more effective, efficient, and open to the American people. As the President put it, "We cannot win the future with a government of the past."

The President believes that we need to reform our government to make it better organized and better equipped to support American competitiveness. We want to ensure that we're aligning all of the resources we have into negotiating the best agreements, enforcing our trade rights, supporting our exporters and promoting their products.

That is why the President has asked our nation's first Chief Performance Officer (CPO), Jeff Zients, to lead our reorganization effort. Our first focus will be looking at trade and exports to see how we can better reform these functions to give American companies a leg up in the global economy.

Mr. Zients and his team are reaching out to the business community, government reform experts, those who run these programs, members of Congress, and a wide range of stakeholders and citizens to get their input about how government can be reformed to best work for them.

QUESTION: Will a legislative proposal be sent to the Congress this year to begin this reorganization?

ANSWER: The President issued a memorandum tasking the CPO with developing recommendations to be submitted to him by early June and to Congress thereafter.

QUESTION: Does the Department of Commerce have any views with respect to moving the U.S. Trade Representative into the Commerce Department?

ANSWER: CPO Jeff Zients has been tasked with taking a comprehensive look at the agencies involved in trade and exports to see how we can improve these functions to give American companies a leg up in the global economy. We are working closely with him at this time and do not want to prejudge the outcome. Once the review is complete, there will be a clear plan forward to better serve American businesses.

Funding Priorities

QUESTION: Given the fiscal concerns that will likely impact the Committee's ability to fund all of the initiatives requested in the FY 2012 budget, what are top three program and/or funding priorities in this budget?

ANSWER: With his FY 2012 request, President Obama pledged to cut or reform ineffective, outdated, or duplicative programs in order to take further steps to reduce our long-term deficit. In all, the Department's FY2012 budget proposes ending, reducing, or restructuring more than 15 lower-priority programs.

The Department of Commerce's FY 2012 budget makes tough but responsible choices that will put government on a sounder financial footing and reflects the Administration's commitment to invest in areas that will help create jobs at home and better position America in an increasingly competitive global economic environment. The budget does this by focusing investments in innovation, international competitiveness, science, and support of coastal communities.

United States and Foreign Commercial Service (US&FCS)

QUESTION: The total funding level requested for the International Trade Administration (ITA) in FY 2012 is $517 million. The budget for ITA includes an increase of $55 million and 68 new staff to in part expand the Commercial Service presence in China, India, and Brazil. This increase will bring the U.S. and Foreign Commercial Service (US&FCS) budget to $314 million. The exact locations of these new positions are not included in the budget. Instead, ITA will present a plan in the next several months proposing an allocation of these new positions as well as a realignment of existing positions.

Please provide an outline of this plan and the criteria ITA used when determining how to realign existing and new resources and staff.

ANSWER: US&FCS has followed a strategic process that utilizes a number of robust planning tools to determine market coverage, staffing, and budget resources to support its core mission and further the objectives of the National Export Initiative (NEI). As part of

the National Export Initiative, the International Trade Administration has been developing global sector strategies and country strategies to help focus resources, capitalize on global trade promotion opportunities and address pressing trade barriers in critical markets. By aligning its resources with high potential markets, US&FCS will enable U.S. exporters to expand and increase sales and market penetration.

US&FCS is refocusing and streamlining operations by prioritizing markets of highest potential and regionalizing its overseas presence to more effectively support U.S. enterprises within available US&FCS resources. The new regional models will both invest resources and efforts in priority markets, and where feasible, begin to reorganize leadership, management and administrative functions along regional lines. NEI priority markets include the future growth BIC markets (Brazil, India, and China); large, mature markets (NAFTA, Europe and Northeast Asia); FTA markets; and emerging markets.

QUESTION: Do you intend to place more staff in China?

ANSWER: Yes. China is one of our priority markets. We are currently examining how to best enhance our presence there.

QUESTION: To what extent does ITA rely on US AID and State Department staff to cover posts where ITA does not have a presence?

ANSWER: The U.S. & Foreign Commercial Service and State Department have an agreement that enables State Department economic sections designated as US&FCS partner posts to provide U.S. companies with export assistance services in select overseas locations where there is not a US&FCS presence but there is significant commercial potential. These partner posts work in close collaboration with a neighboring US&FCS office in their region to provide U.S. companies with services to facilitate market-entry. There are currently 45 State Department partner posts at locations throughout the world, with the heaviest concentration in Sub-Saharan Africa. For example, US&FCS and the State Department are presently exploring fresh, innovative strategies to increase program efficiencies and expand commercial partnerships between U.S. and African traders.

QUESTION: How much does ITA interact with the State Department with respect to deploying resources? Can their embassies accommodate this planned expansion of Foreign Commercial Service personnel?

ANSWER: We will consult with the State Department to address any capacity concerns. Through the NSDD-38 process, the Chief of Mission at each post must formally concur with the expansion or reduction of US&FCS human resources at that post. The State Department and the US&FCS have always come to a mutual arrangement that accommodates additional US&FCS staff at post.

QUESTION: How many Commercial Foreign Service officers does the U.S. have stationed abroad compared to our top trading partners?

ANSWER: The U.S. & Foreign Commercial Service (US&FCS) has more than 200 Foreign Commercial Service Officers and 763 locally engaged staff (i.e., foreign nationals directly employed by the US&FCS) stationed abroad. We currently do not have comparable information for top trading partners staff stationed abroad. The data that we do have does not enable us to separate core trade staff, i.e. Commercial Officers and Locally Engaged Staff (LES). Therefore, any analysis would not be sufficient to make viable comparisons.

QUESTION: Do you believe that the U.S. is really doing all it can to aggressively promote American products abroad? If not, what else should we consider doing to promote American goods and services?

ANSWER: Through the National Export Initiative (NEI), President Obama directed all of the trade promotion and finance agencies to do everything they can to promote U.S. exports. The 70 recommendations presented in the September 2010 National Export Initiative Report to the President are short-term and longer-term concrete steps that agencies are taking or could take, authorities and resources permitting, to maximize the impact of their programs on expanding U.S. exports. The annual National Export Strategy will report on its progress this month and in coming years.

The President's 2012 budget includes funding to expand export promotion and assistance efforts, including:

- $78.5 million for ITA to expand its staff in critical foreign markets (to help companies take advantage of opportunities and address barriers to exporting), to make exporting information and resources more accessible to U.S. companies through an improved *www.export.gov*, and to launch a new nationwide export education and awareness campaign tailored to SMEs. ITA estimates that this increase in FY 2012 will help American businesses export $4.4 billion in goods and services and support 22,000 additional jobs.
    - A $20 million funding increase for U.S. Department of Agriculture (USDA) to expand export outreach to SMEs, strengthen resources for the Foreign Agricultural Service (FAS) overseas staff in key agricultural export markets, and increase trade negotiation and enforcement activities.
- $19 million increase for Export-Import Bank to support additional demand resulting from the NEI. The Administration also approved a program budget of $76.4 million in FY 2012, which will support $32 billion in lending activity. Because Ex-Im Bank collections exceed Ex-Im Bank expenses, there was no appropriations request.
    - $212 million in subsidy budget authority for SBA to support, among other things, $24 billion in loan guarantees in the Section 7(a) and 504 programs, which offers a number of loan products to help small businesses develop or expand their export activities. The budget also includes $8.3 million for SBA's Office of International Trade to continue its small business export promotion efforts.

- $78.5 million for Commerce's ITA to expand its staff in critical foreign markets (to help companies take advantage of opportunities and address barriers to exporting), to improve www.export.gov (so that companies can better navigate the site), and to launch a new nationwide export education and awareness campaign (export conferences tailored to SMEs to get them to enter high-growth markets).

QUESTION: What successful strategies do our trading partners employ to promote their goods that the U.S. should consider adopting?

ANSWER: We identified three areas where our trading partners are particularly effective:
1- In supporting their companies attending international trade events;
2- Using technology to help their companies export; and
3- Developing long-term relationships with public procurement entities for major projects.

The 70 recommendations in the 2010 NEI report represent concrete steps we can take to help level the playing field for U.S. companies. The President's budget includes requests to implement or expand implementation of many of these recommendations, including funding programs that will increase the availability of export financing to support U.S. companies and expanding trade agencies' overseas staff to help recruit more foreign buyers to attend U.S. trade shows. More staff overseas will also help expand our contacts with overseas procurement officials. Part of the President's budget request includes resources to enhance our technology so that we can better educate U.S. companies about the benefits of exporting and U.S. Government export assistance resources available to them.

QUESTION: Two years ago, the President announced a goal to double U.S. exports over 5 years. How much have exports increased since the announcement and do you believe the U.S. will succeed in meeting this goal?

ANSWER: U.S. exports of goods and services in 2010 increased nearly 17% over 2009 -- the largest year-to-year percent change in over 20 years. This puts us on pace to achieve President Obama's goal of doubling exports within five years and supporting millions of new jobs. The $1.83 trillion total in exports of U.S. goods and services in 2010 represents the second highest annual total on record.

January 2011 exports of goods and services ($167.7 billion), exports of goods ($120.5 billion), and exports of services ($47.2 billion) were the highest on record.
January 2011 exports of goods and services represent a 15.9% increase over January 2010, representing a strong start to the second year of the NEI.

With the support of Congress, other stakeholders at the state and local level, and the U.S. business community, we believe this ambitious goal can be achieved. But as important as hitting this goal is, encouraging more companies to think about exporting as a viable growth strategy will be a victory for our nation's competitiveness and prosperity.

QUESTION: Do you believe that the State Department, ambassadors and embassy staff are doing all they can to support American businesses overseas? If not, what steps could be taken to strengthen cooperation between Commerce and State to promote U.S. businesses?

ANSWER: Cooperation between the Commerce and State Departments is very strong, aided by collaborative institutions such as the Advocacy Center and the Trade Promotion Coordinating Committee headquartered at the U.S. and Foreign Commercial Service (US&FCS) in Washington, D.C., as well as by close day-to-day working relationships in our embassies abroad.

Yet, much more could be done to leverage our ambassadors and embassy staff with the funding requested in the President's 2012 budget. Much of the $78.5 million requested for ITA is dedicated to expanding staff in critical foreign markets -- helping companies take advantage of opportunities and address barriers to exporting.

Expanding ITA's direct presence in both traditional markets and the growing number of emerging markets with burgeoning middle classes will help support the ambassadors in their efforts to open these markets and help U.S. companies win major procurements.

QUESTION: When I was chairman of this subcommittee previously, we directed the department to provide human rights training to ITA employees. This program lapsed for several years, but was reinstated last year. What is the status of the human rights training program? How many employees received training last year?

ANSWER: During 2010 and thru early April 2011, 619 client-facing CS staff were trained (target for this timeframe was 300), representing 53 countries at 27 worldwide training events. In February 2011, the New Delhi program provided training to 55 client-facing CS staff representing seven cities across India and the Moscow program provided training to 23 client-facing CS staff representing three cities across Russia. In 2011, we will focus on ensuring that all CS client-facing staff who have not taken the instructor-led course (another 390 staff) take the online module.

Participant lists for instructor-led training are carefully developed to ensure client-facing (Commercial Officers, Commercial Specialists, and Commercial Assistants as long as they are client-facing) staff is in attendance.

To ensure global, 24/7 access to the content and to reach those that could not attend an instructor-led session, an online learning module was developed. The module was created based on the content in the instructor-led training program, formatted for the web, and uploaded to the Commerce Learning Center (CLC), the Learning Management System that can provide completion reporting for management. The course has been available and accessible to all employees in ITA at any time of day since July 2010. This is the first time ITA or the Commercial Service has uploaded a customized, computer-based training module to the CLC and we are learning quickly how to effectively use distance learning to achieve our training goals.

In all, a total of about 990 employees are targeted to have completed the Human Rights training. We will focus in 2011 on ensuring that all CS client-facing staff who have not taken the instructor-led course (another 390 staff) take the online module.

The following 27 instructor-led training programs were completed in FY10 and FY11:

April 2010
Mexico City, Mexico
Amman, Jordan
Vienna, Austria

May 2010
Tokyo, Japan
Seoul, South Korea

June 2010
Beijing, China
Shanghai, China
Guangzhou, China
Manila, Philippines
Hanoi, Vietnam
Madrid, Spain
Cairo, Egypt
Milan, Italy
Nairobi, Kenya
Paris, France
Lagos, Nigeria

July 2010
Jakarta, Indonesia
Taipei, Taiwan
Memphis, Tennessee
Warsaw, Poland
Ankara, Turkey
San Salvador, El Salvador

August 2010
Washington, DC
Toronto, Canada
Buenos Aires, Argentina

February 2011
New Delhi, India
Moscow, Russia

Import Administration (IA)

QUESTION: ITA is also requesting an increase of $4 million in its Import Administration for a total funding level of $72 million. This office is responsible for conducting antidumping and countervailing duty investigations and reviews, monitoring other countries' antidumping and countervailing duty practices, administering foreign trade zones and enforcing U.S. trade laws and trade agreements, including specifically with respect to textiles.

Does this office have a backlog, as it were, of cases that it has not yet prosecuted?

ANSWER: Import Administration (IA) of ITA is required, under the applicable statute, to undertake antidumping and countervailing duty investigations based upon petitions filed by U.S. workers and firms if such petitions satisfy the legal requirements for initiation. The timing of the conduct of antidumping and countervailing duty proceedings is dictated by statute and regulation.

The petitioners, not IA, control when petitions are filed. For example, last month, eight antidumping duty petitions and three countervailing duty petitions were filed. In addition to conducting antidumping and countervailing duty investigations, IA conducts administrative reviews of many antidumping and countervailing duty orders. Estimating the number of requests for administrative reviews is difficult as requests can be made by interested parties in numerous proceedings in any given month. However, in 2010, IA initiated 122 administrative reviews of various AD and CVD orders. In order to ensure that its determinations are issued in a timely manner, and that appropriate relief is provided to injured domestic industries, each quarter IA measures the percentage of determinations issued within statutory and regulatory deadlines. Since this metric was established, IA's annual target goal has always been met.

QUESTION: What country is the biggest offender?

ANSWER: Approximately 37 percent of our current orders are on products from China.

QUESTION: What country takes up the majority of this offices' time?

ANSWER: We currently have 249 antidumping and 51 countervailing duty orders in place. Of these orders, 89 antidumping and 21 countervailing duty orders are on products from China.

QUESTION: Does ITA have enough resources to aggressively pursue those countries and businesses that are not abiding by U.S. trade laws?

ANSWER: The President's budget will allow IA to perform its role at a high level, working on a large number of cases, including reviews and investigations, many with novel and complex issues.

The Commerce Department understands that effective enforcement of the U.S. trade laws does not necessarily end with the imposition of an antidumping or countervailing duty order. IA takes allegations of transshipments and evasion very seriously and works closely with the domestic industry and U.S. Customs and Border Protection (CBP) to quickly address circumvention issues that arise. IA has established a CBP Liaison Unit to coordinate with and provide advice to CBP on the enforcement of the antidumping/countervailing duty laws, as well as the enforcement of IA's determinations. The CBP Liaison Unit also tracks and maintains protest records and files related to Customs litigation issues. Commerce will continue to do all that it reasonably can within the confines of the law and its jurisdiction to prevent and address the evasion or circumvention of antidumping and countervailing duty orders.

In addition, last year we announced a number of proposals that place a high priority on refining IA's current antidumping and countervailing duty practice to further strengthen the agency's administration of the nation's trade laws and enhance our ability to effectively identify, analyze and address market distorting unfair trade practices. This trade law enforcement initiative firmly supports the President's commitment to ensure that U.S. businesses and U.S. workers have the opportunity to compete on a level playing field, resulting in increased U.S. industry competitiveness and ability to improve access to international markets. The trade law enforcement initiative outlines a number of proposals for administrative and regulatory clarifications, updates, or other improvements to address trade remedy law practice issues, including updates that will more closely capture the realities of how entities function in a non-market economy. IA has released three policy bulletins clarifying our current practice and has issued six *Federal Register* notices seeking comment on possible changes to our practice.

Bureau of Industry and Security

QUESTION: The Department is requesting $111 million for the Bureau of Industry and Security. An increase of about $11 million will support 37 additional positions on the Office of Export Enforcement. Of this amount, $10 million will support counter proliferation and export enforcement activities with respect to their work with sensitive U.S. dual-use goods and technologies. An increase of $3 million will support an increase in the number of staff involved in counter proliferation, counterterrorism, and national security programs and investigations.

Both of these increases are in response to recommendations in the 2005 report, "Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction."

What worries experts in this office with respect to the U.S.'s ability to provide adequate enforcement of rogue states or lone terrorists?

ANSWER: Both rogue states and lone terrorists are of concern. However, the scope of the Export Administration Regulations, in terms of product, technology, and end use controls, has historically caused BIS's Office of Export Enforcement (OEE) to be focused primarily on procurement activities by rogue states. BIS experts are concerned with innovative activities by procurement networks constructed in third world countries that exploit new technologies, including globalized order management and delivery over the Internet. OEE aggressively pursues such cases and has delivered convictions involving these factors, but must continue to seek new ways to uncover and pursue violators.

QUESTION: Does Commerce have difficulty recruiting highly qualified personnel into these very technical positions?

ANSWER: No. On average, dozens of applicants apply for our investigator and investigative support personnel positions. For example: our Hong Kong Export Control Officer position recently closed with 123 applicants. Our challenge is to select the right person from a highly qualified pool of candidates.

QUESTION: Does Commerce have good working relationships with other Federal law enforcement entities with respect to investigating and prosecuting cases?

ANSWER: Commerce's Bureau of Industry and Security (BIS), through its Office of Export Enforcement (OEE), has a close, productive working relationship with other Federal law enforcement entities. These entities include: the Federal Bureau of Investigation, the Defense Criminal Investigative Service, the various military criminal investigative organizations (such as Army CID, Air Force OSI, and Navy NCIS), Customs and Border Protection, the U.S. Marshals Service, the Drug Enforcement Administration, the Immigration and Customs Enforcement (ICE), and the Department of Alcohol, Tobacco and Firearms.

In November of last year, the President signed an Executive Order creating the Export Enforcement Coordinating Center (EECC) as a central element of export control reform as it applies to enforcement activity. The EECC will be a permanent center with dedicated staff intended to ensure that BIS, ICE, the FBI, State, and Treasury and the intelligence community coordinate their activities. It will enable agencies to better leverage their resources by de-conflicting investigations.

BIS's Office of Export Enforcement will be able to more closely and efficiently coordinate its investigative efforts via the EECC. For example, when OEE initiates an investigation, it will send the names of all suspects to the EECC for deconfliction. The EECC will then identify back to OEE any other law enforcement agency investigating the same suspects. Many of these cases are already working jointly; but where the EECC identifies uncoordinated activities, the case agents involved will be put in touch with each

other so their investigations can be coordinated. As a result, all relevant agencies will be able to approach these investigations as full partners.

QUESTION: Has Commerce experienced an increase in the number of cases in this section?

ANSWER: Although the number of charged cases decreased in FY 2010, the types of cases we pursue are, as reflected in the record amount of penalties imposed in FY 2010, more complex and often involve international procurement networks, such as those in or operating on behalf of Iran. Much of the BIS's efforts have been focused on dismantling networks directly responsible for trading components used in the making of Improvised Explosive Devices (IED) for use against Coalition Forces in Iraq and Afghanistan.

This year, several BIS Special Agents received the Attorney General's Award for Excellence in Furthering the Interests of U.S. National Security, for spearheading an investigation that led to the indictment, arrest, and conviction of more than 35 individuals and entities implicated in the provision of sensitive military and dual-use goods to Iran that were then used to manufacture IEDs used against American troops. This illegal trade has dangerous, if not deadly, consequences for U.S. National Security interests.

The Bureau of Industry and Security (BIS) requests an increase of $10.4 million and 28 FTEs to continue to improve its response to the Administration's various mandates in the arena of counter-proliferation and export enforcement. Doing so will place BIS in a better position to execute its critical mission of ensuring that sensitive U.S. dual-use goods and technologies are not misused by proliferators, terrorists and others working contrary to the national security interests of the United States, and will significantly enhance outreach and education efforts directed to promote and encourage compliant exports. Export Enforcement (EE) has several significant ongoing investigations and operations which highlight the current need for more investigators and program enhancements to pursue these national security imperatives.

The Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction (WMD Commission) has recommended enhancement of the U.S. Government's counter- proliferation efforts. BIS is seeking additional resources to increase the number of positions in the Office of Export Enforcement (OEE) to support increased counter- proliferation, counterterrorism and national security programs and investigations. Seized Computer Evidence Recovery Specialist (SCERS) enhancements are also required to support this initiative, as recent investigations have yielded useful results by utilizing these analytical technologies.

One of the core recommendations of the WMD Report was the expansion of BIS Special Agent resources in the field. An expanded presence will result in better access to industries and technologies with associated proliferation concerns, which have thus far been difficult to reach due to the limited OEE footprint across the country. EE has conducted an exhaustive study to determine the locations where the greatest need exists to accomplish its national security mission. That study determined that OEE should

expand its investigative presence in the following states: Oregon, Ohio, Arizona, and Georgia. This expansion would create four Resident Agents in Charge (RAC) offices in the designated locations. It is critical that EE establish a presence in each of these locations. The priority order of expansion will be determined by ongoing investigations and initial opportunities to co-locate with existing Federal law enforcement offices. This increase in OEE's investigative coverage posture will allow the agency to more efficiently execute its duties within new regional areas of responsibility, enhancing its ability to prevent the proliferation of dual-use goods and technology contrary to the national security interests of the United States.

The WMD Commission identified BIS's contributions to the national security effort and recommended greater interaction with the intelligence community. The personnel resources described in this request will help BIS satisfy that recommendation. Effective enforcement requires intensive analytical capability. BIS seeks to increase the number of analyst positions within the Office of Enforcement Analysis (OEA) to support increased coordination and liaison with the intelligence community in support of counter-proliferation, counterterrorism and other national security programs.

New Wireless Innovation Fund at EDA, NIST, and NTIA

Question: The administration is proposing to reallocate federal and commercial spectrum bands over the next 10 years, generating about $27 billion in mandatory spending. This program will depend on enactment of legislation authorizing the FCC to conduct this auction, but this legislation has not yet been sent to the Congress. Congress has to give the FCC permission to conduct incentive auctions, which would compensate broadcasters for moving off their spectrum and could raise funds for an interoperable emergency communications network.

Commerce expects to receive funding over five years, beginning in FY 2012, as part of this Wireless Innovation and Infrastructure Initiative (WI3) to fund activities in EDA, NIST, and NTIA.

When does the Administration anticipate sending this legislation to the Congress, or does Commerce anticipate that the authorizers will put forth legislation?

ANSWER: The Administration plans to work with Congress to develop legislation that will implement the initiative.

QUESTION: Will this legislation be sent up in time to go through the authorizing committees during their process this year so that the Appropriations Committee can act on the funding provisions that are included in this bill, yet are dependent on legislation that has not be sent with the budget?

ANSWER: The Administration plans to work with Congress to develop legislation to implement the initiative. It does not anticipate that additional discretionary appropriations will be needed. .

Economic Development Administration Grant Program

QUESTION: As part of the Wireless Innovation Fund, EDA has requested $20 million for regional cluster grants as part of its proposed Wireless Innovation Fund. EDA will provide targeted assistance to help communities transition into more competitive regions by developing or expanding next generation information and communications technologies deployment and utilization.

When does EDA anticipate awarding these grants and when will we see any benefits?

ANSWER: We anticipate selecting the winning communities by the end of the first quarter of FY 2012.

EDA anticipates the WIN program will lead to short-term and long-term benefits. EDA's experience with challenge grants (i.e., I6) has demonstrated that the process of collaborating to develop and apply for EDA funding leads to a broad array of benefits (increased collaboration, connections among various regional planning efforts, etc.) that can help strengthen regional development goals. The long-term benefits of EDA investments are assessed 3, 6, and 9 years after an award via Government Performance and Results Act (GPRA) performance awards, although initial benefits can begin to be seen at the local level as soon as a project starts.

QUESTION: How is this program different from existing EDA grant programs?

ANSWER: The WIN Program represents an inter-agency initiative comprised of EDA, DOD, and NSF. Operationally, it is differentiated from existing EDA programs given it's: a different source of funding, and specific focus on wireless applications that leverage previous broadband investments.

EDA's WIN funding will be drawn from wireless spectrum auction receipts, as 500MHz of wireless spectrum is auctioned for licensed mobile broadband. The spectrum proceeds will fund EDA's new efforts to support the adoption of wireless applications in underserved communities— helping accelerate America's competitive position and strengthening the development of new technologies in health, energy, and education.

QUESTION: How many jobs does EDA estimate will be created as a result of this initiative?

ANSWER: EDA envisions providing funding to support investments that will advance 4G-technology in the fields of education, energy, health, transportation, and economic development. The program's goals include increasing the productivity and competitiveness of communities by accelerating the utilization of high speed wireless technology and new technologies. Funding decisions will be based upon a national

competition. The evaluation criteria, including performance metrics are under development.

Public Safety Broadband Network

QUESTION: NIST is also expected to benefit from this spectrum auction, receiving $100 million in FY 2012 for a Public Safety Innovation Fund to work with industry and public safety organizations to conduct research and develop standards and technologies. NIST will use the funds to conduct research and develop new technology and applications to advance public safety communications.

According to NIST budget materials, there are some 4 million public safety users in the U.S., including fire, police, and EMS. I certainly support interoperable communications for public safety officers.

Prior to this request, has NIST undertaken similar activities with respect to conducting research or developing standards and technologies?

ANSWER: Assisting in the development of standards and technologies is at the core of NIST's mission and as such it has led and provided assistance to many similar efforts over its 110 year old history. In addition to informing the development of standards for Smart Grid and electronic health care records, and a variety of other technologies, NIST has helped identify research and development priorities and administer grants for many multi-billion dollar programs. NIST has a long history in forwarding public safety related issues and in particular public safety communications standards and research and development efforts. NIST's Law Enforcement Standards Office (OLES) has worked with various federal sponsors including the Departments of Homeland Security (DHS) and Justice (DOJ), numerous Standards Development Organizations (SDOs), industry, and the public safety community to establish body armor, forensics, and other public safety related standards.

In the communications realm, NIST has worked through its Public Safety Communications Research (PSCR) program for over a decade to catalyze standards and perform research, development, testing, and evaluation. In support of public safety communications standards, PSCR's staff of highly qualified federal engineers has been deeply involved in the acceleration and adoption of Project 25's (P25) (administered by the Telecommunications Industry Association) wireless communications standards. Additionally, PSCR created, in partnership with DHS, a P25 Compliance Assessment Program that has helped public safety purchasers have an increased level of confidence that the equipment they purchase meets the requirements of the standard.

PSCR has also led an effort with P25 to modify the existing standards to improve voice intelligibility on behalf of the fire fighting community. Fire fighters had pointed to incidents when alarms and alerts essential to keeping them safe while fighting a fire were

causing serious communication problems. PSCR worked with the fire fighting community to document, quantify, and put forward technical changes to P25 to improve the problem. In June 2008, PSCR published a technical report that details the testing completed and results and information gleaned from the testing. Additionally, PSCR worked with public safety practitioners to develop a best practices guide that enhances audio quality and intelligibility.

PSCR has also been at the forefront of broadband communications for public safety. PSCR, working in partnership with the National Public Safety Telecommunications Council's Broadband Task Force, provided the technical expertise necessary to establish an initial set of broadband requirements for the public safety community. Building on that effort, PSCR is currently working with industry to implement a 700 MHz Public Safety Broadband Demonstration Network project in Boulder, CO. The Demonstration Network project is the only government or independent lab facility located in the United States available to test and demonstrate public safety 700 MHz broadband networks and applications. This project brings together public safety users, federal policy makers, and industry to help understand the capabilities that broadband can provide and the requirements for public safety.

Additionally, PSCR has spearheaded efforts to bring interoperability to Voice over Internet Protocol (VoIP) technologies commonly used to bridge incompatible public safety wireless voice communications systems. PSCR partnered with industry to establish a common technical solution that greatly enhances interoperability among VoIP systems. PSCR created and led a VoIP working group to develop common requirements for bridging these interoperable systems and worked with the leading VoIP vendors to demonstrate how creating "profiles" based on usage scenarios could improve interoperability problems. Additionally, the working group published a BSI (Build Security In) Best Practices guide that helps agency technicians and administrators in their procurement decisions and to achieve best results. As a result, approximately 80% of manufacturers have adopted the NIST-developed VoIP implementation profile.

QUESTION: Please explain the Public Safety Broadband Demonstration Network, which NIST anticipates will later be used as a public safety education center where first responders can run emergency scenarios. When does NIST anticipate that this network will be operational?

ANSWER: Congressional legislation has made broadband spectrum cleared by the Digital Television (DTV) transition in the 700 MHz band available to public safety. New public safety broadband communications will allow for a unified system to foster nationwide roaming and interoperability. The Public Safety Communications Research (PSCR) program is deeply involved in the rapidly progressing 700-MHz broadband activities. To help move forward broadband technology for public safety communications, PSCR is building a 700 MHz public safety broadband demonstration network that will serve as a vendor-neutral environment where public safety, industry, and other stakeholders can observe how new broadband technologies can meet public safety's communication needs.

PSCR is implementing a Public Safety Broadband Demonstration Network to provide manufacturers a location for early deployment and evaluation of their systems in a multi-vendor environment. No government or independent laboratory facilities exist in the United States to test and demonstrate the behaviors of this yet-to-be-deployed first-responder network. The PSCR program's demonstration network will be available to all emergency responders, vendors, carriers, academia, and other pertinent stakeholders to understand how the broadband systems function and determine how the systems will meet user needs. Interested agencies can visit the network and witness demonstrations of the technology executing public safety specific test cases that relate directly to their operational environments. Additionally, the Federal Communications Commission has granted several waivers to states and localities around the Nation to begin building broadband systems. The Demonstration Network will provide a place where early builders (waiver recipients) can gain information about the technology which will help them make informed decisions when procuring systems.

NIST's Public Safety Broadband Demonstration Network is currently operational with a limited number of industry participants. However, over the next few months the capabilities of the network project are set to expand as new industry partners join the project. NIST has partnered with the Department of Commerce's Institute for Telecommunications Sciences (ITS) through their joint Public Safety Communications Research (PSCR) program in creating this network. As of March 31, 2011, NIST and ITS have signed agreements, called cooperative research and development agreements or CRADAs, with over 20 companies. Over the next few months, each of these companies will deploy its equipment on the network.

QUESTION: How many communities or regions does NIST anticipate will be able to participate in this effort?

ANSWER: Any community or region can take advantage of the findings of the Demonstration Network project to understand what kind of capabilities broadband can provide. NIST is also planning an extensive outreach effort to share information with the public safety community and their associations, industry, federal policy makers, and other stakeholders. The results and learning from this project have the potential to improve the way the Federal Government and state and local jurisdictions spend tens of billions of dollars in this area. Putting that information in the hands of procuring officials and policy makers is the primary mission of the Demonstration Network project.

For instance, NIST is currently working directly with the 20 jurisdictions that received conditional waivers from the Federal Communications Commission to begin building broadband networks in the 700 MHz band allocated to public safety. NIST is using the results of its testing to inform the waiver recipients on their procurements and buildouts.

To provide information to a wider audience, NIST has already held two open meetings, which were attended by over 400 participants from public safety, various communities around the Nation, industry, federal agencies, and others. These meetings were open to any who wished to attend. NIST anticipates continuing these meetings on a regular basis

throughout the life of the project. These forums provide an opportunity for public safety purchasers to become familiar with the capabilities broadband can provide, interact with industry, and inform policy makers. As more results from the network project become available, NIST will undertake additional outreach efforts.

QUESTION: Has NIST ever had a program such as this wherein it has supported research efforts in this area?

ANSWER: As mentioned previously, assisting in the development of standards and technologies is at the core of NIST's mission and as such it has led and provided assistance to many similar efforts over its 110 year-old history. In addition to informing the development of standards for Smart Grid and electronic health care records, and a variety of other technologies, NIST has helped identify research and development priorities and administer grants for many multi-billion dollar programs. NIST has a long history in forwarding public safety related and in particular public safety communications standards and research and development efforts. NIST's Law Enforcement Standards Office (OLES) has worked with various federal sponsors including the Departments of Homeland Security (DHS) and Justice, numerous Standards Development Organizations (SDOs), industry, and the public safety community to establish body armor, forensics, and other public safety related standards.

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Demonstration Network project in Boulder, CO. The Demonstration Network project the only government or independent lab facility located in the United States to test and demonstrate public safety 700 MHz broadband networks and applications. This project brings together public safety users, federal policy makers, and industry to help understand the capabilities that broadband can provide and the requirements public safety has.

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The National Telecommunications and Information Administration

QUESTION: Please explain how this $1 billion public safety interoperable grant program from 2007 dovetails with the $1.4 billion that NTIA is slated to receive as a result of the spectrum auction?

ANSWER: The Public Safety Interoperable Communications (PSIC) grant program is a one-time grant program that awarded approximately $968 million to the 56 states, territories and the District of Columbia to assist in the planning and coordination associated with the acquisition, deployment, and training for the use of interoperable communications equipment, software, and systems. States are distributing these funds to local, tribal and non-governmental public safety entities, funding more than 5,000 enhancement projects around the country. The projects primarily focus on narrowband voice communications capabilities such as funding wireless phones for voice communications, push-to-talk functionality, voice dispatch support, and priority access capabilities. These investments are vitally important to the improvement of public safety entities ability to communicate between agencies and between jurisdictions during daily routine operations and natural disasters.

Whereas projects funded by PSIC focus on narrowband voice technology, the President seeks as part of the FY 2012 Budget $1.4 billion for the development and deployment of a nationwide, interoperable public safety broadband network using next generation 4G/LTE wireless broadband technology. Although an allowable expense under the PSIC program, very few projects focused on next-generation communications technologies, such as broadband data and mobile/wireless Internet, access which also is vital to first responders.

QUESTION: How is the FY 2012 request for $1.4 billion different from the $4.7 billion spent by NTIA as part of the Broadband Technology Opportunities Program (or BTOP) established as part of the *American Recovery and Reinvestment Act of 2009*? Of that funding, some $382 million was provided for public safety infrastructure activities.

ANSWER: The Broadband Technology Opportunities Program funding will complement NTIA's request for $1.4 billion for a public safety broadband network (PSBN) to begin the establishment of a secure, interoperable network for first responders. NTIA's Broadband Program awarded approximately $382 million for seven public safety broadband pilot projects to entities that in May 2010 received waivers from the FCC to build out networks in the 700 MHz band for broadband public safety data applications. These networks will employ a newly-developed wireless broadband technology, known as Long-Term Evolution (LTE), which enables the ability to communicate across public safety disciplines and jurisdictions. The projects demonstrate the use of LTE in a variety of environments ranging from dense, metropolitan population areas (e.g., northern New Jersey, Los Angeles) to more rural areas (e.g., Mississippi, Adams County Colorado). With different topographical and geographical representation, these projects will provide public safety agencies nationwide with valuable "lessons learned" and best practices that can be applied toward the implementation of a truly national public safety wireless broadband network.

QUESTION: Did the Congress provide $1 billion a few years ago only now to be replacing that old technology with new technology?

ANSWER: No. The PSIC program addressed narrowband land mobile radio communications issues. First responders have made a significant investment in this area to address interoperable voice solutions, which addressed a critical need of public safety. The proposed PSBN will enhance the capabilities of first responders by providing public safety mobile broadband data solutions necessary to more effectively respond in emergency situations. Although the technologies deployed in a PSBN could ultimately supersede established voice solutions, the lengthy cycle time that would be involved in completing a transition makes prior investments worthwhile.

Economics and Statistics Administration

QUESTION: In December, the *Wall Street Journal* reported on a study that found the U.S. and other countries do not accurately track balance of trade. They found that our bilateral trade statistic models are outdated and do not reflect many complex modern trade flows.

According to a subsequent editorial in the Journal, the "study ought to be required reading on Capitol Hill. Most importantly, it raises the question of how much anyone really knows about what America's trade with China is."

Has Commerce studied this issue and what was their conclusion? Do you believe that we need to revisit how we collect and analyze our trade statistics?

ANSWER: The Bureau of Economic Analysis and the Census Bureau, the agencies responsible for measuring international trade flows, continuously pay close attention to measurement methodology, and play key leadership roles in the various international bodies which set standards for measuring trade.

Currently, trade statistics compiled by major countries (based on guidelines from the IMF and other organizations) measure foreign trade as the gross value of exports and imports. This value embodies the labor, capital, and intermediate goods and services used to produce the final product, regardless of which countries provided the inputs. The gross value is assigned entirely to the country of origin for imports and the country of destination for exports. These gross values are readily available from business accounting records and the reporting of these gross trade flows is relatively straightforward around the world.

While there are drawbacks to this methodology, as noted by the Wall Street Journal story, currently the "value-added methodology" alternative, as detailed in the Journal's article, is not viable.

In theory, a value added approach would more realistically calculate the value of imports from each country in the supply chain. In the iPhone example detailed by the Journal, the overall U.S. trade deficit would remain the same, but the deficit with China would be smaller and the deficits with other countries that supply parts—Japan, South Korea and others—would be larger.

However, major challenges loom for implementing a value added system. Chief among these challenges is a dearth of relevant information from businesses. In general, businesses are not able to report in surveys whether their material inputs are from foreign or domestic sources. Previous attempts to obtain information about whether material inputs were either imported or domestically produced have not been effective. Firms also typically are not able to report the country sources of their inputs.

In addition, for value added statistics to be relevant for comparing bilateral trade balances, a coordinated approach involving other countries embracing the same statistical system would be required.

Thus, at this time, the Department does not believe there is a viable alternative to the current methodology. However, the Department will continue to monitor developments in this area.

Bureau of the Census

QUESTION: The Census continues to digest data collected during the 2010 Census. The FY 2012 budget and a proposed reorganization are already looking forward to the 2020 Census, which is on the horizon. Census is proposing an increase of $69

million to begin research projects as part of the ramp-up to the 2020 project, with the stated goal of ensuring that the 2020 total budget does not exceed, and is indeed less than, the $94 per household that the 2010 census cost, which was nearly double the 2000 census.

While this goal is laudable, given the fiscal constraints that are unlikely to continue, shouldn't the goal be to have the 2020 Census cost less than 2010?

ANSWER: For several decades, it has become increasingly more difficult to conduct the decennial census. Factors such as the increasing diversity of the population, a decline in people's willingness to participate, and natural population growth will impact the overall cost of the 2020 Census. These factors, however, are not within our control. If the population and the number of housing units continue to grow, maintaining the 2010 Census per household cost may still result in an overall cost of the 2020 Census that is higher than that of 2010. Given the factors discussed above and the current environment of continued fiscal constraint, it is important for the Census Bureau to research various alternatives that may control costs in order to understand the impact on coverage, cost, and quality. The Census Bureau will continue to communicate the impact of these factors to Congress and other stakeholders before committing to the final design and estimated lifecycle costs for the 2020 Census. The Census Bureau is, however, committed to the goal of designing and conducting a 2020 Census that costs less per housing unit (on an inflation-adjusted basis) than the 2010 Census while maintaining quality.

QUESTION: With respect to the 2010 handheld device program that was not successfully completed, please provide the original cost of this program; the amount that was ultimately spent on this program; and the amount of any awards received by the contractors.

ANSWER: The original Field Data Collection Automation (FDCA) contract award was $596 million and the final cost is expected to be about $790 million. Harris Corporation received $44.7 million in award and technical incentive fees. Both before and after scope changes in 2008, the FDCA contract solution provided the 2010 Decennial Census with more than handhelds. Though the handhelds were not used in the Non-response Followup (NRFU) operations, they were successfully used in the Address Canvassing operation. Additionally, the FDCA contractor supported Decennial field operations in 494 Local Census Offices (LCOs), providing desktop workstations, software applications, and local area networks in each LCO; a nationwide telecommunications infrastructure; network and security operations centers that provided 24x7 systems monitoring; and related support services including an asset management system to control thousands of pieces of equipment; and a Help Desk for technical problem resolution.

QUESTION: What efforts is the Census Bureau undertaking now with respect to successfully using technology to improve data collection, reduce non-response follow-up, and move from a paper-based process?

ANSWER: Learning from and building on our 2010 Census experiences, the Census Bureau has established a 2020 Census research and testing agenda, covering the FY 12 – FY 14 time period, to investigate options for dramatically improving design elements related to the implementation of the 2020 Census. Three of our five planned research tracks focus on using technology more efficiently and effectively. These are: (1) expanding, automating, and tailoring multiple modes of data collection to encourage self response from the diverse subgroups of the population, including use of the Internet; (2) reengineering the field operational infrastructure to take advantage of efficiencies gained through using electronic data collection methods; and, (3) reengineering the headquarters IT infrastructure to establish integrated cross-program capabilities through a revamped acquisition strategy. The other two research tracks focus on evaluating the quality of our address database and establishing acceptable quality levels during continuous frame updating; and on determining the best use of administrative records to reduce costs and maintain quality. The goal of our research is to determine the best mix of technologies and methodologies and to adopt a design that will deliver the highest quality census, with the goal of reducing the per-household cost and managing risk.

Use of Administrative Records

QUESTION: As part of this effort to ensure that costs won't continue to escalate with respect to the 2020 Census, Census will spend an additional $9 million to pursue the use of administrative records as a potential alternative to non-response options in the 2020 Census.

Census has proposed expanding the use of administrative records in the past. Please explain how the Census uses administrative records now and explain how it wants to use them more fully in the 2020 Census.

ANSWER: The first known statistical use of administrative records at the Census Bureau was to create a frame of mortgage holders in connection with the 1890 Economic Census. For many decades we have used records obtained from several Federal agencies to help us conduct surveys of businesses. Whenever possible, we don't burden businesses with requests that they have already provided on those records. We also use records to create cost effective and useful new data products. For example, our Local Employment Dynamics program is a voluntary partnership between state labor market information agencies and the U.S. Census Bureau to develop new information about local labor market conditions at low cost, with no added respondent burden and with the same confidentiality protections afforded census and survey data.

We use administrative records such as birth and death records to calculate our annual population estimates and to develop our demographic analysis estimates that help us measure the quality of the Census. We also use administrative records such as building permits to help us determine the quality of our address list.

In addition, for some years we have conducted research to examine whether program records can be used to improve the quality of our survey data, as well as provide useful statistics on persons and households. We have reported on these evaluations in scientific

meetings over the past several years. This research offers promise, we believe, that these records can be used as part of a decennial census count while reducing the burden to the American people.

In the 2010 Census, the Census Bureau used administrative records for several purposes. The uses included:

- Address List Improvement: We used files from the United States Postal Service to update our address list as authorized specifically by legislation enacted in 1994.
- Military Overseas Enumeration: We used records provided by the Department of Defense and other federal agencies to enumerate members of the military and federally employed civilians posted overseas.
- Group Quarters Enumeration: In some group quarters, such as prisons and nursing homes, we used locally-provided administrative records to assist with the enumeration of residents of these facilities.
- Coverage Follow-up: We used administrative records to identify housing units with potential coverage issues for further follow-up.
- Demographic Characteristic Imputation: We used administrative records to enable a linkage of persons from the 2010 Census to previously self-reported race and Hispanic origin data from Census 2000 and the American Community Survey.

As part of our 2020 research and testing agenda, the Census Bureau will explore new uses of administrative records. We believe that a census conducted only with administrative records would fail to cover important parts of the population. We're not anticipating this for 2020. Our intent with the 2020 Census is to continue providing the public with more opportunities to self-respond, but with that there will still be the need to follow-up with non-responders. We do think, however, that the quality of the 2020 Census might be improved if we were able to use administrative record information for some of the people who do not respond to the census. Rather than go to everyone's house who doesn't respond, we could use information from administrative records they already completed where available. This would allow us to focus expensive door-to-door calls on those for whom no other data is available. However, we don't want to do this unless the records meet quality standards.

We have mounted an evaluation study to see what groups are covered and not covered by such record systems, by comparing administrative record information to the 2010 census results. We'll also examine the accuracy of datathat are collected on the Census, such as age and gender, are reported. We'll know more at the end of this calendar year.

QUESTION: Under what authority does the Census use administrative records?

ANSWER: Title 13, Subchapter 1, Section 6, directs that "to the maximum extent possible" the Secretary of Commerce shall acquire and make use of records and reports from other Federal departments and agencies, as well as other governmental units and private sources to conduct censuses and surveys provided for under Title 13. In order to

provide the country statistical information it needs while reducing the burden on the American public. Data we obtain in this manner have all of the confidentiality protections as those provided directly from the respondents. Once we have an understanding of how fully we might be able to use administrative records in the 2020 Census, we will consult with Congress about our proposed plans.

QUESTION: What constitutes an "administrative record" as used by the Census Bureau?

ANSWER: Many Federal government programs that provide benefits or services collect data relevant to those programs. Thus, people are correct when they say that they have already provided the answers to Census questions to the government, even when it's not the Census Bureau. This indicates a response burden that could be addressed. .

Our intent is to increase the convenience and reduce the response burden of participating in the Census. Census seeks to record data respondents previously provided willingly to other Federal entities. Census intends to use this information only in the absence of having other information -- ensuring that all persons are counted in the census.

Administrative records are also available from commercial entities, and we will be exploring whether information that accurately answers the 10 census questions viable and accurate.

QUESTION: Realizing that non-response follow-up is a big cost driver in conducting the Census, does the Census want to use administrative records for non-response follow-up to the 2020 Census?

ANSWER: The National Academy of Sciences, the Government Accountability Office, and the Commerce Inspector General have suggested the Census Bureau to consider the use of administrative records to reduce the cost of non-response follow up. The Census Bureau will investigate the use of administrative records to replace or reduce in-person visits during the Non-response Follow-up operation as part of our 2020 Census research and testing agenda. Our research will explore new sources of administrative records and will examine the quality and coverage by demographic/geography of the available administrative records sources.

QUESTION: Does an expansion in the use of administrative records for the 2020 Census mean that the Census will not be counting every person as it has done in the past?

ANSWER: Our mission in conducting a decennial census remains counting all people, once, only once, and in the right place. An expanded use of administrative records does not change that.

Under the Constitution, Congress has the responsibility for directing the manner in which the decennial census is conducted. Our evaluation study of the 2010 Census and its match to various record sets should provide very good answers to the questions on what

extent administrative records can be used for conducting the Nonresponse follow-up operation, and we will share those with you when that is completed.

Enhancements in the Government Statistics Programs

QUESTION: Though a small amount of funding, Census is also requesting an increase of $3 million for research, improvements, and new data products in the area of pension statistics. Specifically, Census is seeking additional funds to collect data on defined contribution plans and will allow for this data to be used in the calculation of Gross Domestic Products. Funding will also support development work on new methodologies to produce consistent measures of the costs and liabilities associated with Other Post Employment Benefits. These efforts will assist policy makers with a new data source to assess trillions in estimated liabilities of state and local governments.

Please explain why this information is necessary?

ANSWER: A number of recent articles and reports have highlighted the pension crisis faced by many state and local governments. Current collections on pension statistics are incomplete and do not capture the full magnitude of this fiscal crisis. With this program increase the Census Bureau will quantify the effects of the costs of public pension systems on present and future economic conditions, policymakers will be able to assess economic conditions and make informed decisions, and Federal counterparts will have real measures to fill the gap in current pension statistics.

The program increase will be used to develop new methodologies for measuring revenues, expenditures, and financial assets of publicly sponsored defined contribution plans, and for measuring costs and liabilities associated with Other Post-employment Benefits (OPEB) for all public employees. Little information exists on the full scale of unfunded liabilities associated with public pensions and OPEB, nor are there comprehensive official statistics on these data.

The Census Bureau currently collects statistics on defined benefits plans and limited information on defined contribution plans. The program increase will expand the current collection to encompass the full universe of defined contribution plans as well as OPEB. OPEB (including post-employment healthcare benefits, life insurance, and long-term disability coverage) are considered a significant financial commitment for many governments. Even more so since state and local governments have shifted in recent years from offering defined benefit plans to defined contribution plans and OPEB.

Several state and local governments are trying to renegotiate existing defined benefit plan arrangements and transition to defined contribution plans, these changes will have socioeconomic impacts on nearly 17 million current state and local government employees. In order to address funding shortfalls in OPEB, many governments may be forced to increase revenues (i.e., taxes) and decrease benefits at the same time. Data are needed to inform decisions facing our public policymakers as well as to assess additional intergovernmental financing options. Detailed information on OPEB will allow policymakers to assess the viability of the social safety net, state and local governments'

ability to cover costs, and state and local dependence on federal funding to cover these or other costs as a result of these obligations.

Furthermore, the program increase will fill a critical data gap by providing measures that are used for the calculation of the gross domestic product (GDP), a standard indicator of the Nation's fiscal well-being. Pension data, in addition to health benefits and life insurance, feed directly into the state and local government employee fringe benefits portion of the GDP. These fringe benefits comprise 1.7 percent of the GDP (for 2009), or $239.4 billion. These calculations are based on the data that are currently measured, i.e. defined benefit, not defined contribution plans or OPEB. Therefore, current GDP calculations lack an accurate measure of these components. This program increase will provide for the first quantitative data on defined contribution plans and OPEB, which will allow for their inclusion in the calculation of the GDP. The resulting measures will allow policymakers to account for this critical, ever growing component of public sector data.

Without the program increase we would have a less complete picture of the fiscal welfare of governments at all levels, including local, state, and Federal. The resulting measures will fill critical data gaps, providing policy makers with information to accurately estimate the magnitude of potential funding shortfalls due to unfunded liabilities and Federal counterparts better inputs for which to calculate GDP.

Conversely, Census is also proposing to eliminate certain Census statistical programs including $4 million for certain manufacturing sector reports.

QUESTION: Why would Census eliminate funding for this survey when this sector of our economy continues to lag?

ANSWER: This decision was not taken without an in depth consultation with key data users on relative program priorities and specifically about the consequences of the elimination of the CIR program. Users weighed the loss of the CIR against proposed cuts of other programs and key stakeholders understand why we chose the CIR program given the amount of detail statistics we currently provide for the manufacturing sector. While few data users wanted to eliminate an existing data source, the availability of manufacturing product class data from the Annual Survey of Manufactures, and the continued collection of detailed product information in the Economic Census and in our monthly trade statistics program, helped mitigate the loss. Moreover, on balance we continue to measure the manufacturing sector (e.g. new orders, capital and IT investments, research and development, corporate profits, etc.) in far more detail than any other economic sector.

QUESTION: Please explain how these surveys were chosen for elimination?

ANSWER: In deliberations on FY 2012 submission, the Census Bureau consulted with the key data users on relative program priorities and specifically about the consequences of the elimination of the CIR program. The availability of manufacturing product class data from the Annual Survey of Manufactures, and the continued collection of detailed product information in the Economic Census and in our monthly trade statistics program,

which help mitigate the loss, also weighed into the decision. Also, on balance the Census Bureau continues to measure the manufacturing sector (e.g. new orders, capital and IT investments, research and development, corporate profits, etc.) in far more detail than any other economic sector.

QUESTION: Will Census be able to collect these data sets using other existing survey forms?

ANSWER: The Census Bureau will continue to collect and publish information on detailed manufacturing products on an annual basis at the product class level (rather than the product level) for these 121 categories through the Annual Survey of Manufactures (ASM). The data in the CIR are consistent with the data in the ASM. The consistency of this relationship allows data users to continue to monitor, evaluate, and understand the market. The Economic Census for the manufacturing sector collects comparable data (value and quantity) that will allow users to derive unit cost.

The Census Bureau will also continue to measure the manufacturing sectors in far more detail than any other economic sector. For example, the Manufacturers' Shipments, Inventories, and Orders (M3), a principle economic indicator, provides monthly trends on economic conditions through measurement of current industrial activity while providing indication of business trends. The Quarterly Plant Capacity Utilization survey provides statistics on the rates of capacity utilization for the manufacturing sector. The Census Bureau produces a "Profile of U.S. Exporting Companies" that provides aggregated data on the U.S. exporting community (i.e. number of exporters, known value of the export trade, employment size, type of company (manufacturers, wholesalers, and others) and major foreign markets). These data, in combination with other surveys covering capital and IT investments, research and development, corporate profits, etc., provide a host of information to examine, evaluate, and monitor the performance of the manufacturing sector against foreign competition.

U.S. Patent and Trademark Office

QUESTION: The U.S. Patent and Trademark Office is again proposing language to allow it to spend fees in excess of appropriations, so called "buffer" language. PTO is also requesting authority to collect $2.7 billion in fees while at the same time their spending proposal is for only $2.6 billion. The difference, about $107 million, is being proposed by the PTO as a "reserve" to be carried over from FY 2012 to FY 2013. PTO anticipates carrying over $342 million into FY 2013 to enable it to forward fund initiatives.

Please explain why PTO is expecting to carryover this level of funding? Why wouldn't PTO spend these funds to work down the backlog?

ANSWER: USPTO maintains an operating reserve as part of its strategic objective to establish a sustainable funding model to address both its multi-year funding requirements and any economic/workload volatility that may occur in the future. This is in line with the Administration's and our stakeholder's desire that USPTO maintain a reserve to help

mitigate any funding difficulties along the lines of those the agency experienced over the last couple of years.

The USPTO has a multi-year plan to achieve an average first action patent pendency of 10 months, and an average total pendency of 20 months by 2014 and 2015 respectively, as well as reduce the backlog of unexamined applications. The operating requirements laid out for FY 2012 will continue to implement this multi-year plan by hiring and training 1,500 patent examiners, authorizing the maximum amount of overtime, and paying for awards and contractual services needed for additional production. These levels were analyzed and modeled to identify the appropriate level of hiring to ensure the desired ramp down of staffing once the application inventory reaches optimal levels.

QUESTION: PTO received a $129 million supplemental in August 2010. All of this funding was carried over. Why was this supplemental needed in FY 2010 if none of the money was obligated in that fiscal year?

ANSWER: The supplemental appropriation provided by H.R. 5874 increased the USPTO's authority to spend an additional $129 million of patent fee collections related to applications that had to be examined. The USPTO's original FY 2010 appropriation was $1.887 billion, for which all fees were collected by August, 2010. The USPTO collected an additional $182 million in fees through September 30, 2010 and $129 million of those fees were authorized to be spent in the supplemental appropriation.

We are grateful to the Subcommittee and to the Congress for their exceptional efforts to move this legislation so quickly. The additional funding allowed us to continue the progress we've made in improving the USPTO and the patent process so that patents can be issued more quickly, investments in new technology and new products will be accelerated, and much-needed jobs will be created. In August, right after receiving the supplemental, the USPTO took immediate action to restart the multi-year plans that were paused while waiting for the spending authority. The USPTO plans included spending the entire $129 million on initiatives to reduce backlogs in processing patent applications by building out the examiner workforce and making that workforce more productive by improving information technology and tools.

Executing on those plans was not permitted to occur without this supplemental spending authority, lest we commit the Agency to financial obligations for which it had no authority to act upon. For example, we were not permitted to extend hiring offers to patent examiners or deliver specifications to begin negotiations for contractual goods and services. Without this supplemental, the hiring of 500 patent examiners would have occurred much later in FY 2011 and would have slowed down our efforts to reduce backlogs.

Once the supplemental spending authority was received and during FY 2010, the USPTO began acting on all of its plans for executing. A summary of the plans and when the funds were/are being obligated is:

- Almost 30% of the funds were obligated during FY 2010. These obligations were in areas where the lead time for execution was short including:
    - Continuing with full overtime for patent examiners and support staff;
    - Hiring and training a portion of the planned 500 patent examiners; and
    - Executing modifications to existing USPTO contracts for patent printing and outsourcing the Patent Cooperation Treaty searches.
- Another third is being used in FY 2011 to pay salaries, benefits, and overtime during FY 2011 for the 500 patent examiners recruited from the vacancy announcements that were posted during FY 2010. When the patent examiners started being recruited in FY 2010, we had to reserve a portion of the supplemental and carry it over to ensure we had the funds to pay for them.
- The remaining funds are being used in FY 2011 on contracts and task orders that were not able to be obligated in FY 2010 because of the necessary procurement lead time for fair and open competition associated with obtaining proposals, commencing negotiations, and awarding contracts. Almost all of these contracts are for planned IT infrastructure investments and capital improvements.

PTO and China

QUESTION: I believe that we are putting ourselves at a disadvantage by making U.S. patent applications available on-line. I understand that making applications available on-line is required by law, but I think that we should be publishing abstracts only.

Please provide the legal authority whereby the U.S. posts its patent applications on-line.

ANSWER: Congress provided for publication of patent applications at eighteen months from their filing date in the Domestic Publication of Foreign Filed Patent Applications Act of 1999, Sec. 4502(a), now in statute as 35 USC 122 (b). This publication requirement is consistent with other major Patent Offices around the world.

QUESTION: How does the U.S. stop China from counterfeiting the products that they copy from the patent applications available on-line?

ANSWER: The USPTO has undertaken several initiatives with Chinese IP protection and enforcement agencies on methods to improve the functionality and usability of the Chinese regime for protecting and enforcing IP rights within China and internationally. Working with partners in China, the USPTO has organized programs for US businesses focused on protecting an innovation through a patent or trademark filing and how to enforce an IP right using China's three-track system for IP enforcement (administrative, criminal, and civil systems). These programs have been held in Beijing, Shanghai, Guangzhou, Shenzhen and other cities throughout China.

The USPTO also has developed bilateral relationships with Chinese agencies responsible for IP protection and enforcement and offered assistance in bringing down the incidence of IP infringement for US right holders. The main forum for IP discussions with China is the Joint Commission on Commerce and Trade (JCCT). The USPTO is a co-chair of the IPR Working Group within the JCCT and meets twice a year with its Chinese counterparts to address issues of concern to US companies. In addition, because of the scope and scale of the problem with IP infringement in China, the USPTO has posted two IP Attachés in the Embassy in Beijing and in the US Consulate in Guangzhou, respectively. A third IP attaché position has recently been created at the U.S. Consulate in Shanghai and will be filled in the near future.

QUESTION: Realizing that part of the impetus for posting patent applications on-line is to encourage continued innovation, have any patent applicants voiced concerns that their patent applications are being pirated while awaiting approval?

ANSWER: Very few applicants have contacted the USPTO indicating that their patent applications were being pirated while examination was being conducted. Our records indicate that over past few years less than ten (10) applicants have contacted the USPTO to voice such a concern. This is supported by the small, and decreasing, number of requests received each year by the USPTO that an inventor's patent application not be

published. In Fiscal Year 2010, the rate at which applicants requested non-publication of their patent applications was 6.1%. This is lowest rate since pre-grant publication of applications started in 2000. The rate at which applicants have requested non-publication of their applications has steadily dropped each of the last four (4) years. The continued increase in the rate at which applications are published suggests that piracy of applications is not as great a concern for the patent community as some might suggest.

With respect to general complaints regarding application publications, the Office has averaged less than 4 petitions per year concerning withdrawing a properly published patent application or not publishing a patent application publication when applicant did not opt out of the publication process. Piracy has not been raised as an issue in these petitions.

Economic Development Administration

QUESTION: EDA is proposing to eliminate the Trade Adjustment Assistance Program. FY 2010 funding for this program was $16 million.

Why are you proposing to eliminate this program?

ANSWER: The Administration believes that EDA can make investments such as those that are made under the the Trade Adjustment Assistance for Firms (TAAF) program in a more cost-effective and timely manner using other EDA and Department of Commerce (DOC) programs, such as EDA's EAA Program and the National Institute of Standards and Technology's (NIST's) Manufacturing Extension Program (MEP). The President's proposed FY 2012 budget prioritizes continued investment in high-impact programs while making the tough choices necessary to address the country's long term fiscal needs.

QUESTION: EDA is proposing a new $40 million competitive grant program – the Regional Innovation Program, in concert with HUD and USDA efforts, to fund 20 community regional innovation activities.

Please explain this program. This program is intended to support regional strategic plans to identify how communities can build assets to stimulate job creation and business expansion. What exactly will EDA be funding? More public works grants?

ANSWER: In FY 2012, under this new Regional Innovation Program, EDA will implement a Growth Zones initiative. The proposed Growth Zones replaces the previous Empowerment Zones Program. Specifically, the Growth Zones initiative will competitively select 20 communities that develop the most effective economic development strategies linked directly to the Empowerment Zone programs investment tax credits. This deliberate linkage of strategies for competitive industry growth to Treasury's tax incentives will ensure higher leveraging of Federal investments. The

Growth Zones initiative will provide strategic investments to help communities leverage their innovation ecosystems to create jobs, businesses, and regional prosperity. Specifically, the program will support a nationwide competition to encourage 20 communities to develop and implement regional strategic plans that identify how the community can build on assets and link to drivers of regional economic growth in order to stimulate job creation, business expansion and creation, and enhanced regional prosperity.

In addition, this program includes grants to support the formation and development of regional innovation clusters; grants for feasibility studies for the establishment of science and research parks, and loan guarantees to support the construction and expansion of science and research parks.

National Oceanic and Atmospheric Administration

The FY 2012 discretionary budget request for NOAA is $5.5 billion, comprising about 63% of Commerce's discretionary budget of $8.8 billion. This request is 16% above the annualized FY 2010 level.

Proposed Establishment of a Climate Service

NOAA is proposing a $346 million reorganization to establish a Climate Service. Funding is being transferred from the Office of Oceanic and Atmospheric Research (-$226 million); the National Environmental Satellite, Data, and Information Service (-$111 million); and National Weather Service (-$15 million) to establish this service. Concerns have been raised with respect to the creation of this office. Namely, that NOAA's science mission will be sacrificed and that policy or politics is going to drive the science to be housed in the proposed climate office.

QUESTION: Please outline how Commerce intends to ensure that the science mission of NOAA will not be sacrificed for or driven by politics.

ANSWER: Science guides all of NOAA's activities, and the proposed Climate Service would be no exception. NOAA holds itself to the highest standards of data quality and transparency, and as a science agency is well positioned to provide trusted information on climate variability and change.

This Administration is committed to the honest and open conduct of science. One of the first actions of NOAA Administrator Dr. Lubchenco was to appoint a scientific integrity team at NOAA. Their charge was to review the state of science and scientific integrity at NOAA, to actively assist OSTP in developing recommendations that would strengthen the integrity of science in government, and to draft a scientific integrity policy for NOAA.

NOAA's first priority is to maintain the highest quality climate science while being responsive to user needs. The principal goal of the proposed Climate Service is to make the scientific data and information about climate easily accessible in order to help people make informed decisions in their lives, businesses, and communities.

The National Academy of Public Administration (NAPA) endorsed this approach in their study and recommended that NOAA bring its research, observation and monitoring, and service development and delivery capacity into a single line office. NAPA noted that, "It would undermine the whole concept of an integrated NOAA Climate Service if these research assets were not an integral part of the new line office." The National Academies of Science have also stated that a decision support initiative for climate should be "closely linked" to its research element. (Informing Decisions in a Changing Climate, 2009).

NOAA is also using the proposed reorganization as an opportunity to strategically realign its existing core research line office, the Office of Oceanic and Atmospheric Research (OAR), to strengthen the agency's overall science enterprise. OAR will refocus its work to serve as an innovator and incubator of new science, technologies, and applications for its missions, and an integrator of science and technology across all of NOAA. The OAR Assistant Administrator would serve as vice-chair of the NOAA Research Council. Further, as leader of the central research Line Office, the OAR Assistant Administrator will become the senior advisor to the NOAA Chief Scientist.

QUESTION: What have NOAA's stakeholders told Commerce about this proposed reorganization?

ANSWER: NOAA's climate capabilities significantly matured and markedly grew in sophistication over the past 40 years. Americans depend upon this essential information to make decisions for their family, business and community balance sheets and are now demanding more data, increasingly complex products, and advanced scientific study. As much as one-third of U.S. gross domestic product depends on accurate weather and climate information, and American businesses are using NOAA's climate information to make smart investments to manage their risks and reap economic benefits. For example, through an effort with the National Association of Homebuilders, NOAA provided climate data to help the home building industry establish the most cost efficient insulation standards for protecting building foundations from frost. By industry estimates, this information is said to save roughly $330 million in annual building construction costs and energy cost savings of 586,000 megawatt hours.

This is one example of the positive impact of NOAA's climate services that is fueling an increased demand and the widely recognized view that for NOAA to meaningfully rise to this national challenge, the establishment of a single management structure for the agency's core climate capabilities will be required. Throughout the Department's efforts to develop the proposed Climate Service reorganization, the Department consulted with and benefited from the input and advice of a wide array of external partners and stakeholders across public and private sectors.

Most prominently, the U.S. Congress asked an expert panel of the National Academy of Public Administration (the Academy) to assist NOAA with "a study and analysis of

organizational options for a National Climate Service within NOAA, emphasizing maximum effectiveness and efficiency." (U.S. Congress, House, Conference Committee Report to Accompany Consolidated Appropriations Act, 2010 11 Cong. 1 sess., 2009, Report 111-366 (Washington: GPO) p. 636).

In the conduct of the Academy's report to Congress, Building Strong for Tomorrow: NOAA Climate Service, a survey found that the "*themes that the Panel heard often and found compellingly stated were: strong support for the concept of creating a NOAA (or a National) Climate Service; the need to improve federal interagency coordination of resources and service delivery; the importance of partnerships with the public and private sectors; a need for more localized and more accessible research; the potential positive impact of using innovative service delivery technologies and tools; and the importance of supporting a user community that is large and diverse.*" (Building Strong for Tomorrow: NOAA Climate Service, pg 16).

The Academy report's survey results were based on over 40 interviews with NOAA staff, current and former government officials, and external stakeholders; three roundtable discussions with over 50 key NOAA climate constituents: (1) federal agency partners; (2) state and local government leaders; and (3) academics and other subject matter experts; and lastly, a national Online Dialogue that solicited ideas about how to structure and operate a NOAA Climate Service from June 14 to June 28, 2010.

The Academy's report, resounding as it is in its response, is one of an array of expressions of support for NOAA's proposed reorganization. Below are a number of additional examples of external stakeholder feedback:

"Establishing a NOAA Climate Service demonstrates that the administration and NOAA understand there is a real need to deliver climate services in this country. This is a giant leap forward in meeting this need. NOAA plays a central role in many aspects of climate science including climate modeling, observations, and assessments, and has a major role to play in the efforts to establish a more coordinated and integrated government-wide National Climate Service. The creation of a new NOAA Climate Service will allow it to be a more effective partner with other federal agencies, the private sector, and the research and academic community, in that effort."

Dr. Rick Anthes, President, University Corporation for Atmospheric Research

"NOAA's proposed climate service would be a welcome and critically needed asset to the public health community, both in the U.S. and around the world. Every key sector of the public health community, from first responders to those who provide food and medical supplies and services, would draw on the information. Forecasting air quality, drought, natural hazards and climate-sensitive diseases all impact public health. Better predictive tools, monitoring and other resources will inform our decision-making and advance our efforts to get further ahead of the curve. Lives can be saved as a result."

Georges C. Benjamin MD, FACP, FACEP (Emeritus), Executive Director, American Public Health Association

"I was delighted and thrilled to learn of the commitment by the Administration to form the NOAA Climate Service. I have been a long time supporter of this vision and it is very gratifying to see it accomplished. NOAA has worked for many years to become proficient in climate science, climate observation, and data management. Additionally, with vast experience in producing world-class weather forecasts, extension of these skills to climate is a natural step and will go far in improving the foundation for rational science based policy making. My thanks and congratulations to the hardworking NOAA team members who over many years have made this event possible."

Honorable Conrad C. Lautenbacher, Ph.D.,Vice Admiral (U.S. Navy Ret.) Vice President, Science Programs, CSC, ATG, Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator, 2001-2008

"As climate adaptation becomes an increasingly important strategic path, the new climate service will provide essential information to the public and private sectors. The insurance industry is heavily dependent on public data and information related to climate, and the creation of a NOAA Climate Service with new data services will greatly enhance the industry's analysis of climate and extreme event weather risk."

Frank W. Nutter, President, Reinsurance Association of America

"Addressing climate change is one of our most pressing environmental challenges. Making climate science more easily accessible to all Americans will help us gain the consensus we need to move forward. The new NOAA Climate Service is a welcome addition to our national climate change capabilities. It will help bring people together so we can also bring about an economic recovery by more rapidly modernizing our nation's energy infrastructure."

Jim Rogers, President and CEO, Duke Energy

"I am very excited by today's announcement regarding formation of the NOAA Climate Service. Working in tandem with the highly skilled work force from the National Weather Service, the NOAA Climate Service will enhance NOAA's ability to deliver world class climate services and to address the wide variety of issues related to climate change.

NWSEO intends to work closely with the Obama Administration, NOAA's leadership and the NOAA Climate Service to effectively launch this new venture. We look forward to

forging a close working relationship with the NOAA Climate Service, which will effectively utilize the skills of NWSEO's members and satisfy America's needs to better understand and to predict climate change."

Dan Sobien, President, National Weather Service Employees Organization (NWSEO)

"Our organizations, representing hunters and anglers across the country, are very concerned about the impacts of climate change on fish and wildlife, and we recognize that providing good information to resource managers will be critical to helping ecosystems, fish, and wildlife adapt to the coming changes in climate.

While the broad implications of climate change are becoming better understood, the need for more regional and local understanding of future climate impacts is urgent. The federal government's investment in observing, researching, modeling, and developing tools to respond to the impacts of climate change will be significant, and the ability to disseminate that information to states, municipalities, and non-governmental organizations, while responding in turn to their specific information needs, is critical. NOAA's climate service can play an important role in gathering, analyzing, and presenting that information to those in need of it."

Randi Swisher, President, American Fly Fishing Trade Association;
Tom Franklin, Director of Policy and Government Relations,
Theodore Roosevelt Conservation Partnership; and
Steve Moyer, Vice President for Government Affairs, Trout Unlimited

These are examples of the broad array of support for NOAA's proposed Climate Service from stakeholders; and many more are listed at: http://www.noaa.gov/climateresources/testimonial.html. As a final example of feedback that has been received, attached please find a letter I received from a diverse and distinguished group of business leaders including Microsoft, Deloitte, and Governor Jim Geringer.

QUESTION: Do you believe there is overlap between NOAA and NASA's earth science and climate programs?

ANSWER: NASA and NOAA provide mostly complementary and coordinated earth science services to the nation, cooperating closely through numerous formal and informal mechanisms. For example, through the U.S. Global Change Research Program (USGCRP), interagency coordination and collaboration, and with oversight from the White House Offices of Management and Budget and Science and Technology Policy, NOAA and NASA, along with other federal agency partners, work diligently to ensure coordination among federal climate research portfolios.

NASA conducts research to advance Earth system science, and implements leading-edge technologies to pioneer new space-based measurements of a broad range of Earth system parameters. NOAA, on the other hand, conducts targeted research and provides services that are focused on efficiently and effectively responding to the rapidly increasing demand for easily accessible and timely scientific data and information about climate that helps people make informed decisions in their lives, businesses, and communities.

The NOAA-NASA partnership in observing Earth from space builds on the expertise each brings to this challenging enterprise. NASA's strength in space systems acquisition and its unique research capabilities ensure that space-based measurements provide as advanced a scientific understanding of the Earth system as possible. Once the value of these measurements have been verified, NOAA's strength is in making the information derived from them routinely available in understandable formats to decision makers and the public.

NOAA and NASA extensively share both observational and derived data products, in particular climate data sets developed across observing platforms, which are developed by both agencies. The complementary roles of the agencies are reflected in the complementary nature of space-based observation (much at NASA) with its broad geographic coverage and in situ observations (mostly NOAA) which allows for reference-quality measurements at a specific place.

Both NOAA and NASA develop and run climate models that contribute to national and international predictions and projections to understand the range of possibilities for the overall climate system. Each advances the science of climate modeling, however, in complimentary ways that reflect their individual missions. NOAA improves its models by increasing their spatial resolution and incorporating biological processes relevant to regional and local decision makers. NASA focuses its efforts on better representing physical processes in models, like clouds and the cryosphere, for which its space-based measurements provide valuable supporting evidence. These complementary approaches contribute to the leadership role in climate modeling the United States currently contributes to the international community.
Under the U.S. civil space program construct recently reinforced by the National Space Policy, NOAA and NASA have developed and implemented a successful 40+ year partnership that has provided increasing technology advances in Earth observation capabilities that have been transitioned for use operationally to improve weather forecasting, severe storm/hurricane prediction and climate observations. This partnership has successfully developed, built, launched and operated over 60 weather satellites.

QUESTION: Which agency should have primary responsibility for earth science and climate study?

ANSWER: To ensure the federal family's various and unique capabilities in earth, climate and other science and technology activities are coordinated activities are organized, the Committee on Environment, Natural Resources, and Sustainability (CENRS), co-chaired by the Environmental Protection Agency, NOAA, and the White House Office of Science and Technology Policy, and its subcommittees, serve as the

principal means for coordinating science and technology policies across the Federal Government. The U.S. Global Change Research Program (USGCRP) was established specifically to coordinate cutting edge climate change research across 13 federal agencies. The program is steered by the CENRS Subcommittee on Global Change Research, chaired by Dr. Thomas Karl from NOAA.

Several agencies have complementary responsibilities in advancing the state of knowledge of earth science and climate issues, for example, both NASA and NSF have responsibility to do basic research to advance the state of knowledge of earth science and climate while NOAA has primary responsibility to accomplish the applied research and development needed to improve the nation's weather and climate services. Where the distinctions among responsibilities are not clear, NOAA coordinates with the USGCRP and other agencies.

With regards to the climate science roles of federal agencies and interagency coordination, the National Academy of Public Administration's Panel report, "Building Strong for Tomorrow: NOAA Climate Service," recognized that "*no single agency could conduct all federal climate research. Nor will one agency have all the assets needed to support all constituencies or to deliver all services regarding climate.*" However, the Panel also stated that that it would be essential to have one federal agency designated to be "*the center of gravity for aggregating and rigorously providing an authoritative roadmap or portal to the best available science that can be harnessed to support public policy decision making.*"

After extensive consultation, the Panel concludes that a Climate Service Line Office, properly configured and implemented, could serve the public and private sectors as a lead federal agency for climate research and services, and to provide an ongoing accessible, authoritative clearinghouse for many federal science and services related to climate.

Establishing a Climate Service at the Expense of NOAA's Core Science Mission

QUESTION: Some may be concerned that this Climate "Service" is being created while NOAA's Oceanic and Atmospheric "Research" service is going to suffer. If you look at OAR's budget, which is being cut in half, this appears to be the case. From a strictly numbers perspective, it certainly seems that NOAA will be spending less money on cutting edge research and spending more money disseminating climate data.

OAR's Competitive Research Program is being transferred to the new Climate Service, and the funding is being cut from $152 million to $71 million. Does this mean that fewer non-NOAA scientists will be able to compete for NOAA research dollars?

ANSWER: The proposed reorganization does not eliminate any of NOAA's research activities and NOAA's overall funding for cutting edge research – whether climate or other critically important areas like oceans and weather – is not proposed to be reduced.

In fact, NOAA's FY 2012 proposal maintains NOAA's research funding levels and in some instances, such as ocean acidification and weather radar research, proposes targeted new investments in cutting edge science.

In terms of the specific Competitive Research Program referenced, funding for that activity is not being cut, but has rather been restructured to more accurately reflect in detail what the funding supports. The $152 million to which you refer is now reflected in a number of lines within the Climate Service and a small portion ($4 million) remains in OAR for Integrated Ocean Acidification. The attached table shows how the money from this line was distributed in the reorganization. The question of the future distribution of funding between intramural and extramural research is not addressed in the reorganization proposal, but NOAA does not envision any significant shift.

QUESTION: Likewise, OAR's Laboratories and Cooperative Institutes programs are being cut nearly in half, from about $109 million to $62 million. Again, is this fewer research dollars going out the door to extramural scientists?

ANSWER: The funding change in the OAR's Laboratories and Cooperative Institutes Program reflects the proposed transfer of the three divisions at the Earth System Research Laboratory (Chemical Sciences Division, Physical Sciences Division, and Global Monitoring Division). The Geophysical Fluid Dynamics Laboratory is proposed for transfer to the proposed Climate Service along with these four organizations.

These research programs are proposed for transfer so that NOAA's climate capabilities can be housed under a single line office management structure. In this manner, NOAA can more efficiently and effectively respond to the rapidly increasing demand for easily accessible and timely scientific data and information about climate.

The question of the future distribution of funding between intramural and extramural research is not addressed in the reorganization proposal, but NOAA does not envision any significant shift.

QUESTION: Stakeholders may be concerned that NOAA may be able to direct the focus of the research if it cuts extramural research funds and instead conducts in-house research, the results of which may be called into question by some. Please explain how Commerce is going to address these concerns?

ANSWER: NOAA strongly values extramural research and our relationships with extramural institutions. Through our Cooperative Institutes, Regional Integrated Sciences and Assessments, and other extramural programs, tremendous advances in NOAA mission oriented science and technology development have been realized. NOAA does not envision any significant shift in distribution of requested funding among intramural and extramural partners.

QUESTION: Will the Climate Service maintain the function of the old OAR programs or will they change in nature or scope once they are part of the new Climate Service?

ANSWER: Conducting climate research in the context of the proposed Climate Service will enable NOAA to more effectively transition research to services that support the many sectors NOAA serves. The missions of existing OAR programs that are proposed for transfer to the Climate Service in the reorganization will not change. Existing research, modeling, monitoring, and observational programs, including their internal vs. extramural funding distributions, are also envisioned to continue under the proposed Climate Service. That said, minor strategic re-directions of funding will continue to occur each year as a result of careful program reviews in the context of NOAA's Next Generation Strategic Plan and NOAA leadership approval in order to ensure the agency's portfolio of programs most efficiently and effectively meets the Nation's evolving needs. The core focus of NOAA's climate research is not envisioned to change.

QUESTION: Explain the Global Monitoring and Research programs at the new Climate Service. That program is growing from $14 million to $27 million, an increase of nearly 90%. What is this program? Please provide additional information on the scope of the research and other programs that will be conducted under the auspices of this program.

ANSWER: The Global Monitoring and Research program is largely comprised of activities conducted by the present day Global Monitoring Division (GMD) that is part of the Office of Oceanic and Atmospheric Research (OAR)'s Earth System Research Laboratory in Boulder, Colorado. GMD is renamed the Global Monitoring and Research Laboratory (GML) under the reorganization proposed in the FY 2012 budget. The Global Monitoring Division provides the best possible scientific information about atmospheric constituents that affect our climate. This includes ozone in the stratospheric, measuring the global distributions, trends, sources and sinks of tiny particles in the atmosphere and gases that affect the absorption of heat. This research will advance Earth system projections and provide scientific information to support decision making. GMD continuously monitors atmospheric gases, particles, and radiation across the globe to determine and evaluate trends influencing climate change, ozone depletion, and baseline air quality, and communicates its findings in usable and understandable forms. More information about GMD is available at: http://www.esrl.noaa.gov/gmd/

The total FY 2012 increase to this program includes two initiatives: $4.7million for Monitoring Atmospheric Carbon Sources and $8.0 million for Carbon Observing and Analysis System with summaries below.

Monitoring Atmospheric Carbon Sources: +$4.7million: As the need greater information about the makeup of greenhouse gases in the atmosphere increases in order to inform our deepening understanding of climate variability and change, NOAA's monitoring, modeling, and analysis capabilities must augment its capability to separate human from natural influences. With these funds, NOAA will work with universities and the

Department of Energy's Lawrence Livermore National Laboratory to increase $^{14}CO_2$ measurements at NOAA sampling sites and develop the infrastructure necessary to increase national measurement capacity. (^{14}C is also known as radiocarbon, which is a radioactive isotope of carbon, and is found in atmospheric CO_2 produced by natural sources (e.g., leaf decay) but not in atmospheric CO_2 produced by burning fossil fuels.)

Carbon Observing and Analysis System +$8.0 million: An accurate, reliable, and independent system for tracking sources and sinks of carbon dioxide and other greenhouse gases is needed to increase understanding of the carbon cycle and its impacts on climate variability and change. With these funds, NOAA will complete and sustain an observation and analysis system that will shed light on the regional uptake and emissions of greenhouse gases across North America.

QUESTION: Will the consolidation of some scientific research efforts into the new Climate Service diminish or squeeze out funding for other crucial NOAA activities, namely fisheries or weather research? For example, NMFS's cooperative research funding is going down from nearly $18 million to $7 million.

ANSWER: NOAA's proposed reorganization to create a Climate Service is budget neutral and does not affect the funding levels associated any weather or NMFS fisheries research programs. In FY 2012, NOAA is requesting $13.2 million for Cooperative Research ($6 million in the National Catch Share program line and $7.2 million under the Cooperative Research line.) This funding level represents a return to historical funding levels. Funding for Cooperative Research was $10.1 million in 2008 and $11.5 million in 2009.

Only the funding related to the existing programs that are proposed to be moved into the Climate Service would be transferred to that new office. With the exception of normal increases and decreases that result from annual budget prioritizations and formulation, the funding levels of those programs that are proposed to be moved into the Climate Service remain largely the same. Should the reorganization be approved by Congress, NOAA will continue to meet all of its mission requirements.

The scientific research that has been consolidated is not diminished nor is the weather research or fisheries activities negatively impacted by the NOAA structural change of the proposed Climate Service. Rather, the new office focused on climate, leverages the resources within NOAA for a more complete and robust environmental portfolio that synergizes climate, fisheries, and weather research.

Satellites

The fiscal year 2012 budget request for NOAA, the largest agency within the Department of Commerce, includes $5.5 billion, comprising some 63% of the Department's FY 2012 discretionary funding request of $8.8 billion. Within the amounts for NOAA, an increase of $688 million is for the Joint Polar Satellite System (or JPSS) for instrument development; ground systems; and satellite procurement. This is the successor to the former NPOESS program that experienced schedule slips from 2008 to the current 2014

first launch, a nearly doubling of funding from $6.5 billion to more than $14 billion and a loss of capability – from six satellites to four.

QUESTION: Given the current funding climate, funding levels for FY 2011 will be less than requested for the satellite programs. What contingency plan is Commerce making to address the funding amount needed for the JPSS program in order to remain on schedule?

ANSWER: Due to insufficient funding caused by the FY 2011 Continuing Resolutions (CR), the launch date for JPSS-1 has already slipped to late 2016 – early 2017 time frame from the originally planned 2015 launch date, and the costs to complete the JPSS Program will increase. Continued inadequate funding will cause further delays – on an approximate day-for-day slip – and further cost growth. With the current lack of funding for the program, NOAA is focused on meeting the launch of NPP later this year and maintaining the minimum level of effort on the JPSS-1 instrument and spacecraft contracts with an aim to ramp up work in FY 2012. As a result of the delay already incurred, NOAA is currently reassessing instrument, spacecraft and ground segment development schedules in light of limited available funding to mitigate the high probability of a data gap beginning in FY 2017. Furthermore, it is critical that NOAA receive its FY 2012 request or its ability to provide the critical weather and environmental data needed to support its programs for the long term will be at risk. As part of our contingency planning NOAA will:

- initiate notices to its users advising them to expect and prepare for degraded products and services in the 2016-2017 time period.
- evaluate the application of Metop and other data sources for the numerical weather prediction models to minimize model forecast degradation
- continue where possible to support data from legacy spacecraft that may be available.

With respect to FY 2011, NOAA has limited flexibility in its budget portfolio to apply funds from other programs to the JPSS Program. For the program to move forward and to preserve as much schedule as possible, full funding of the President's FY 2012 Budget request of $1.070 billion is required.

QUESTION: Does Commerce still expect the NPP (NPOESS Preparatory Project) to launch on October 25, 2011 as planned?

ANSWER: NPP is a NASA-led mission. All indications are that NASA is still on schedule for an NPP launch in October 2011.

QUESTION: What are the contingency plans if the NPP launch is unsuccessful?

ANSWER: If the NPP launch is unsuccessful or NPP fails once in the afternoon orbit, NOAA would rely on observations from NOAA-19, the primary polar operational

satellite that is currently flying in that orbit, while it still operates. NOAA would also continue to access data from its older polar satellites, NOAA-18 and NOAA-16, which provide secondary support in the afternoon orbit. NOAA would continue to use these data as long as they were available and usable, recognizing that those satellites are operating beyond their design lives and are demonstrating increased unreliability.

NOAA would continue to make use of NASA Earth Observing System (EOS) data, recognizing that these research satellites have also exceeded their design lives and are also demonstrating increased unreliability. NOAA would also assess the utility of data from foreign satellites (e.g., Japanese, French, Indian, Chinese) and leverage as much useful data as possible. NOAA would need to enter into partnership arrangements with these foreign satellite operators to ensure that the data would be made available to support NOAA's operational requirements for full, open, and timely access to these data. However, even if the potential foreign data source options were utilized, the quality of NOAA polar data would be impacted and, in turn, the quality of NOAA forecasting products and services would be degraded.

If NOAA did not have a polar satellite data source (i.e. POES, NPP or JPSS) in the afternoon orbit, and since the National Weather Service (NWS) cannot rely on Defense Meteorological Satellite Program data, the NWS modeling effort would be based solely on the European MetOp data from the mid-morning orbit. A gap in NOAA polar satellite coverage would result in a degradation of forecast accuracy by 1 to 2 days for NWS 2 to 7 day forecasts. Thus, higher confidence forecasts would only extend out 5 days instead of 7 days as they do currently. This degradation would cause NWS to suffer a loss of a decade's worth of continual improvements in forecast ability.

Finally, NOAA would work with its users to convey the likelihood of degraded products and services as a result of the loss of the NPP satellite and lack of a reliable replacement for measurements in the afternoon orbit. NOAA would attempt to make changes to its numerical weather prediction models using proxy data to substitute for real observations. However, there are no guarantees that these changes would compensate for degraded weather forecasts that would result due to the lack of actual observed data. NOAA would seek to accelerate JPSS-1 development, if feasible.

QUESTION: FY 2012 funds for JPSS will continue instrument development, ground systems, and satellite procurement activities. What are the milestones you expect to meet with the JPSS program in FY 2012 with the funding requested?

ANSWER: Currently, the JPSS program management team is focused on fielding and testing the ground system to support the October 2011 NPP Launch Readiness Date, transitioning the remaining two NPOESS instruments and maintaining a level of activity on JPSS-1 that somewhat mitigates the schedule risk introduced by the FY 2011 funding levels. NOAA has plans in place to use the $1.070 billion requested in the President's FY 2012 Budget request to achieve the following milestones:

- Prepare for and complete the JPSS Program System Design Review

- Conduct the pre-Ship Review for the Cloud and Earth Radiant Energy System (*CERES*) flight model 6 (FM#6) which will be delivered to the JPSS program for integration onto the JPSS-1 spacecraft
- Implement the next phase of fielding, testing, and reviewing the ground system

All of the above milestones are critical near-term steps that must be met to achieve the preparations required in time for the launch readiness date, which will be determined once appropriated funding levels are known.

QUESTION: Provide the Committee with an update on the new program management, now the Department of Defense is no longer a direct partner.

ANSWER: NOAA will maintain overall responsibility for developing, funding, and implementing the JPSS program. NOAA will provide the strategic guidance to NASA as it administers the JPSS program and its requirements, budget and planning, constellation architecture, and launch dates. Strategic direction will be conveyed to NASA through formal Guidance Letters. NOAA will lead JPSS interactions and negotiations with the Department of Defense (DoD) as it develops its Defense Weather Satellite System (DWSS) program in the early morning orbit. NOAA will lead the discussions with international partners such as European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), Japanese Aerospace Exploration Agency, the Canadian Space Agency, and the French Space Agency, CNES, on JPSS related activities.

NOAA/NASA began transitioning to the JPSS program when the Administration announced its decision to restructure the NPOESS Program in February 2010. NOAA continues to finalize transition of the JPSS program and work with DoD to transition contracts from the NPOESS prime contractor to NOAA/NASA management control. Emphasis was placed on the need to implement the necessary government program management oversight that had been lacking in the NPOESS.

The Department of Commerce and NOAA HQ are working closely with NASA HQ to provide the kind of programmatic and decision-making support to the JPSS program that was missing under the tri-agency NPOESS program. The JPSS acquisition is being integrated into the NASA program management and engineering processes. The monthly NOAA-led Program Management Council is providing programmatic oversight.

A NOAA and NASA program management team is in place and operating. Given the current fiscal climate, the most critical NOAA and NASA positions are currently staffed, but the program has not progressed to the staffing levels required. NOAA and NASA JPSS staff are co-located in the same office complex which adjoins the NASA Goddard Space Flight Center. Staff transitions from the NPOESS Integrated Program Office (IPO) to JPSS or other NOAA programs have been completed.

QUESTION: In light of the increasing cost of satellites, have you considered opportunities to use "hosted payload" space on existing commercial satellites?

ANSWER: The use of hosted payloads is one of the options being evaluated by NOAA to meet our cost, schedule and performance requirements.

NOAA and NASA are currently evaluating the feasibility of hosting some of the instruments that are part of the JPSS program on commercial spacecraft, specifically, the Total Solar Spectral Irradiance Sensor (TSIS), the Search and Rescue Satellite-aided (SARSAT), and the Advanced Data Collection System (A-DCS) instruments.

Even if NOAA identified opportunities for commercial hosting, in addition to developing the instruments, NOAA would still need to provide funds to these commercial entities to host and integrate these instruments onto commercial platforms.

Weather Service Forecast Improvements for the Aviation Industry

QUESTION: The NOAA budget also includes an increase of $27 million to fund Next Generation Air Transportation development activities. Total funding for this activity is $33 million, and represents the third year of development, and will support initial deployment of 4D weather data for aviation users, improving access and availability of observed and forecast weather information. This infrastructure will improve dissemination of weather information to National Airspace System users.

Would you please tell the Committee what improvements you expect as a result of this investment?

ANSWER: This investment represents NOAA's commitment to the multi-agency Next Generation Air Transportation System (NextGen) initiative, and will result in the development and deployment of the NextGen 4-Dimensional (4-D) Weather Data Cube described in the NextGen Integrated Work Plan. This "Cube" is characterized by:

a) Improvements to IT infrastructure comparable to those already employed by other governmental agencies and by industry to provide greater and easier access to NOAA weather information for aviation decision-makers. Greater access to aviation-relevant weather information will facilitate better integration of this information into aviation users' decision-making processes.
b) More consistent aviation weather information, providing a common operational weather picture needed for consistent decision making across the National Airspace System.
c) Improvements to accuracy of weather information. The research and development (R&D) needed to meet NextGen's stringent weather forecast accuracy requirements will be an extended, multi-year effort. This long lead-time R&D will underpin more accurate aviation weather information including improved prediction of local weather (such as thunderstorms), improved forecast confidence (reduction of uncertainty), and reduction of false alarm rate. This improved guidance forms the foundation to which forecasters add their expertise to develop the official forecast supporting NextGen goals.

d) Improvements to aviation forecast generation techniques. NWS meteorologists require advanced tools and techniques to enable faster, more accurate generation of aviation weather information.

While this investment is intended to benefit the aviation community, improvements to IT infrastructure, improved forecast accuracy, and more advanced forecast processes will have wider reaching benefits to governmental and private sectors that use environmental information. These results will be leveraged by other NWS service areas, such as support to Emergency Managers, and improved forecasts for severe weather notification or flood warnings to the public. NOAA, other governmental agencies, private industry, and the public will have more effective and efficient access to accurate, consistent, and timely weather information to drive their decision-making systems and processes.

Catch Shares

QUESTION: NOAA is requesting an increase of $37 million to continue implementation of its Catch Shares Program, for a total program of $54 million. NOAA defines "catch shares" as a program that allocates a portion of the total allowable fishery catch to individuals, cooperatives, communities, or other entities. Each recipient of a catch share must stop fishing when its exclusive allocation is reached. Catch share programs, in effect in U.S. federal fisheries since 1990, now include some 15 different programs from Alaska to Florida managed by six different Councils. NOAA does not require the use of catch shares in any particular fishery or sector, but it is promoting and encouraging their use.

If catch share programs have been in use since 1990, why are they so controversial now? Has NOAA changed the way they are implemented?

ANSWER: NOAA has not changed the way catch share programs are implemented. However in November, 2010 NOAA released a national policy encouraging the consideration and use of catch shares as a fishery management tool. Catch shares remain a management tool for the Regional Fishery Management Councils (Council) to consider and programs are designed at the Council level with technical expertise provided by NOAA as requested by the Council. As with any management action adopted by the Councils, a catch share program is subject to approval by the Department of Commerce and must meet all legal requirements of the Magnuson-Stevens Act and other applicable law.

Management of fisheries, like any regulated industry, can be controversial. The two most recent catch share programs were implemented in fisheries facing overfished populations and required reductions in catch levels to rebuild stocks to healthy levels. The controversy about reduced catch levels is often intermingled with discussions about catch shares. In situations where catch limits are decreasing, catch shares are an extremely dynamic and flexible tool, and, when properly designed, can ease the transition to sustainable fisheries. We have seen Councils take a wide variety of catch share

approaches to address the different biological, economic, and social objectives that they are looking to achieve in sustainable fisheries. Matching the business goals and incentives of fishermen, with the Council regulatory program, is one strength of a catch share approach.

QUESTION: Of the 15 catch share programs that NOAA currently has in operation, what percentage include small, "mom and pop" operations which operate one boat as opposed to the large scale fish operations?

ANSWER: Most fisheries are comprised of a mix of vessel size and ownership components. Ten of the fifteen catch share programs (66 percent) include operations which operate single vessels. Catch share programs, which are developed by the Regional Fishery Management Councils, can be, and have been, designed to address issues of concern to smaller owner-operated vessels, for example by setting consolidation and ownership limits, establishing set-asides of quotas for particular fleets or ports, and providing assistance in the form of permit banks and loan programs to assist small entities and new entrants consistent with the Council's objectives. Under catch shares, a vessel owner has more flexibility to operate in a way that maximizes their efficiency and profit. These potential economic benefits of catch share programs can be particularly valuable to smaller operations. In the past, those small boats still had to compete with larger operations, but under a catch share program, how and when they fish is largely within their individual control.

Additionally, catch share programs can be designed to minimize impacts on fishing communities that include smaller fishing operations and promote community sustainability. The Councils have the tools to develop programs that help communities by taking advantage of Magnuson-Stevens Act provisions under Section 303A to designate Fishing Communities (FCs) and Regional Fishery Associations (RFAs). These types of entities can be flexibly developed (e.g., a specific port, group of ports or communities, a group of fishermen using the same gear type or other grouping), while at the same time providing a structure and framework for anchoring quota with a particular community. NOAA can provide support and technical advice on developing FCs and RFAs, and encourage partnerships for community capacity building, which can be a tool for "mom and pop" operations to successfully and sustainably build and maintain their business.

QUESTION: Some concerns have arisen with respect to the creation of fishing monopolies, whereby the catch shares program is biased towards larger, better financed vessels that have the latest fishing gear. A quote from the Environmental Defense Fund's report on catch shares, and the Environmental Defense Fund is a strong proponent of catch shares, seems to support this concern, stating that as a result of catch shares programs, "the total number of available crew positions decreased by half and the viability of some small-scale operators and ports may indeed be reduced."

Please comment on this concern that catch shares will foster consolidation in commercial fishing and drive out smaller operators?

ANSWER: Historically, catch share programs have been implemented in fisheries where overcapitalization (too many vessels catch too few fish) was a management concern and the program included design elements to specifically address overcapacity in the fishery.

The Mid-Atlantic Fishery Management Council adopted the first U.S. catch share program, in the Surf Clam and Ocean Quahog fishery, to address overcapacity, among other issues. Permits jumped from 40 to 168 before the program started and in order to keep overall harvest levels under control fishing had to be limited to six hours per vessel every two weeks. Since the initial years of the catch share program, market transfers resulted in permit consolidation so the number of permits is holding steady at 40, a more sustainable historical level of effort in the fishery. This consolidation improved safety, older unsafe vessels left the fishery and fishermen could fish when the weather allowed, and the market stabilized in terms of price per bushel.

Councils have great latitude to design catch share programs to achieve a wide variety of management objectives, including addressing consolidation and ownership requirements, such that smaller operations remain competitive. Examples include the use of accumulation limits or excessive share caps, requirements for product to be landed in specific ports or by specific sizes of vessels, and setting aside a percentage of the allowable harvest to address community impacts.

Larger operations may have better access to capital which can give them an opportunity to purchase more (or additional) quota or upgrade vessels more easily than a small operator; however, that is true regardless of whether the fishery management regime is a catch share program or another management program. The MSA allows Councils to specify NOAA Fisheries Finance Program loans to assist small operators and first time buyers of catch share privileges.

We heard concerns with respect to consolidation during the development of the NOAA Catch Share Policy and in response, key design elements connected to consolidation such as allocations, transferability, and fishing community sustainability, are among the guiding principles in the policy. In some instances, the Councils goal may be to reduce overcapacity, and that goal should not be precluded; however, we will work diligently with the Councils to ensure that the possible impacts of consolidation, such as lost crew positions, are considered and mitigated during the development of any catch share program.

Catch Shares Program Squeezing Out Fisheries Research and Stock Assessments

QUESTION: As noted earlier with respect to the development of the Climate Service, NOAA is reducing funds for fisheries cooperative research by 61% to partially fund activities related to catch share programs.

What sorts of research will not be funded now because of this reduction of fisheries research – from nearly $18 million to only $7 million?

ANSWER: The agency recognizes the value of cooperative research in supplementing its existing mandated and core research programs and the current funding request would allow NMFS to continue to fund a number of high priority projects. NMFS will continue to leverage cooperative partnerships to maximize agency investments in science. With demands for high-quality science and more focused management continuing to escalate, the call for cooperative research projects to address regional concerns is consistently greater than available funding in all regions of the country, and must be balanced with many other competing priorities.

QUESTION: It appears that NOAA is backing away from cooperative research activities as seen in the reduced funding for cooperative research funding in a number of areas. Why?

ANSWER: The agency recognizes the value of cooperative research in supplementing its existing mandated and core research programs and the current funding request would allow NMFS to continue to fund a number of high priority projects. NMFS will continue to leverage cooperative partnerships to maximize agency investments in science. With demands for high-quality science and more focused management continuing to escalate, the call for cooperative research projects to address regional concerns is consistently greater than available funding in all regions of the country, and must be balanced with many other competing priorities.

Inadequate Fisheries Research

Concerns continue that NOAA relies on old or insufficient data when it makes decisions about how many fish can be caught in a given fishery. NOAA is asking for an increase of $16 million for a total program level of $67 million. This program level is about $13 million higher than the funds to implement the catch shares program. NOAA is proposing to spend nearly as much money trying to tell the fishermen where and when they can fish as it is on the science needed to make those decisions.

QUESTION: Wouldn't it make sense for NOAA to spend more funds collecting information on the fishery resources?

ANSWER: NOAA appreciates the support of Congress and the agency is not opting for catch shares at the expense of other fisheries research and management programs. NMFS is requesting $67.1 million in the FY 2012 President's Request to expand annual stock assessments, an increase of $15 million. These funds will improve assessments for high priority stocks; update assessments for stocks more frequently; and, conduct fishery-independent surveys to enable assessment of more stocks, including data poor stocks, 3-5 years from now. In addition to stock assessments the NMFS budget includes funds for survey and monitoring. Since reauthorization of the Magnuson-Stevens Act, NMFS has requested over $360 million for these activities between FY 2008 and FY 2012.

To further demonstrate that fisheries research has been a clear priority for NOAA, we have invested significantly in our fleet of fisheries survey vessels to collect the foundational data required for informed decision making, In 2007, *Henry B. Bigelow* was commissioned and started fisheries research in the northeast in FY 2008. Since then NOAA has received delivery of *Pisces* and *Bell M. Shimada* to support fisheries science efforts in the Gulf of Mexico and California Current respectively. The FY 2012 budget includes requested funds for fisheries survey vessel 6 which will replace *David Starr Jordan* to collect fisheries science data off the coast of California.

The National Catch Share Program (NCSP) also includes an important data collection component. Funding will support improvements in fishery dependent data collection systems, fishery data management, cooperative research related to catch share programs, and observers and monitors which are crucial to determine catch levels and share allocations. Without these data on at sea discards, bycatch, and on shore landings, catch limits would likely be set more conservatively, reducing the potential economic benefits of these programs. This increased monitoring leads to improved data collection, which can better inform stock assessments and management decisions.

Funding for the NCSP will also support program management at the national and regional levels, quality control on historic catch data to support individual or group allocations, social and economic data collection and analysis, and adjudication of administrative appeals by program participants

Catch share programs are a science-supported management tool which assist in the rebuilding of fish stocks, and are critical to improving the economic vitality of coastal communities and ensuring long-term ecological sustainability.

QUESTION: Are there other lower priority NOAA programs that could be reduced in order to fund additional fisheries research activities?

ANSWER: NOAA is proposing a variety of activities that support the Administration's economic and environmental priorities. This budget request is the result of a rigorous review and prioritization of the agency's programs and activities. Low priority programs or activities have already been curtailed or eliminated, core functions and services are sustained, and increases are requested for only the most critical programs, projects, or activities necessary to meet the growing demand for NOAA's services.

National Working Waterfronts: New NOAA Program for Economic Development

The National Ocean Service is also proposing a new $8 million program, "Working Waterfronts," to assist fishing dependant coastal communities. Funds would support socio-economic studies; community-based planning and capacity building; and economic development and transition projects. This sounds like an EDA program in NOAA.

QUESTION: Even though supporting materials say this program will be implemented as a cross bureau effort, to include EDA, doesn't this type of program distract the National Ocean Service from its core mission of coastal science?

ANSWER: The Working Waterfronts program is related to the National Ocean Service's core mission. By building on long standing NOAA partnerships with state governments, utilizing existing NOAA outreach networks to coastal communities (through Coastal Zone Management Programs, Sea Grant), and capitalizing on NOAA's expertise in coastal policy, education, and science-based problem solving, the Working Waterfronts program will allow the National Ocean Service to further achieve its vision of a nation with safe, healthy, resilient and productive oceans and coasts.

Supporting the economic and environmental resiliency of coastal communities and marine-dependent industries are the larger goals of the Working Waterfronts program. This goal is specifically addressed in one of NOS's key authorities: the Coastal Zone Management Act (CZMA) (16 U.S.C. §§ 1451-1466). The CZMA provides the basis for protecting, restoring, and responsibly developing our nation's diverse coastal communities and resources. By taking a comprehensive approach to coastal resource management, the CZMA balances the often competing and occasionally conflicting demands of coastal resource use, economic development, and conservation. The CZMA specifically identifies economic development, addressing issues such as coastal-dependent uses, redevelopment of deteriorating urban waterfronts and ports, public access, fisheries development and aquaculture, and restoration of historic, cultural, and esthetic coastal features. The Working Waterfronts program thus harmonizes with existing NOS capacity and authority and is well-suited to be led by NOAA's National Ocean Service.

National Institute of Standards and Technology

National Institute of Standards and Technology

The FY 2012 discretionary budget for NIST is $1 billion, comprising some 11% of Commerce's discretionary budget. NIST is requesting about $145 million or 17% in increases for a variety of existing programs as well as funds to establish a few new programs to assist industry and science.

Proposal to Enhance Internet Security Causes Privacy Concerns

QUESTION: NIST is requesting increases of $43 million for a number of cyber infrastructure initiatives, including the creation of a National Program Office for the National Strategy for Trusted Identities in Cyberspace (or NSTIC). This effort grew out of the Administration's 2009 Cyberspace Policy Review.

Concerns have been raised that this initiative will eventually lead to a national ID card.

NIST's role in the National Strategy for Trusted Identities program is in part to improve the process of authenticating the individuals, organizations, and underlying infrastructure — such as routers and servers — involved in sensitive online transactions. NIST is requesting an increase of about $25 million to begin this initiative.

A portion of the NIST funds will support three to five pilot programs between the private sector and state and local governments that will last anywhere from 6 to 12 months. This initiative in part is supposed to enhance security for people when they conduct business on-line. That is, when they buy a book from Amazon, check their banking accounts, or pay bills, for example, they would only have one ID and password.

Please explain how this one ID would work.

ANSWER: NSTIC does not envision – nor does it mandate – that consumers will have only one ID. Rather, NSTIC is focused on the creation of a robust, private sector-led Identity Ecosystem, where consumers could choose from dozens of providers of strong, interoperable, privacy-enhancing credentials for online identification and authorization. The strategy envisions that these providers would each be competing in the marketplace for business, and that consumers could choose to use as many digital identities from as many identity providers as he or she would like.

Of course, an individual would be free to choose to use only a single identity provider, much as many people today choose to have a single credit card. But to be clear, NSTIC would not require this, nor is NSTIC focused on trying to drive consumers to such an outcome.

A core focus of NSTIC is to help the country address some of the key barriers – such as cost, interoperability and privacy – that have prevented Americans from obtaining and regularly using stronger authentication technologies. Passwords today are easily defeated through a variety of attacks from cybercriminals and identity thieves, and do not provide appropriate levels of security for many online transactions. Because of this, many transactions that could be online – in health care, banking, government, and other sectors – still require individuals to appear in person. NIST will work collaboratively with industry to develop standards and best practices that will remove these barriers, enabling American consumers, businesses, governments and other organizations to more easily adopt stronger types of authentication that augment or replace passwords.

NSTIC proposes to rely on the private sector – not government – to develop a wide range of identity solutions that Americans can use to better protect their privacy and security in online commerce. Central to the NSTIC vision is a system that allows individuals to have multiple digital identities and, when an individual so chooses, to engage in online activity anonymously and pseudonymously.

QUESTION: What are the long-term goals of the NSTIC?

ANSWER: The long term goals of NSTIC are to develop a vibrant Identity Ecosystem where individuals, businesses, and other organizations enjoy greater trust, privacy and security as they conduct sensitive transactions online – and that can serve as a platform for innovation in the United States.

The NSTIC envisions that identity solutions will be:

- privacy-enhancing and voluntary
- secure and resilient
- interoperable, and
- cost-effective and easy to use.

QUESTION: What government agencies are involved in this effort?

ANSWER: The Department of Commerce is the lead agency involved with the implementation of NSTIC. The Department of Commerce plans to establish a National Program Office (NPO), led by the National Institute of Standards and Technology and the National Telecommunications and Information Administration, to coordinate the federal activities and private sector efforts needed to implement the NSTIC. The office would become the focal point to bring the public and private sectors together to meet this challenge. The President's FY 2012 Budget request supports this plan to establish the NPO.

The White House led an interagency process to develop the Strategy itself. The Department of Commerce, Federal Trade Commission, Department of Homeland Security, and General Services Administration were among the agencies who played a major role in the development of the Strategy.

All agencies have a role in making the NSTIC successful. The NSTIC was developed to align with other existing government efforts, including Homeland Security Presidential Directive 12 and the Federal Identity, Credentialing, and Access Management program. By implementing these efforts, all Federal agencies support the NSTIC and the use of secure, efficient, easy-to-use, and interoperable identity solutions.

QUESTION: What outside organizations are involved?

ANSWER: No organizations are formally involved with NSTIC; however, many provided input as the draft strategy was refined. Organizations representing 18 different business and infrastructure sectors and 70 different nonprofit and federal advisory groups were consulted in developing the Strategy.

Just as with the NSTIC's development, the implementation of the NSTIC will require broad collaboration and coordination with industry; State, local, tribal, territorial, and international governments, communities of interest and advocacy groups. This implementation will be private sector-led; the role of the government is to act as a partner and supporter of the private sector, to lead by example as an early adopter, and to

advocate for and protect individuals, including the enhancement of privacy and protection of civil liberties.

QUESTION: Within NIST's Scientific and Technical Research Services Account, increases are requested for a variety of programs. One increase of nearly $23 million will enable NIST to continue efforts in the development of interoperability stands and conformity assessment requirements in the Smart Grid, Electronic Health Records, and Cloud computing arenas.

Would you please explain NIST's role in these programs? Please start with the Smart Grid program, which might encompass some of the 3,100 different electric utilities in the U.S

ANSWER: The National Institute of Standards and Technology (NIST) supports one of the key roles in the growth of the Smart Grid—bringing together manufacturers, consumers, energy providers, and regulators to develop "Interoperable standards." In other words, NIST is responsible for making sure the many pieces of "the world's largest and most complex machine" are able to work together. Congress assigned NIST this responsibility in the Energy Independence and Security Act of 2007. The deployment of the Smart Grid is supported by $4.5 billion dollars of Recovery Act grants administered by the Department of Energy (DOE), which together with private matching funds, represents an investment of $10 billion in the modernization of the electric grid. NIST's work on interoperability standards helps ensure that these investments will not become prematurely obsolete and will help deliver the Smart Grid's benefits to consumers in cleaner, more reliable, and more cost-effective electric service.

As for Electronic Health Records, NIST has been collaborating with industry and others to improve the healthcare information infrastructure since the 1990s. NIST IT researchers have an internationally respected reputation for their knowledge, experience, and leadership. Since 2004, NIST has worked closely with the Department of Health and Human Services' Office of the National Coordinator for Health IT (HHS/ONC).

The role of NIST is further articulated in the Federal Health IT strategic plan and the Health Information Technology for Economic and Clinical Health (HITECH) Act to:

- Advance healthcare information enterprise integration through standards and testing
- Consult on updating the Federal Health IT Strategic Plan
- Consult on voluntary certification programs
- Consult on health IT implementation, and
- Provide pilot testing of standards and implementation specifications, as requested.

NIST's roles in health IT will help improve the quality and availability of healthcare and reduce healthcare costs by enabling the establishment of an emerging health IT network that is correct, complete, secure, usable, and testable. Specifically, NIST's roles are to:

- Enable the accelerated development and harmonization of standards for health IT technologies
- Create a health IT testing infrastructure
- Perform foundational research to develop an objective, repeatable procedure for measuring and evaluating the usability of health IT
- Enable health care delivery beyond traditional physical locations, and
- Perform cutting edge R&D on related emerging technologies.

Currently, NIST health IT research and development areas include:

- Providing technical expertise to leverage industry-led, consensus-based standards development and harmonization as well as developing a conformance testing infrastructure to enable interoperability and adoption.
- Advising the HHS Office of the National Coordinator for Health IT (ONC) and the HHS Office for Civil Rights (OCR) on processes and technologies to secure health information as well as leveraging current and emerging security automation specifications and apply them within the context of healthcare.
- Through R&D on usability health IT standards and a testing infrastructure, enable acceleration and adoption of health IT by improving effectiveness, efficiency, and satisfaction of product use.
- Advising ONC on all aspects of developing the proposed EHR certification programs, and collaborating with ONC during the implementation and operational phases of both the temporary and permanent EHR certification programs
- Research and development on emerging health technologies such as medical device interoperability, defining improved methods for acquiring and displaying images for telemedicine applications, identifying best practices and support standards development for the long-term preservation and management of electronic health records, as well as conducting research related to ubiquitous delivery of physiological signals to/from the human body via radio frequency- enabled wearable or implantable devices.

In the area of cloud computing, the most visible early NIST contribution was the cloud computing definition, which has been widely adopted and helps to clarify a complex emerging information technology paradigm. NIST serves as a technical advisor to the Federal CIO Council, and has issued Special Publications which provide cloud computing security guidance. More broadly, NIST has a technology leadership role in accelerating U.S. government agency adoption by collaboratively developing a U.S. Government Cloud Computing Technology Roadmap. This roadmap, which is targeted for an initial draft release at the end of FY 2011, will identify high priority security, interoperability, and portability requirements which must be met to support U.S. government adoption of cloud, and the standards, guidance, and technology which are needed to satisfy these requirements.

QUESTION: For the Electronic Health Records program, NIST is involved in ensuring that the infrastructure standards are available. What is your assessment of the status of Electronic Health Records program?

ANSWER: NIST collaborates with other government agencies and with private sector partners (many of whom are called out in the **ANSWER** to question 4, below) to realize the benefits of interoperable electronic health records (EHRs).

For example, in an effort to enable the deployment and adoption of EHR systems, NIST developed a set of approved procedures for testing EHR systems to the standards and criteria defined by U.S. Department of Health and Human Services Office of the National Coordinator (HHS/ONC). Under a certification program HHS/ONC, testing organizations authorized by HHS/ONC use the NIST-developed tools to evaluate EHR software and systems that vendors would like to sell to doctor's offices, hospitals and other health care providers. These ONC-approved test procedures help ensure that electronic health records function properly and work interchangeably across systems developed by different vendors. The set of 45 approved test procedures evaluate components of electronic health records such as their encryption, how they plot and display growth charts, and how they control access so that only authorized users can access their information. To date (April 6, 2011), there are 543 certified EHR products available for health care providers (375 ambulatory products; 168 inpatient products).

In addition, to help developers of software and computer systems for doctors' offices, clinics, and hospitals improve the ease of use of electronic EHRs, NIST has published two guides to support EHR system developers in demonstrating evidence of the use of key elements of user-centered-design principles and to support standard approaches in evaluating and comparing the usability of EHR systems. These publications are part of a federal effort, led by HHS/ONC to help providers adopt and use EHRs that can bring about broad quality improvements and cost savings in the health care system.

The HITECH Act outlines key activities to make EHRs a reality. Based on the establishment and successful operations of these programs and quantifiable measures such as health IT adoption, certified products on the marketplace, and physicians and hospitals participating in the incentive program, the Electronic Health Records program is on target.

QUESTION: When do you believe they will be in place? I believe the President said in his State of the Union that he wanted them in place by 2014.

ANSWER: Electronic Health Records that satisfy Stage 1 Meaningful Use standards and certification criteria are already in place in many physicians' practices and many hospitals. Recent surveys show that more than 80 percent of all hospitals and 40 percent of all office-based physicians intend to achieve meaningful use and qualify for incentive payments by using certified EHRs in a meaningful way. We anticipate that these numbers will increase in time, especially as the private sector continues to embrace the opportunity to innovate with less expensive and more user friendly EHRs. The next stage of this program, Stage 2, which will stipulate additional and enhanced standards and

certification criteria, is scheduled to occur in 2013, leading to more robust interoperable EHRs and greater adoption rates.

QUESTION: What private sector partners work with NIST on developing standards for electronic health records? What is NIST's role in ensuring the security behind the use of these electronic health records?

ANSWER: Working in collaboration with relevant standards development organizations, Federal agencies, professional societies, and industry, NIST provides technical expertise to enable the acceleration of industry-led, consensus-based standards development and harmonization to help ensure a complete, unambiguous set of health IT standards for clinical information exchange functions such as finding patients, discovering patient information, retrieving patient information, sending patient information, and allowing information to be sent, such as lab test results. NIST plays a critical role by participating early in the development process and by helping ensure that the requisite infrastructural standards (such as clinical information exchange, security, and usability) are complete and unambiguous.

For example, NIST is collaborating with the private sector partners, including the health IT industry, large and small practitioners, academia and other healthcare organizations in the development of health IT standards and tests. NIST collaborates with these partners in such fora as:

- Health Level Seven (HL7)
- IEEE
- International Organization for Standardization (ISO)
- Integrating the Healthcare Enterprise (IHE)
- National Council for Prescription Drug Programs (NCPDP)
- American Society for Testing and Materials (ASTM)
- Health Information Management System Society (HIMSS).

NIST helps address the broad challenges to safeguarding health information through the practical application of security guidelines and technologies. NIST developed a systematic approach that organizations can use to design the technical security architecture necessary for the secure exchange of health information. This approach applies common government and commercial practices to the health information exchange domain. Utilizing this approach will assist organizations in ensuring protection of health data is addressed throughout the system development life cycle. NIST is also leveraging its Security Automation program to develop baseline security configuration checklists and toolkits that will help Health Insurance Portability and Accountability Act (HIPAA) Covered Entities, including small healthcare providers, and their business associates to understand and to implement the requirements of the HIPAA Security Rule. NIST also engages in broad outreach and awareness activities focusing on current and emerging threats to health information, as well as technologies and methodologies that can be used to help combat those threats, resulting in stronger protection of health information. In May, NIST is co-hosting a conference to explore the current health information technology security landscape and the HIPAA Security Rule. The conference

on "Safeguarding Health Information: Building Assurance through HIPAA Security," hosted in conjunction with the HHS Office for Civil Rights (OCR) will provide a forum to discuss the present state of health information security, and practical strategies, tips and techniques for implementing the HIPAA Security Rule.

QUESTION: The President articulated in his State of the Union that he wanted electronic health records by 2014. Will the industry meet this deadline?

ANSWER: Both industry and government providers of healthcare are poised to meet the goal of interoperable EHRs by 2014, as discussed earlier. Two key components to enabling interoperable EHRs are NIST's collaborations with our government partners and the private sector. The answer to the previous question discusses NIST's roles in standards development and harmonization. Current priority areas include security standards, usability standards, and medical device and terminology standards. NIST also advances other high priority and emerging health IT standards as appropriate.

NIST's standards work is augmented by NIST testing activities, including developing test tools and associated testing infrastructure, which reduce the cost to develop health IT systems by providing developers with an innovative, flexible and virtual testbed to confirm that their systems can exchange clinical information with other systems. In addition, it is important that vendors test their implementation of standards-based health systems; without testing it is impossible to know if a standard is implemented correctly. Also, NIST test procedures are being used under the voluntary health IT certification program to evaluate EHR software and systems so doctor's offices, hospitals, and other healthcare providers have confidence in the systems they purchase.

These NIST activities are providing the enabling technologies need by industry to meet the deadline of 2014 for EHRs.

QUESTION: Please explain cloud computing, and what NIST is doing in this arena? Will cloud computing eventually take away the need for government agencies to spend funds on technology refreshment? How is NIST working to ensure that government information will be secure if in the future more information technology operations are outsourced?

ANSWER: Although the power of modern cloud computing systems is new, the ideas behind cloud computing reach back decades. In the early 1960s, researchers proposed the idea of computing as a utility, similar to other services such as gas or electricity. Around the same time, techniques to make a single computer appear to be many separate "virtual" computers were developed and implemented on mainframe computers. Some of the building blocks for cloud computing were in place, but performance and costs were barriers, and networking was inadequate. Therefore, cloud computing is a model of computing that evolved from prerequisite technologies which have matured to the point where this vision of Information Technology as a utility service is viable. An abridged

version of the NIST definition[1], widely cited, is: "Cloud Computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications, and services) that can be rapidly provisioned and released by the user."

This most visible early NIST contribution was the cloud computing definition, which has been widely adopted and helps to clarify a complex emerging information technology paradigm. NIST serves as a technical advisor to the Federal CIO Council, and has issued Special Publications which provide cloud computing security guidance. More broadly, NIST has a technology leadership role in accelerating U.S. government agency adoption by collaboratively developing a U.S. Government Cloud Computing Technology Roadmap. This roadmap, which is targeted for an initial draft release at the end of FY 2011, will identify high priority security, interoperability, and portability requirements which must be met to support U.S. government adoption of cloud, and the standards, guidance, and technology which are needed to satisfy these requirements.

Cloud computing will not, in the foreseeable future, directly eliminate all requirements for technology refresh capital investment. However, cloud computing does have the potential to greatly reduce the requirements, and the expectation is that the trend will expand over time. First, cloud computing leverages excess capacity, so even in the case where the government adopts a private (government owned and operated) or government community cloud computing model, fewer infrastructure will be required. Second, cloud computing services procured through a public cloud computing model eliminate the requirements for government upfront capital investment in infrastructure. Less government owned and operated infrastructure translates into lower technology refresh requirements.

To help U.S. government agencies make risk based management decisions regarding when and how to apply the cloud computing model, NIST is actively involved in translating U.S. government agency mission requirements into technical security requirements. NIST is also focusing on portability and interoperability, which are tightly coupled with security. NIST is working with federal CIOs, state and local governments, industry, industry consortia, and academia, including security experts, to assess the extent to which existing security requirements, standards, and guidance support the cloud computing model. NIST is working with these same stakeholders to prioritize and develop guidance. In 2010 and 2011 NIST issued three Special Publications which apply to cloud computing:

- Final *Guide to Security for Full Virtualization Technologies*, January 2011 (Final)
- *Guidelines on Security and Privacy Issues in Public Cloud Computing*, January 2011 (Draft)
- *NIST Definition of Cloud Computing*, January 2011 (Draft).

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[1] Full definition available at: http://csrc.nist.gov/publications/drafts/800-145/Draft-SP-800-145_cloud-definition.pdf

NIST is planning release of a fourth Special Publication within the next 2 months: DRAFT *NIST Cloud Computing Synopsis & Recommendations*.
A complete review of the NIST Cloud Computing work can be found on the NIST cloud web site (http://www.nist.gov/itl/cloud/index.cfm); particularly under the "Useful Information for Cloud Adopters" link.

NIST Industrial Technology Services Account

NIST Advanced Manufacturing Technology Consortia

QUESTION: NIST is requesting an increase of $12 million to establish an Advanced Manufacturing Technology Consortia (or AMTech) to establish industry-led R&D grants and research projects. Funds will support long-term industrial research needs, including the funding of facilities, equipment, and research at universities and government labs.
Grants will be competitively awarded to consortia comprised of industry, Federal and regional government entities, universities, and private sector partners.
The budget states that up to two grants will be awarded to establish new consortia ($500,000 each) and another one to two grants will be awarded to established consortia with clearly identified long-term industry research needs. These grants will be $5 to $10 million each.

What types of groups will compete for these programs?

ANSWER: Any organization seeking to establish consortia with partners from industry, academia, and regional and federal government to develop a shared vision of industry's research needs via a technology roadmap will be eligible for $500,000 planning grants. This could include trade associations, states, universities, companies, not for profit research organizations, etc.

Industry led-consortia composed of industry, Federal, university, regional, and other private sector partners with a defined road map would be eligible to apply for a larger grant to fund the identified research needs

Criteria for award potentially include:

- a demonstration of the of the innovative and high risk nature of the research to be supported
- a demonstration of the potential high impact of the research results and likelihood that these research results will transform industrial competitiveness
- a demonstration of the need for NIST support of the consortia research agenda
- a demonstration that the consortium members span the innovation life cycle from idea to discovery, invention, and ultimately commercialization

- a demonstration that the consortium has the leadership, capabilities, membership and assets to meet the research needs and transition the scientific achievements to commercial success, and
- a demonstration of how the proposed consortia builds upon existing regional assets and advantages.

QUESTION: What sort of industry research needs does NIST envision will be supported with this funding?

ANSWER: Fundamental, yet targeted, R&D to answer long-term questions about new technologies can be facilitated by AMTech. The AMTech program fills a critical gap by providing resources to conduct directed basic research and measurement research that is seen as too long term for large industry and is pre-competitive, meaning all industry consortia members will benefit from the R&D outcomes. AMTech will leverage the Federal investment with genuine industry needs, ultimately to the economic benefit of the U.S.

QUESTION: How will Commerce be able to measure the success of this program?

ANSWER: Each of the large grants to research consortia will be continuously monitored to track outputs and progress and to ensure that the R&D portfolio managed by the consortia is tracking long term R&D needs. Some potential metrics of the program could include:

- Direct funding of research activities and support for graduate and post-doctoral researchers
- Production of new scientific knowledge and pre-competitive technology
- Attraction of industry and state funding for directed basic research
- Attraction of state and venture funds to support commercialization, and
- Creation of new companies and employment opportunities in high value-added sectors.

QUESTION: What research has been funded in the past and what benefits have been realized?

ANSWER: We have seen this model work successfully in the Nanoelectronics Research Initiative, a consortium created by the Semiconductor Research Corporation following on their realization that by cooperating around a common goal, university research capabilities could be advanced to support the semiconductor industry. Current achievements of this program include:

- NIST funding of research ($2.75M/year) has been leveraged by $5M/year from industry partners and $15M/year from states to support projects at 30 universities to work in 4 regional centers.

- The NIST/NRI partnership has attracted over $200M over five years in state and private funding to support business development and commercialization.
- NIST/NRI interactions are currently supporting 128 graduate students and 24 post-docs through the four regional centers.
- The NIST/NRI partnership has produced 239 scientific publications, and 13 patents have been filed based on the work of sponsored by the NIST/ NRI.

"The Nanoelectronics Research Initiative (NRI) and the regional research centers exemplify what can be done when industry, government and academia work together. This investment is likely to pay substantial dividends in the future. Leading-edge university research centers have proved to be powerful magnets for investment by technology companies and will help build the high-tech ecosystem for high-value jobs in the future."

George Scalise, President of the Semiconductor Industry Association

NIST's Technology Innovation Program

QUESTION: NIST is requesting a total program level of $75 million for the Technology Innovation Program, including an increase of $5 million. The TIP program was established in the America COMPETES Act of 2007 to support high-risk, high-reward research.

What research efforts that have been funded thus far under TIP and what results have you seen so far?

ANSWER: TIP offers a unique opportunity for funding collaborative cutting edge research. Since its inception in 2008, TIP has funded 38 projects in the following areas of critical national need: civil infrastructure and advanced manufacturing.

These 38 projects represent $279.7 million in new high-risk, high-reward research being conducted by scientists at small and medium-sized businesses as well as in academia.

- $135.7 million from TIP
- $144.0 million from participating organizations contributing cost-share.

These cost-shared, collaborative efforts support small businesses. Of the projects funded to date, 35 of 38 (92%) are either small-business, single-company projects or include a small business as a member of the research joint venture.

These small-business single companies and joint venture members are often very small;

- 32 percent have fewer than 10 employees and
- 90 percent have less than 100 employees.

Additionally, 24 percent of these small businesses are start-up companies (less than five years old).

By Critical National Need Topic:

Civil Infrastructure (2008 and 2009 competitions): "Advanced Sensing Technologies and Advanced Repair Materials for the Infrastructure: Water Systems, Dams, Levees, Bridges, Roads, and Highways".

- 17 projects awarded
- specifically supporting R&D to assist the nation in sensing, monitoring, and repairing the nation's aging infrastructure.

Advanced Manufacturing (2009 and 2010 competitions): "Manufacturing and Biomanufacturing: Materials Advances and Critical Processes".

- 21 projects awarded
- specifically to strengthen the nation's global role in manufacturing by supporting the development of manufacturing for new advanced materials and by seeking solutions to critical bottlenecks in current manufacturing processes.

These areas represent important challenges to the nation and their solutions are an important component in maintaining U.S. global competitiveness.

Rich Teaming

Rich teaming is a characteristic of TIP projects. TIP's portfolio includes 16 research joint ventures and the 22 single company proposals involve collaboration with contractors who are testers and potential adopters of the technologies. Including contractors, there are 132 organizations located in 30 different states participating in TIP projects. Despite being a young program, results from the R&D is already being shared and tested. Technologies in civil infrastructure have been tested in state highway facilities and several of the projects have agreements with state DOTs (e.g., California, Michigan, Massachusetts) to serve as test beds for these next generation of technologies. The scientific findings from these projects are also being actively shared within the scientific community, enabling these efforts to benefit R&D in areas beyond the organizations partnering with TIP. In March of 2011, organizations working with TIP in the 17 civil infrastructure projects presented 47 research papers at a smart structures conference hosted by SPIE – the international society for optics and photonics. This interaction across scientific disciplines allows TIP participants to share important R&D findings that can subsequently be used by other researchers. These early research results and strong partnering relationships suggest the research currently underway has laid the foundation for transforming today's research into tomorrow's solutions.

QUESTION: Given the expected low funding levels for FY 2012, where does TIP rank in relation to core NIST research and MEP?

ANSWER: Because of its ability to leverage significant non-federal investment for high-risk, cutting edge technologies, Federal funding for TIP can go a long way.

TIP has completed 3 competitive funding opportunities addressing 2 areas of critical national need: Civil Infrastructure and Manufacturing

- TIP has initiated $279.7 million in high-risk, high-reward research to be conducted over the next 3-5 years:
    - $135.7 million from TIP
    - $144.0 million from awardees cost-share
- Award Characteristics:
    - 132 participating organizations that have committed their own funds and resources
        - 89 small/medium businesses
        - 32 universities
        - 11 other R&D organizations.

TIP only funds projects for which alternative funding is not available, and which are within NIST's areas of technical competence. TIP's location at NIST represents a symbiotic relationship; TIP has access to world-class scientists at NIST to assist with technical reviews and development of competition topics and NIST labs are given an early glimpse of cutting-edge research that may represent new measurement needs.

NIST's Manufacturing Extension Partnership Program

QUESTION: NIST is requesting an increase of $18 million for the Manufacturing Extension Partnership Program for a total program level of $143 million, a 14% increase. This program funds technical and business assistance to small and medium sized manufacturers through centers in all 50 states and Puerto Rico.

Will the emphasis of the MEP program change?

ANSWER: No. MEP's focus will remain on supporting U.S. manufacturers by providing the tools and services needed to increase profits, create and retain jobs, and save time and money. The nationwide network will continue to build on existing services ranging from innovation strategies to process improvements to green manufacturing to develop the tools needed to solve manufacturers' challenges and help identify opportunities for growth.

QUESTION: Will the program expand to include new research areas?

ANSWER: Manufacturers are facing significant challenges to cut costs, improve quality, meet environmental and international standards, and get to market faster with new and improved products. As manufacturers struggle to keep pace with accelerating changes, MEP is continuing to implement its Next Generation Strategy by developing services and tools to support manufacturers in five critical areas: technology acceleration, supplier development, sustainability, workforce, and continuous improvement.

QUESTION: What will this additional funding provide? Additional funds to each center or will NIST manage the increase centrally?

ANSWER: Building on competitions started in FY 2010, additional funding will be competitively awarded to MEP Centers and other not-for-profit organizations to focus on the development and expansion of next generation services to respond to manufacturers' challenges and position them to respond to new business opportunities.

Baldrige Program

QUESTION: NIST is proposing to reduce funding for the Baldrige Program, from nearly $10 million to $8 million, with a plan to transition the program out of Federal funding. This program has been around for some 24 years and has assisted the private sector in developing quality and performance strategies.

Is the Baldrige Program a core, scientific NIST activity?

ANSWER: While the Baldrige Program is not a scientific activity, its enabling legislation, which called for the Program "to improve performance and competitiveness of U.S. organizations in ways that enhance economic security and improve quality of life," supports NIST's mission "(t)o promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life." The FY 2012 budget request will evaluate alternative sources of funding and alternative cost models consistent with the administration's goal of transitioning the program out of federal funding.

QUESTION: What benefits has NIST or Commerce realized as a result of the Baldrige Program?

ANSWER: NIST's operating units have used the Baldrige Criteria to increase efficiencies and effectiveness. For example, the Baldrige Program supports NIST's Manufacturing Extension Program (MEP) by providing the Criteria to evaluate its Centers; providing training of MEP Center staff to serve on the Baldrige Board of Examiners; and by connecting Baldrige-based state and local programs with MEP Centers across the country. In addition, the Baldrige staff consults with other NIST staff on the Baldrige process, offer annual training on our Criteria, can assist with benchmarking and comparative data, and provide NIST leaders access to senior level contacts. These contacts include our Board of Overseers, Examiners, Baldrige Foundation, Baldrige Fellows (leading industry executives), and Baldrige Award winners. Recently, these contacts have paved the way and offered leadership to NIST on the use of social media. In many ways the Baldrige Program is the face of NIST to much of the business community. The Baldrige website is second only to "standard time" as the most visited pages on the NIST website.

The Department of Commerce hired a Director of Performance Excellence who is from a Baldrige Award winning organization (The City of Coral Springs, Florida). Subsequently, the Department created the DoC Performance Excellence Program based

on the Baldrige Criteria for Performance Excellence: leadership, strategic planning, customer focus, measurement, analysis, and knowledge management, workforce focus, operations focus, and results. Baldrige staff serves as consultants to this program providing training on performance improvement methodologies to staff from all Commerce agencies and designing the project evaluation methodology used to recognize role model improvements.

QUESTION: What benefits has the Baldrige Program provided for industry?

ANSWER: The Criteria are distributed at a rate of more than 2 million downloads per year from the program's website and provide organizations with a systematic, validated management framework to successfully operate and improve performance. More than 35 states operate Baldrige-based programs to assist industry across the U.S. on a local level with using the Baldrige Criteria and process to improve and innovate their operations. These state programs could not exist without the Criteria, technical assistance, and training tools they receive from Baldrige. Around 2,270 State Baldrige-based examiners volunteered approximately $29.5 million in services to evaluate 1,350 organizations at the state level in 2010.

Between 2005 and 2010, 482 U.S. organizations have applied for the Baldrige Award. In 2010 alone, 83 applicants represented 277,700 jobs, 1,500 work locations, over $38.5 billion in revenues/budget, and an estimated 80 million customer served. 578 Baldrige examiners volunteered roughly $8.8 million in services in 2010. The Baldrige public-private partnership enables this volunteer network.

Baldrige has further helped industry and other organizations. Some examples by award category include:

Manufacturing, Service and Small Business

- **MEDRAD,** two-time Baldrige winner, grew revenues from about $120 million in 1997 to approximately $625 million in 2009. Gross margin increased more than 10% in three years.
- **Cargill Inc.**, the U.S.'s largest privately held company, and a three-time Baldrige winner, achieved 30% premium in earnings for its business units most fully engaged with the Baldrige approach.
- **The Ritz-Carlton Hotel Company**, two-time Baldrige winner, increased revenues more than 40% to $1.5 billion between their first and second Awards, and decreased employee turnover, already around 30 percentage points lower than industry average, from approximately 47% to 30%. Their leadership claims that "Unequivocally the Baldrige Program is responsible for making the Ritz-Carlton the number one brand in the world."
- **PRO-TEC Coating Company**, a manufacturer of ultra-high-strength automotive steel, came through the recession without any lay-offs and now plans a large-scale capital investment to expand its production capacity by 50% and increase workforce by 30% in the next 3 years.

Education

- **Iredell-Statesville Schools** in North Carolina moved from 57th to 9th in overall academic performance, cut achievement gaps for African-American students and Students with Disabilities in half, and raised SAT scores by over 50 points, all while remaining at 107th out of 110 districts in spending.

Nonprofit

- **VA Cooperative Studies Program's** workforce engagement scores are in the top quartile of all scientific and research organizations and it is a top 10 place in New Mexico's *Best Places to Work.*

Health Care (20 % of GDP)

- 5 Baldrige **Health Care winners** in the top 100 most wired hospitals in the U.S., with winners like Advocate Good Samaritan Hospital (IL) were able to decrease malpractice insurance premiums by over 50% while achieving top decile patient satisfaction and risk-adjusted mortality performance.
- Creating 3,500 new jobs in Tupelo, Mississippi (10% of the entire population) with the placement of a new, technologically advanced Toyota plant due in part to the presence of a Baldrige Award winner to deliver employee health care– **North Mississippi Medical Center**

These are examples of some of the benefits users of the Baldrige Criteria have achieved as a result of this Presidential Award Program. In addition, two-thirds of our Federal applicants come from state-based Baldrige programs—who rely on the Baldrige Program as previously described above.

Bring Jobs Back to America Act, H.R. 516

QUESTION: Last summer, I introduced the Bring Jobs Back to America Act and reintroduced it again this Congress. Among other things, my legislation would create repatriation task forces in the department to support state and local governments to compete for jobs from foreign countries. These task forces are something that you could start -- right now -- under your current authority as Secretary.

Will you look at this legislation and report back on what elements could be implemented this year under your current statutory authority?

ANSWER: I have read your "Bring Jobs Back to America Act" and I am pleased to report that we are already working on elements of your legislation in response to the COMPETES Reauthorization Act of 2010 (COMPETES). As required by the COMPETES legislation, the Commerce Department, in conjunction with the National Economic Council at the White House, is working on a report examining the economic competitiveness and innovation capacity of the United States. That report will contain a set of recommendations aimed at increasing the international competiveness of the United States, and thus our ability to generate jobs. A subset of that report will provide the information necessary for the development of the "comprehensive national

manufacturing strategy" that your legislation calls for. Our report will be delivered to Congress by January 4, 2012.

QUESTION: In March 2011, *The Financial Times* reported that China officially has displaced the U.S. as the world's leading manufacturer -- the first time a country has topped America in 110 years. My legislation would also requi*re an update to the* department's 2004 national manufacturing strategy report. Has the department revisited this report since 2004 and do you believe that the U.S. has a coherent plan to grow our manufacturing base?

ANSWER: The Department of Commerce has not issued an update to the 2004 national manufacturing strategy report, but the Administration has placed tremendous emphasis on assisting the manufacturing sector for several reasons, including that manufacturing is a key sector of the U.S. economy (11 percent of U.S. GDP in 2009); the U.S. manufacturing sector provides high-quality jobs for millions of middle-class Americans; and the sector generates substantial economic activity by providing the necessary catalyst for innovation in the broader national economy (in 2008, manufacturing firms accounted for two-thirds (67%) of all business R&D performed in the United States.)

The American manufacturing sector today faces a number of challenges. The sector has experienced long-term employment declines due to both increases in productivity as well as global competition.

President Obama and his entire administration are focused on spurring private sector job creation in the near-term and putting in place the policies that will sustain economic growth into the future. To that end, the Administration is working to ensure that the United States is viewed as a premier location for businesses to locate—and that it has a qualified, skilled, and productive workforce from which businesses can draw. This is especially important in the case of manufacturing firms because they create more ancillary economic activity than firms in other sectors, including generating 68 percent of exports and 70 percent of private sector research and development (R&D).

The National Export Initiative is a priority for the administration and the Department because it supports economic growth and recovery. Given the high percentage of U.S. exports which are manufactured goods, increasing exports of U.S. made goods will significantly benefit U.S. manufacturers and create more jobs here at home. Over the past year, the manufacturing sector has been leading the economic recovery. The sector has increased employment for the first time in over a decade, and manufactured goods exports have increased by 16 percent over the last year. We are on track to achieve President Obama's goal of doubling exports by the end of 2014 and supporting millions of American jobs.

President Obama is also promoting growth in the U.S. manufacturing sector through the administration's efforts to streamline government regulation, reform the corporate tax system, and invest in innovation and science, technology, engineering, and math education. The Obama Administration supports greater public and private sector investment to promote job creation in the domestic manufacturing sector. The

Administration's FY 2012 budget request includes $148 billion for R&D which provides the foundation for future innovation and economic growth. At the Commerce Department, the National Institute of Standards and Technology (NIST) conducts cutting edge research designed to promote innovation and technological advances in manufacturing which enhances American competitiveness.

The Obama Administration has also called for making the R&E tax credit permanent which will incentivize companies to make new investments which will enable manufacturers based in the United States to achieve greater efficiency and meet the demands of the global marketplace.

On January 18, 2011, President Obama signed Executive Order 13563 outlining his regulatory strategy—one that supports robust economic growth and job creation, while protecting the safety, health and rights of all Americans. This strategy builds on best practices of the past, while adapting to challenges the country faces today and establishing a smart path for the future. As part of the immediate implementation of this strategy, the President also issued a memorandum to the heads of Executive Agencies and Departments calling for more transparency and accountability in regulatory compliance, as well as a memorandum emphasizing the need to reduce burdens on small businesses wherever possible.

One specific initiative already underway is revising the regulations for the U.S. Foreign-Trade Zones program to allow simpler, faster access for U.S. manufacturers. Our Foreign-Trade Zones program is an important tool that helps to encourage additional manufacturing in the United States in place of offshore alternatives.

In addition, the Economic Development Administration's (EDA's) Growth Zones initiative will play a critical role in supporting EDA's efforts to foster regional innovation clusters, promote the export potential of American regions, and encourage 21st Century innovation infrastructure.

Another factor impeding our ability to attract and retain manufacturing investment is the current structure of our corporate tax system. As it is currently written, the tax code system causes costly distortions where some individual companies end up paying little, if any, in taxes, while the rest pay more than their fair share. This is why in his State of the Union address, the President called for reform to make the tax code fairer and simpler, promote economic growth and support opportunity for middle class families.

Manufacturing and Services (MAS)

QUESTION: General Electric CEO Jeff Immelt, who was recently appointed by the President to chair his jobs council, has publicly stated that for the U.S. to have a sound economy, at least 20 percent of U.S. jobs should be from manufacturing. Yet

we have less than half that number today. What level of manufacturing do you believe is necessary for healthy and sound economy?

ANSWER: The United States is the world's dominant manufacturing economy. One reason the United States has a lower share of workers in manufacturing compared to other nations is because U.S. manufacturing labor productivity has outpaced that of our competitors. In February, U.S. manufacturing employment was 10.8% of total private employment. Expanding employment in the manufacturing sector is a top priority of the Administration, as evidenced by the National Export Initiative.

QUESTION: I understand that the Director of National Intelligence has commissioned a classified study on the state of the U.S. manufacturing base. Are you working with him on this effort? Will an unclassified version of the study be made available?

ANSWER: The Department of Commerce is not participating with the Office of the Director of National Intelligence (ODNI) on a study on the state of the U.S. manufacturing base. To our knowledge, the ODNI does not conduct broad assessments on the U.S. manufacturing base for intelligence purposes. From time to time, the ODNI may perform limited assessments of specific industrial capabilities to support acquisition activities. The best source for more information on this subject would be the ODNI.

Virginia Agriculture Issue

QUESTION: Mr. Secretary, the Chinese have indicated that one of their trade priorities is U.S. market access for fresh apples. I am concerned that the administration's decision to share a list of invasive pests and diseases associated with Chinese apples telegraphs the desire to quickly move an agreement, even though the Chinese have a terrible track record even when approved sanitary-phytosanitary import protocols are in place. For example, during your time as Governor, a researcher happened to discover a quarantined pest on Chinese Ya Pears while shopping at his local Washington grocery store. Sound scientific principles indicate that one should take a deliberate and cautious approach to allowing fresh apples into our nation, and I strongly urge the administration to be careful to make sure any fresh apple imports meet SPS standards. In December, you co-chaired a meeting of The U.S.-China Joint Commission on Commerce and Trade. I understand that one issue on the agenda was our desire to import beef into China.

Was the Chinese request to import fresh apples into our nation discussed?

ANSWER: The Chinese have raised their request to import fresh apples into the United States on numerous occasions, including recent JCCT meetings. As the U.S. Government has explained to the Chinese, our market access decision will be based on scientific evidence in accord with our international obligations. The U.S. regulatory process is both science-based and transparent. This transparency ensures that all interested parties (both domestic and foreign) are provided ample time to provide comments. The

Administration remains committed to protecting the health and value of American agriculture.

For more information, I would suggest you follow up with the Department of Agriculture or the Office of the U.S. Trade Representative

QUESTION: For the last three years China has banned poultry exports from Virginia in response to a single, isolated case of subtype H5N1 low pathogenic avian influenza reported in a commercial Virginia turkey flock. This flock was depopulated; the premises were cleaned and disinfected under federal and state supervision; and the farm has long since been raising turkeys with no further incidence of avian influenza. Clearly, there is no scientifically defensible reason for continuation of the ban on Virginia poultry.

I am concerned that this restriction is contrary to a WTO Agreement, which requires trade measures to be based on scientific principles, supported by a risk assessment. Have you been in contact with Chinese about how they justify this continued ban?

ANSWER: The United States has been raising this issue frequently with China, noting that measures, including bans on U.S. poultry, be consistent with international standards. The United States most recently raised this issue with China during the December 2010 U.S.-China Joint Commission on Commerce and Trade. As a result of U.S. Government engagement, China recently lifted long-lingering low pathogenic avian influenza bans on poultry from Idaho and Kentucky, although import suspensions remain on four other states. The United States hopes to continue this progress by encouraging China to remove other import suspensions and adopt a scientifically sound approach to future low pathogenic avian influenza incidents.

For more information, I would suggest you follow up with the Department of Agriculture or the Office of the U.S. Trade Representative.

WEDNESDAY, MARCH 2, 2011.

U.S. PATENT AND TRADEMARK OFFICE

WITNESS

HON. DAVID KAPPOS, UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND DIRECTOR OF THE U.S. PATENT AND TRADEMARK OFFICE

OPENING STATEMENT BY CHAIRMAN WOLF

Mr. WOLF. The hearing will begin. We welcome Secretary Kappos. In fiscal year 2012 PTO estimates it will collect $2.7 billion in fees. Of this amount, $2.4 billion is from base fee collections and another $263 million represents an estimated 15 percent surcharge on patents that PTO would like to collect to address the current backlog. The spending estimate is about $819 million, or 43 percent, higher than the 2010 level. Your fee collections will in part support 11,137 FTEs, including 1,500 new hires in fiscal year 2012 to address the backlog. PTO anticipates that it will need to hire about 3,400 patent examiners between 2011 and fiscal year 2013 to address the backlog.

The PTO is clearly a driver for the economy but you certainly have some challenges ahead. We understand that as of February 24, 2011 the backlog of applications that have not been touched is 718,000 applications. We have a number of questions but before that I recognize the Ranking Member, Mr. Fattah.

OPENING STATEMENT BY MR. FATTAH

Mr. FATTAH. Thank you, Mr. Chairman. And let me thank you for convening this very important hearing on a subject that is critically important to our economy and to the President's call to focus on innovation. Obviously it is intertwined in its connections to the patent, and to having the Under Secretary here to testify. And I am very pleased to see that there is a compromise in the works around authorization, and moving forward, there probably are still a few hiccups down this road, and maybe even some questions that we will have about it. But it seems like it is essentially a growing consensus that what you have argued for, as people are not coming to grips with that. We need to move forward. And even in this time of discussion around cuts, I think there is broad bipartisan agreement that this is an area where we need to invest in terms of additional resources. And since it is a fee-generated operation, and those who are paying the fee are even for doing more. So it is a great day for us to come together and get into the details of this. And I know the Chairman is very interested, and I am interested, in your testimony. So I will yield back. And I thank the Chairman.

Mr. WOLF. Thank you, Mr. Fattah. Secretary Kappos, you can proceed as you see appropriate.

OPENING STATEMENT BY UNDERSECRETARY KAPPOS

Mr. KAPPOS. Well thank you, Chairman Wolf, Ranking Member Fattah, and members of the subcommittee. Thank you for this opportunity to discuss the USPTO's operations and our programs and initiatives, and the President's 2012 budget request to support those efforts.

Innovation continues to be a principal driver of economic growth and job creation in the United States. We at the USPTO are proud of the role that we play in serving America's innovators and granting the patents and registering the trademarks they need to secure investment capital, and to build companies, and to bring new products and services into the marketplace. The work that we do at USPTO directly contributes to strengthening our economy and creating jobs, and it helps us move forward toward the President's goal of winning the future by out-innovating our economic competitors.

To effectively carry out our mission, the USPTO must be well-run and appropriately funded. Consistent with the directive from Secretary of Commerce Locke, our overriding goal is to focus our resources more effectively on improving overall operations and reducing the time it takes to get a patent.

Now I am pleased to report that during last year the USPTO has increased patent production, reformed key processes, and improved quality. During this time we also developed and issued a metrics based strategic plan to strengthen the capacity of the USPTO to ensure that our resources are appropriately focused on our strategic goals. And these accomplishments have helped us to begin to reduce the significant backlog of pending patent applications.

Mr. Chairman, the President's fiscal year 2012 budget provides the USPTO with the funds we need to reduce the patent application backlog and pendency levels, improve patent quality, and make necessary investments in our information technology infrastructure. The budget requests authority to access the $2.7 billion in user fee collections currently projected for fiscal year 2012 to execute our multiyear operating requirements. This results in an appropriation of zero dollars budget authority. As a fully user fee funded agency, the USPTO's requirements are addressed at no cost to the taxpayer.

Our performance commitments for fiscal year 2012 assume enactment in March of the fiscal year 2011 President's budget for the USPTO, including the interim fee increase on patent fees. Availability of these budget resources will promote America's economic growth and competitiveness by enabling investments that are essential for reducing the current patent application backlog and pendency levels, maintaining trademark pendency at current levels, and moving to 21st century information technology systems, and helping improve IP protection and enforcement around the world.

These goals briefly are supported by hiring 1,500 patent examiners, establishing a nationwide workforce focused on hiring from around the country, telework, and hiring patent examiners with

previous IP experience, enabling patent applicants to fast track their most important applications, facilitating work sharing arrangements with foreign IP offices, updating patent and trademark IT systems, and enhancing our international programs.

Fee collections are running very strong at USPTO as a result of an improving economic outlook, stronger patent renewal rates, and our increased production. We are getting more done and collecting more fees in doing so. As you know, to enable these efforts the President's fiscal year 2011 budget proposes that the USPTO be permitted to spend all of the fees it collects and proposes a 15 percent surcharge on patent fees. Despite our strong fee collections, the USPTO has been forced to implement spending reductions as a result of the terms of the current continuing resolution, and these include delaying critical IT projects, slowing down hiring, and restricting examiner overtime. Should the continuing resolution be extended beyond March 4 and March 18, and hold the USPTO to its fiscal year 2010 spending authority level, we will be forced to halt all hiring, overtime, and IT improvements. This would unfortunately reverse many of the gains we have begun to make, and such continued restriction in appropriations would also result in almost $200 million of user fee collections being unavailable to support USPTO operations this year.

Mr. Chairman, in conclusion, ensuring stable funding for the USPTO will continue to be a critical component of our success in serving America's innovators. We wish to work with you to ensure that the job creating, deficit neutral work conducted at USPTO for the benefit of our Nation's innovators is supported in whatever final spending package is enacted for the remainder of fiscal year 2011 and, of course, into fiscal year 2012. Thank you very much and I am happy to take questions.

[The information follows:]

STATEMENT OF

DAVID J. KAPPOS

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY
AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE

SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES
COMMITTEE ON APPROPRIATIONS
U.S. House of Representatives

"USPTO FY 2012 Budget Request"

MARCH 2, 2011

I. Introduction

Chairman Wolf, Ranking Member Fattah, and Members of the Subcommittee:

Thank you for this opportunity to discuss the United States Patent and Trademark Office's (USPTO) operations, programs, and initiatives, and the President's FY 2012 budget request to support those efforts.

Innovation continues to be a principal driver of economic growth and job creation in the United States, and intellectual property (IP) delivers that innovation to the marketplace. We at the USPTO are proud of the role we play in serving America's innovators, and granting the patents and registering the trademarks they need to secure investment capital, build companies, and bring new products and services to the marketplace. The work we do at the USPTO directly contributes to strengthening our economy and creating jobs and helps move us toward the President's goal of winning the future by out-innovating our competitors.

To effectively carry out our mission, the USPTO must be well-run and appropriately funded. Consistent with the directive from Commerce Secretary Locke, our overriding goal is to focus our resources more effectively on improving overall operations and reducing the time it takes to get a patent. I am pleased to report that during the last year the USPTO has increased patent production, reformed key processes, and improved quality. During this time we also developed and issued a metrics-based strategic plan to strengthen the capacity of the USPTO and ensure that our resources are appropriately focused on our strategic goals. These accomplishments have helped us begin to reduce the significant backlog of pending patent applications.

II. President's FY 2012 Budget

The President's Budget provides the USPTO with the funds we need to reduce our patent application backlog and pendency levels, improve patent quality, and make necessary investments in our information technology (IT) infrastructure. These investments will support actions we have already taken and have underway at the USPTO to create a more efficient and effective Office. We continue to work closely with the Department of Commerce in planning and preparing our priorities and budget requirements to ensure our goals and initiatives are aligned with and support the goals of the Department

The President's Budget requests authority to access the $2.7 billion in user fee collections currently projected for FY 2012 to execute our multi-year operating requirements. This results in an appropriation of $0 budget authority. As a fully user-fee funded agency, the USPTO's requirements are addressed at no cost to the taxpayer. Our performance commitments for FY 2012 assume enactment in March of the FY 2011 President's Budget for the USPTO, including the interim increase in patent fees.

Availability of these budget resources will promote America's economic growth and competitiveness by enabling investments that are essential for reducing current patent application backlog and pendency levels; maintaining trademark pendency at current levels; moving to 21st century information technology systems; and helping improve IP protection and enforcement around the world. These goals will be supported by:

- Hiring 1,500 patent examiners for a net increase of 1,000;
- Establishing a nationwide workforce focused on hiring from around the country, telework, and hiring patent examiners with previous IP experience;
- Enabling patent applicants to fast-track their most important applications through a Three-Track Examination program;
- Facilitating work sharing arrangements with foreign IP offices;
- Continuing to develop and implement a new generation of patent and trademark IT systems; and
- Enhancing our international capacity-building, training, and advisory programs.

Under the FY 2012 budget, we anticipate receiving and processing 527,600 patent and 404,000 trademark applications and producing 573,700 patent units of production and 840,500 trademark balanced disposals.

By the end of FY 2012, we expect to reduce patent first action pendency to 22.3 months and the backlog level to 549,600.

In executing the FY 2012 budget, we expect to reduce patent first action pendency by 60 percent to 10.4 months in FY 2014 and reduce patent total pendency by 45 percent to 19.3 months in FY 2015, as compared to FY 2010 levels. Our backlog of unexamined patent applications would be reduced by 50 percent to 352,400 in FY 2014. This will represent an optimal level of inventory for ongoing efficient operation of the USPTO.

With respect to our Trademarks Operation, we expect to maintain trademark first action pendency on average between 2.5 to 3.5 months, with total pendency at 12.5 months.

III. Current Funding Overview

Mr. Chairman, ensuring stable funding for the USPTO will continue to be a critical component of our success. Fee collections are running very strong as a result of an improving economic outlook, strong patent renewal rates, and our increased production. We are getting more done and are collecting more fees in doing so. As you know, to enable these efforts, the President's FY 2011 Budget proposes that the USPTO be permitted to spend all of the fees it collects and proposes a 15 percent surcharge on patent fees. The USPTO's budget is fully supported by the fees it collects and uses no taxpayer funds.

Despite our strong fee collections, the USPTO has been forced to implement spending reductions as a result of the terms of the current Continuing Resolution. These include delaying critical IT projects, slowing down hiring, and restricting examiner overtime (examiner overtime is a highly efficient way to increase agency production and fee collections -- far outstripping the incremental cost of overtime pay).

Should the Continuing Resolution be extended beyond March 4, and hold the USPTO to its FY 2010 spending authority level, we will be forced to halt all hiring, overtime, and IT improvements. This unfortunately would reverse many of the gains we have begun to make. Such continued restriction in appropriations would also result in almost $200 million of user fees collections being unavailable to support USPTO operations. Ensuring stable funding for USPTO will continue to be critical to our success in serving America's innovators.

IV. Progress

Mr. Chairman, while we have faced, and continue to face, financial challenges, we have implemented a broad array of changes during the last year, and have refocused our resources to our most important work, including reducing the current patent backlog. I am pleased to report that our dedicated employees have made progress in a number of important areas:

- Our Patents Operation set all-time records in total Agency work output, including the number of patents granted and applications rejected.

- As of the end of FY 2010, we reduced the backlog of utility patent applications to about 708,000 – the lowest level in several years.

- We have seen a sustained and substantial decrease in actions per disposal – an indication that patent application issues are being resolved more efficiently. Importantly, these accomplishments have been made without any sacrifice in quality. In fact, our quality metrics have actually risen – even while productivity has improved.

- We increased our total number of interviews hours – time spent working with patent applicants to understand their inventions and resolve issues – a full 40 percent last year, to 140,000 hours of interviews. This represents another all-time record for our agency.

- We have put a number of market driven pilots into action including: accelerated examination of Green Tech applications, project exchange and a "Three Track" examination process.

- Working with our patent examiner's union POPA, the USPTO has installed a new examination "Count" system which gives our examiners more time to examine patent applications – increasing quality – while incenting earlier resolution of issues, resulting in improved examination efficiency.

- We expanded telework opportunities for our employees and, at the end of last year, almost 6,000 USPTO employees – 83% of those eligible – teleworked at least one day per week. More than 2,700 teleworked 4-5 days per week. Recent legislation will enable us to further expand and improve our telework programs.

- We have substantially expanded our work sharing arrangements with other major patent offices worldwide to speed the processing of applications filed in multiple jurisdictions. In fact, in FY 2010 we more than doubled the total usage of our benchmark Patent Prosecution Highway as compared to all previous years combined.

V. Conclusion

While we are aggressively making changes at the Office, I want to express the Administration's support for continuing congressional efforts to enact patent reform legislation. Enactment of a number of the proposals considered in recent years will significantly improve our patent processes, reduce litigation uncertainties and costs, and increase the value of patent rights for American innovators. We are particularly pleased that the latest version provides necessary authority for the USPTO to adjust patent and trademark fees as needed to reflect the costs of providing services to applicants.

Mr. Chairman, we are ready to work with you to ensure that the jobs-creating, deficit-neutral work conducted at USPTO for the benefit of our nation's innovators is supported in FY 2012, as well as the final spending package enacted for the remainder of FY 2011.

We appreciate your continued leadership and support of the USPTO and look forward to working closely with you and the Members of the Subcommittee to meet the challenges before us.

# # #

OPERATING RESERVE

Mr. WOLF. Sure, thank you. We want to ask you a couple of questions about your operating reserve. The supporting budget materials show the PTO's operating reserve or carryover balances going into fiscal year 2012 are about $213 million. PTO carryover balances have increased significantly over the last several years, growing from about $72 million in 2008, $119 million in 2009, and $223 million in 2010. Most come from trademarks. Would that be accurate so far?

Mr. KAPPOS. Yes, I believe it is.

Mr. WOLF. Okay. A portion of the current carryover balances are a result of the fiscal year 2010 $129 million supplemental that PTO received in 2010. We understand that you have hired 350 additional patent examiners with this additional funding. Your operating reserve is essentially a carryover, or funds that you do not spend in one fiscal year which are carried over into the next year. PTO estimates its fee collection to be $2.7 billion. Your budget request, however, is built toward a $2.6 billion funding level. Would you please explain the differences between the $2.7 billion in fees you anticipate collecting and the $2.6 billion that you anticipate spending? Is the difference about $107 million to fund another operating reserve? I am waiting, yes.

Mr. KAPPOS. Okay. Well thanks, Chairman Wolf, for that question. The difference, about $107 million, would go into our operating reserve. It is absolutely required, it is imperative that we carry that reserve going into 2013. And the reason is because our hiring in 2012 is going to increase our examiner count so that we will have to carry on our payroll throughout all of 2013. Those additional examiners are going to take time to come up to full production capacity. As a result, we are going to need that $107 million carryover in order to fund their pay during 2013 while they are coming up to production capacity. By the time we get into 2014 we will no longer be hiring anymore, and those people will be up to production capacity, so we will have the full benefit of their production producing income. But in 2013, it is a very critical year for us. We will be carrying our maximum head count in that year and many of those people will not quite be up to production capacity yet. So we do not anticipate that our fee income, unless we are able to have that carryover, will be adequate in order to enable us to carry through on all of our plans. So that is why we need that $107 million reserve carrying over.

Mr. WOLF. The PTO end-of-year operating reserve will be about $342 million, will it not, when you add them both together? And I do not quite understand the importance of not spending every last penny at the end of the fiscal year and allowing a bit of a cushion, but if PTO has such a backlog why do we have such a large carryover? Most Federal agencies do not have a carryover. Why do you differ than the Department of Defense? Or the IRS? Or some agency like that?

Mr. KAPPOS. Well a couple of points. Number one, Chairman Wolf, as you pointed out before, a tremendous amount of that carryover is on the trademark side. And by statute we have what is a statutory fence——

Mr. WOLF. Would you rather not have the fence?

Mr. KAPPOS. No, I am comfortable with the fence.

Mr. WOLF. Why would you not spend the funds on overtime and hiring to reduce the backlog now, and not have such a large carryover for the following year? So if you broke the fence down, took the fence away, could you not do that?

Mr. KAPPOS. Well, I cannot do that. It would require a change in the statute.

Mr. WOLF. I understand that. But I said if that were done, if the statute and the law were changed. The Park Service takes money in from collections if somebody is going through a National Park. They also take money from other venues. They kind of merge them together, and the Director of the National Park Service can use it for whatever. Would it be helpful if that fence did not exist? And you could then deal with the backlog as soon as possible?

Mr. KAPPOS. You know, I actually do not think that it would be helpful. I think Congress did the right thing by erecting the fence in the first place.

Mr. WOLF. Why?

Mr. KAPPOS. Because it enables us to operate the trademark side of the office, which is extremely efficient, extremely well-managed, and operating right in its appropriate pendency zones. It enables us to preserve the operating efficiency of that part of the office and never run into, what I consider to be not good management discipline, of breaking the working part of your business in order to fix the part that is not working so well, which in our case is the patent side.

Mr. WOLF. But are you the only agency in the government that that is the case, that has that? Are there other agencies——

Mr. KAPPOS. Well, that I do not know. I only know that the USPTO, so long as I can remember, has had this trademark fence. And I think on policy, and business-wise, it really is the right thing.

Mr. WOLF. I am not so sure. You are again requesting a 15 percent surcharge on patent fees. You anticipate that this will provide the PTO with an additional $263 million. What do you anticipate that this additional revenue will enable the PTO to accomplish?

Mr. KAPPOS. Well the additional revenue is absolutely imperative to reaching the President's and the Secretary of Commerce's mandated goals of bringing our backlog down to an appropriate inventory level of about 350,000 cases in inventory, which requires cutting in half from where it is now, and bringing our pendency level down to the industry benchmark standard of about twenty months from where it currently is, which is about thirty-four months or so.

Mr. WOLF. When is the last time it has been at twenty months?

Mr. KAPPOS. Actually, it was at twenty months, I want to say about 1987, something like that. So it has been a while, but it has been there before.

REVENUE PROJECTIONS

Mr. WOLF. According to a December, 2010 Commerce IG report, PTO does not have a documented process for projecting patent fee collections. This same view, however, also found that between fiscal year 2006 and fiscal year 2009 PTO overestimated certain fee col-

lections by as much as 30 to 55 percent, while another fee collection was under PTO's estimate by 35 to 42 percent. Were those figures accurate? And would you explain?

Mr. KAPPOS. So far as I know, what you have said is accurate.

Mr. WOLF. And? Why the incompetency in projecting patent fees, what do you think the reason for that overestimate and underestimate was?

Mr. KAPPOS. Well, projecting fees at an agency like the PTO is like projecting the future. It is like trying to anticipate what the stock market is going to do tomorrow. And, I am quite serious about this, there is no business in the world, and I have worked in business for twenty-six years, there is no business in the world that can project the future. We are making estimates about what is going to happen in technology investments as much as several years down the road here. We are making estimates about what patent filers in the U.S. and in other countries are going to be doing. There is absolutely no way we can be 100 percent accurate about those. We cannot anticipate financial downturns, like the one that happened a few years ago. And when those occur they are a surprise to everybody. They certainly were a surprise to me. I do not know if anyone else in this room was able to predict those downturns. They affect USPTO fee incomes. They are very dynamic. We do our best to anticipate. We actually are quite accurate overall. I think in the last couple of years we have been accurate to within about a percent, which is an amazing accuracy, actually. But we are never going to be perfect.

PATENT INFORMATION

Mr. WOLF. Last summer you announced a new policy whereby PTO would provide China with full access to our entire patent database, including regular updates with new patents. Your own white paper you said as follows: "Under the new arrangement, the Chinese will have easier access to full text public documents, including the bulk back file of U.S. full text data on tapes followed by regular updates." This decision will undoubtedly expedite Chinese state sponsored cyber espionage. I mean, why would you give the Chinese this?

Mr. KAPPOS. Well that last part is not a quote from me.

Mr. WOLF. No, that is my quote. Why would you give this to the Chinese?

Mr. KAPPOS. China, like all other countries, already has access to all of that same information.

Mr. WOLF. But why should they have any of the access to it, period? China is doing espionage against us, cyber attacks against us, stealing from us. We have had IGs from different committees, Commerce, NASA telling us about the cyber attacks by the Chinese government. Why would you cooperate in any way at all? I mean, your comment was, "Under the new arrangement, the Chinese will now have easier access to full text public documents, including the bulk back file of U.S. full text data on tapes followed by regular updates via file transfer protocol, all through the most comprehensive search system." Why would you do that?

Mr. KAPPOS. This is all public information.

Mr. WOLF. But why should it be public information is the question I am asking you? Why should we give that to the Chinese government? The manufacturing base of this nation is eroding. What they are doing, and different small companies tell me, they are going in and seeing what ideas are out there, and they are taking them. Why would you make it easier for the People's Liberation Army to access that material whereby that industry or that idea could be taken and used by the Chinese?

Mr. KAPPOS. So patent files——

Mr. WOLF. You know what I am talking about. I think you, were you not in the meeting that we had before? We had some of your people come up to meet with Pat Choate and some other people with regard to the problem. Do you remember?

Mr. KAPPOS. I actually do not recall that.

Mr. WOLF. Did your people not tell you?

PTO STAFF. We did, the Director was not in that meeting.

Mr. WOLF. Excuse me?

PTO STAFF. He was not in that meeting.

Mr. WOLF. Did you tell him about the meeting?

PTO STAFF. We did about the publication and your bill that you introduced.

Mr. WOLF. And did that register with you?

Mr. KAPPOS. I am not sure what the question is. Did what register?

Mr. WOLF. Did you give him the full update of what Pat Choate said, the meetings, and the concerns? What were the Director's comments based on the meeting that you had telling him about the meeting that we had?

PTO STAFF. I will let the Director——

Mr. WOLF. But he does not remember.

Mr. KAPPOS. I am happy to help if you could just explain the question a little bit more fully?

Mr. WOLF. I think you ought to come by. One, I do not think you ought to give the Chinese anything, period. And we are going to officially ask you not to give the Chinese anything. China is taking jobs from the United States. The manufacturing base is eroding in the United States. As the manufacturing moves offshore, the research and development and innovation moves offshore. The Administration has said they want jobs here in America, not jobs in China. This material should not be given to the Chinese in any form, in any way. Do you have a comment? Or is this——

Mr. KAPPOS. Well, if you have a question, I would be happy to answer it, but I did not hear a question.

Mr. WOLF. You do not understand the concern that I have——

Mr. KAPPOS. Well look, it is——

Mr. WOLF. Look?

Mr. KAPPOS. We are required by law to——

Mr. WOLF. You are not required by—what law requires you to give this to the Chinese?

Mr. KAPPOS. 35 United States Code, Federal patent law mandates that patents get published when they are granted. It is part of the original bargain in the Constitution based on the constitutional exchange of a patent for a publication. We publish all of that information. It is all made available on the internet. If we do not

make it available on the internet, others will make it available on the internet. There is a large industry that does that. That information all becomes instantly available everywhere in the world. And it is just a fact of, frankly a fact of life in the 21st century. I do not see any way we can go back to not publishing patents and not having them become instantly available, full text searchable, to anyone in the world on the internet.

Mr. WOLF. Okay. And, well, we will take a look at that. Mr. Fattah.

PATENT APPLICATION FILINGS

Mr. FATTAH. Let me thank you. Let me go to the, what appears to be the compromise about how to reform the patent operation. And let me start from the generality and move to the specific. First and foremost, can you tell us about the level of activity, we know a little bit about the backlog, but the number of applications on whatever basis, quarterly or annually? And whether it is on the uptick or the downtick? And who is applying for patents?

Mr. KAPPOS. Thanks for that question Ranking Member Fattah. Indeed, patent filings are increasing. They increased by over 4 percent last year. They are increasing so far this year by a rate of about 7.5 percent. And to the question of USPTO's ability to make predictions, we predicted patent application rates would be up about 5 percent or so this year. They have exceeded our expectations. I do not know of any way we would have anticipated that they were going to be up as much as they have been so far this year. But it is causing fees to run quite strong because application filings are up so much.

Mr. FATTAH. And who is applying? Who is making applications for patents?

Mr. KAPPOS. Everybody is applying more. Americans are applying more for patents, and filers from outside of the U.S. are applying more also.

Mr. FATTAH. Can you quantify the percentages in those two groups?

Mr. KAPPOS. You know, I do not have exact percentages. I would be happy to go back and provide those. We have got all of those statistics back at PTO.

Mr. FATTAH. Can you provide a general sense? I mean, are half of the patent applications Americans and half from overseas?

Mr. KAPPOS. Oh, yes. A little more than half originate from overseas now. The last statistics I saw were somewhere around 51 percent or so originating from overseas.

Mr. FATTAH. Is this not a rubicon that has never been crossed before in the country's history, in which now we have a majority of the patents being applied for by people overseas?

Mr. KAPPOS. It is, yes.

Mr. FATTAH. So this is correlated to the President's goal of trying to put innovation at the forefront of our efforts to restore the American economy, and the fact that this whole effort of the Administration, the focus on education, and science, and the like, so that we can return to a point at which perhaps the majority of patents being sought in our country were from American citizens?

Mr. KAPPOS. We would love to see that happen. And as you say, Ranking Member Fattah, STEM education is a key enabler to increasing Americans' patent filings, and also the education that we do at the USPTO is a key enabler.

HIRING

Mr. FATTAH. So that is the general context of which, now we get to this question, one of the challenges in your shop is the backlog. And you have got a program in which I think there is bipartisan consensus that unlike the other discussion about cutting, that we actually want to hire more people over, was it 1,500? 1,100 new, right?

Mr. KAPPOS. Yeah, about 1,500 this year.

Mr. FATTAH. Total, but some of that is to replace people who are retiring?

Mr. KAPPOS. Correct, attrition and retirements, yes.

Mr. FATTAH. About 1,100 are new?

Mr. KAPPOS. Correct.

Mr. FATTAH. Patent examiners, right?

Mr. KAPPOS. Correct.

Mr. FATTAH. Now this will allow us to do what relative to the backlog over what period of time?

Mr. KAPPOS. Well this will allow us to cut the backlog over a period from now, 2011, through 2015, when we will reach our optimum backlog level. So patent examining, at the end of the day, is enabled by information technology systems. It is made more efficient by good management, and we are working on all of that. But at the end of the day, it is intellectual work. Watson cannot examine patent applications. It takes human beings to do that. And so we are going to get to an optimal backlog and pendency level. It is clearly going to require more examiners and that is why we are hiring aggressively.

REDUCING FEES FOR MICRO ENTITIES

Mr. FATTAH. Well I think there is agreement that we should hire more. And it is good to know that we can focus on what we need to do. Now there is going to be, in the compromise, there is a discussion about reducing fees for small and newly defined micro-entities. Can you illuminate, provide any information about what that might mean?

Mr. KAPPOS. Ranking Member Fattah, that goes back to your question about enhancing the access to our agency for small and micro-entities, independent inventors, and very small companies. We already provide a 50 percent discount on many of our statutory fees for small entities. If we get this legislation, we would very much like to provide a 75 percent discount for individual filers who meet certain income levels, and for very small companies having very small numbers of people in them. This in turn will lead to greater access to the USPTO, and we hope and believe, greater numbers of filings by Americans in the infant stages of businesses—Americans who do not have any business but have a great idea, and Americans with very small businesses.

Mr. FATTAH. Now there is, in the adjudication process, the agreement would replace the Board of Patent Appeals and Interferences with the Patent Trial and Appeal Board. What, other than the semantics, does that mean?

Mr. KAPPOS. We have a Board of Patent Appeals and Interferences. It actually would stay in place. Those people evaluate about 20,000 appeals we have currently pending in our agency, appeals from the patent process. In addition, if this legislation goes through we would be creating this new board that you talk about. In terms of management discipline, it will be managed under the same roof, if you will, and under the same set of management disciplines as our current board. It will be more Administrative Law Judges (ALJs), of course, attorneys trained and skilled in the patent law. Their job will be to sit in panels of three and very expeditiously decide these new post-grant reviews and inter partes reviews that are called for by this legislation.

Mr. FATTAH. And now I think the real difference is that the appeals will go directly to the U.S. Court of Appeals?

Mr. KAPPOS. Well that is a difference. But right now our post-grant processes are managed in what is called our Central Reexamination Unit (CRU) at the USPTO, which is comprised of examiners and not ALJs. So it is a big difference to move much of that work from the CRU, to this new board. We are going to need a lot more ALJs as part of that board in order to handle that workload, which will be moving from the CRU into the board. As you mentioned——

Mr. FATTAH. Do the ALJs get any particular training?

Mr. KAPPOS. Yeah, well——

Mr. FATTAH. Other than that they are lawyers?

Mr. KAPPOS. You could think of them as judges. Administrative Law Judges——

Mr. FATTAH. But other than being a member of the bar is there some particular training?

Mr. KAPPOS. Yes. They are trained essentially as judges. So they are not examining patent applications, they are adjudicating.

Mr. FATTAH. Right. So when Kodak says that BlackBerry or someone did, you know, misuse matters that they had on the patent to create cameras on the BlackBerries, they come before them and they have a big argument, trials and whatever? And they make a decision, right?

Mr. KAPPOS. Yes, exactly.

Mr. FATTAH. I got you. I was just trying to understand whether they got any particular training relative to patent issues.

Mr. KAPPOS. Oh, of course.

Mr. FATTAH. And the answer is no, right?

Mr. KAPPOS. No, the answer is yes. Yes.

Mr. FATTAH. Okay.

Mr. KAPPOS. Oh yes.

Mr. FATTAH. All right. I got you. Well, it would seem to me that we would all be concerned if now the majority of the patents being requested in our country were no longer American citizens. Then we have a lot of work to do, this subcommittee under our chairman

is going to be doing a lot of that work in the area of STEM education, and science. And so hopefully there will be future projections that are off base in terms of the percentage of applications filed. And maybe many more of them will be American citizens.

You know, there is this overall issue of intellectual property in terms of our international competitors. And it is not just China. You know, others are involved in industrial espionage and other activities. And these are very significant issues as we go forward, particularly in terms of rebuilding our manufacturing base. I know it is above your pay grade actually about what our relationships are and how we conduct international affairs. But hopefully you can appreciate the Chairman's passion on the matter. And I think it is logical for us as a country to think about, think anew about how we interact with those we are competing with. So I thank the Chairman.

Mr. WOLF. Mr. Schiff.

Mr. SCHIFF. Mr. Wolf, I think Mr. Honda was here first.

Mr. WOLF. Okay, Mr. Honda.

Mr. FATTAH. See how gracious my side is? You know, they want to get the order right.

PATENT AND TRADEMARK OPERATIONS

Mr. HONDA. Thank you, Mr. Chairman. I appreciate it. And let me add my words to Congressman Fattah in terms of the passion of our leadership here. But let me start out with this question. What is the prime, core mission in terms of the concept of having a patent and patent offices?

Mr. KAPPOS. Do you mean multiple patent offices? Or the Patent Office in general?

Mr. HONDA. What is the purpose of the patent?

Mr. KAPPOS. Well the purpose——

Mr. HONDA. It was conceived, it was conceived to do what?

Mr. KAPPOS. The purpose of the patent system is to provide an incentive to innovation. It is a jobs clause, if you will, in the Constitution as originally written. It is about incentivizing Americans to innovate.

Mr. HONDA. And then once you file for a patent, and you receive a patent, are there certain things that can be expected from holding a patent?

Mr. KAPPOS. Yes, absolutely. The constitutional quid pro quo to get a patent is you have to disclose your invention and permit it to be published for the whole world to see.

Mr. HONDA. And the inventor or the innovator, do they have protection on that?

Mr. KAPPOS. Absolutely. You get twenty years of protection from the date of filing.

Mr. HONDA. Against whom?

Mr. KAPPOS. Against the whole world as to activities that occur in the U.S. So any other party making, using, selling, or offering to sell anything that infringes your invention, you have the right to prohibit them from doing that.

Mr. HONDA. And if you violate that provision, are there sanctions to that?

Mr. KAPPOS. Yes. A party who infringes a patent is liable to pay damages to compensate the patentee and is also subject in most cases to an injunction to prohibit further infringement.

Mr. HONDA. And trademarks, are they different in nature?

Mr. KAPPOS. Trademarks are very different in nature. Trademarks protect brands. So think Coca-Cola, think Microsoft, think Kodak brands. And trademarks have no time duration on them, so a trademark can persist forever. The Coca-Cola brand has been around more than a hundred years, I think.

Mr. HONDA. And to process trademarks versus applications for patents, are there distinctions in the timelines?

Mr. KAPPOS. Very different timelines.

Mr. HONDA. Which——

Mr. KAPPOS. Trademark applications are very complex also, but they are processed much more quickly. The trademark applicant community wants a processing time of between two and three months for trademark applications, and a total of thirteen months processing time to final completion. We are right on those numbers at the USPTO.

Mr. HONDA. And so the firewall that is created allows you to continue to do that work in spite of that fact that as far as budgetary concerns may lag a little bit this, this gives you the cushion to not fall behind and stay on top of the demand for attention in the trademark area?

Mr. KAPPOS. Right, that is exactly right. You know, I think Congress appropriately wanted the USPTO to protect the trademark part of the operation and to keep its funds separate and that is the nature of the fence.

REDUCING THE PATENT BACKLOG

Mr. HONDA. Now on to your reform, in I guess Senate 23, there is provisions for IT and other things like that. How will these things help the backlog? And what is your anticipation of cutting down the backlog time? I mean, can you give us a ballpark figure of what it might look like?

Mr. KAPPOS. I can actually be quite precise about that. The backlog is currently a little bit over 700,000 applications on the patent side. The appropriate inventory level in the USPTO, in other words think like a factory. You have to have parts on hand for people assembling new things going through the factory. Similarly in the patent process you want each examiner to have an inventory of cases that they are working on. If you multiply out the appropriate inventory levels for all of our many, many areas of technology what you come to is about 350,000 total applications in inventory with the number of examiners that we will have in 2014–2015.

So that is our optimal inventory. We are on a trajectory to actually get there. To get there in the timeline the President has asked for, 2014–2015, requires us to hire a lot of people this year and next year especially. So that is why we are in this big hiring bubble.

Mr. HONDA. Right. So in the hiring of new folks, and the backlog, the backlog has been created by what, what factor? Is it lack of staff? Was it lack of technologies? Is it a change in technology that is more complicated so you need more time to figure it out? You

know, what are, what are some of the factors that are involved in the backlog?

Mr. KAPPOS. That is a great question. Like with all complex problems there were, in my estimation, a number of issues, some on the management side, some on the technology side, that have contributed to this backlog gradually building up over the last decade or so. And part of the problem was that we underestimated the growth rate of filings, which meant we did not have enough examiners in place to handle that accelerating growth rate. And to give you an example, this year alone at a 7.5 percent growth rate, we will have over 30,000 additional applications. We are going to get over half a million, in fact 528,000 applications this year. That is an enormous amount of work coming in.

Mr. HONDA. So that change, that steep increase, and the increase in backlog, is that based upon the new technologies and the lack of skills, technical skills, that the folks have to be able to process it? They have to have knowledge of what they are looking at, is that correct?

Mr. KAPPOS. Well yes, they do have to have a lot of knowledge of what they are looking at. Patent examiners require a lot of training.

Mr. HONDA. How will you address that? In what way will you address that?

Mr. KAPPOS. Well, we are addressing that in a number of ways. Number one, one of the changes that I have made at the agency is to move as much as we can to hiring people who have intellectual property experience when they start at the agency. We are hiring lots of attorneys, patent attorneys, patent agents, and even patent engineers—within weeks are able to start actually examining applications. They require nowhere near the amount of training time that a fresh graduate out of college requires when that person has no IP experience.

Mr. HONDA. It seems to me that the technical training in terms of the law is one thing. The scientific understanding of what you are looking at in order to provide the patent and being able to distinguish between different applications would be a critical piece where you end up with lawsuits. And in San Jose when we had the first lawsuit against Microsoft there were no judges that understood technology. What is it, what is the, is there a ramp up time for your staff to be able to come up to snuff? Or are you hiring to that issue in terms of your staffing?

Mr. KAPPOS. We are not what I refer to as skating to where the puck is going rather than skating to where the puck is. This is basic business discipline. We are using projections of the number of examiners we are going to need and factoring in the amount of training time that is needed, and calibrating our hiring to that number rather than to the number that we might have needed in the past. That is why we are starting to get on top of the backlog, even though the number of applications is increasing.

SATELLITE OFFICES

Mr. HONDA. Well having satellites, you have one in Michigan?

Mr. KAPPOS. We have announced, we have not yet started it but we have announced——

Mr. HONDA. What satellites are you looking at?

Mr. KAPPOS. Well we do not have any firm plans to have additional offices yet. But I will share that in my view we need more than one satellite office. We should be experimenting a little bit, this is a pilot program after all. I have in mind, and would like to be able to subject to appropriations, have three satellite offices using slightly different models at each office, in different parts of the country, with different demographics involved and then test our results in terms of efficiency, retention, quality of the work that we are doing, ability to attract the workforce that we need, satisfaction of the applicant community, all of those criteria, and judge what is working well and then evolve our model.

Mr. HONDA. I would probably anticipate there will be a lot of applications coming out of the chairman's district because of the activities there, and my district, and possibly in Adam Schiff's district. But I guess I would like to know——

Mr. SCHIFF. I should get priority.

Mr. HONDA. It is going alphabetically and by power. But I was just wondering what your metrics would be in order to determine where are you going to be placing this? You know, you call them satellites, and satellites we use them to geoposition ourselves and figure out where we are going to be. I was just curious, will it be the number of patents? The complex, or the, what is the, the convenience of people being able to get to a satellite? Because I think that unless technology takes over and collapses the distance, so I would be interested in it. Because it does create activities in the area, and——

Mr. KAPPOS. The factors that we have been looking at, and the factors that we used in making the decision to put our first satellite office in Detroit, included indeed the number of patent applications originating from the area. Of course places like the valley, you know, Northern California as well as Southern California, and many other places score well against that metric. We also considered the number of skilled patent practitioners practicing in the area. Because after all, they are not only our candidate workforce since we are trying to hire experienced professionals into the agency, but they are also the practitioner group that is going to be wanting to come in and interact at the agency. So we considered those folks. We also considered the presence of universities in the area that would supply graduates that would want to come and work at the USPTO, plus would be available to help with training and other interactions with the agency. We considered cost of living, we considered housing prices, we considered access to major transportation hubs because we have to fly people around occasionally.

INDEPENDENT INVENTORS SUPPORT

Mr. HONDA. My last question, Mr. Chairman. Given this is fee based, how do you prevent criticism on the fee based process where large companies who may have the wherewithal to apply for many patents, do they get special consideration? Do they have ways to get involved in the process of moving the patent through? Do they, or are, is it a fair fee system where you can create a firewall be-

tween those who are applying and the timelines and the attention that they get? Is my question clear?

Mr. KAPPOS. It is a good question. We actually provide a tremendous amount of assistance for independent inventors and small inventors. We do not provide any breaks really at all for the large entities. The large entities pay full fees and they are expected to interact at a highly professional skilled level with the agency. Independent inventors get a 50 percent discount and as was asked before, I think by Ranking Member Fattah, if we are able to we are actually going to give independent inventors a 75 percent discount. We also have extensive assistance programs for them. We have an Independent Inventors Assistance Center. We train our examiners to help what is called pro se, or independent inventors, to get through the agency. We have a range of outreach and programs that are designed to help small parties, independent inventors, I will say people who are not familiar with the patent and trademark system, to help them get into the system. We provide those services to them for free. We do not provide any of those services to large entities. They are expected to fend for themselves.

Mr. HONDA. Thank you. And Mr. Chairman, I appreciate your patience on my series of questions.

Mr. WOLF. Sure. Mr. Austria.

Mr. AUSTRIA. Thank you, Mr. Chairman. And I apologize for walking in late. Director, thank you for being here. If I could just follow up with Mr. Honda on his question about the backlog, just so I better understand, Mr. Director. What is the backlog now? Is it, I thought I read somewhere where it was maybe twenty-two months behind as far as the backlog on patent approvals?

Mr. KAPPOS. Well that is pretty close. We are currently running with a backlog of a little over 700,000 applications. What that translates into in terms of the time it takes us to process an application is approximately twenty-four months. I think it is twenty-three and change, but in that range, until we are able to first respond substantively to a patent application. And then about another year after that, I think thirty-four, thirty-five months we are currently running, until we finally finish work and grant the patent.

INFORMATION TECHNOLOGY

Mr. AUSTRIA. And that is one of the concerns that I hear back in Ohio, is the delay or the timeframe of this process. And we talked a little bit about technology. Have you put a plan forward where we can help speed up using resources and understanding the budget that we are going through right now to be able to advance this technology, to be able to speed up that process?

Mr. KAPPOS. Yes, absolutely. So technology, especially information technology, is clearly a key driver to efficiency at the USPTO. And I am on record as saying that our information technology system at USPTO is moribund. I came from the information technology industry. I am an electrical engineer. I have twenty-six years of experience in that industry and worked on some of the biggest projects every conducted. I know a broken IT system when I see one, and the USPTO system has major problems.

We are on a multiyear program right now to completely reengineer the USPTO's IT infrastructure. It started with the most basic building blocks. We literally did not even have the right power coming into our buildings. We did not have the right bandwidth across the fiber optical network that we use to run our what is called VOIP, or voice over internet protocol. We have gotten all of that basic work done so we have gotten the foundation laid. And we are now beginning to deploy new single work stations to our examiners, universal laptops, which is another key building block to basically enable people to be effective. We are building up the layers on top of that. It will take several years, but we are on the path now.

Mr. AUSTRIA. And you feel comfortable, considering the budget process that we are going through right now, that you will be able to remain on target with that, and have the resources necessary to complete that? I know that is hard to predict that in the future. But based on your projections right now?

Mr. KAPPOS. Well that is a great question. So far we are doing okay. So far we are on our plan. We have had to slow down some of our information technology efforts. But I will tell you I feel pretty good about where we are and we have been able to keep the most critical ones going. If we get our 2011 funding here fairly promptly, like in March, we will be able to keep going, running at pace. We are being extremely careful about spending money. The thing I am the most proud of is I stopped about $300 million in IT spending that was being considered, that was in plan when I started at the agency. So we are being very careful about our spending. But if we get our resources this year we will, no question, we will be able to continue on our plan.

If we do not get our resources here in the month of March I am going to have to stop all of my IT improvement programs because I will just not be able to afford going forward with them any further that will start to have an impact. Unfortunately the impact is more than month by month because what I have found in working for the government is that when you stop projects the restart time is tremendously long. So, unfortunately, we are very much nearing a critical point here, where we either need to get our money, the fees that we are collecting, or I am going to have to stop the IT efforts and we are going to suffer a pretty considerable setback.

INTELLECTUAL PROPERTY THEFT

Mr. AUSTRIA. I appreciate that. One other area, and I apologize if this has already been asked, that is brought up to me a lot is intellectual property, the theft of that. And I know you have worked very hard to strengthen both domestic and international intellectual property protection. But when we look at what is happening, both in the United States and internationally, as far as intellectual property theft costs that continue to go up. U.S. businesses, the numbers I am looking at, $200 billion to $250 billion annually. And we can go right on down the line, counterfeit merchandise is responsible for the loss of more than 750,000 American jobs. These are substantial losses to our economy. And I just would like to get your comment, or how you are proceeding as Director to try to deal with this issue? Because I know it is very important

back in my state, and when I am talking to folks regarding this issue.

Mr. KAPPOS. That is a great question. IP theft, counterfeiting, piracy is a huge problem. It is a problem in the copyright area. It is a problem in the branding area, trademarks. It is a problem in the patent area. So the USPTO has an overseas attaché program that has been very, very successful. We place employees in key embassies. We have got a couple in China, and I would like to put another one in China. We have got Southeast Asia covered. We have got Brazil covered. We have got Russia covered, and some other countries. What those people do is they work with U.S. businesses in the region, coordinating with U.S. business here in the U.S., to look for ways that we can strengthen the enforcement regimes overseas. So that is something that we are investing in and I think we need to invest more in that.

On the U.S. side, it is our agency that leads in developing policies on a global basis that help our trading partners, in fact in many cases, that push our trading partners into adopting IP laws and enforcing them in a way that helps to counter piracy and counterfeiting.

Mr. AUSTRIA. Well and I will just close by just saying that I think it is very important that we be dealing with this issue and taking on this war against intellectual property theft. Because the substantial losses to our economy, I mean, it is a trickle down effect. It impacts, because of the loss of tax revenues, it is impacting our schools, our hospitals, our local public departments, and other public services. So I think it, you know, there is a trickle down effect here and it is important that we do get a handle on that and we deal with that issue. And I appreciate your comment, and thank you Mr. Chairman, I yield back.

Mr. WOLF. Thank you. I am going to go to Mr. Schiff, but that is what I was talking about and we will get back to it. Mr. Austria is right. I think you have a Pollyanna viewpoint to think that your person in Beijing has any impact on this Chinese government. If you think so it is naive. It is absolutely, positively, categorically naive.

They have the Nobel Peace Prize winner in jail today, in jail today, and his wife cannot even get out of their apartment for house arrest. Does that trouble you, that maybe your person in Beijing may be having a difficult time? And we will get to it when I come back to the questions, but how successful have you been with regard to the Chinese government? And it is sort of a Pollyanna thing here with regard to that. They are spying against us. There are cyber attacks. My computer was stripped by the Chinese. How many times has your computer been hacked. We are going to ask you how many cyber attacks? But you just sort of speak in Pollyanna terms. They are stealing us blind. They are stealing us blind. They are taking jobs from Ohio, from all over this country. Mr. Schiff.

USPTO RESOURCES

Mr. SCHIFF. Thank you, Mr. Chairman. Thank you, Director, for being here. And I wanted to follow up with you on questions about the patent backlog, which I have had a long interest in as you

know. I think it really is key to our efforts to get our economy moving again and competitive that we reduce this backlog to an acceptable level. I want to make sure, though, I understand the fee diversion a little further, because this has been a particular point of interest of mine. I know there has been an issue in the past in terms of the appropriation process where if you come in and you estimate that the fees you are going to generate are going to be less than they turn out to be, the fees that come in above that amount, above the amount that we appropriate, end up getting diverted to the Treasury so the Patent Office loses the use of that money. On the other hand, if you overstate how much you will need and you come in under that, then not only do you not have the advantage of those resources but the subcommittee then cannot allocate them for other purposes. So I know that has been an issue. But I want to make sure I understand one thing about it in terms of the account you mentioned at the outset of the chairman's questioning. And that is, if you estimate fees at $1 billion, let us say. And the subcommittee authorizes you to use $1 billion worth of revenues. And let us say that your actual expenditures are $900 million, and the actual fees coming in are $1.1 billion. Do I understand it correctly that the amount between the amount you use and the amount that is authorized, which would be $100 million, can go into a reserve for future years, for the use of the Patent Office? But the $100 million above that was generated by fees that was not within the authorized limit, that would go back to the Treasury? Is that right?

Mr. KAPPOS. Exactly right.

Mr. SCHIFF. Okay. There have been a couple of things we have looked at over the years. One has been ending fee diversion, such that you could use whatever revenues come into the Patent Office until you get to a point where you have eliminated the backlog. There has been another proposal where the Patent Office would have the capability of setting its own fees. And then of course there is the third proposal, which would be to have Congress approve a 15 percent increase in fees. I know that among the stakeholders there has been concern with giving the Patent Office fee setting authority, that, or even the 15 percent increase. They are willing to pay more. They are willing for you even to have the authority to set fees. But they do not want to do it if they are going to be subsidizing somebody else. If you are going to raise fees and those fees are going to go to some other purpose. And, you know, I wonder in connection with the trademark question, which I think was a good question by the chairman, is some of the reservation that you have about using the trademark, the surplus in the trademark fees, is that owing to a concern that the trademark community, those that use your office for securing trademarks, are going to have the same concern that the patent users have? That they are paying fees for trademarks that are in excess of what you need and they are not going to want to do that if they see those fees going on the patent side. Is that part of the issue?

Mr. KAPPOS. That is exactly right.

Mr. SCHIFF. And how much are the users of both different users? I mean by and large are the trademark users not also patent users? Or is there heavy overlap between them?

Mr. KAPPOS. There is some overlap, but you would find significant distinctions. I will give you an example. Louis Vuitton, I do not know if they have gotten any patent applications in the USPTO. They probably have hundreds of trademarks. You know, there are many, many other entities that have no patent filings and lots of trademarks. And then on the other side if you look particularly at the independent inventor community and small businesses they would have no trademarks or maybe one trademark and many, many patent applications. So clearly there is some overlap. But there is an enormous amount of distinct community between those two groups.

Mr. SCHIFF. And the trademark fee is when they are in excess and you are able to carry them over. What has happened in the subsequent year? Is it a situation where the committee will reduce the appropriation the following year? Because you, let us say you had a $100 million surplus in trademark fees and that gets held over to the following year. And you normally get let us say $500 million for trademarks from the committee. Will they then give you $400 million the next year because they see you have $100 million more that you can use? What generally happens in those circumstances?

Mr. KAPPOS. You know, in my experience that has not happened. What is going on on the trademark side is that the reserve is obviously money paid by trademark applicants that is being used as part of our trademark next generation system, an IT project that requires substantial investments that we are making right now, although we are at the early stages of it, that is designed to very substantially upgrade the capabilities of the trademark community to manage trademark portfolios.

We believe cutting management costs for U.S. businesses and significantly advantaging them over time, but it requires an investment on our part. That is what the trademark community wants done with the funding that they have paid in and that is what we are using it for.

Mr. SCHIFF. Getting back then on the patent side of things, where was the backlog—how long have you been now director?

Mr. KAPPOS. Eighteen months.

Mr. SCHIFF. Eighteen months. And where was the backlog when you began, where is the backlog now, and how does that compare the trajectory you need to be on to eliminate all but the sort of acceptable norm by 2015?

Mr. KAPPOS. When I started, it was somewhere in the 765,000 range. It is now in the low 700s. We expect to go below 700 later this month. We expect to be down to about 655,660 by the end of this financial year.

We actually are on trajectory despite the fact that we have been constrained in our spending this year and we were constrained most of last year. We are on trajectory to get down to the appropriate levels of 10 months to first action and 20 months to final action in 2014 and 2015. So if we get our funding, we will be able to make those targets.

Mr. SCHIFF. Now, you have had an excess of applications in terms of what your expectations were. How much are you able each year thus far or every six months to not only keep up with the in-

coming but to reduce the backlog of those that are pending? Do you need to reduce the backlog 100,000 a year to meet your target? And it does not sound like you have been reducing it 100,000 a year. I mean, if you are at 700,000 now and you want to get down to what is it, 200,000?

Mr. KAPPOS. Three hundred and fifty.

Mr. SCHIFF. Three hundred and fifty. That means you need to reduce it by 350,000. 2015 is only 14 years away, so——

Mr. KAPPOS. Four.

Mr. SCHIFF. What's that?

Mr. KAPPOS. Four years away.

Mr. SCHIFF. Four. What did I say?

Mr. KAPPOS. Fourteen.

Mr. SCHIFF. Fourteen. Oh, God. Okay. So what does that mean in terms of how much you need to reduce it each year and are you on that pace?

Mr. KAPPOS. Yes. We really are. So the requirement that the President and the Secretary of Commerce gave me was to get the patent pendency level to the right amount by 2015.

To do that in that amount of time as a businessman——

Mr. SCHIFF. Right.

Mr. KAPPOS. I have to resource up in the early years to get those folks trained, get our examiners trained and productive so that in the out-years, which in this case is 2013 and 2014 and then finally in 2015, those extremely productive examiners are taking the backlog down rapidly.

So if you look at our projections, we have a model that projects given the number of employees we have and their seasoning, the GS levels they are at, the technologies that they examine, and how that backlog is going to move, if you look at it, it is going to go this year to, as I mentioned, about 655, 660,000 or so by the end of this financial year. By the end of the next financial year, that would be 2012, end of financial year, it will be down about to 550,000.

You can see, Representative Schiff, the rate of decrease accelerates over time, but it is not a surprise because more examiners are coming online and they are more highly trained and they are more seasoned.

So we get 60,000 off this year, 100,000 off next year, something like 150,000 off the year after that, and that is why you see in our plan that we stop hiring. After 2013, we stop hiring altogether. We want to start attritting some examiners off so that we come in and have a smooth landing at about 350,000.

Mr. SCHIFF. Isn't the big variable in all this, though, that you have, I mean, what, 100 percent more applications this year than you thought? I mean, that is higher. But you had a substantially greater number of applications this year than anticipated. Someone has got to handle those.

You know, hopefully, the recovery will continue to gather momentum, which I assume will mean more applications. How can your strategy take into consideration that growth if it was unanticipated?

Mr. KAPPOS. Well, that is a great question. So we are experiencing about a 7.5 percent increase in filings this year which indeed has exceeded by about two and a half percent our projections.

As the manager of the agency, that makes me nervous because it puts all of my plans at risk.

Obviously we are going to have to recalibrate over time as we learn things, and we will come back to this committee with recalibration. I think it is a good thing, in fact, and a great thing that our patent application filing rates are going up. It shows that innovation really is where the action is. So I am very comfortable with filing rates going up.

But clearly we are in a dynamic environment. We cannot perfectly predict the future. As things change, we are going to keep skating to where the puck is going. If we find out it is going to a little different place, we are going to start skating there. So I will readily agree with you that that is going to require recalibrating over time.

Now, so far, it is looking like we are able to absorb the increases because, of course, other factors are working out a little differently too. We are hiring some of these experienced people. They are getting online quicker.

We increased our efficiency by 20 percent last year. That is helping us considerably. The new IT systems are helping us somewhat or we think they will as they start coming into play.

Mr. SCHIFF. In the scale of things, what would be of most value in terms of having the consistency of resources to stay on track with decreasing the backlog? Would it be a flat 15 percent increase? Would it be the capability of setting your own fees or would it be a policy here in the Congress to ensure that there is no diversion of fees because you could set fees all you want, but if we do not appropriate the money generated by those fees, then you just become a cash cow for someone else? What would be the most useful in terms of making sure that that downward trajectory stays on track?

Mr. KAPPOS. The answer is all of the above. We really do need fee setting authority for the USPTO. We need to set and keep our fees reasonably in line with what is going on and the cost to deliver our services. Right now our fees are, I would have to describe them as arbitrary and bizarre relative to the cost to perform our services.

So we need to set our fees in a rational way. We obviously need to keep that money. I would be very uncomfortable changing USPTO fees, increasing them in any way at all, if I was not able to assure the people sitting behind me here that I am going to be able to use that money to do what the American people are paying into the patent system for. So the ability to retain fees, to spend them on decreasing that backlog is extraordinarily important.

The 15 percent surcharge is simply a financial vehicle that gets an infusion of money coming into the agency quickly so that we can continue to embark on the programs that we are on, the IT improvements, the hiring programs, et cetera, during the period of time until we are able to have a really thorough process with good oversight from this committee and others and the IP community to set fees at much more rational levels.

Mr. SCHIFF. Do you have the authority within the current fee structure to set differing fees based on the complexity of the application or based on the multiplicity of applications filed by a single party? In other words, a massive user of the Patent Office that files

a tremendous number of applications or tremendously complex applications, do you have the capacity now to discriminate in terms of fees for those?

Mr. KAPPOS. The answer for the most part is no, we do not. We charge the same fee for an application that is three pages in length as for one that is 3,000 pages in length. That is one of the problems that we have.

Mr. SCHIFF. Well, I mean, do you need authorization to do that and if you had the authorization, would you utilize it? Would it be good policy to do that?

Mr. KAPPOS. We would need authorization in order to change those fees. We certainly would consider this is something where we need to consult with the intellectual property community, but we certainly would consider differential charges based on things like complexity and length of application. But those are perfectly rational criterion to consider.

Mr. SCHIFF. Are you embarking on a new plan to allow companies to pay extra to have an expedited patent application?

Mr. KAPPOS. Yes, we are. It is called Track One and——

Mr. SCHIFF. Was that authorized by Congress? How are you able to do that, but not differentiate—how can you differentiate fees that way but not based on complexity?

Mr. KAPPOS. That is a regulatory fee and we are actually permitted under statute to set regulatory fees. So that is the way we did that one. The basic filing fees are set by statute and those fees we are not able to set.

Mr. SCHIFF. And tell me the difference between the statutory fees and the regulatory fees.

Mr. KAPPOS. Well, some number of our fees, I want to say 15 percent of them, something like that are regulatory and those are the ones USPTO can adjust. Some of our fees relative to continuing practice, what is called continuation applications, are regulatory. But most of our fees, a large majority of them and the most important ones are statutory.

Mr. SCHIFF. And the last question, Mr. Chairman.

Is there an independent agency like GAO, for example, who is currently overseeing the quality of the patents such that in the zeal to reduce the backlog we are not sacrificing the quality of the patent examinations for quantity?

Mr. KAPPOS. There is not any such agency. We do, however, have our own quality metrics that we use at USPTO that are published, freely available for anyone to look at. And using those metrics, our quality actually increased last year because we started giving examiners more time to examine applications. Our quality metrics went up about a percentage point each.

Mr. SCHIFF. Thank you, Mr. Chairman.

Mr. WOLF. Mr. Yoder.

Mr. YODER. No.

Mr. WOLF. Mr. Serrano.

Mr. SERRANO. I am sorry, Mr. Chairman.

Mr. WOLF. We will come back.

Mr. SERRANO. No, no, no. I just walked in. And we had a long hearing, so I am just glad to be here.

Mr. WOLF. We are glad you are here too.

Mr. FATTAH. Did you have a good hearing?
Mr. SERRANO. It was wonderful.

PUBLICATION OF PATENT APPLICATIONS

Mr. WOLF. Let me just put something right on the record. I am really disappointed that you did not get in detail and you did not understand. It almost seems like we were in the minority last year and you literally blew us off. You just did not really care. And I do not think that is appropriate.

And, frankly, we had a good meeting. We brought a lot of people in. I thought you would be ready and, frankly, you are not prepared. And this is a big issue. It is an issue I am going to drive on, I am going to push on, I am going to force on until they tackle me and take me down. We are going to deal with this issue. And you did not even know anything about it. And so maybe this office ought to be abolished or you ought to get a new person in the office. And I am kind of disappointed.

Now, if you can give me a list of when PTO did not have a backlog and when PTO did have a backlog each and every year up until current time. And, secondly, if we can get a list of how many patents per examiner are completed each year, also how many applications are examined by those who are at the headquarters and those who are now doing telework.

1. History of the backlog from FY 1988 through FY 2011: amount of backlog at the start and end of each fiscal year, to include a distinction between first action and final action.

End of Fiscal Year	*UPR Backlog*	*First Action Pendency (in months)*	*Final Action Pendency (in months)*
1998	212,681	12.6	23.8
1999	232,855	13.8	25.0
2000	297,008	13.6	25.0
2001	344,369	14.4	24.7
2002	421,245	16.7	24.0
2003	457,254	18.3	26.7
2004	508,878	20.2	27.6
2005	586,580	21.1	29.1
2006	674,333	22.6	31.1
2007	737,288	25.3	31.9
2008	750,596	25.6	32.2
2009	718,835	25.8	34.6
2010	708,535	25.7	35.3
2011[1]	658,981	23.0	34.5

[1] Estimated

2. Number of examiners and other employees start of year, end of year, FY 1988 – FY 2011 (estimated on end of year).

Fiscal Year	Positions (End of Fiscal Year)		
	USPTO	Patents	Trademarks
1999	6,066	5,341	725
2000	6,394	5,563	831
2001	6,426	5,454	972
2002	6,939	6,045	894
2003	6,723	5,990	733
2004	6,816	6,060	756
2005	7,363	6,494	869
2006	8,189	7,283	906
2007	8,913	7,959	954
2008	9,518	8,582	936
2009	9,716	8,786	930
2010	9,507	8,645	862

3. Number of examinations per examiner from FY 1998 through FY 2011 (estimated).

End of Fiscal Year	Average Production Units per Examiner FTE[1]
1998	94.0
1999	88.5
2000	88.1
2001	88.6
2002	85.7
2003	85.3
2004	85.4
2005	79.1
2006	74.7
2007	72.0
2008	71.5
2009	76.0
2010	81.1
2011[2]	82.1

[1] Depending on the technology examined, a GS-5 has an average production goal ranging from 37 production units to 70 production units, and a GS-15 has an average production goal ranging from 55 production units to 150 production units

[2] Estimated

Mr. WOLF. Would you please explain why the PTO makes patent applications available online some 18 months after they are filed and as they continue to wait in the backlog queue? Is that by constitution, by law, or by regulation?

Mr. KAPPOS. That is by law.

Mr. WOLF. By law. What year was that law passed?

Mr. KAPPOS. That was in the AIPA, I believe 1999. It might have been the previous law in 1996 that instituted it.

Mr. WOLF. What we were talking about in the meeting that you never heard anything about or either forgot about is, should there be an exception with regard to a national security issue or a dual use issue whereby when the person or company files it, they may say this may be something that somebody may want to make a nuclear bomb or the Chinese may take this and develop an industry?

Has there ever been an exception whereby at the time, there could be an exclusion based on that?

Mr. KAPPOS. Well, we already have that very system. A number of U.S. security agencies look at all patent applications filed at the USPTO and make that very judgment about national security risks and they do.

The U.S. security agencies take some of the applications out of our agency and put them under what is called a secrecy order and that happens. Every single application that is filed at the USPTO goes through that process. So we are actually quite sensitive to that issue, Mr. Chairman.

Mr. WOLF. Is that by the patent person who files it or is that by the National Security Agency and do they also look at economic issues in addition to national security issues?

Mr. KAPPOS. It is the——

Mr. WOLF. If a plant closes in Ohio or a plant closes in Virginia, that is an economic security area because the company has left. We do not make any more television sets here in the United States. They are made in China and in Mexico. So it is an economic security issue.

Is there a category for economic security?

Mr. KAPPOS. Not that I know of.

Mr. WOLF. Would it be a good idea if there were?

Mr. KAPPOS. I would need to see what that looked like. I would be concerned to understand what such a category looked like before I tried to comment on that.

Mr. WOLF. Well, so we do not take too much time, maybe you should come by the office and we can talk about it if we can get an appointment with you.

I want to see us doing something like that. I think the jobs that are being taken out of this country and going to places like China both from the national security perspective with regard to a threat, but also the economic security perspective is very, very important.

Do other countries make their patent applications available online?

Mr. KAPPOS. Yes, many do. In fact, if not all——

Mr. WOLF. Give us a list of those who do and those who do not.

[The information follows:]

4. List of countries that make patent applications available on-line prior to issuance or rejection of patent. Please provide the authority under which PTO makes this information available on-line.

Virtually all national patent offices around the world publish patent applications at 18 months, regardless of the status of the application (unexamined, etc...), unless the application has been withdrawn prior to that date. The following offices make the published applications available online:

- Australia
- Austria
- Brazil (abstracts)
- China
- European Patent Office
- Germany
- India
- Indonesia (abstracts)
- Italy
- Japan
- Moldova (abstracts)
- South Korea
- Mexico
- Russian Federation (claims only)
- Thailand (abstracts)
- Turkey (abstracts)
- United Kingdom
- Vietnam (abstracts)

The authority under which USPTO makes patent applications available on-line is 35 USC 122(b), as enacted in American Inventors Protection Act, Pub. Law 106-113 (Nov. 29, 1999). Publication of pending applications at 18 months has been strongly recommended by various studies both by the Federal government and by independent advisory groups ranging from the *Report of the President's Commission on the Patent System* (November 1966) to the *Advisory Commission on Patent Law Reform* (August 1992) to the most recent report on the Patent System issues by the Federal Trade Commission, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* (March 2011).

Mr. KAPPOS. Oh, absolutely. Sure.

Mr. WOLF. Does China?

Mr. KAPPOS. To my knowledge, they do. In fact, U.S. examiners have access to all Chinese patents and published applications at 18 months. China, in fact, requires all patent applications to be published at 18 months. They have no carve out and we get——

Mr. WOLF. What about Russia?

Mr. KAPPOS. Russia requires all applications to be published also.

Mr. WOLF. And what about France and Germany?

Mr. KAPPOS. Oh, of course. They long since have.

Mr. WOLF. Does the PTO provide this information in a regular weekly update to China?

Mr. KAPPOS. You mean——

Mr. WOLF. The information.

Mr. KAPPOS [continuing]. Information about U.S. applications?

Mr. WOLF. Right.

Mr. KAPPOS. I believe that it is provided, that information is provided. Well, yes, in the sense that we publish patents on a weekly basis. Every Tuesday when patents issue, we publish them on the internet and American information providers publish them on the internet. So they are available to everyone in the world then.

Mr. WOLF. Does it concern you that maybe China is taking them and using them for certain purposes?

Mr. KAPPOS. I do not know what purposes you are thinking of. I think that every person in the world has access to our published patents at the same time and is able to use them for the disclosures that they contain.

Mr. WOLF. And for taking ideas from them?

Mr. KAPPOS. Yes. That is the purpose for the patent system.

Mr. WOLF. Whereby they can then violate the patent?

Mr. KAPPOS. No, not to violate the patient, right, but to learn from them.

Mr. WOLF. Has there been any enforcement against China with regard to any violation of patents?

Mr. KAPPOS. I believe in the U.S., there has been tremendous enforcement of infringement of——

Mr. WOLF. In China, have there been any sanctions with regard to activity in China?

Mr. KAPPOS. Well, I am not, you know, an expert on the daily details there, but the Chinese do have patent laws that I would characterize as——

Mr. WOLF. Of course, they also have laws of freedom of speech and freedom of religion. It is in their Constitution. But there are 30 Catholic bishops in jail today. There are several hundred Protestant pastors in jail today.

If you need a new kidney, for $55,000, you can go over to China, stay in a four-star hotel, and they will take your blood type and they will go into the prison and they will then take the blood type of the prisoner. It may be a Catholic bishop or it may be a pickpocket.

And so they have what is in their laws and regulations, but have there been any enforcements with regard to any violations of patent infringements by China in China?

Mr. KAPPOS. Yes, I believe there has been enforcement.

Mr. WOLF. Well, can you give us a list of them?
Mr. KAPPOS. Yes, we can certainly provide what we know.
[The information follows:]

5. A list of any patent enforcement activities against its own citizens that the government of China has undertaken with respect to enforcing international or Chinese patent laws.

The statistics that we were able to obtain do not indicate if the defendants are Chinese:

Year	Civil Patent cases (Case accepted for the first instance)	Patent Administrative Enforcement (Case accepted)
2009	4,422	937
2008	4,074	986
2007	599	986
2006	458	1,227

TELEWORK

Mr. WOLF. Let's move to the telework. How many PTO employees are participating in your telework program and how many are eligible to participate?

Mr. KAPPOS. Okay. I might need some statistics on that. We have I want to say as many as 7,000 of our employees are teleworking at least one day a week now. We have all of those statistics though. And if you want to bear with me, I probably——

Mr. WOLF. I definitely want it because I was the author of the law to bring about telework at the Patent and Trademark Office.

Mr. KAPPOS. Thank you very much, Mr. Chairman. It has been enormously successful for us.

Mr. WOLF. But you do not have those numbers available?

Mr. KAPPOS. Well, I may have them here. Bear with me just a second. Let's see here. IT improvements. Okay. Let's see. I think I have—okay. So you are looking for total numbers of——

Mr. WOLF. Participating and eligible.

Mr. KAPPOS. Yes. I am going to turn for a second to my CFO and see if he has got those exact numbers with him.

Tony. Okay. No. That is the same document I have. And it does not have the exact numbers on it. It is thousands though. We have——

Mr. WOLF. But I wanted the exact number. Do you know how many were participating and how many were eligible?

Mr. KAPPOS. We can get you the exact numbers.

[The information follows:]

As of the end of the First Quarter, 2011, Telework Statistics are:
7,396 Eligible Positions
6,119 Eligible Positions Teleworking (83% of eligible positions teleworking)

Mr. WOLF. I thought you would have had that for the hearing. That is just a thought that I had.

Those who telework outside of this region, how often do they have to return or do they have to return to Washington?

Mr. KAPPOS. They currently still do have to return to Washington.

Mr. WOLF. And how often per year and why?

Mr. KAPPOS. Well, they have to return, if I recall right, once per biweek which means once every other week, they——

Mr. WOLF. So if they are in Montana or California, they have to come back?

Mr. KAPPOS. Yes. And that is a problem for me too.

Mr. WOLF. And what is the reason for that?

Mr. KAPPOS. Well, the law as it was written until it was just recently changed last December statutorily required every employee to report to their duty station once per biweek. Now, thanks to your leadership, that law was changed.

We are currently aggressively in the process of going through the steps that the law, that the new law required us to go through in order to waive that requirement for all of our employees. And I intend to pursue that and I am pursuing it extremely aggressively.

Mr. WOLF. Have you conducted any studies to determine if productivity has improved or sick leave usage has gone down?

Mr. KAPPOS. Yes, I have. And that information I have right in front of me here. And would you like me to——

Mr. WOLF. Sure.

Mr. KAPPOS [continuing]. Share some of that information? So what we have learned from surveying our employees and looking at our own data is that the amount of examining time is approximately 3.5 hours per examiner greater per biweek for examiners who are on our teleworking programs. And the reason for that is that they use less leave, less sick leave and less other kind of leave because of the flexibility involved.

We also know that our GS14 and 15 employees, which are our most productive examiners, average nearly 10 percent more examining time, those examiners who are working at home versus those examiners who work in the office. So that is an incredible increase in efficiency, 10 percent increased efficiency.

We also have measured the rate of successful ratings of examiners who work at home versus examiners who come into the office and we have measured 15 percent higher rate of outstanding performance for examiners who work at home versus those who come into the office which means that 26 percent more work gets done by those people with 78 percent fewer hours.

So statistically the legislation that you passed, Mr. Chairman is what we call a no-brainer from a business viewpoint. It pays.

Mr. WOLF. With all the new employees you are seeking to hire, do you currently have the office space to absorb the new employees?

Mr. KAPPOS. The answer is that we do to a limit, but we are dependent, very dependent on further expansion of our telework programs to be able to permit employees who qualify for telework to go work at home and then reuse their offices for some of the new examiners coming in.

SATELLITE OFFICES

Mr. WOLF. I am going to go to Mr. Serrano in a minute or two. But on the issue with regard to the office in Detroit, why did you choose Detroit?

And by having these regional offices, you are in essence arguing against the very purpose of the telework. There are many in Congress who very vigorously opposed this telework bill. And one of the arguments that we used is we said there would be less office space. We said it would do exactly what you said it would do. And now you are anticipating establishing a satellite office, what seems to work against the very purpose that we argued why we needed telework.

What are your thoughts about that?

Mr. KAPPOS. Well, the answer is that no, not at all. In fact, establishing satellite offices is not only consistent with teleworking, my vision is it is going to accelerate teleworking.

What you get when you establish a satellite office is a place for people to go in to, applicants who want to conduct business with the agency and our examiners who need to conduct business with applicants there, especially to conduct interviews, and to meet with their managers and do the other things that you occasionally need to go into an office to do.

Having an office in Detroit is like opening a giant door to new teleworking. It is going to enable us to employ potentially many hundreds of people if we are successful in Detroit, skilled IP professionals that we would never get to move to Washington, D.C. for the time that they need to spend training, then let them work at home in Detroit or in Montana or wherever else they want that is proximate to Detroit. They will be able to then commute into there when they need to do interviews with applicants but work at home other times.

So I see having satellite offices as not only consistent but an accelerant to getting more qualified examiners in our agency and giving them the flexibility to go work at home but have a place to come into without having to get on an airplane when they need to do an interview with an applicant or conduct other business.

Mr. WOLF. So currently now they have to come back into Washington to do the interview?

Mr. KAPPOS. Yes, in many cases. Applicants on the patent side have a statutory right to have a face-to-face interview with an examiner. And the only way we can live up to the law is to require our examiners to come here to—well, to Alexandria to conduct those interviews.

Mr. WOLF. You could not have a cooperative arrangement with a couple other Federal agencies? For instance, I am sure there must be an office of Department of Housing and Urban Development whereby a collocation, where you could use that because that takes place in a Washington, D.C. office. There are some telework centers whereby they have joined with other Federal agencies and that is basically a telework center in essence in another agency where they come and use the conference room. And you cannot do that?

Mr. KAPPOS. We can. In fact, that is exactly what we are doing. One of the reasons among all the other reasons that I mentioned, one of the reasons we chose Detroit is because there is a Commerce Connect there which is a sister component of the Department of Commerce. We are able to capture efficiencies by having other parts of the government, especially other parts of Commerce there.

So over time establishing these offices in conjunction with other Federal agencies to cross-use floor space, to capture efficiencies is entirely natural, entirely businesslike and completely in the plan.

Mr. WOLF. How many satellite offices do you plan on establishing?

Mr. KAPPOS. Well, I do not know. As was asked previously, there is not a plan. There is not a budget currently to establish more offices. In fact, we will not even be able to go forward with the Detroit office if we are stuck under the current continuing resolution. We are not going to have the funds for it.

But my view is that we should establish several initial offices, three is the number that I have been discussing from time to time, in different parts of the country, very different areas so that we gain experience with different models.

USPTO'S IMPACT ON INNOVATION

Mr. WOLF. Okay. Mr. Serrano.

Mr. SERRANO. Thank you, Mr. Chairman.

One of the things that President Obama said in his State of the Union which has stuck with me and I think is the challenge for the majority party as it sets out to have some very dramatic budget cuts and also a challenge for us as we decide to go or not go along with some of those cuts is how do we at the same time keep investing enough money so that our scientists and other folks can create and invent things. And he said that and I feel strongly about that.

So as far as patents go, and I do not know and forgive me if you have already asked this question, is there a sign, is there a history in the last couple of years of where we are going? Are Americans inventing more or are most other people inventing and we are not?

I mean, that was part of our strength. That has traditionally been part of our strength as a county. And, again, he said a couple of hundred things at that State of the Union. For some reason, that one stuck with me, the fact that as we go out to cut these budgets, we have to keep investing here and creating whether it is a new medicine or a new Velcro or a new Tang or whatever it is. I am giving credit to all these things NASA did, right? But, you know, let's go out and be innovative again and be the world leader.

Any signs in your office of where we are going?

Mr. KAPPOS. So the good news in that regard, we did talk about it a little bit earlier, the good news is that Americans are innovating like crazy. They are every bit as innovative. Our country is every bit as innovative, if not more than we have ever been. We are getting more patent applications including more applications from Americans.

As Ranking Member Fattah I think pointed out earlier, we are also getting more applications from overseas, so we are just getting more applications from everywhere.

The indications that I get from both the statistics and the inventors that I talk to, thousands and thousands of them, is that there is no shortage of invention in this country.

The thing that is in shortage right now is the other resources, access to capital, the mentoring that is needed in order to transit great ideas through the Valley of Death and into products and services.

Mr. SERRANO. And is there a tie-in between people on their own being innovative or are universities still playing a major role?

Mr. KAPPOS. Universities are playing a more important role all the time.

Mr. SERRANO. More?

Mr. KAPPOS. Absolutely. If you look at the statistics, you see university patent filings have increased very substantially. If you look at seminal inventions or what is called breakthrough inventions, many of them originate from universities. Universities are playing statistically a much increased role in technology transfer, in diffusing technology from labs into communities. Universities are playing an enormously important role. The Bayh-Dole legislation——

Mr. SERRANO. Right.

Mr. KAPPOS [continuing]. Passed by Congress several decades ago was absolutely instrumental and it is, in my view, substantially responsible for our country's economic leadership.

Mr. SERRANO. I remember about 15 years ago, I was talking to some folks who were visiting the Hill from Virginia Tech and I said wouldn't it be nice if we had a car that would park itself. And they said we are working on that.

Mr. KAPPOS. We do.

Mr. SERRANO. You know, and so, I mean, that is exciting when you see that happening which leads me to kind of a fun question. I do not know if you got into the details, but what are Americans inventing?

We spend so much time on the iPad 2 coming out and the new nano iPad which will probably, you know, bring the singer out into your living room or whatever. And, you know, and you can then kick him or her out of your room. But what are we inventing that the American people do not know about?

Mr. KAPPOS. So American innovation is up across the board. We measure it at the USPTO and we are, you know, lucky in that we are the first stop on the line for innovation. Every new invention first comes to the USPTO. So we see them all.

We are seeing increases in patent filings across the board. So everything from the mundane, believe it or not, new ways to make wheels, still getting invented. We see those patent applications.

Mr. SERRANO. The wheel is being reinvented?

Mr. KAPPOS. Believe it or not. Composites that are used to make wheels, new manufacturing processes, those kinds of things.

But the places where we are seeing the biggest inventions are in nanotechnology, you know, really serious materials technology, green tech innovation, think windmills, wind turbines, you know, gas, electric, those kinds of things. We are seeing big increases in, as we have for years, in the information technology sector, the iPads and the iPods and the mobile phone industry. All of the wonderful innovations in there continue at pace. And our patent filings continue to increase in those areas.

Then I would point to the bio area as a key area of U.S. leadership. And, you know, we have a lot of folks from California here. Think San Diego. Think Silicon Valley. Think Boston. Think Research Triangle Park. The U.S. far and away leads in bio innovation and the patent filings show it.

Mr. SERRANO. Again, I apologize if this has been asked, but people come to you. So I invent something and I bring it to you to get a patent. Do I have to first prove it works to somebody else? Is part of your role "get out of here, that does not work, stop wasting my time with that?"

Mr. KAPPOS. Well, yes in the sense that you have to disclose the invention. And this is required by law——

Mr. SERRANO. Right.

Mr. KAPPOS [continuing]. United States Code Title 35. You are required by law to disclose the invention and describe in sufficient detail for someone skilled in the area to actually make it and use it. So, yes, you are required to show that you know how to build this thing, you know how it works and how to construct it.

Mr. SERRANO. And that it actually does what you claim it does?

Mr. KAPPOS. Exactly, yes.

Mr. SERRANO. All right.

Mr. KAPPOS. Yeah.

Mr. SERRANO. Thank you, Mr. Chairman.

TELEWORK

Mr. KAPPOS. Mr. Chairman, I now have the statistics that you asked for before, if I can provide them to you.

So USPTO's fourth quarter 2010 teleworking statistics, we had out of a total of 9,778 employees as of the end of fiscal year 2010 fourth quarter, we had 5,915 teleworkers. So those are people actually teleworking, 5,915 teleworkers. And that represented 83 percent of the eligible employees. So a very, very high rate of teleworking.

Mr. WOLF. Do you have a patent that you want to——

Mr. SERRANO. I have a way that we can vote from our districts while attending a town hall meeting, although come to think of it, we might be better off here.

By the way, Mr. Chairman, I say this with great pride and for the admiration I have for you, not only did you affect the workforce in the Federal Government with the telecommuting, but you also set the tone for Congress.

And I can brag about the fact that I was one of the first Members of Congress a long time ago that set up the ability to get on my laptop in the Bronx or here on a no vote day in Virginia and just with the ID, the secure ID, be able to work as if I was there.

When I used to go to schools and talk to people, I would say here is the best way to explain it. When I am in the office, I am sitting in front of a computer. Now I am in my living room sitting in front of the same computer with the rest of my staff and they think I am there.

Mr. WOLF. No, I know. I have often said there is nothing magic about sitting before our computer or strapping yourself into a metal box and driving 50 miles to work. And you drive 50 miles if I recall.

Mr. SERRANO. I did at that time, yeah.

Mr. WOLF. At that time, yes.

PATENT OPERATIONS STUDIES

I am looking here at the patent reform report by the Congressional Research Service, its patent reform in the 112th Congress in innovation and ideas report. And the last look, the last in depth look at this issue shows was the National Research Council, National Academy of Science, a patent system for the 21st century which was written in 2004.

We are going to ask the NAPA, the National Academy of Public Administration, to take an in-depth look at the PTO operation, your operation. We will ask the staff to also look at the National Academy and see if maybe they may be the best.

You sound somewhat like many other patent leaders have said and, yet, conditions continue to be worsening. So we want to make sure because the one figure that you said to Mr. Serrano, and you have said it several times, the number of overseas patents are increasing.

If you could give us the number of patents that have been filed, let's say from 1988 because we are using that year as the year of U.S. and foreign in 1988, 1989 right up to present time. And then

if we could get a breakdown as to what countries they are coming from.

But the conditions may be and based on your answer may be dramatically changing. So what we are going to do is ask NAPA, and we would ask you to cooperate with NAPA——

Mr. KAPPOS. Sure.

[The information follows:]

6. Between 1998 – 2011, the number of patent applications from U.S. filers and foreign filers, and within the foreign filers category, the number by country for each year.

UNITED STATES PATENT AND TRADEMARK OFFICE
PERFORMANCE AND ACCOUNTABILITY REPORT TABLE 7
PATENT APPLICATIONS FILED BY RESIDENTS OF THE UNITED STATES [1]
(FY 1998 - FY 2010) [2]

State/Territory	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 [2]	2010 [3]
Total	**146,205**	**152,845**	**175,705**	**190,512**	**193,358**	**197,256**	**218,220**	**218,472**	**236,012**	**247,898**	**257,818**	**246,777**	***254,550***
Alabama	694	705	782	870	899	843	954	884	837	886	996	912	*976*
Alaska	102	83	105	76	89	94	90	93	86	82	88	95	*85*
Arizona	2,670	2,466	3,088	3,262	3,299	3,434	4,084	4,090	4,123	4,486	4,460	3,927	*4,019*
Arkansas	326	418	324	366	342	295	395	381	365	406	420	418	*455*
California	31,135	33,421	40,377	45,283	46,592	46,873	52,432	52,401	57,608	63,027	66,370	66,132	*66,191*
Colorado	3,153	3,288	3,736	4,309	4,559	4,713	4,910	4,794	4,889	4,918	4,898	5,019	*5,237*
Connecticut	2,905	3,147	3,642	3,629	3,871	3,739	4,167	3,872	4,368	4,281	4,326	4,009	*4,224*
Delaware	651	674	793	752	682	839	840	873	897	954	922	904	*992*
District of Columbia	116	146	194	216	6,040	213	229	192	223	250	262	261	*261*
Florida	4,838	4,952	5,500	5,844	3,690	6,691	7,103	7,309	7,896	8,184	8,480	7,839	*8,613*
Georgia	2,396	2,544	3,040	3,399	157	3,607	3,962	3,966	4,906	4,818	4,946	5,051	*5,208*
Hawaii	163	161	166	223	3,346	218	228	206	245	294	300	293	*267*
Idaho	2,195	2,116	2,723	3,340	7,410	3,240	3,377	2,783	3,114	2,495	1,905	1,544	*1,633*
Illinois	6,385	6,427	7,307	7,090	3,040	8,237	8,154	8,471	9,108	9,323	9,340	8,985	*9,266*
Indiana	2,406	2,330	2,663	2,676	1,225	2,916	2,878	3,209	3,085	3,178	3,345	3,181	*3,510*
Iowa	1,086	1,171	1,287	1,180	1,038	1,391	1,393	1,428	1,580	1,490	1,641	1,481	*1,579*
Kansas	672	681	809	893	797	1,110	1,403	1,270	1,355	1,475	1,587	1,671	*1,676*
Kentucky	698	672	903	803	771	918	1,100	1,198	1,184	1,129	1,215	1,132	*1,121*
Louisiana	881	906	895	805	307	852	799	777	808	838	709	795	*882*
Maine	251	222	274	319	4,906	332	383	348	382	415	411	344	*415*

State/Territory	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 [2]	*2010* [3]
Maryland	2,543	2,619	2,989	3,934	8,983	3,379	3,298	3,450	3,731	3,840	3,694	3,503	*3,547*
Massachusetts	6,467	6,779	7,723	8,915	7,082	8,728	9,981	9,990	10,506	11,218	11,534	11,417	*12,360*
Michigan	5,528	5,544	6,358	6,694	5,807	7,431	8,217	7,764	7,964	8,249	8,447	7,881	*7,824*
Minnesota	4,302	4,515	5,152	5,641	279	6,330	6,796	6,871	7,755	7,997	8,164	7,805	*7,843*
Mississippi	280	269	309	298	1,754	358	360	347	367	329	320	337	*338*
Missouri	1,488	1,501	1,636	1,757	256	1,859	2,150	2,010	2,166	2,273	2,335	2,285	*2,311*
Montana	204	267	273	309	442	268	326	346	291	281	258	239	*249*
Nebraska	338	350	451	435	1,182	477	537	555	532	689	592	504	*600*
Nevada	620	665	844	1,088	1,281	1,281	1,515	1,400	1,426	1,629	1,996	1,680	*1,783*
New Hampshire	1,052	1,134	1,177	1,324	7,618	1,316	1,442	1,384	1,474	1,450	1,564	1,510	*1,545*
New Jersey	6,854	7,296	7,729	7,651	708	7,501	7,746	7,994	8,973	8,649	9,428	9,622	*9,848*
New Mexico	568	594	622	750	12,166	699	721	949	802	960	857	814	*861*
New York	10,289	10,672	12,397	13,540	4,228	12,226	13,653	13,482	14,595	15,518	16,838	15,098	*15,258*
North Carolina	3,165	3,403	3,860	4,234	146	4,268	4,856	4,827	5,427	5,841	7,008	5,803	*6,045*
North Dakota	107	172	124	133	6,253	160	178	200	217	218	178	207	*167*
Ohio	5,508	5,671	6,186	6,790	982	6,610	7,156	6,836	7,508	8,104	7,791	7,528	*8,128*
Oklahoma	792	963	925	913	3,714	1,052	1,189	1,071	1,079	1,129	1,048	1,052	*1,136*
Oregon	2,378	2,310	3,176	3,523	6,672	4,008	4,968	4,912	5,197	4,841	4,487	3,911	*4,198*
Pennsylvania	6,137	6,425	6,543	6,607	610	6,696	7,044	6,812	7,448	7,811	7,951	7,568	*8,056*
Rhode Island	517	498	533	548	1,117	658	739	697	652	716	740	666	*738*
South Carolina	941	968	1,108	1,172	157	1,240	1,432	1,255	1,541	1,506	1,585	1,596	*1,667*
South Dakota	149	131	166	168	1,753	199	176	168	170	198	193	220	*224*
Tennessee	1,480	1,507	1,537	1,573	12,178	1,837	2,022	2,063	2,357	2,320	2,010	2,034	*2,284*
Texas	10,588	10,748	11,960	12,552	1,547	12,300	14,148	13,903	14,803	15,886	17,339	15,667	*16,545*
Utah	1,161	1,213	1,490	1,640	680	1,765	1,995	1,987	2,304	2,391	2,516	2,594	*2,778*
Vermont	567	607	676	776	2,663	628	882	866	983	1,001	1,309	616	*678*
Virginia	1,914	2,117	2,506	2,671	5,673	2,727	2,827	2,993	3,242	3,554	3,532	3,402	*3,577*
Washington	3,325	3,980	4,682	5,573	265	6,293	8,033	10,149	10,444	11,163	12,602	12,619	*12,796*
West Virginia	251	227	277	243	3,712	222	308	292	309	294	274	300	*291*
Wisconsin	2,794	3,005	3,526	3,527	119	3,943	4,410	4,127	4,453	4,631	4,341	4,054	*3,986*
Wyoming	83	110	117	134	186	146	144	128	147	198	183	158	*197*

State/Territory	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 [2]	*2010* [3]
Puerto Rico	54	41	31	58	80	78	80	84	75	70	70	82	*67*
Virgin Islands	3	1	7	2	4	14	5	9	7	10	10	11	*13*
U.S. Pacific Islands [4]	8	2	3	3	1	3	1	3	2	3	-	1	*1*
United States [5]	27	11	4	1	0	1	4	3	6	2	3	-	*1*
Other[5]	-	-	-	-	-	-	-	-	-	-	-	-	-
- Represents zero.													

[1] Data include utility, plant, design, and reissue applications.
[2] Finalized data for FY 1998 to FY 2009 provided.
[3] FY 2010 data are preliminary and will be finalized in the FY 2011 PAR.
[4] Represents residents of American Samoa, Guam, and miscellaneous U.S. Pacific Islands.
[5] State/Territory information not available.

UNITED STATES PATENT AND TRADEMARK OFFICE
PERFORMANCE AND ACCOUNTABILITY REPORT TABLE 9
UNITED STATES PATENT APPLICATIONS FILED BY RESIDENTS OF FOREIGN COUNTRIES[1]
(FY 1998 - FY 2010)

Residence	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009[2]	2010[3]
Total Non US	**110,461**	**125,423**	**136,102**	**154,205**	**160,036**	**158,162**	**160,764**	**191,060**	**209,601**	**220,432**	**239,068**	**239,722**	***254,817***
Total US filings	**146,205**	**152,845**	**175,705**	**190,512**	**193,358**	**197,256**	**218,220**	**218,472**	**236,012**	**247,898**	**257,818**	**246,777**	***254,550***
Percent of US Filings vs non US	**57.0%**	**54.9%**	**56.4%**	**55.3%**	**54.7%**	**55.5%**	**57.6%**	**53.3%**	**53.0%**	**52.9%**	**51.9%**	**50.7%**	***50.0%***
Afghanistan	-	-	-	-	-	-	-	1	-	-	-	1	*1*
Albania	1	-	-	-	-	-	-	1	-	-	-	1	-
Algeria	-	-	1	2	-	1	-	3	2	3	1	-	*1*
Andorra	2	1	-	3	3	2	1	2	-	5	8	5	*4*
Angola	-	-	-	-	1	-	-	-	-	-	-	-	-
Anguilla	-	1	-	-	1	-	-	-	1	-	-	3	-
Antigua & Barbuda	1	-	-	-	-	-	1	2	-	2	1	1	*2*
Argentina	121	102	138	146	109	123	118	92	133	166	139	151	*141*
Armenia	1	1	1	4	1	1	-	3	10	3	9	2	*8*
Aruba	-	-	-	1	1	-	-	1	-	-	-	-	-
Australia	1,450	1,507	1,887	2,088	2,246	2,498	2,495	3,339	3,078	3,612	4,194	4,211	*4,106*
Austria	665	871	887	945	1,134	1,009	858	1,119	1,200	1,417	1,785	1,713	*1,870*
Azerbaijan	2	1	1	2	-	1	1	3	4	1	1	3	*5*
Bahamas	21	14	17	14	26	22	30	16	18	13	20	16	*15*
Bahrain	1	2	1	-	-	1	1	-	1	1	-	2	*5*
Bangladesh	-	-	-	1	1	1	-	1	-	-	1	-	*2*
Barbados	1	3	7	4	4	-	8	9	2	6	7	6	*8*
Belarus	3	6	11	4	8	6	10	4	13	15	11	7	*11*
Belgium	1,034	1,207	1,338	1,341	1,435	1,420	1,160	1,539	1,578	1,700	1,748	1,917	*2,183*
Belize	1	-	-	-	-	-	-	-	-	-	4	1	-

Residence	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009[2]	2010[3]
Benin	-	-	-	-	-	-	-	1	-	-	1	-	-
Bermuda	5	7	15	4	12	11	5	7	8	4	8	8	*5*
Bolivia	2	2	-	1	1	-	2	2	2	2	3	4	*1*
Bosnia & Herzegovina	1	1	1	-	-	-	-	1	-	3	6	-	*1*
Botswana	1	-	-	-	-	-	-	-	-	-	-	-	-
Brazil	167	206	240	247	288	333	287	340	333	385	499	497	*583*
British Virgin Islands	2	2	3	2	13	15	17	5	7	11	10	11	*3*
Brunei	-	-	-	2	2	-	-	-	-	1	-	1	*1*
Bulgaria	15	2	23	10	10	8	98	67	52	49	83	114	*89*
Burkina Faso	-	-	-	-	-	-	-	-	-	1	-	-	-
Burundi	-	-	-	-	-	-	-	-	-	-	1	-	-
Cameroon	-	-	-	-	-	-	1	2	1	3	1	9	*5*
Canada	5,975	7,006	7,146	7,802	7,967	8,138	9,035	9,114	10,243	10,788	11,436	11,250	*12,186*
Cayman Islands	2	7	4	8	10	1	4	14	2	4	6	10	*25*
Chad	-	-	-	-	-	-	-	-	1	-	-	-	-
Chile	18	14	28	29	44	27	55	56	50	105	63	65	*68*
China (Hong Kong)	457	757	837	1,008	1,109	1,159	1,379	1,319	1,318	1,447	1,419	1,254	*1,265*
China (Macau)	-	-	-	-	-	-	-	-	5	3	5	5	*7*
China (People's Republic)	289	271	437	694	966	1,230	1,708	2,330	3,838	4,422	5,148	5,301	*8,346*
Columbia	14	21	24	28	26	22	26	15	15	27	35	28	*53*
Costa Rica	20	8	29	8	18	17	36	47	25	33	20	18	*28*
Cote D'Ivorie	-	1	-	-	2	-	-	-	-	-	-	-	-
Croatia	18	15	18	22	20	23	23	42	37	32	39	35	*31*
Cuba	4	5	14	6	11	7	1	16	9	16	38	23	*26*
Cyprus	-	4	2	7	5	7	8	13	11	5	8	12	*18*
Czech Republic	39	37	58	83	55	52	64	87	102	129	180	245	*278*
Czechoslovakia	22	15	-	-	-	-	-	-	-	-	-	-	-
Denmark	776	938	941	1,130	1,227	1,145	869	1,167	1,259	1,232	1,654	1,783	*1,849*

Residence	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 [2]	2010 [3]
Dominica	-	1	2	-	-	-	-	-	-	-	-	-	-
Dominican Republic	3	-	4	1	3	5	11	5	8	7	9	5	*7*
Ecuador	2	5	6	8	11	9	7	5	12	5	5	9	*5*
Egypt	8	19	21	16	13	13	14	17	17	33	53	33	*55*
El Salvador	1	1	2	3	1	2	2	-	-	3	-	1	*1*
Estonia	1	7	7	7	8	6	7	20	14	18	35	36	*52*
Ethiopia	-	-	-	-	-	-	1	-	1	1	-	-	*1*
Faroe Islands [4]	-	-	-	-	-	-	-	-	-	-	-	-	*1*
Fiji	1	2	-	2	1	1	1	-	-	-	-	1	-
Finland	910	1,309	1,475	1,799	2,045	1,866	1,771	2,096	2,310	2,517	2,782	2,793	*2,904*
French Polynesia	-	-	2	-	-	-	-	2	1	-	-	-	-
France	5,414	6,398	6,859	7,154	7,434	6,887	5,618	7,515	7,228	8,204	9,281	9,726	*10,627*
Georgia	6	2	1	5	3	5	3	5	10	14	5	2	*5*
Germany	13,799	17,446	17,858	19,776	21,657	19,646	16,394	21,598	22,263	23,535	26,331	26,855	*28,119*
Ghana	-	1	-	-	1	-	1	3	-	3	1	3	*2*
Gibraltar	-	-	-	-	1	-	-	7	10	3	3	7	*7*
Greece	47	47	45	48	56	44	53	65	81	86	128	118	*137*
Greenland	-	-	-	-	-	-	-	-	-	3	4	-	-
Grenada	-	-	-	-	-	1	-	-	-	-	-	-	-
Guatemala	3	2	1	12	3	1	-	1	7	3	2	2	*8*
Guinea	1	-	-	-	-	-	-	-	-	-	-	1	-
Guyana	-	-	-	1	-	-	-	-	-	-	-	-	-
Haiti	-	-	2	-	1	-	-	-	-	1	-	-	*1*
Honduras	5	6	1	1	-	-	3	3	1	1	1	1	*1*
Hungary	69	115	116	91	135	128	91	128	172	193	203	234	*250*
Iceland	28	30	39	39	40	49	60	52	47	37	41	49	*52*
India	182	263	389	636	813	1,105	1,274	1,444	1,862	2,280	2,869	2,878	*3,691*
Indonesia	7	26	15	10	25	26	40	24	31	37	25	19	*27*
Iran	16	2	1	4	4	5	4	4	10	18	28	29	*67*
Iraq	-	-	-	1	1	-	-	-	1	-	1	1	-

Residence	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 [2]	2010 [3]
Ireland	197	264	339	401	448	382	407	507	528	561	740	711	*784*
Isle of Man [4]	-	-	-	-	-	-	-	-	-	-	-	-	*2*
Israel	1,499	1,938	2,477	2,781	2,737	2,611	2,547	3,191	3,617	4,114	4,916	4,772	*5,112*
Italy	2,449	2,835	3,031	3,185	3,336	3,325	2,792	3,685	3,691	3,832	4,273	4,460	*4,570*
Jamaica	4	4	2	1	2	3	3	5	4	4	12	11	*3*
Japan	46,569	47,413	54,365	62,676	61,259	61,177	63,543	73,250	76,940	79,725	84,473	86,456	*84,727*
Jersey [4]	-	-	-	-	-	-	-	-	-	-	-	-	*9*
Jordan	5	5	-	4	3	6	8	2	7	12	8	14	*5*
Kazakhstan	1	10	2	2	1	2	1	3	4	1	2	3	*8*
Kenya	1	8	1	13	12	28	8	7	7	9	4	4	*2*
Korea, Dem. Republic of	63	-	-	-	-	-	-	-	-	1	2	1	-
Korea, Republic of	5,625	5,634	5,882	6,792	7,757	9,614	13,388	16,643	21,963	23,589	25,507	24,066	*26,612*
Kuwait	13	12	10	6	11	7	13	23	36	25	18	39	*49*
Kyrgyzstan	-	1	-	-	-	-	-	1	-	-	-	-	-
Latvia	5	2	2	5	2	2	6	6	8	10	6	15	*19*
Lebanon	3	5	4	9	11	6	5	7	14	12	11	17	*8*
Libya	-	-	-	-	-	-	-	-	-	-	-	1	-
Liechtenstein	15	26	26	33	28	34	22	25	27	26	35	42	*40*
Lithuania	2	3	4	8	2	8	20	9	10	11	13	13	*13*
Luxembourg	49	51	65	77	81	72	74	78	84	118	102	94	*92*
Macau	-	2	-	4	7	7	4	3	-	-	-	-	-
Madagascar	-	1	-	2	-	-	-	-	-	1	-	-	-
Macedonia	-	-	3	2	-	-	3	1	-	1	-	2	-
Malaysia	58	74	94	144	136	237	334	341	392	378	326	325	*387*
Mali	1	-	-	-	-	-	-	-	-	-	-	-	-
Malta	2	-	1	6	5	3	3	6	13	5	10	11	*10*
Marshall Islands	-	-	-	1	-	-	-	-	-	-	-	-	-
Mauritius	1	-	-	1	-	2	-	-	-	2	1	-	*1*
Mexico	152	172	180	220	167	213	211	217	229	216	269	244	*316*
Moldova	1	-	1	2	3	2	1	-	1	1	1	1	*1*

Residence	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 [2]	2010 [3]
Monaco	13	14	26	29	27	29	15	18	21	15	16	21	*21*
Morocco	3	1	5	1	1	5	1	4	2	2	11	6	*4*
Mozambique	-	-	-	-	-	-	1	-	-	-	-	-	-
Myanmar	1	-	-	-	-	-	-	-	-	-	-	-	-
Namibia	-	1	-	-	-	-	-	-	-	-	1	-	-
Nauru	1	-	-	-	-	-	-	-	-	-	-	-	-
Nepal	-	-	-	-	-	-	-	-	-	-	-	2	-
Netherlands	1,914	2,158	2,446	2,822	3,074	2,382	2,291	3,637	4,098	4,249	4,240	4,510	*4,634*
Netherlands Antilles	3	1	-	1	1	1	1	1	-	1	1	4	*1*
New Caledonia	2	-	-	-	3	-	-	-	-	-	-	-	-
New Zealand	204	249	296	355	402	473	270	416	449	474	580	579	*657*
Nicaragua	-	-	-	1	-	-	-	-	-	-	-	-	-
Niger	1	-	-	-	-	-	-	-	-	-	-	-	*1*
Nigeria	3	1	5	7	3	4	2	3	2	5	1	2	*7*
Norfolk Island	-	-	-	-	1	-	-	-	-	-	-	-	-
Norway	341	399	465	452	587	470	366	583	593	662	856	871	*1,022*
Oman	-	-	-	-	1	4	-	5	1	2	5	4	*7*
Pakistan	3	2	6	2	6	6	10	12	12	10	21	7	*20*
Palau	-	1	-	-	1	-	-	-	-	-	-	-	-
Panama	4	8	4	10	4	6	9	3	6	7	12	6	*3*
Paraguay	1	-	2	-	-	-	1	-	1	-	1	-	-
Peru	3	8	6	8	9	7	12	3	3	9	9	5	*8*
Philippines	21	28	32	47	72	37	82	60	85	87	72	61	*84*
Poland	16	27	35	43	46	48	75	122	93	104	122	150	*178*
Portugal	17	29	22	27	31	22	24	55	43	66	91	87	*113*
Qatar	-	-	-	-	1	1	5	1	-	4	-	4	*2*
Romania	9	5	10	13	9	10	13	16	31	39	47	58	*64*
Russian Federation	271	360	384	417	403	345	266	361	377	443	531	498	*599*
Saint Kitts & Nevis	-	2	2	2	1	6	-	-	-	-	-	-	-
Samoa	-	-	-	-	-	-	-	-	5	-	4	1	*2*

Residence	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 [2]	2010 [3]
San Marino	-	-	-	1	-	-	-	-	-	1	-	3	*1*
Saudi Arabia	24	17	24	32	35	33	37	41	51	69	90	153	*266*
Senegal	1	-	-	-	-	-	-	-	-	-	-	-	-
Serbia	-	-	-	-	-	-	-	-	7	12	16	5	*27*
Serbia & Montenegro	-	-	-	-	-	-	3	6	-	-	-	-	-
Seychelles	2	-	-	1	-	3	-	2	1	-	1	1	*1*
Singapore	315	444	680	766	792	817	902	949	1,183	1,192	1,376	1,278	*1,488*
Slovakia	10	5	10	3	15	6	7	18	29	32	36	30	*42*
Slovenia	26	20	27	21	21	55	46	50	47	53	71	69	*111*
South Africa	215	243	199	259	248	263	173	241	243	280	319	323	*355*
Soviet Union	1	-	-	-	-	-	-	-	-	-	-	-	-
Spain	442	481	595	611	690	633	637	855	868	1,080	1,294	1,224	*1,468*
Sri Lanka	3	13	8	8	20	3	3	6	9	9	16	12	*14*
St. Lucia	-	-	-	1	1	-	-	-	-	-	-	-	-
Suriname	2	-	1	-	-	-	-	-	-	-	-	-	-
Swaziland	17	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	2,390	2,770	2,840	3,001	2,692	2,311	1,769	2,371	2,793	3,132	3,508	3,610	*3,900*
Switzerland	1,897	2,245	2,318	2,494	2,560	2,362	2,053	2,651	2,968	3,138	3,681	3,714	*4,162*
Syria Arab Rep	-	5	3	-	3	4	-	2	-	-	1	2	-
Taiwan	7,627	11,392	10,380	12,403	13,761	14,537	17,703	17,933	21,165	20,447	19,733	17,974	*21,254*
Tanzania	-	-	1	1	1	1	-	-	-	-	-	-	-
Thailand	34	61	91	106	85	88	109	79	82	111	127	116	*110*
Trinidad & Tobago	2	1	8	1	1	4	-	6	3	4	6	8	*12*
Tunisia	-	1	-	1	3	2	3	1	3	7	9	5	*5*
Turkey	26	35	27	31	39	41	49	62	68	86	103	113	*141*
Turkmenistan	-	-	-	-	-	-	-	-	-	-	-	1	-
Turks and Caicos Islands	-	-	2	5	7	6	2	2	1	5	2	1	*2*
Uganda	1	4	-	-	-	-	-	-	-	-	-	-	-
Ukraine	31	20	23	39	46	39	35	34	32	35	46	61	*67*

Residence	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 [2]	2010 [3]
United Arab Emirates	6	7	6	2	11	10	19	15	22	22	30	54	*45*
United Kingdom	6,072	7,128	7,613	8,464	9,238	8,215	6,679	8,603	9,127	9,185	10,795	11,205	*11,835*
Uruguay	5	4	2	7	8	10	9	11	18	8	13	27	*16*
Uzbekistan	3	4	3	-	3	1	1	-	1	-	-	1	-
Vatican City	-	-	-	-	1	-	-	-	-	-	-	-	-
Vanuatu (New Hebrides)	-	-	-	-	-	-	-	-	1	-	4	-	*2*
Venezuela	43	44	42	65	41	30	27	31	33	37	27	32	*35*
Vietnam	1	1	1	5	1	1	3	6	4	3	13	4	*10*
West Bank/Gaza	-	-	-	-	-	-	-	-	1	-	-	-	*1*
Yemen	1												
Yugoslavia	6	6	7	4	8	10	-	-	-	-	-	-	-
Zimbabwe	3	1	1	1	2	1	2	1	-	3	2	2	-
Other [5]	75	-	-	-	-	-	-	-	-	-	-	-	-
- Represents zero.													

[1] Data include utility, design, plant, and reissue applications. Country listings include possessions and territories of that country unless listed separately in the table. Data are subject to minor revisions.
[2] FY 2009 data are updated and final.
[3] FY 2010 data are preliminary and will be finalized in the FY 2011 PAR.
[4] Countries/Territories not previously reported.
[5] Country of origin information not available.

Mr. WOLF [continuing]. And the National Academy of Science as they take a look at your operation. Have you seen a trend that shows a reduction in the number of U.S. patent filings?

Mr. KAPPOS. No, not at all. In fact, the opposite.

Mr. WOLF. Is it a reduction in percentages or is it a reduction—an increase overall as well percentages? As the foreign ones are going up, are we going up as much?

Mr. KAPPOS. Foreign filings have indeed increased in percentage. If you look back a number of years ago, fewer than 50 percent of U.S. patent filings were from or originated overseas. Now, as I mentioned before, slightly more than 50 percent originate from——

Mr. WOLF. When did you cross that line?

Mr. KAPPOS. I want to say two, three years ago, we hit the 50 percent point and went over that.

Mr. WOLF. Okay. Mr. Fattah, I have a few more. You want to go back and——

Mr. FATTAH. Yeah.

Mr. WOLF. Yes, go ahead. You go ahead.

Mr. FATTAH. You want me to go?

Mr. WOLF. Yes, you are next.

Mr. FATTAH. Yeah. Within the last year of the Bush administration, we crossed this rubicon. But part of this is that basic science research——

Mr. WOLF. Was that a compliment or—I did not get——

Mr. FATTAH. Well, no. It is just a fact. It has nothing to do with——

Mr. WOLF. Oh, okay.

Mr. SERRANO. What do you mean rubicon?

Mr. FATTAH. Oh, that we crossed to the 51 percent mark. But it is a very important issue because of so called patents, so called engineers. But as the chairman has said, when we are producing 70,000 engineers and China produces 700,000, there is going to be a differential over time.

Now, we were at a moment where we led the world in scientific research. We now represent about a third of that. And, you know, about a third of it is in Europe and a third of it is over in Asia, in India and China. So it is a very different world map. And, you know, we could have a small country like Singapore investing $4 billion in basic scientific research.

And when we look at the National Science Foundation we are not—I mean, we are in a challenging situation to find the resources. And as we all know, until we get to some budget reform around some of the things that are really driving the budget, we are not going to be making these investments that we need to make in STEM. And it is a major issue.

But I want to drill down for a minute. When someone applies for a patent, do they have to, other than the fact that they have this idea, do they talk about how they developed the idea? Do they talk about where they got the initial funding?

Let me give you an example. I met with a 33-year-old young guy who is the head of material and mechanical engineering at a school in Philadelphia. He got a $20,000 investment from the university a few years back and he got, Mr. Chairman, an NSF grant for, you know, in the six figures. And now he has got a patent and he has

got a company. And he has got about a $600 million product line that is helping make the world a better place.

And this committee is involved in a lot of issues beyond patents, but through one of the STEM programs that the committee has supported in previous years, there is young lady over at Howard University now who has got a patent disclosure for a development of an idea to power underwater labs of NOAA and other entities by using material on the ocean floor.

I mean, we have the talent. We have young people who have the talent to do almost anything. It is just a matter of creating the opportunities for them, and that is what we are interested in.

So the work that you are doing is vitally important, and I think that we are going to have to work through the issues of the appropriations. The CR is another matter, but I think the Senate is acting on the CR today, for two weeks, and they passed it. Okay. And then we will go into what happens on March the 18th.

But you are not the only agency to say. The Pentagon came out today and said if we keep operating under a CR, it is going to actually cost more money, and it endangers national security. So we do have to get to a resolution.

And I hope that there is either a budget summit or there is some kind of resolution where we can get the spending at least set for the rest of this year and then the Appropriations Committee can do its work properly about next year's funding because this is serious business. And we owe it to American industry that if we are going to have a patent operation, that it function in real time. And you have international treaty obligations, right?

Mr. KAPPOS. Yes.

Mr. FATTAH. So these countries, not only do we have obligations, but other countries have obligations. And we want to make sure that in order to hold them accountable that we are meeting the mark that we need to be meeting.

So I want to thank you for your testimony.

And I will conclude on that, Mr. Chairman.

Mr. WOLF. Thank you. Well, I appreciate the comments from my good friend from Pennsylvania. I am from Virginia but was raised in his home town in Pennsylvania.

I think there is an answer, but it is a relatively difficult solution to what is relatively easy. And it is really to adopt the Simpson-Bowles or Bowles-Simpson Commission, changing things. And obviously there are things in there that I did not agree with. And I would have made a sincere effort.

But when Tom Coburn and Dick Durbin can come together, I think it is going to take a bipartisanship. It is going to take the President to come forward. There was an editorial in today's *Washington Post*, "Waiting for Waldo", meaning waiting for the President to step forward. It is important that we do this in a bipartisan way.

And until you deal with the fundamental issues of the entitlements and those issues, you can come up here and testify all you want to testify, it is going to continue to be a problem.

Mr. KAPPOS. Yes.

Mr. WOLF. So I think the way to do it is to come together, find a rationality. And I think the beginning of it could be what the

Senate is doing is a bipartisan effort. One of the senators from my State, Senator Warner, Senator Chambliss from Georgia, Senator Coburn, and Senator Durbin are working on something to sort of force the Congress and force the Administration to come together.

Then I think if we can do that and I think we can do it in a way that is not painful to the Nation, adjusting around the edges, then I think all these issues to a certain degree free up a tremendous opportunity for the sciences and math and physics and chemistry and investments and have a renaissance.

But until that comes you are going to continue to have budget cuts and you are not going to have the CR be ended quickly. I mean, I am not so sure, maybe I am wrong, but I do not know if two weeks will be enough. Who knows what? So you are going to continue to kick this can down the road. But I think if we could begin with what Senator Simpson and Bowles did, I think we can begin to make some progress.

PATENT AUTOMATION

A couple of last questions before we end. In 2005, GAO reported that the PTO had spent over $1 billion, B billion, between 1983 and 2004 for patent automation activities which did not achieve a fully integrated electronic patent process. Between fiscal year 2006 and October 2010, PTO spent another $47.9 million on another IT modernization effort on a system that has not been effective either.

Can you describe PTO's proposed Patents End to End Program and when do you anticipate awarding a contract?

Mr. KAPPOS. Sure. I would be happy to do that. So the Patents End to End Program is designed to take a completely different approach than the programs that previously failed. It is designed to start and we have started. We have been spending the better part of a year now starting without attempting to make architectural decisions, without attempting to choose servers or programming languages or any of that, without even attempting to choose contractors.

Instead we started doing something that apparently is kind of new in the Federal Government but is actually pretty straightforward to me as someone who, as I mentioned before, has been doing this stuff for going on 30 years now which is to actually talk to your customers. In this case, examiners.

So we put together task forces of examiners. We literally have engaged over this period thousands of our examiners at the agency. I mean, you can ask the folks at our unions who will say management never did that before and they absolutely love that management is engaging the employees. And we asked them the question, what do you want your IT system to look like. And that is where we started.

We spent a lot of time collecting input. We brought three contractors in, very small contracts, to design the prototypes of what our user interface would look like. We finished with that work. We did extensive user input on it. We would love to show you the results. It is actually very, very engaging. Our users have chosen what their next system is going to look like. And we spent very, very little money so far.

But this is about collecting the user input that you need so that you ensure that you are designing a vehicle that meets the needs of the people who are going to ride in the vehicle. In this case, primarily Patent and Trademark Office examiners.

So we finished that initial prototyping work. We are now engaged in the process of lining up the contracts to get going on the first set of what is called Sprint using a programming methodology and a development methodology that again is—that I have been using for years in the private sector, but is new to the Federal Government, that is called agile development methodology. That is the approach that we are using.

And we expect using that approach to have the first but I will caution initial pieces of programming for our Patents End to End Project by the end of this calendar year. We are going to deploy them initially using our Central Reexamination Unit. I mentioned that before. It is a part of our examiner core that focuses on patent reexaminations which is extremely important work but has the advantage that it is not automated at all right now. They are on totally paper processes.

So there is very little risk in moving them to a new system. It is a small group of people, but it employs very similar processes to our large core. So you will see that rolling out late this year and then you will see the way agile works, a steady stream of vertical and horizontal improvements, in other words, filling in functionality on top of the initial system and more functionality across the whole patent examining process. It will take several years, though, to get this done.

Mr. WOLF. What sort of technical expertise does PTO have to oversee the contractors?

Mr. KAPPOS. Well, we have got a CIO who has many years, in fact decades of experience in the information technology industry. I personally, as an IT professional and electrical engineer from that industry, I personally spend a lot of time working with my team.

We have now hired as we were requested by the President's CIO, we have hired a project manager also from private industry with much experience managing projects to design and implement complex IT solutions. And so I believe we have actually got a robust team in place to manage contracts.

Mr. WOLF. Is he an employee or is he a contractor?

Mr. KAPPOS. Employee of the USPTO.

Mr. WOLF. All right. Okay. For the record, Mr. Fattah, you have any other——

Mr. FATTAH. No.

Mr. WOLF. Okay. With that, we thank you for your testimony. I hope you will come up and see me. I want to talk to you because I am going to do something on the China issue.

And, secondly, if you would cooperate with NAPA and whoever it is to take a look. We will try to get that up and running. We will try to put language in the bill. But I think we will do a letter to them early and if they can begin early, I would appreciate it.

With regard to that, I guess we will just submit the rest for the record. Thank you.

Mr. KAPPOS. Okay. Thank you, Mr. Chairman.

[The information follows:]

Questions for the Record (Wolf)
for the United States Patent and Trademark Office
FY 2012 Budget Request

Difference between FY 2012 Budget Request and Anticipated Fee Collections – PTO is Proposing an Operating Reserve

1. *PTO expects to end FY 2012 with a reserve of $342 million. Would you please explain the need for PTO's reserve? Why wouldn't you spend funds on overtime and hiring to reduce the backlog and not have such a large carryover from year to year?*

   Answer: USPTO maintains an operating reserve as part of its strategic objective to establish a sustainable funding model to address both its multi-year funding requirements and any economic/workload volatility that may occur in the future. This is in line with the Administration's and our stakeholder's desire that USPTO maintain a reserve to help mitigate any funding difficulties along the lines of those the agency experienced over the last couple of years.

   The USPTO has a multi-year plan to achieve an average first action patent pendency of 10 months, and an average total pendency of 20 months by 2014 and 2015 respectively, as well as reduce the backlog of unexamined applications. The operating requirements laid out for FY 2012 will continue to implement this multi-year plan by hiring and training 1,500 patent examiners, authorizing the maximum amount of overtime, and paying for awards and contractual services needed for additional production. These levels were analyzed and modeled to identify the appropriate level of hiring to ensure the desired ramp down of staffing once the application inventory reaches optimal levels.

Fee Surcharge: PTO is again requesting a 15% surcharge on patent fees and PTO anticipates that this will provide the PTO with an additional $263 million.

1. *What will this additional revenue enable PTO to accomplish?*

   Answer: The 15 percent surcharge, together with existing fee collections, will fund requirements for patent hires and associated costs (such as overtime and workload-related contracts) to reduce the backlog of unexamined applications by over 100,000, and total pendency by 2.4 months by the end of FY 2012.

2. *How much of the backlog will be reduced by this surcharge?*

   Answer: With the surcharge in place in FY 2012, the USPTO will hire additional patent examiners and reduce the backlog by over 100,000 applications by the end of FY 2012. Over the three-year period – 2011 through 2013 – the USPTO plans to hire about 3,400 patent examiners. This will enable the Office to reduce the accumulated backlog of unexamined applications by 50 percent to 352,000 at the end of FY 2014.

3. *Will this surcharge be applied to all new applications or just certain industries?*

   Answer: As per the FY 2012 President's Budget, the requested 15 percent surcharge to statutory patent fees will be applied to all new patent applications. Under the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), the USPTO is not able to discriminate against technologies or industries in any manner affecting applicants.

Impact of Inaccurate Fee Estimates

1. *When PTO does not collect as much as it anticipates, what happens?*

   Answer: USPTO budget and spending plans are developed based on operating requirements and projected fee collections. The sustainable funding model, upon which the FY 2012 President's Budget was developed, includes an operating reserve and multi-year flexibilities to manage and allow the agency to ensure a reliable revenue stream and adjust for unexpected revenue changes without putting the agency at operational risk. Without a multi-year sustainable funding model, the USPTO would need to reduce spending if fee collections do not meet expectations. When spending is reduced, the ability to meet pendency goals and targets is impacted.

2. *What steps does PTO take to keep spending within the limits of what it collects?*

   Answer: The USPTO establishes annual fee collection and spending plans. These plans are monitored daily, reported to management monthly, and adjusted as necessary.

3. *What steps is PTO taking to improve the accuracy of fee estimates to ensure that it is able to hire and retain staff in order to continue efforts to work down the backlog?*

   Answer: The USPTO has a good track record of projecting its fees, and except during the unprecedented recession in FY 2009, has generally estimated patent fees within acceptable tolerance levels. The Office of Inspector General has reported that a margin of error of ±5 percent of actual receipts is generally deemed acceptable. At the same time, however, the agency acknowledges certain weaknesses in our projection process noted by the IG, and is taking steps to mitigate those weaknesses. In order to enhance transparency and accountability, the USPTO has begun documenting the policies and procedures used for managing and forecasting fee collections. We are also improving annual reporting on patent fees by formally reporting potential causes for significant variances and trends to consider as appendices to President's Budgets.

Reducing the Backlog

1. *What is the current backlog estimate? How did it reach this level and what initiatives are in place to work down the backlog?*

Answer: The backlog as of March 29, 2011 is 705,048. If the USPTO receives FY 2011 and FY 2012 funding levels as requested in the FY 2012 President's Budget request, the estimated backlog by the end of FY 2012 would be approximately 550,000 new patent applications. This represents a reduction of approximately 160,000 patent applications from the backlog in comparison to the backlog at the end of FY 2010.

The backlog has grown due to a number of factors, including significant increases in the number and complexity of patent applications. The USPTO continues to balance the need to address the growth of the backlog, while improving quality. To address this challenge, the USPTO must continue to hire, train, and retain a highly skilled, diverse examiner workforce. Initiatives in place include:

- Hiring approximately 2,800 hires during FY 2011/2012
- Use of the hiring model that focuses on experienced IP professionals
- Targeting overtime to high backlog technology areas
- Developing and implementing a Nationwide Workforce
- Improving retention by developing mentoring, best practices, and retention strategies
- Continue the outsourcing of Patent Cooperation Treaty (PCT) searching.

The USPTO must also continue to increase efficiencies through the implementation of major process improvements in the patent examination workflow, and in optimizing examination capacity. Initiatives in place include:

- A re-engineered patent examiner production count system
- Prioritization of incoming work
  - Green technology acceleration
  - Project exchange
  - Multi-track customized examination
- Focusing on compact prosecution initiatives
- Re-engineering efforts
  - Patent classification system
  - Patent examination process

2. *The goal is to reach a 20 month approval timeframe. Is this an acceptable timeframe?*

Answer: Yes, a goal of 20 months total pendency (and the inter-related goal of 10 months to first action upon which it is predicated) is an acceptable and appropriate timeframe.

Under 35 U.S.C. § 122, the large majority of patent applications are published at 18 months from the earliest filing date. The 18-month publication trigger is an important milestone in the patent application. Applicants from around the world expect their applications to be kept secret prior to 18-month publication, and use the period between filing and publication to assess technology and marketplace developments. Applicants are then able to elect, prior to 18-month publication whether to continue pursuing patent protection at the "cost" of having their innovations published to the world, or whether to

abandon patent protection in order to retain trade secrecy. A total pendency of 20 months accommodates the 18-month publication decision, and thus represents the shortest pendency consistent with applicant flexibility under international norms.

A total pendency of less than 18 months to issuance will place U.S. inventors at a major disadvantage relative to overseas competitors by forcing publication versus trade secrecy election in less than the 18 months available to overseas competitors. This would effectively reduce trade secrecy lead time from 18 months to whatever pendency is reduced to. Many U.S. applicants will find such a choice highly prejudicial. As a result, it is not desirable for total pendency to be less than 18 months as a general matter.

Similarly, a first office action pendency of 10 months is highly desirable to allow applicants time to make informed decisions regarding whether to file for international protection (whether under the PCT or the Paris Convention route), because international patent applications must be filed within 12 months of the earliest filing date of the parent application in order to enjoy the right of priority provided under international treaties.

Under the Patent Cooperation Treaty (PCT), international searching and international preliminary examining authorities (ISAs/IPEAs) are required to produce an international search report within 16 months from the earliest filing date of an application. The results of the non-binding search/exam results help applicants decide whether to pursue protection at the national/regional level. Thus, in addition to helping determine whether to file under the PCT, first office action pendency of 10 months at the USPTO would help applicants decide whether to substantively pursue international patent protection under the PCT.

Moreover, having a first office action within 10 months from the earliest effective filing date is critical to applicants who must decide whether to continue prosecution of the application or abandon the application to avoid publication at 18 months from the filing date. The ability to abandon an application prior to publication preserves, for some inventors, the important option to protect an invention as a trade secret. Additionally, in those cases where an applicant files less extensive patent applications overseas, the applicant may request within 16 months of the earliest effective filing date that a redacted version of the application corresponding to the less extensive foreign applications be published in the United States. Ten-month pendency to first office action facilitates that decision process and preserves applicants' ability to retain appropriate trade secret protection.

The patent term adjustment (PTA) provisions of the American Inventors Protection Act of 1999 (AIPA) provides for patent term adjustment if the USPTO fails to initially act on an application within fourteen months of its filing date. Ensuring first office action pendency of 10 months would eliminate the need for patent term adjustment. Currently, patent term adjustments are granted in 74% of issued patents, with an average adjustment of over 400 days. It is likely that the need for patent term adjustment for other delays will also be reduced as overall pendency is decreased.

It should be noted that for those seeking faster processing, 12 month patent pendency will be available under Track One of the proposed Three-Track Patent Processing program.

3. *Would you please walk us through the backlog as it relates to the fact that PTO publishes patent applications 18 months after they are filed?*

   Answer: As is the norm in most patent examining countries, applications are published before they are examined. Where an applicant certifies that he/she has not and will not file a counterpart application in a country that provides for eighteen-month publication, the USPTO will not publish the application unless and until a patent is granted (currently only about 6% of applicants opt out). Where the applicant does not make such a certification, the USPTO publishes the application at eighteen months from its filing date to provide an English language publication for those applications whose counterpart applications are already being published abroad (generally in languages other than English).

4. *Please provide patent examiner attrition rates for FY 1998 through FY 2011, estimated. What are the attrition rates expected to be in FY 2012, 2013, and 2014?*

   Answer: Patent examiner attrition rates for fiscal years 1998 – 2014 (actual and estimated) are as follows:

UPR Examiner Attrition Rate FY98 – FY14			
Fiscal Year	**Attrition Rate**	**Fiscal Year**	**Attrition Rate**
1998	8.99%	2007	8.47%
1999	10.92%	2008	7.83%
2000	12.48%	2009	5.51%
2001	7.27%	2010	3.75%
2002	6.06%	2011[1]	5.00%
2003	5.54%	2012	7.00%
2004	6.97%	2013	7.00%
2005	8.09%	2014	7.00%
2006	8.83%		

[1]Data for fiscal years 2011 through 2014 are projections based on the 2012 President's Budget

Efficiency Gains

1. *Would you please explain the efficiency gains you expect as a result of changes to internal work processes?*

   Answer: The efficiency gain is one component in the road map for the USPTO to achieve 10-months first action pendency. The USPTO expects efficiency gains through changes to internal work processes through the implementation of several initiatives such as: interview training, compact prosecution training, and claim interpretation training.

These activities will directly reduce the amount of time examiners spend to complete prosecution in an application through:

- revisions to the examiner count system which gives more time/credit for examiners to prepare first actions, thereby encouraging a quality first action which will result in compact prosecution as well as providing an incentive to work on more new applications;
- a first action interview program which enables applicants and examiners to identify issues and come to an agreement more quickly during the prosecution of an application; and
- work sharing agreements which will allow an office to rely, to a maximum extent practicable, on the work previously done by another office.

The combination of these process changes will enable our examiners to complete the prosecution of applications more quickly and provide them with incentives to do more first office actions on applications in our backlog which will ultimately expedite the reduction of inventory and facilitate the USPTO's ability to reach 10 month first action pendency.

2. *How much overtime do you currently allow each examiner to earn per year?*

Answer: When the USPTO is appropriated sufficient spending authority, and is operating at maximum production capacity to meet agency goals, examiners are authorized to work up to 32 hours on a bi-weekly basis and up to 50 hours with a technology center Director's approval. Under the current CR, examiner overtime has been reduced in most technology centers ranging from 10 to 20 hours per bi-week. Nevertheless, there are several technologies in which the examiners are still authorized to work up to 32 hours per bi-week and up to 40 hours with a technology center Director's approval.

Under any of the authorized levels above, an examiner can not exceed the bi-weekly rate payable for a GS-15/10 as indicated under Title V.

3. *How many applications does this generally equate to?*

Answer: The amount of overtime requested in the FY 2012 President's Budget request would generate an estimated 47,500 production units (application equivalents).

Release of Patent Applications Electronically

1. *Under what authority does the PTO makes patent applications available on-line some 18 months after they are filed and as they continue to wait in the backlog cue?*

Answer: Congress provided for publication of patent applications at eighteen months from their filing date in the Domestic Publication of Foreign Filed Patent Applications

Act of 1999, Sec. 4502(a), now in statute as 35 USC 122 (b). This publication is consistent with other Patent Offices around the world. The rationale for this change to the U.S. patent laws was to provide for an English language publication of applications that were also being published abroad, since most countries with patent systems provide for publication of applications at eighteen months from their filing date. Where an applicant certifies that he/she has not and will not file a counterpart application in a country that provides for eighteen-month publication, the USPTO will not publish the application unless and until a patent is granted (currently only about 6% of applicants opt out). Where the applicant does not make such a certification, the USPTO publishes the application at eighteen months from its filing date to provide an English language publication for those applications whose counterpart applications are being published abroad generally in languages other than English.

2. *Does the PTO believe that this puts U.S. inventors at a disadvantage, given that their applications are available to anyone while they sit and wait for their application to be acted upon?*

Answer: The USPTO does not believe that 18 month publication puts U.S. inventors at a disadvantage. To protect an applicant between the date the application is published and the date a patent is granted, the eighteen-month publication provisions of the Domestic Publication of Foreign Filed Patent Applications Act of 1999 provides that the rights provided by a patent include the right to recover a reasonable royalty from those with actual knowledge of the published application who engage in acts of infringement during the period between the date the application is published and the date a patent is granted.

3. *Do other countries make their patent applications available on-line? If so, which ones? Do any countries not make their applications available on-line or in some other way available publicly?*

Answer: Yes, other countries/offices that make patent applications available online before issuance include:

Australia	Indonesia (abstracts)	Thailand (abstracts)
Austria	Italy	Turkey (abstracts)
Brazil	Japan	Sweden
China	Moldova (abstracts)	United Kingdom
European Patent Office	South Korea	Vietnam (abstracts)
Germany	Mexico	
India	Russian Federation (claims only)	

Most offices make their applications publicly available prior to issuance, either online or by some other means. Of the 41 countries/offices in the World Intellectual Property Organization's online Index of Patent Systems, the offices which do not make their applications publicly available prior to issuance are:

Ghana	Madagascar	Papua New Guinea

Israel	Mali	South Africa
Libya	Monaco	Turkmenistan

*WIPO's online Index of Patent Systems may be accessed at:
http://www.wipo.int/ipstats/en/resources/patent_systems.html

Telework

1. *When did PTO begin using the telework authority?* ***(CAO)***

   Answer: Established in 1997, the Trademark Work at Home (TWAH) program began as a feasibility pilot of eighteen examining attorneys who partnered to share physical offices and alternate days at home with days in the Office. In 2003, the Trademark organization started the agency's first hoteling* program with 110 examining attorneys (44% of the Trademark examining corps) who worked remotely for more than 90% of their work week. Trademarks now has 346 Trademark examining attorneys participating in the Trademark Work at Home hoteling program.

   In 2006 the Patent organization launched the Patents Hoteling Program (PHP).

   Agency-wide, the USPTO currently has 6,119 employees working from home between 1 and 5 days per week. 2,841 of these employees have completely relinquished their office space on the USPTO Alexandria campus and are working from home between four and five days per week.

   * *Hoteling - A telework arrangement in which employees are not assigned permanent space in a central office, but rather share offices and conference space as necessary when on-site. Such space is assigned by reservation, much like a hotel. Employees teleworking under this program, and living outside of the 50-mile commuting radius, are required to visit the Alexandria campus twice every pay period for the purpose of maintaining their duty station as Alexandria, VA. The bi-week visit requirement will change when the recent telework legislation is implemented.*

2. *How many PTO employees are participating in PTO's telework program and how many are eligible to participate?*

   Answer: As of the end of the First Quarter, 2011, Telework Statistics are:

   - 7,396 Eligible Positions
   - 6,119 Eligible Positions Teleworking (83% of eligible positions teleworking)

3. *Has PTO conducted any studies to determine if productivity has improved or if sick leave usage has gone down?*

Answer: A Patents Hoteling Program (PHP) time analysis conducted in 2007 demonstrated an increase in the amount of examining time by approximately 3.5-5 hours per examiner per bi-week as a result of less leave use and increased use of overtime by examiners on PHP.

4. *What other benefits have been realized as a result of telework initiative?*

Answer: The USPTO Telework Program is based on a business strategy that supports and furthers the Agency's mission and goals. Key features include:

Realizing space and related cost savings: Over the history of the program, the USPTO's hoteling initiative has enabled the Office to hire new employees without securing additional office space or additional parking facilities.

Employees who work from home four to five days per week relinquish their office space on the Alexandria campus and reserve space in an on-campus hoteling suite when they travel to the USPTO campus. The ability to recoup space from hoteling employees has prevented the need for acquisition of additional space to accommodate the new hires. It is estimated that the agency has avoided over $19 million annually in additional leased office space as a direct result of the USPTO's hoteling programs.

Incorporating planning for continuity of operations: The existing telework program additionally provides the USPTO with the ability to continue some everyday business operations during an emergency beyond those defined in the Continuity of Operations (COOP) plan. An example of this was the agency's ability to continue many of its operations during the 2010 snowstorms. Without telework and hoteling, the agency would have been completely unproductive during this time.

Federal agencies have historically had to place all but emergency employees on administrative leave an average of two days a year due to snow and other emergencies. USPTO telework programs have enabled eligible employees to continue working during inclement weather that may have otherwise impaired their traveling to the USPTO campus. As long as the agency's IT network remains intact and accessible, the telework program will allow for some, if not most, of daily business operations to continue.

Positively impacting resignation rates: The Trademark organization began its hoteling initiative in 2003 with the Trademark Work at Home (TWAH) hoteling program for Trademark examining attorneys. From 1997 through 2001, five years prior to the program, Trademarks had an average resignation rate of 9.62 percent. From 2006 through 2010, the most recent five years incorporating the TWAH hoteling program, the average resignation rate was 3.03 percent. In a 2006 Trademark survey, 90 percent of respondents indicated that their participation in the TWAH program has influenced them to stay at the USPTO. Additionally, the 2007 Patents Hoteling Program (PHP) perception survey indicated that 87 percent of the respondents surveyed agreed that PHP has positively impacted their willingness to extend their years of service with the USPTO.

Reducing traffic congestion in the Washington region: The telework program is having a positive impact on traffic congestion and air quality in the Washington metropolitan region. USPTO fourth quarter FY 2010 telework data indicates 743 Patent employees and 89 Trademark examining attorneys teleworked 4 days per week and 1,652 Patent employees and 255 Trademark examining attorneys teleworked 5 days per week. This translates to 16,883 tons of emissions reductions for the Washington metropolitan region.

Reduced Sick Leave for Hoteling Employees: A 2007 perception survey of patent hoteling participants indicated that 45 percent of patent hotelers surveyed felt they had used less sick leave since having joined the Patent Hoteling Program. Additionally, based on a spring 2006 survey of teleworking employees in the Trademark Operations, 80 percent reported that the flexibility of working at home allowed them to decrease the amount of sick leave used by at least eight hours per year.

5. *With all of the new employees PTO is seeking to hire, does PTO's new office have the ability to absorb all of these new employees or does PTO anticipate that the majority of these new examiners will telework?*

Answer: Trademark examining attorneys are not eligible to telework until they are fully trained. At about 1½ years experience, they may telework twice per bi-week; after two years, they may chose to hotel. The Trademark organization does not anticipate a problem housing new hires on campus because more experienced attorneys have already chosen to hotel at an 85-90% rate.

The USPTO is absorbing the influx of new Patent examiners; however, new patent examiners are precluded from joining the Patent Hoteling Program (PHP) until they have been at the Office at least two years. The USPTO's ability to absorb new patent examiner hires, without violating space-related components of the existing collective bargaining union agreement, is largely based on getting enough experienced examiners to volunteer to participate in PHP. Our current plans do not include an increase in space requirements at the Alexandria campus.

Establishment of an Office in Detroit Michigan

1. *Why did PTO chose Detroit, Michigan to establish a satellite office?*

Answer: Prior to site selection, USPTO's Nationwide Workforce team evaluated a number of potential sites based on a series of criteria. The city of Detroit, Michigan fulfills a number of critical criteria that the Nationwide Workforce team evaluated, including:

- The city of Detroit is located near universities which are a source of technical knowledge and possible candidates for the patent examiner position. The University

of Michigan (a top ten engineering school), Michigan State University, and Wayne State University are just a few of the universities near and in the Metro Detroit area.

- Detroit and the surrounding area is considered a major manufacturing center with thousands of manufacturing factories which produce billions of dollars worth of goods each year as well as a global trade center with Fortune 500 companies and large international law firms. 1.87% of the workforce in the Detroit area are engineers, higher than the average of 1.29% for the other cities considered by the USPTO.

- The State of Michigan had over 1,000 registered Patent Attorneys and Agents, over 3,500 patents granted and over 7,600 patent applications filed (9th largest filings) in 2009.

- The unemployment rate of 13.2% in Michigan is one of the highest in the country—as compared to the 9.5% national average.

- The cost of living in Detroit, Michigan is indexed at 100, which is slightly lower than the average of other cities considered for the pilot.

- With a population of just under 10 million at the close of 2009, Michigan is the eighth largest state in the country, and with over 900,000 residents, Detroit is the 11th most populous city in the country (as of the 2000 Census, the latest available at the time of site selection).

- Detroit, located in the Midwest Region, is an important transportation hub with facilities, ports, major highways, rail connections, and is only a short drive from the 17th largest airport by annual number of boarding passengers (DTW).

- The Department of Commerce's CommerceConnect project is located in Metro Detroit and would further enable interdepartmental collaboration – an important goal of the Secretary of Commerce and of USPTO leadership.

2. *When does PTO anticipate opening this location?*

Answer: USPTO plans call for an August 2011 opening. However, due to uncertainty around the USPTO's 2011 and 2012 budgets, the project is currently being delayed on a day-for-day basis until there is more clarity on the budget.

3. *Does PTO anticipate opening other satellite offices?*

Answer: The Detroit office marks the pilot phase of the project and information gathered from the establishment of this office will help inform decision-making regarding future expansion of the program.

The Nationwide Workforce Program is flexible and offices may be added based on need and long-term Agency recruitment and retention objectives.

The USPTO is currently exploring expansion into other areas of the country and plans to engage with stakeholders to determine the most efficient use of resources.

4. *What gains does PTO expect as a result of opening this new office?*

Answer: The USPTO anticipates several gains from opening this new office, such as:

Production: Detroit IP experienced hires are expected to meet production targets on pace with IP- experienced hires at the USPTO Alexandria, VA headquarters.

Human Capital: Hiring targets of 4 classes of 25 IP experienced hires over the first year of operation are expected to be met. Attrition is expected to be less than or equal to levels of attrition at the Alexandria HQ.

Operations: Management will also monitor success of operational activities including but not limited to: success of training program, IT connectivity and support tools, and procurement costs.

5. *If PTO has an active and successful telework program, why would it need to open additional offices? Why wouldn't PTO just expand its recruiting efforts and reiterate that employees wouldn't need to live in the Washington, D.C. area in order to be an employee?*

Answer: Telework and Satellite Offices are distinct, though complementary projects.

The satellite office is designed to enhance the ability of the USPTO to recruit and retain the most highly skilled workforce from regions outside of the Capital Beltway area. Currently, in order to be eligible for the Patent Hoteling Program ("telework") a Patent Examiner must be a GS-12 or higher and have at least two (2) years of service at the USPTO headquarters. Until the recent telework legislation is implemented, hoteling examiners outside the 50 mile radius of the USPTO will also continue to have to report to the Alexandria headquarters 2 days a bi-week at their own expense.

USPTO telework is designed, in part, to provide employee flexibility, reduce commuting time and costs, positively impact vehicle emissions and traffic congestion, and aid in employee retention. While it is a valuable tool in employee recruitment, telework alone does not offer the Agency the geographic flexibility required to recruit the best talent.

Additional offices will also provide the USPTO physical presence and greater access to our customers and stakeholders in diverse geographical locations throughout the country. This increased accessibility will enhance communication and collaboration between USPTO employees and USPTO customers.

Innovation

1. *Has PTO seen a trend that shows a reduction in the number of U.S. patent filings?*

Answer: As can be seen in the table below, with few exceptions the number of Utility, Plant, Reissue and Design (UPRD) patent applications filed in the U.S. have historically increased from year to year, and the total number of U.S. patent filings increased by 4.8% in fiscal year 2010. Total U.S. patent filings are projected to continue this trend of growth in fiscal years 2011 and 2012.

Patent Applications Filed FY85 – FY10

Year	Total UPRD	UPRD Growth Rate	Year	Total UPRD	UPRD Growth Rate
1985	125,931		1998	256,666	8.3%
1986	131,403	4.3%	1999	278,268	8.4%
1987	137,173	4.4%	2000	311,807	12.1%
1988	148,183	8.0%	2001	344,717	10.6%
1989	163,306	10.2%	2002	353,394	2.5%
1990	174,711	7.0%	2003	355,418	0.6%
1991	178,083	1.9%	2004	378,984	6.6%
1992	185,446	4.1%	2005	409,532	8.1%
1993	188,099	1.4%	2006	445,613	8.8%
1994	201,554	7.2%	2007	468,330	5.1%
1995 [1]	236,679	17.4%	2008	496,886	6.1%
1996 [2]	206,276	-12.8%	2009 [3]	486,499	-2.1%
1997	237,045	14.9%	2010	510,060	4.8%

[1 and 2] As a result of a change in the term of patent protection, the agency experienced a "surge" in application filings in 1995 prior to the effective date of implementation and a concomitant "trough" in 1996.
[3] Downturn due to economic conditions.

Like the increase in the total applications filed in the U.S., the number of U.S. originated patent filings submitted to the U.S. have also grown consistently. It should be noted that U.S. originated patent filings declined in fiscal year 2009, likely due to domestic economic conditions. However, as a percentage of total patent filings to the USPTO, U.S. originated filings have been on a gradual decline for the last few decades.

2. *Between 1998 – 2011, the number of patent applications from U.S. filers and foreign filers, and within the foreign filers category, the number by country for each year.*

Answer: Please see the attached summary of application filings for fiscal years 1998 through 2010. Calendar year data can also be found on the USPTO website at: http://www.uspto.gov/web/offices/ac/ido/oeip/taf/appl_yr.htm.

Information Technology

1. *Please describe PTO's proposed Patents End-to-End program.*

   Answer: The key objectives of the Patent End-to-End Processing program are:

   - To redesign and re-architect the Patent IT Systems to provide a single, integrated, end-to-end electronic processing system to eliminate the labor-intensive, manual business process currently required Patent employees and external stakeholders.

   - To build an infrastructure and application architecture that allows for the system to scale and adapt over time to increasingly sophisticated operational requirements and greater usage loads.

   - To develop and implement structured, eXtensible Markup Language (XML) representations of all documents and data from application to publication.

2. *When does PTO anticipate awarding a contract?*

   Answer: The initial contract will be for a small integration team to begin building the application architecture and core requirements that lays the foundation for concurrent development of project modules by multiple development teams. USPTO anticipates that it will award this contract in May 2011.

3. *When does PTO expect it to be operational?*

   Answer: The initial release of Patents End-to-End (PE2E) will be operational in September 2011. This release will emphasize consolidating and streamlining the examination process, and it will be aimed at the examiners of the Central Reexamination Unit, a group of approximately 80 highly-skilled patent examiners devoted to the reexamination of issued patents. Solutions for this release will be scalable, and subsequent releases at 3 to 6 month intervals will build on this core feature set. Currently, USPTO anticipates having a fully-functioning end-to-end system in place by the end of September 2013, and plans to begin decommissioning existing systems in 36 months.

4. *Will it include commercial off the shelf software or will all of it have to be developed?*

   Answer: Patents End-to-End (PE2E) will integrate commercial and open source off-the-shelf solutions, which will require development efforts to leverage the applications' interfaces to create a modularized, extensible framework into which future custom or off-the-shelf products can be integrated without impacting the rest of the system.

5. *What sort of technical expertise does PTO have to oversee the contractors and ensure that they are delivering a usable product on time and within budget?*

   Answer: The PTO has hired a full-time portfolio manager with extensive experience in architecting and delivering large, complex software projects using agile development methodologies. He will oversee all development, integration, and specification efforts to ensure that they meet business needs and that they are proceeding according to PTO expectations. The agile development framework will allow stakeholders to inspect the application, gauge its progress, and provide feedback at 60 to 90 day intervals, ensuring a transparent process that allows frequent course corrections to ensure a quality deliverable.

Three Track Examination

1. *What is the status of the Three Track Examination process?*

   Answer: The USPTO published a notice of proposed rule making on February 4, 2011 to implement Track I, with comments due by March 7, 2011. The USPTO received twelve comments on the proposed rule change, which are posted on the USPTO's Web site. The USPTO has considered the comments and has prepared a final rule to implement Track I, which is currently under review by OMB. The USPTO is in the process of preparing a notice of proposed rule making to implement the remainder of the 3-Track program.

2. *Does PTO anticipate that this program will begin in FY 2012?*

   Answer: The Track I program should begin in early May 2011. The remainder of the 3-track program should be implemented in late FY 2011 or early FY 2012.

3. *Does PTO need authority to charge these additional fees to fast track applications?*

   Answer: The USPTO does not need additional statutory (i.e., authority beyond current 35 USC 41(d)(2)) to charge an additional fee for Track I applications. Using this authority, the USPTO is able to assess a user fee of $4,000 to applicants wishing to request prioritized examination under the Three Track Examination system. However, the Director does not have authority to provide a small entity discount for user fees set by regulation and would need additional statutory authority to reduce this fee by 50% for small entity applicants. The USPTO has proposed this authority in the FY 2012 appropriation language in order to provide independent inventors and small businesses greater access to prioritized examination.

4. *Will this put smaller innovators at a disadvantage?*

   Answer: The USPTO supports the enactment of legislation to authorize a 50% discount of the prioritized examination fee for small entity applicants. The 3-track program will not put smaller innovators at a disadvantage. The principal cost involved in the patent

application process is the professional services costs of preparing and prosecuting an application. The cost due to USPTO fees is secondary.

5. *Will this initiative add to the overall backlog?*

   Answer: No. The 3-Track program should not result in additional application filings, but only permits applicants some control over the priority with which the USPTO acts on their application.

6. *How many applicants does PTO believe will put their application in Track I?*

   Answer: The USPTO is limiting Track I to 10,000 applications in fiscal year 2011.

7. *Can applicants in the backlog enter this program, or does it apply to new applicants only?*

   Answer: The initial implementation of the Track I program is limited to applications filed on or after the effective date (new applications only). However, an applicant in the backfile may always abandon an application in the backfile in favor of a new continuing application (directed to the same invention as the application in the backfile) and request prioritized examination of that new continuing application to effectively obtain prioritized examination of an application in the backfile.

Questions for the Record (Fattah)
Hearing on the FY 2012 Budget Request
for the United States Patent and Trademark Office

1. *Would PTO agree that the true cost of a patent is not solely reflected in the expenses of the PTO, and that the work of other agencies, including the Department of Justice's patent-related litigation activities, are a benefit to patent holders not financed within the patent fee system?*

   Answer: The USPTO agrees that it does not pay for the Department of Justice's (DOJ) patent-related litigation costs when the expense is covered by DOJ's own mission related funding. However, the USPTO does pay for its own patent-related litigation when USPTO works with the Department of Justice. In spite of this, the largest expense that would be typically paid for by another agency is reflected in the expenses of the USPTO and financed by the patent and trademark fee system. Unlike most Federal agencies, the USPTO pays for the full costs of post retirement benefits of all USPTO employees, as estimated by the Office of Personnel Management. For example, in FY 2010 the USPTO expenses included around $55 million of post-retirement benefits that another Federal agency did not have had to finance. Therefore, the USPTO believes that the true cost of a patent is materially reflected in the expenses of the USPTO.

2. *PTO notes that the first action pendency backlog declined from 764,000 in early 2009 down to 708,000 at the end of fiscal year 2010, and that with the ability to hire new examiners and allow experienced examiners full overtime, PTO's goal is to reduce the backlog to approximately 658,000 by the end of fiscal year 2011. If the PTO is kept at its current funding level of $2 billion for fiscal year 2011, rather than the requested level of $2.3 billion, how will these efforts be impacted?*

   Answer: If the USPTO is held to $2 billion in FY 2011 then both pendency and backlog will suffer. The USPTO would fall short in its production goals which in turn would ensure that the pendency and backlog would be much higher in the years to come. The USPTO estimates that the reduced funding level would ensure the USPTO would not achieve the priority goal of 10 months for first action pendency in 2014, and 20 months for total pendency in 2015. The Office would immediately see a slight increase of first action patent pendency in 2011, with a more significant increase by 2014.

3. *Will the backlog start growing again?*

   Answer: The backlog is a function of patent applications received versus applications examined. The backlog would grow if incoming work were to outpace production. The FY 2011 President's Budget provides the USPTO with the funds needed to reduce the patent application backlog and pendency levels, even with expectations of moderate annual growth of incoming applications. Authority to spend our fees at a level less than the $2.3 billion would ensure that the backlog would be greater than the FY 2011 end of year estimate.

4. *For fiscal year 2012, PTO is requesting to spend $2.7 billion. But currently, PTO is still operating at the CR rate of just over $2 billion. Does PTO have the capacity to absorb a nearly $700 million increase in spending over an 18-month period? In terms of the portion of this increase devoted toward increasing the number of examiners, would PTO be able to hire and train that many additional new staff that quickly? How much of the funding would remain unobligated and carried over into future fiscal years?*

   Answer: If the FY 2012 President's Budget is funded beginning October 1, 2011, the USPTO plans to spend $2.6 billion to fulfill the priorities identified in the President's Budget, primarily reducing patent backlog and pendency. The USPTO has a long history of recruiting and assimilating large numbers of patent examiners. The USPTO has also initiated new recruitment approaches, such as hiring experienced intellectual property professionals and skilled technologists having experience with the USPTO as inventors, and developing a nationwide workforce to enable hiring employees from around the country.

   The remaining funds would be deposited in an operating reserve to cover the full costs of the 2011 and 2012 patent examiner hires in the out-years.

5. *PTO's goal for average patent pendency is 19.3 months by fiscal year 2015, and PTO's goal is to reduce the backlog of unexamined patent applications down to 352,000 in fiscal year 2014. Clearly, these numbers would be improvements over the current situation, but how did PTO arrive at these particular numbers? Do these numbers represent, in PTO's view, the correct goals to strive toward? Would it be possible to strive for even faster processing goals?*

   Answer: The USPTO believes that the goal of 20 months total pendency and the inter-related goals of 10 months to first action and 10 month inventory position, upon which it's predicated, are the correct goals to strive for.

   A first office action pendency of 10 months (and the companion goal of 10 months inventory of unexamined applications - approximately 352,000 in FY 2014) would be highly desirable to allow applicants time to make informed decisions regarding whether to file for international protection (either under the PCT or the Paris Convention route), because international patent applications must be filed within 12 months of the earliest filing date of the parent application in order to enjoy the right of priority provided under international treaties.

   Under the Patent Cooperation Treaty (PCT), international searching and international preliminary examining authorities (ISAs/IPEAs) are required to produce an international search report within 16 months from the earliest filing date of an application. The results of the non-binding search/exam results help applicants decide whether to pursue protection at the national/regional level. Thus, in addition to helping determine whether to file under the PCT, first office action pendency of 10 months at the USPTO would

help applicants decide whether to substantively pursue international patent protection under the PCT.

Moreover, having a first office action within 10 months from the earliest effective filing date is critical to applicants who must decide whether to continue prosecution of the application or abandon the application to avoid publication at 18 months from the filing date. The ability to abandon an application prior to publication preserves, for some inventors, the important option to protect an invention as a trade secret. Additionally, in those cases where an applicant files less extensive patent applications overseas, the applicant may request within 16 months of the earliest effective filing date that a redacted version of the application corresponding to the less extensive foreign applications be published in the United States. Ten-month pendency to first office action facilitates that decision process and preserves applicants' ability to retain appropriate trade secret protection.

The patent term adjustment (PTA) provisions of the American Inventors Protection Act of 1999 (AIPA) provides for patent term adjustment if the USPTO fails to initially act on an application within fourteen months of its filing date. Ensuring first office action pendency of 10 months would eliminate the need for patent term adjustment. Currently, patent term adjustments are granted in 74% of issued patents, with an average adjustment of over 400 days. It is likely that the need for patent term adjustment for other delays will also be reduced as overall pendency is decreased.

Under 35 U.S.C. § 122, the large majority of patent applications are published at 18 months from the earliest filing date. The 18-month-publication trigger is an important milestone in the patent application. Applicants globally expect their applications to be kept secret prior to 18-month publication, and use this time to assess technology and marketplace developments during the period between filing and publication. Applicants are then able to elect, prior to 18-month publication whether to continue pursuing patent protection at the "cost" of having their innovations published to the world, or whether to abandon patent protection in order to retain trade secrecy. A total pendency of 20 months accommodates the 18-month publication decision. Twenty months thus represents the shortest pendency consistent with applicant flexibility under international norms.
A total pendency of less than 18 months to issuance will place U.S. inventors at a major disadvantage relative to overseas competitors by forcing publication versus trade secrecy election in less than the 18 months available to overseas competitors, effectively reducing trade secrecy lead time from 18 months to whatever pendency is reduced to. Many U.S. applicants will find such a Hobson's choice highly prejudicial. As a result, it is not desirable for total pendency to be less than 18 months as a general matter.
However, it should be noted that for those seeking faster processing 12 month patent pendency is available under Track One of the proposed Three-Track Patent Processing program.

6. *I'd like to get PTO's reaction to an observation made by Stanford University Law Professor Mark Lemley, who has written extensively about the PTO. He claims that even if PTO were given authority both to set fees and to keep all its fee collections, this would*

not necessarily have an impact on the quality of the patents that are awarded. Professor Lemley claims that because the PTO's ability to examine new applications is dependent on the revenue from previously granted ones—the so-called "maintenance fees"—the PTO faces a problem: the more bad applications it rejects, the fewer patents will pay maintenance fees, and the less money will be available for the PTO to conduct detailed examinations. Professor Lemley notes that the PTO ran into a financial crisis very recently, when a lower grant rate for applications occurred at the same time that companies were abandoning patents during the recession. What are PTO's thoughts about this issue? Is there a tension between the need to maintain a reliable revenue stream and the need to weed out bad patent applications?

Answer: No, there is no tension between the need to maintain a steady and reliable revenue stream and quality patent examination. While there is direct correlation between the number of patents granted and future maintenance fee eollections, it is only one of numerous factors that impact the agency's financial status.

Providing high quality and timely patent examination is the first strategic goal of the USPTO. The agency continues to improve the quality of its examinations, including adopting new, more comprehensive procedures for measuring the quality of patent examination which were crafted by a joint USPTO-Patent Public Advisory Committee (PPAC) Task Force after extensive consultation with the intellectual property community and the public. Other policies that have been established to improve quality include:

- New examiner count system was established to give examiners more time to examine applieations
- Increased the total number of interviews hours – time spent working with patent applicants to understand their inventions and resolve issues
- Implemented the Patent Examiner Technical Training Program, which is designed to provide patent examiners with access to scientists and experts who will share their technical knowledge of the state of the art, prior art, and industry standards
- Revamped performance plans for patent examiners and Supervisory Patent Examiners to stress quality and timeliness of examinations

USPTO's adoption of a multi-year funding model with flexibilities to manage and adjust spending plans as operating requirements change, authority to administratively adjust fees to recover cost of operations, spending authority equal to fees collected and an operating reserve will allow the agency to ensure a reliable revenue stream and adjust for unexpected revenue changes without putting the agency at operational risk. Therefore, the authorities to set fees by regulation – with Stakeholder and Public oversight – and to keep all of its fee collections are complimentary. In fact, regardless of the financial environment, patent examiners make independent decisions on the merits of each individual patent application. The quality initiatives will ensure quality examinations and decisions. When these operational decision are made independent of the financial decisions, the fact that the USPTO can plan to keep all fees it estimates to collect will allow the USPTO to use its authority to set fees at the right level to ensure the aggregate fees recover the aggregate costs of the Office.

7. *Does the PTO ever encounter problems attracting specialized employees because of pay differentials between the public and private sectors? Will this become a more acute problem for PTO as the economy recovers and alternative private sector job opportunities increase?*

Answer: Yes, in the past the USPTO has experienced difficulty attracting qualified, specialized employees for mission critical positions such as patent examiners. The results of a 2006 analysis demonstrated patent examiner pay was significantly under market in comparison to the private sector at the entry level positions. For example, in the electrical engineering discipline, which represents a significant portion of the USPTO hiring, Federal pay was 13.6% under market at the entry level positions as compared to the private sector. As a result, a special pay rate was established for patent examiners grades 5-9, and later expanded to grades 12-15. The special pay rate was predicated on the fact that pay offered by non-Federal employers was significantly higher than that payable by the Federal Government within certain occupational groups. In addition, a group recruitment incentive, designed to attract and improve retention of patent examiners, was also implemented during those years.

The use of the group recruitment incentive and reduction in disparity between the special pay rate and private sector compensation was a significant factor in USPTO meeting its aggressive hiring goals from 2006 through 2009. The USPTO evaluated the benefits of the group recruitment incentive in the current economy and chose to eliminate new group recruitment incentives; the July 2009 hiring class was the last to receive one.

When the economy improves, specifically in job growth, USPTO will likely encounter similar recruiting challenges as experienced in 2006 and 2007—as there is still a shortage of highly qualified candidates for certain disciplines (e.g., computers and electrical arts). At that time, the Agency will re-examine the need to conduct future market rate analyses and pay comparability studies.

8. *Does PTO have statistics showing the connection between faster patent approvals and increased economic growth and job creation in the United States?*

Answer: More timely (faster) and higher-quality patent approvals are related to two important drivers of growth: (a) entrepreneurs' ability to secure capital funding and (b) their ability to lower uncertainty over the innovation they are contemplating. These issues are particularly important in the context of small startup companies, since recent economic research has shown that these young companies may be the only net producer of jobs in the U.S. economy.

In high-technology sectors, which tend to be major contributors to high-paying jobs and U.S. international innovative competitiveness, young startups rely on patents to attract funding. A recent study by economists at the University of Michigan and the University of Pennsylvania found that having more patents leads to faster and larger venture-capital investment for semiconductor startups [1]. Similarly, in a recent survey conducted at the

University of California, technology startups from the biotechnology, medical devices, electronics, and software sectors reported that patents were important to their investors when making their investment decision. Among companies that had received venture capital investment 97% of biotechnology startups and 59% of software startups suggested that holding patents was an important factor in their company securing investment [2].

Patenting also plays a role in lowering uncertainty, and allowing companies to invest in the innovation they are contemplating. Recent research by economists at Duke University [3] has shown that the innovation system is more efficient when companies can specialize in different elements of the technology value chain – and that patenting plays an important role in facilitating that specialization. Since Adam Smith wrote *The Wealth of Nations* we have understood that the division of labor and specialization brings with it enormous efficiency gains. In technology markets, patents allow smaller companies to specialize in discrete technologies that – with the help of property rights that patents provide – can then be licensed or sold to other larger companies who specialize in combining many technologies from smaller companies into a final product which are then sold to consumers. In a recent study, economists at Northwestern University and the University of Pennsylvania find that the issuing of a patent plays a significant role in increasingly the likelihood that a licensing transaction occurs. [4] Their finding is important support for the notion that a slower patent prosecution process is indeed a costly one for the American economy. Slower patenting results in slower – or entirely missed – investment opportunities, and the engine of America's innovation marketplace is hampered.

[1] David Hsu & Rosemarie Ziedonis, Patents as Quality Signals for Entrepreneurial Ventures (Apr. 2007) (unpublished manuscript, on file with Mack Ctr. for Technological Innovation working paper series).
[2] Graham, Stuart J. H., Merges, Robert P., Samuelson, Pamela and Sichelman, Ted M., High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey (2009). Berkeley Technology Law Journal, Vol. 24(4), pp. 255-327.
[3] Ashish Arora, Andrea Fosfuri & Alfonso Gambardella, Markets for Technology: The Economics of Innovation and Corporate Strategy (2004).
[4] J. Gans, David Hsu, S. Stern (2008), The Impact of Uncertain Intellectual Property Rights on the Market for Ideas: Evidence from Patent Grant Delays, Management Science, 54: 982-997.

Questions for the Record (Schiff)
Hearing on the FY 2012 Budget Request
for the United States Patent and Trademark Office

1. *Given the effectiveness of competitively-sourced Patent Cooperation Treaty searches, has the Patent and Trademark Office considered a pilot program for competitively-sourced searches for US patent applications?*

   Answer: Public Law 108-447 required that the agency conduct a pilot program for searches related to the subject matter of patent applications by commercial entities. Pursuant to these requirements the USPTO conducted a pilot in 2005-2006 for competitively sourcing search functions to commercial entities. The purpose of the pilot program was to demonstrate whether searches conducted by commercial entities could meet or exceed the standards of searches conducted and used by the USPTO during the patent examination process. Given the requirements, it was deemed most appropriate to conduct the pilot with Patent Cooperation Treaty (PCT) applications from a variety of technologies.

   Upon review, neither of the contractors selected for the pilot were able to perform at or near an acceptable level of quality. Additionally, both contractors demonstrated an inability to increase the workloads due to internal capacity issues. Based on these results, the pilot was terminated at the conclusion of the six-month base period.
   However, resolving to move forward incorporating lessons learned, the USPTO began outsourcing a portion of PCT Chapter I applications in 2007 as a pendency reduction initiative. Over time, the contractor staff gained more experience and a demonstrated level of proficiency. Specifically, within three years, they were able to more consistently deliver timely products with an acceptable level of quality and manage a varying workload that today approaches 100% of the USPTO PCT applications.

   Today, we have increased the requirements for an acceptable level of quality in the contractors' deliverables. As part of that effort, we have provided training, particularly in the area of identifying the best available prior art. Our strategy lies in maximizing reuse, to the extent possible, of the search and examination provided by our PCT contractors in the corresponding US national stage application examined by our USPTO examiners. However, the agency does not intend at this time to pursue the competitive sourcing of US patent application searches.

2. *Some observers have claimed that requests for continued examination (RCEs) take up excessive time and attention at the PTO. Some RCEs are clearly necessary, but are some unnecessary? If so, is there a way to discourage the filing of unnecessary RCEs without harming the ability of patent filers to get full and fair treatment?*

   Answer: The USPTO has taken steps to provide enhanced training on compact prosecution and interview training for examiners which will help reduce the number of RCEs. We have piloted a program where interviews are held early in the examination

process prior to a detailed formal office action being prepared. This promotes enhanced understanding of the scope of the applicant's invention early on in the examination process. We continue to recommend all patent applicants file both broad and narrow claims in order to avoid the need to present new claims later in the examination process which will result in fewer RCE filings by applicants. As part of our recent agreement with our employee union we adjusted the work credit given to examiners such that less credit is received by an examiner for an RCE. We also changed the prioritization of RCEs in examiner's workflow requirement which has resulted in examiners not moving RCEs as quickly. These last two initiatives will serve as disincentives for filing RCEs both internally and externally.

3. *Many companies offer value-added patent and trademark information, based on public, but often dense and specialized, information from the patent office. This industry provides a valuable service to American companies doing innovative work. As information technology improves, the information provided by the PTO may change, and partnerships with companies and nonprofits may arise to offer more readable patent and trademark information. How is the PTO working to ensure that this space remains competitive and that all competitors receive equal and equally timely access to raw patent and trademark information?*

   Answer: USPTO electronic data files are all released on or after the date of publication and are made available, for customer download, to all customers at the same time.

Questions for the Record (Aderholt)
Hearing on the FY 2012 Budget Request
for the United States Patent and Trademark Office

1. *You discuss the potential consequences should the USPTO current CR be extended. Can you please go into detail on how that would affect your backlog and the potential economic impacts?*

   Answer: If the USPTO is held to $2 billion in FY 2011 then both Pendency and Backlog will suffer. The USPTO would fall short in its production goals which in turn would ensure that the pendency and backlog would be much higher in the years to come. By 2014, the pendency would be several months longer than plan and the backlog would be well over 100,000 cases higher than planned if the USPTO were held to the current CR. The rising backlog would delay jobs creation and spurring the economy and also delay fee collections in future years

2. *How does the US patent backlog compare with other countries? What sort of economic impact does the backlog have on the United States?*

   Answer: The World Intellectual Property Office (WIPO) estimates that the number of pending patent applications across the world stood at 5.94 million in 2008. WIPO based this estimate on pending applications data from 71 patent offices worldwide, including 20 offices with largest inventories (but excluding China, India, Singapore, and South Africa). [1] In numbers, the Japan Patent Office (JPO), the United States Patent and Trademark Office (USPTO), and the European Patent Office (EPO), accounted for the largest office backlogs. Other offices that have large backlogs include the patent offices in Korea, Germany, Canada, Brazil, Australia, Russian Federation, and Thailand. [1]

   Along with rising backlogs, many offices have seen an increase in patent pendency times. For example, WIPO reported that from 1996 to 2007, average pendency times increased from 21.5 to 32 months at the USPTO and from 24.4 to 45.3 months at the EPO. At the JPO, pendency times increased from 26.9 months in 2000 to 32.4 months in 2007. [1] Clearly, application backlogs and increasing pendency are a worldwide problem.

   The increase in patent backlogs and pendency times has different implications for the various types of patent applicants who seek patent protection at the USPTO. For instance, companies applying for US patents operate in different industries, differ in age, revenues, and number of employees, and face different product life cycles and rates of technological change. Their different business strategies will determine how they are affected by increased pendency times. At one extreme, there may be young entrepreneurs facing fast product cycle times, for whom the early grant of a patent is important to attract finance for the commercialization of a new technology. Increased pendency times clearly harm such applicants. At the other extreme, there may be applicants facing long research and development (R&D) cycles and high levels of

technology and market uncertainty who may welcome a longer patenting process to collect more information about an invention's technological and commercial potential.

Still, the increase in patent backlogs and pendency times will have important—and likely in balance costly—consequences for investments in innovation and economic welfare for the United States. In general, the operation of markets is aided when uncertainty is resolved sooner rather than later. In the specifics related to granting patents, delayed examination will leave technology entrepreneurs unable to attract sufficient finance to commercialize their technologies. Moreover, the uncertainty associated with unexamined pending patents tends to make innovators and financiers less likely to invest in certain technologies. A recent report by London Economics has attempted to attach some costs to these effects, estimating that the U.S. patent backlog imposes costs and these costs may be in the billions of dollars due to "foregone innovation" and by failing to rid the system of invalid applications that are imposing quasi-monopolies while pending in the queue and imposing uncertainty in the marketplace, thus interfering with efficient markets and investment in innovation. [2]

[1] WIPO. (2009). "World Intellectual Property Indicators 2009." (Geneva: WIPO).
[2] London Economics. (2010). "Economic Study on Patent Backlogs and a System of Mutual Recognition." Final report to the UK Intellectual Property Office.

3. *For years, China has been infringing on the copyrights and trademarks of American companies. What is the USPTO doing to ensure that China does not use United States patented technology without permission?*

Answer: The USPTO has undertaken several initiatives with Chinese IP protection and enforcement agencies on methods to improve the functionality and usability of the Chinese regime for protecting and enforcing IP rights within China and internationally. Working with partners in China, the USPTO has organized programs for US businesses focused on protecting an innovation through a patent or trademark filing and how to enforce an IP right using the three-track Chinese system for IP enforcement (administrative, criminal and civil systems). These programs have been held in Beijing, Shanghai, Guangzhou, Shenzhen and other cities throughout China.

The USPTO also has developed bilateral relationships with Chinese agencies responsible for IP protection and enforcement and offered assistance in bringing down the incidence of IP infringement for US right holders. The main forum for IP discussions with China is the Joint Commission on Commerce and Trade (JCCT). The USPTO is a co-chair of the IPR Working Group within the JCCT and meets twice a year with its Chinese counterparts to address issues of concern to US companies. In addition, because of the scope and scale of the problem with IP infringement in China, the USPTO has posted two IP Attaches in the Embassy in Beijing and in the US Consulate in Guangzhou, respectively. A third IP attaché position has recently been created at the U.S. Consulate in Shanghai and will be filled in the near future.

The USPTO also works collaboratively with U.S. law enforcement agencies in training personnel on IP issues and assisting in liaison with U.S. right holders both in China and in the U.S. The USPTO has placed a staff member at the National IPR Coordination Center to assist with Homeland Security Investigations in IP training for IP Theft Enforcement Teams located throughout the US. The USPTO also assisted the International Trade Commission in arranging meetings in China to facilitate the drafting of their report on IP protection and enforcement in China.

Finally, the USPTO has undertaken a number of initiatives designed to educate U.S. right holders on best practices in using the Chinese IP protection and enforcement systems. Starting in 2005, the USPTO has organized a series of China specific outreach events targeted at small and medium sized enterprises in order to educate them on the Chinese system for protecting their IP creations and how to enforce their rights in case of an infringement whether it takes place in China or domestically within the United States. Two more of those programs have already been held in 2011, in Newport Beach, CA and Detroit, MI.

Attachment 1

Congressman Wolf
Innovation
2. Between 1998 - 2011, the number of patent applications from U.S. filers and foreign filers, and within the foreign filers category, the number by country for each year.

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATIONS FILED BY RESIDENTS OF THE UNITED STATES AND FOREIGN COUNTRIES[1]
(FY 1998 - FY 2010)

Residence	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009[2]	2010[2]
Total United States	**146,205**	**152,845**	**175,785**	**190,512**	**193,358**	**197,256**	**218,228**	**218,472**	**236,012**	**247,898**	**257,818**	**246,777**	**254,598**
Total Foreign	**110,461**	**125,423**	**136,102**	**154,205**	**160,036**	**158,162**	**166,764**	**191,060**	**209,601**	**220,432**	**239,068**	**239,722**	**254,247**
Percent of US Filings	**57.0%**	**54.9%**	**56.4%**	**55.3%**	**54.7%**	**55.5%**	**57.6%**	**53.3%**	**53.0%**	**52.9%**	**51.9%**	**50.7%**	**50.0%**
Afghanistan	-	-	-	-	-	-	-	1	-	-	-	1	1
Albania	1	-	-	-	-	-	-	1	-	-	-	1	-
Algeria	-	-	1	2	-	1	-	3	2	3	1	-	1
Andorra	2	1	-	3	3	2	1	2	-	5	8	5	4
Angola	-	-	-	-	1	-	-	-	-	-	-	-	-
Anguilla	-	3	-	-	1	-	-	-	1	-	-	3	-
Antigua & Barbuda	1	-	-	-	-	-	1	2	-	2	1	1	3
Argentina	171	102	138	146	169	123	178	92	133	166	139	151	141
Armenia	1	1	1	4	1	1	-	3	10	3	9	2	8
Aruba	-	-	-	1	1	-	-	1	-	-	-	-	-
Australia	1,459	1,307	1,887	2,088	2,246	2,408	2,495	1,339	3,078	3,612	4,194	4,211	4,196
Austria	665	871	887	945	1,134	1,099	858	1,119	1,260	1,417	1,785	1,213	1,470
Azerbaijan	2	1	1	2	-	1	1	3	4	1	1	3	5
Bahamas	23	14	17	14	26	22	30	16	18	13	20	16	13
Bahrain	1	2	1	-	-	1	1	-	1	1	-	2	8
Bangladesh	-	-	-	1	1	1	-	1	-	-	1	-	2
Barbados	1	3	7	4	4	-	8	9	2	6	7	6	8
Belarus	3	6	11	4	8	6	10	4	13	13	13	7	11
Belgium	1,034	1,237	1,338	1,341	1,435	1,420	1,160	1,539	1,578	1,700	1,748	1,917	2,161
Belize	1	-	-	-	-	-	-	-	-	-	4	1	-
Benin	-	-	-	-	-	-	-	1	-	-	1	-	-
Bermuda	5	7	15	4	12	11	5	7	8	4	8	8	5
Bolivia	2	2	-	1	1	-	2	2	2	3	3	4	1
Bosnia & Herzegovina	1	1	1	-	-	-	-	1	-	1	6	-	1
Botswana	1	-	-	-	-	-	-	-	-	-	-	-	-
Brazil	187	206	240	247	288	333	287	340	373	385	499	407	502
British Virgin Islands	2	2	3	2	13	15	17	5	7	13	19	13	8
Brunei	-	-	-	2	2	-	-	-	-	1	-	1	1
Bulgaria	15	2	22	10	10	8	98	67	52	69	83	114	89
Burkina Faso	-	-	-	-	-	-	-	-	-	1	-	-	-
Burundi	-	-	-	-	-	-	-	-	-	-	1	-	-
Cameroon	-	-	-	-	-	-	1	2	1	3	1	9	5
Canada	5,975	7,096	7,146	7,802	7,967	8,138	9,035	9,114	10,243	10,788	11,436	11,250	12,140
Cayman Islands	2	7	4	8	10	1	4	14	2	4	6	16	23
Chad	-	-	-	-	-	-	-	-	1	-	-	-	-
Chile	18	14	28	29	44	27	55	56	50	105	63	65	68
China (Hong Kong)	457	757	837	1,098	1,199	1,159	1,379	1,319	1,318	1,447	1,419	1,254	1,265
China (Macau)	-	-	-	-	-	-	-	-	5	3	6	5	1
China (People's Republic)	289	271	437	694	966	1,290	1,798	2,310	3,818	4,422	5,148	5,361	4,346
Colombia	14	21	24	28	29	21	26	13	15	27	35	28	33
Costa Rica	20	8	25	8	18	17	36	47	25	33	20	18	28
Cote D'Ivoire	-	1	-	-	2	-	-	-	-	-	-	-	-
Croatia	18	15	18	22	20	22	21	42	37	32	39	35	34
Cuba	4	5	14	6	11	7	1	16	9	19	38	21	26
Cyprus	-	4	2	7	5	7	8	13	11	5	8	12	18
Czech Republic	39	37	58	83	55	52	84	87	102	129	180	245	228
Czechoslovakia	22	15	-	-	-	-	-	-	-	-	-	-	-
Denmark	796	938	941	1,130	1,227	1,145	889	1,167	1,289	1,232	1,654	1,783	1,849
Dominica	-	1	2	-	-	-	-	-	-	-	-	-	-
Dominican Republic	3	-	4	1	3	5	13	5	8	7	9	5	2
Ecuador	2	5	6	8	11	9	7	5	12	5	3	9	5
Egypt	8	19	21	16	13	13	14	17	17	33	53	33	19
El Salvador	1	1	2	3	1	2	2	-	-	1	-	1	1
Eritrea	1	2	7	7	8	6	7	20	14	18	33	36	32
Ethiopia	-	-	-	-	-	-	1	-	1	1	-	-	1
Faroe Islands [3]	-	-	-	-	-	-	-	-	-	-	-	-	1
Fiji	1	2	-	2	1	1	1	-	-	-	-	1	-
Finland	910	1,102	1,475	1,799	2,045	1,866	1,771	2,098	2,310	2,517	2,782	2,793	2,904
French Polynesia	-	-	2	-	-	-	-	2	1	-	-	-	-
France	5,414	6,398	6,839	7,154	7,434	6,987	5,618	7,515	7,228	8,204	9,283	9,726	10,027
Georgia	6	2	1	5	3	5	3	5	10	14	5	2	5
Germany	11,299	17,446	17,858	19,778	21,657	19,646	16,394	21,598	22,263	23,535	26,331	26,855	28,119
Ghana	-	1	-	-	1	-	1	3	-	3	1	3	2
Gibraltar	-	-	-	-	1	-	-	2	10	3	3	7	7
Greece	47	47	45	48	36	44	53	65	81	86	128	118	137
Greenland	-	-	-	-	-	-	-	-	-	3	4	-	-
Grenada	-	-	-	-	-	1	-	-	-	-	-	-	-
Guadeloupe	3	2	1	12	3	1	-	1	7	3	2	2	4
Guinea	1	-	-	-	-	-	-	-	-	-	-	1	-

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATIONS FILED BY RESIDENTS OF THE UNITED STATES AND FOREIGN COUNTRIES[1]
(FY 1998 - FY 2010)

Residence	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009[2]	2010[2]
Guyana	-	-	-	1	-	-	-	-	-	-	-	-	1
Haiti	-	-	2	-	1	-	-	-	-	1	-	-	1
Honduras	5	6	1	1	-	-	3	3	1	1	1	1	1
Hungary	69	115	116	91	135	128	91	128	172	193	203	234	290
Iceland	28	30	39	39	40	49	60	52	47	27	41	49	52
India	187	293	389	636	813	1,105	1,274	1,444	1,852	2,280	2,869	2,878	3,993
Indonesia	7	20	15	19	25	26	40	24	31	37	25	19	27
Iran	16	2	1	4	4	5	4	4	10	18	28	29	67
Iraq	-	-	-	1	1	-	-	-	1	-	1	1	-
Ireland	197	264	339	401	448	382	407	507	528	561	740	711	784
Isle of Man [3]	-	-	-	-	-	-	-	-	-	-	-	-	-
Israel	1,499	1,938	2,477	2,781	2,737	2,611	2,547	3,121	3,617	4,114	4,916	4,772	5,112
Italy	2,449	2,835	3,031	3,185	3,336	3,325	2,702	3,685	3,691	3,832	4,271	4,400	4,370
Jamaica	4	4	2	1	2	3	3	5	4	4	12	11	4
Japan	46,569	47,413	54,365	62,676	61,259	61,177	63,543	73,250	76,940	79,725	84,473	80,456	84,227
Jersey [3]	-	-	-	-	-	-	-	-	-	-	-	-	9
Jordan	5	5	-	4	3	6	8	2	7	12	8	14	5
Kazakhstan	1	10	2	2	1	2	1	3	4	1	2	3	8
Kenya	1	8	1	13	12	28	8	7	7	9	4	4	2
Korea, Dem. Republic of	63	-	-	-	-	-	-	-	-	2	1	1	-
Korea, Republic of	5,625	5,634	5,882	6,792	7,757	9,634	13,388	16,643	21,963	23,589	25,597	24,086	26,612
Kuwait	11	12	10	6	11	7	13	23	36	25	18	39	49
Kyrgyzstan	-	1	-	-	-	-	-	1	-	-	-	-	-
Latvia	5	2	2	5	2	2	6	6	8	10	6	15	10
Lebanon	3	5	4	6	11	6	5	7	14	12	11	17	8
Libya	-	-	-	-	-	-	-	-	-	-	-	1	1
Liechtenstein	15	26	26	13	28	14	22	25	27	26	35	42	40
Lithuania	2	2	4	8	2	8	20	9	10	11	13	13	13
Luxembourg	49	51	65	77	81	92	74	78	84	118	102	94	92
Macau	-	2	-	4	7	7	4	3	-	-	-	-	-
Madagascar	-	1	-	2	-	-	-	-	-	1	-	-	-
Macedonia	-	-	3	2	-	-	2	1	-	1	-	2	-
Malaysia	58	73	94	144	136	237	134	341	192	178	326	325	387
Mali	1	-	-	-	-	-	-	-	-	-	-	-	-
Malta	7	-	1	6	5	3	3	6	13	5	10	11	10
Marshall Islands	-	-	-	1	-	-	-	-	-	-	-	-	-
Mauritius	1	-	-	1	-	2	-	-	-	2	1	-	1
Mexico	152	172	180	220	167	233	211	217	229	216	269	244	316
Moldova	1	-	1	2	1	2	1	-	1	1	1	1	1
Monaco	13	14	26	29	27	29	15	18	21	15	16	21	23
Morocco	2	1	5	1	1	5	1	4	2	2	11	6	4
Mozambique	-	-	-	-	-	-	1	-	-	-	-	-	-
Myanmar	1	-	-	-	-	-	-	-	-	-	-	-	-
Namibia	-	1	-	-	-	-	-	-	-	-	1	-	-
Nauru	1	-	-	-	-	-	-	-	-	-	-	-	-
Nepal	-	-	-	-	-	-	-	-	-	-	-	2	-
Netherlands	1,914	2,158	2,446	2,823	3,074	2,382	2,291	3,637	4,098	4,249	4,240	4,510	4,634
Netherlands Antilles	3	1	-	1	1	1	1	1	-	1	1	4	1
New Caledonia	2	-	-	-	3	-	-	-	-	-	-	-	-
New Zealand	204	249	226	255	402	473	270	416	449	474	580	579	602
Nicaragua	-	-	-	1	-	-	-	-	-	-	-	-	-
Niger	1	-	-	-	-	-	-	-	-	-	-	-	1
Nigeria	3	1	5	7	3	4	2	1	2	5	1	2	2
Norfolk Island	-	-	-	-	1	-	-	-	-	-	-	-	-
Norway	341	390	465	492	587	470	366	383	393	662	856	871	1,027
Oman	-	-	-	-	1	4	-	5	1	2	5	4	2
Pakistan	3	2	6	2	6	6	10	12	12	10	21	7	20
Palau	-	1	-	-	1	-	-	-	-	-	-	-	-
Panama	4	8	4	10	4	6	9	3	6	7	12	6	2
Paraguay	1	-	2	-	-	-	1	-	1	-	1	-	-
Peru	3	8	6	8	9	7	12	3	1	9	9	5	8
Philippines	21	28	32	47	72	37	82	60	85	87	72	61	84
Poland	16	27	35	43	46	48	75	122	93	104	122	150	178
Portugal	17	29	22	27	31	22	24	55	43	46	91	87	113
Qatar	-	-	-	-	1	1	5	1	-	4	-	4	2
Romania	9	5	10	12	9	10	13	16	31	39	47	58	64
Russian Federation	271	360	384	417	403	345	266	361	377	443	533	498	599
Saint Kitts & Nevis	-	2	2	2	1	6	-	-	-	-	-	-	-
Samoa	-	-	-	-	-	-	-	-	5	-	4	1	2
San Marino	-	-	-	1	-	-	-	-	-	1	-	3	2
Saudi Arabia	24	17	24	32	35	33	37	41	51	69	90	133	206
Senegal	1	-	-	-	-	-	-	-	-	-	-	-	-
Serbia	-	-	-	-	-	-	-	-	7	12	16	3	27
Serbia & Montenegro	-	-	-	-	-	-	3	6	-	-	-	-	-
Seychelles	2	-	-	1	-	3	-	2	1	-	1	1	1
Singapore	315	444	680	766	792	817	902	949	1,193	1,192	1,376	1,278	1,488
Slovakia	10	5	10	3	15	6	7	18	29	32	36	30	42
Slovenia	26	20	27	21	23	55	46	50	47	53	71	69	111
South Africa	215	243	299	299	248	263	173	243	243	280	319	323	355
Soviet Union	3	-	-	-	-	-	-	-	-	-	-	-	-
Spain	442	481	595	611	690	633	637	855	868	1,080	1,294	1,224	1,468

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATIONS FILED BY RESIDENTS OF THE UNITED STATES AND FOREIGN COUNTRIES[1]
(FY 1998 - FY 2010)

Residence	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009[2]	2010[2]
Sri Lanka	3	13	8	8	20	3	3	6	9	9	16	12	14
St. Lucia	-	-	-	1	1	-	-	-	-	-	-	-	-
Suriname	2	-	1	-	-	-	-	-	-	-	-	-	-
Swaziland	17	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	2,300	2,770	2,849	3,401	2,692	2,311	1,769	2,373	2,793	3,132	3,502	3,610	3,008
Switzerland	1,897	2,743	2,315	2,494	2,360	2,362	2,053	2,651	2,968	3,138	3,681	3,714	4,162
Syria Arab Rep	-	5	3	-	2	4	-	2	-	-	1	2	-
Taiwan	9,627	11,292	10,380	12,403	13,761	14,537	17,303	17,933	21,165	20,447	19,733	17,974	21,258
Tanzania	-	-	3	2	1	1	-	-	-	-	-	-	-
Thailand	34	61	91	106	85	88	109	79	87	111	127	136	116
Trinidad & Tobago	2	1	8	1	1	4	-	6	2	4	6	8	12
Tunisia	-	1	-	1	3	2	2	1	3	7	9	5	3
Turkey	26	35	27	31	39	41	49	62	68	86	101	113	141
Turkmenistan	-	-	-	-	-	-	-	-	-	-	-	1	-
Turks and Caicos Islands	-	-	2	5	2	6	2	2	1	5	2	1	2
Uganda	1	4	-	-	-	-	-	-	-	-	-	-	-
Ukraine	31	20	25	39	46	39	35	14	32	35	46	64	87
United Arab Emirates	6	7	6	2	11	10	19	15	22	22	30	54	45
United Kingdom	6,972	7,128	7,613	8,464	9,238	8,215	6,679	8,603	9,127	9,185	10,795	11,205	11,835
Uruguay	5	4	2	7	8	10	9	11	18	8	13	27	16
Uzbekistan	3	4	3	-	3	1	1	-	1	-	-	1	-
Vatican City	-	-	-	-	1	-	-	-	-	-	-	-	-
Vanuatu (New Hebrides)	-	-	-	-	-	-	-	-	1	-	4	-	2
Venezuela	43	44	42	65	41	30	27	31	33	37	22	22	33
Vietnam	1	1	1	5	1	1	3	6	4	3	13	4	10
West Bank/Gaza	-	-	-	-	-	-	-	-	1	-	-	-	1
Yemen	1												
Yugoslavia	6	6	7	4	8	10	-	-	-	-	-	-	
Zimbabwe	2	1	1	1	2	7	2	1	-	3	2	7	
Other [3]	75	-	-	-	-	-	-	-	-	-	-	-	

- Represents zero.

Data include utility, design, plant, and reissue applications. Country listings exclude possessions and territories of that country unless listed separately in the table. Data are subject to minor revisions.

FY 2009 data are updated and final.

FY 2010 data are preliminary and will be finalized in the FY 2011 PAR.

Countries/Territories not previously reported.

Country of origin information not available.

THURSDAY, APRIL 7, 2011.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

WITNESS

DR. PATRICK GALLAGHER, UNDER SECRETARY OF COMMERCE FOR STANDARDS AND TECHNOLOGY AND DIRECTOR OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

Mr. WOLF. I want to welcome you to the committee. And in light of the time, I will not have any opening statement, but just welcome you, Dr. Gallagher.

Dr. Gallagher, your full statement will appear in the record. You can proceed as you see appropriate.

Dr. GALLAGHER. Thank you very much.

And in the interest of the time, I will also try to give a quick——

Mr. WOLF. Oh, that is okay. Go ahead.

Dr. GALLAGHER [continuing]. Oral sort of summary of the written testimony. Chairman Wolf, it is good to be in front of the committee.

And, Ranking Member Fattah, it is good to see you again.

And it is always great to have an opportunity to talk about the NIST 2012 budget. The budget request for NIST is best understood by its mission to promote U.S. innovation and industrial competitiveness and finds itself very well aligned with the President's focus on supporting economic growth through innovation.

The fiscal 2012 budget request for NIST is $1 billion. This does represent a 17 percent increase over our 2010 enacted level and I would like to briefly summarize the request. There are four major accounts in the NIST Program.

For the NIST Scientific and Technical Research and Services account, which funds our laboratory activities, our budget request is $679 million which is a net increase of $174 million. These funds are to accelerate the development of standards, technology, and measurement science in areas as diverse as advanced manufacturing, cyber security, and advanced building infrastructure.

The NIST Industrial Technology Services account budget request is $238 million. This is an increase of $33 million and also reflects a $1.9 million reduction to the Baldrige Performance Excellence Program consistent with the Administration's goal of transitioning that program out of federal funding.

The budget requests $84.6 million for the Construction of Research Facilities account. This is a $62.4 million decrease. The budget request also includes $25.4 million for the continued renovation of the aging Boulder Building One facility and funds for needed repairs and maintenance of our facilities on the two campuses.

And, finally, NIST is requesting $100 million in the new mandatory account for the creation of a Public Safety Innovation Fund. This is NIST's component of the Administration's Wireless Innovation Infrastructure Initiative (WI3).

So let me touch on a few of the major themes that are in the request: manufacturing, infrastructure, and education.

The President's fiscal year 2012 budget request for NIST includes a very strong focus on manufacturing and provides the measurement tools and other essential technical assistance that other U.S. manufacturers need to invent, innovate, and produce—and to do that more rapidly and more efficiently than their competitors around the world.

With the laboratory budget, there are five manufacturing related initiatives totaling $85.3 million and these initiatives will enable NIST to bolster and diversify needed research and services in areas like nanotechnology, biomanufacturing, additive manufacturing, and advanced robotics that will position U.S. manufacturers to be competitive around the world.

My written testimony includes more details of these initiatives.

The President's budget request also strongly supports manufacturing through our external programs: the Manufacturing Extension Partnership program and the Technology Innovation Program.

For MEP, the budget request is $143 million, an $18 million increase. NIST MEP will use the funds to expand capabilities of its nationwide network of centers located in all 50 states in a number of critical ways to assist manufacturers to successfully compete over the long term.

The request for TIP of $75 million will enable the program to hold a competition to fund high-risk, high-reward research in critical national needs like manufacturing.

NIST is also requesting $12.3 million for a new program, the Advanced Manufacturing Technology Consortia or AMTech. This is a new public-private partnership that will provide grants to stimulate the formation of industrial consortia to address industry-driven technology challenges that any one company would not be able to do on its own.

With regard to strengthening the U.S. infrastructure, the budget request contains $43.4 million in three initiatives for cyber security related programs and activities. This includes activities building upon our core cyber security work in support of the Comprehensive National Cybersecurity Initiative, to support a national program office to coordinate activities for the National Strategy for Trusted Identities in Cyberspace or NSTIC, and to expand the scope of the comprehensive National Cybersecurity Initiative on Education.

In the area of interoperability infrastructure, this budget request proposes funds to support our work in emerging technologies which includes smart grid, interoperable electronic health records, and cloud computing standards for the Federal Government.

The physical infrastructure work in NIST includes work to increase energy efficiency and reduce environmental impact for U.S. infrastructure and to improve our research activities in disaster resilient structures.

This is particularly timely with the earthquake in Japan and the resulting damage to structures. And we are pleased that it has been included in this request.

Finally, in wireless infrastructure, the Public Safety Innovation Fund that I mentioned earlier will focus efforts to support the development of an interoperable nationwide public safety broadband network.

The education initiative, the post-doc research program initiative will enable NIST to offer at least an additional 23 positions per year.

And I want to thank this committee for its support in eliminating the cap on funding for the NIST post-doc program in last year's COMPETES Act that makes this opportunity possible.

Beyond those initiatives, there are two areas in the budget which reflect savings. This budget request incorporates over $11 million in administrative savings and the proposed decrease for the Baldrige Program is an additional $1.9 million.

Mr. Chairman, the fiscal 2012 budget request for NIST reflects the Administration's recognition of the important role that NIST can play in innovation and the impact of NIST research and services that it can play in moving this Nation forward.

And I look forward to answering any questions you may have about our request.

[The information follows:]

Testimony of

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United States Department of Commerce

Before the
United States House of Representatives
Committee on Appropriations
Subcommittee on Commerce, Justice, Science,
and Related Agencies

An Overview of the Fiscal Year 2012 Budget for the National Institute of Standards and Technology

April 7, 2011

Chairman Wolf, Ranking Member Fattah, and members of the Subcommittee, thank you for the opportunity to appear before you today to present the President's Fiscal Year (FY) 2012 budget request for the National Institute of Standards and Technology (NIST). This budget reflects the important role that NIST plays as part of President Obama's Plan for Science and Innovation. As the President has said... *"We know what it takes to compete for the jobs and industries of our time. We need to out-innovate, out-educate, and out-build the rest of the world."*[1] The NIST FY 2012 budget clearly lays out the NIST role in the Administration's priorities by making critical investments in key areas that will help preserve our nation's economic security and strengthen American competitiveness.

Mr. Chairman, I would like to start with a quick mention of the context of this budget. Overall, this is a very difficult budget environment. The President made clear that it was important for the government to live within its means and establish some priorities within those limits. The President has focused on a number of key goals, including innovation, infrastructure and education.

Within that context, NIST finds itself with a mission that's very well aligned to those goals. Over the past few years, numerous reports have underscored the importance of a robust Federal presence in the sciences to advance technological innovation. The "*Rising Above the Gathering Storm*" report and its follow-on, *"The Gathering Storm, Revisited,"* were a clarion call to action that helped to shape the America COMPETES Reauthorization Act that this Committee championed and the President signed into law earlier this year. In addition, in February of this year, the White House Office of Science and Technology Policy, National Economic Council, and Council of Economic Advisers jointly released an update to the 2009 "*Strategy for American Innovation*" that "focuses on critical areas where sensible, balanced government policies can lay the foundation for innovation that leads to quality jobs and shared prosperity."

The NIST mission is to promote U.S. innovation and industrial competitiveness through measurement science, standards and technology. The NIST mission is very well-aligned with the priority goals that the President has laid out. The FY 2012 budget for NIST reflects that alignment.

Mr. Chairman, the President's FY 2012 discretionary budget request for NIST is $1 billion, a 17 percent increase over the FY 2010 enacted level. The budget maintains the President's commitment to double the NIST laboratory budget, and to support and enhance our world leadership in the physical sciences and technology.

The NIST budget is comprised of three discretionary spending accounts and one new proposed mandatory spending account.

For the NIST laboratories, the budget requests $679 million to accelerate the development of standards, technology, and measurement science in areas as diverse as advanced manufacturing technologies, cybersecurity, and infrastructure. The request reflects a net increase of $173.6 million over the FY 2010 enacted level. We did not continue funding $10.5 million in previous

[1] **Remarks by the President in State of Union Address on January 25, 2011.**

year earmarks and redirected this amount to new initiatives. Thus, the budget proposes $178.5 million in laboratory initiatives and $5.6 million in adjustments to base.

For the NIST Industrial Technology Services (ITS) account, the budget requests $238 million, an increase of $33 million over FY 2010 enacted levels. The account includes NIST's external programs: the Technology Innovation Program (TIP), the Hollings Manufacturing Extension Partnership (MEP), the Baldrige Performance Excellence Program (BPEP) and the newly proposed Advanced Manufacturing Technology Consortia (AMTech) program. The request includes $12.3 million for the AMTech, a new cooperative grant program with industry and academia to foster public-private partnerships to develop needed technology to support advanced manufacturing industries that will broadly benefit the Nation's industrial base. Also in the ITS line is a $1.9 million reduction to BPEP from the FY 2010 enacted levels.

The budget requests $84.6 million for the Construction of Research Facilities (CRF) account; representing a $62.4 million decrease from the FY 2010 enacted level. The request includes $25.4 million for the continued renovation of the Boulder Building 1 renovation but does not include $67 million in FY 2010 earmarks and the Construction Grant Program.

Finally, NIST requests $100 million in mandatory appropriations for the Public Safety Innovation Fund, NIST's component of the Wireless Innovation Fund, which itself is part of the President's Wireless Innovation and Infrastructure Initiative (WI3). This mandatory appropriation request will fund NIST's safety efforts in this area, with particular focus on working with industry and public safety organizations to develop new standards, technologies, and applications to advance public safety.

Let me speak in more depth about the major thematic initiatives in this request: manufacturing, infrastructure, and education. These themes directly relate to the President's stated goals to "out-innovate, out-educate, and out-build."

Out-Innovate: Supporting Innovation for a Strong Manufacturing Base.

In order to "Out-Innovate," the U.S. must have a strong manufacturing base. With that focus innovation in manufacturing is key to the NIST 2012 budget. In the area of manufacturing, U.S. industry faces relentless competition that has trimmed the nation's share of global manufacturing output from 25 percent in 2000 to about 20 percent today.

The U.S. manufacturing sector, still the world's largest, is the nation's innovation engine. Manufacturers perform half of all research and development in the U.S., and they employ 17 percent of the nation's scientists and engineers. The sector develops, builds, and supplies the advaneed equipment that enables the U.S. military to maintain technological superiority over our adversaries.

Providing the measurement tools and other essential technical assistance that existing U.S. manufacturers and aspiring start-ups need to invent, innovate, and produce—more rapidly and more efficiently than their competitors—is a top NIST priority. NIST has partnered with the manufacturing sector for over a century. Today's challenges require stepping up efforts to

enhance and strengthen the nation's underlying technical infrastructure, which is integral to our innovation and advanced manufacturing capabilities.

To reap the economic benefits of our ability to innovate, our nation's manufacturing sector must be able to renew itself by adopting new technology and developing new markets. The nation's manufacturers must respond quickly and effectively to an ever-changing mix of requirements, risks, and opportunities, from new regulations to rising energy costs to emerging technologies and markets. The revitalization of the U.S. manufacturing base is critical to driving innovation and job creation in the future and will play a major role in building an economy that can help raise the standard of living for all Americans.[2]

2012 Manufacturing Initiatives:
The President's FY 2012 budget for NIST includes five manufacturing-related initiatives in NIST's scientific laboratories that will enable NIST to bolster and diversify needed research and promote proven services that will strengthen U.S. manufacturing competitiveness in high-value-added product markets.

- **Strengthening Measurement Services in Support of Industry Needs ($20.0M)** The U.S. economy depends upon a robust and reliable physical science-based measurement system. Industry is increasingly relying upon and utilizing NIST's precision time and synchronization services to drive innovation. Industries as diverse as telecommunications, electric power distribution, broadcasting, and navigation networks, as well as many crucial applications in national defense, intelligence, and homeland security rely on NIST calibrations and measurement services. In aeronautics, for example, NIST calibrations for commercial and federal government partners ensure the accuracy and performance of altimeters and electrical systems that enable F-18s and commercial aircraft to fly. This initiative will enhance systems for distributing NIST measurement services to meet the growing demand from industry for such services.

- **Advanced Materials for Industry ($14.2M)** The discovery and optimization of new materials is costly and inefficient. Today, U.S. researchers can design and create new materials at a rate that outpaces our ability to support the measurements to characterize and exploit these discoveries. NIST efforts in advanced materials development and measurement science can help manufacturers save millions of dollars in design costs. This initiative will help to provide that support to industry through the development of a national measurement and standards infrastructure necessary to enable computer modeling and simulation capabilities for discovering new materials and reliably optimizing structures and properties for manufacturing processes and product performance and features.

- **Innovations for 21st Century U.S. Manufacturing: Faster, Smarter and Cleaner ($13.3M)** Innovation is central to manufacturing, and in turn, to the overall growth and health of the U.S. economy. The ability to *rapidly* introduce product innovations provides a foundation for future growth in U.S. manufacturing and with it, the creation and retention of high-skill, well-paying jobs. This initiative will fund efforts to develop

[2] Executive Office of the President, *A Framework for Revitalizing American Manufacturing*, Dec. 2009.

advanced robotics technologies that allow the U.S. to retain manufacturing competitiveness, and fund programs that will promote sustainable operations and improve energy efficiency in both the manufacturing and construction sectors of the economy.

- **Measurement Science and Standards to Support Biomanufacturing ($9.5M)** The high cost of biotechnology medicines is adversely impacting the U.S. healthcare system and economy. Biotechnology drugs, currently dominated by protein therapeutics, are the fastest-growing class of pharmaceuticals and the fastest growing (~20%/year) category of health care spending.[1] Inefficiencies in the manufacturing process contribute to the high cost of these drugs. Under this initiative, NIST will work closely with industry, the FDA, and other standards organizations to better understand the manufacturing process resulting in higher quality biologic products through continuous improvement of manufacturing processes. It will also enable the development of agile biomanufacturing processes required for next generation products such as stem cells and personalized biotherapeutics.

- **Measurements to Support the Manufacture and Production of Nanotechnology-based Products ($28.2M)** There remain significant barriers to the full commercial exploitation of nanotechnology. The lack of manufacturing and characterization tools adds significantly to the development cost of nano-based products. Rigorous measurement science is needed to characterize the environmental, health, and safety risks of engineered nanomaterials. NIST's expertise in measurement science as well as its world-class nanotechnology fabrication facilities at the Center for Nanoscale Science and Technology (CNST) in Gaithersburg, Maryland, provides industry unique resources to advance the measurement science needed to enhance our understanding of the safety of nanomaterials, and fund research on the development and manufacture of cost-competitive technologies. This initiative will position the U.S. to be globally competitive in emerging technologies through safe use of nanotechnology. It will also provide needed investments in the CNST to keep it at the cutting-edge of innovation.

The President's budget strongly supports manufacturing through the Industrial Technology Services programs.

Hollings Manufacturing Extension Partnership (MEP)
The President's 2012 Budget requests $142.6 million for the MEP program. This request is a $17.9 million increase over the FY 2010 enacted level. The MEP is a federal-state partnership which requires a two-thirds financial match from non-federal sources. Through its national network of MEP Centers located in every state, 1,400 technical experts help small- and medium-sized manufacturers navigate economic and business challenges and connect to public and private resources essential for increased competitiveness and profitability.

Through competitively awarded cooperative agreements, NIST MEP will expand the capabilities of its nationwide network of centers to accelerate commercialization of technological

[1] Biotech 2008 – Life Sciences: A 20/20 Vision to 2020, Burrill and Company, 2008.

innovations, adopt environmentally sustainable business practices, promote renewable energy initiatives, foster market diversification, and connect domestic suppliers to manufacturers to assist manufacturers in successfully competing over the long term in today's complex global manufacturing environment.

The Technology Innovation Program (TIP)
The FY 2012 request for TIP is $75 million. The proposed TIP budget represents an increase of $5.1 million above the FY 2010 enacted level. TIP funds cutting edge, transformative research and development projects that address critical national needs and societal challenges not already being addressed by others. TIP requires a 1:1 match of funds from the private sector. In FY 2012, TIP expects to hold a funding competition in one or more of the following research areas: advanced robotics and intelligent automation, energy, healthcare, water, civil infrastructure technologies, and manufacturing.

TIP funding will incentivize innovative research and development (R&D) projects, conducted by small- and medium-sized U.S. based companies, alone or as joint ventures with universities, national laboratories and other non-profit research organizations. Further, it will foster research collaborations, enable the creation of intellectual property in the United States, disseminate new knowledge, and advance the state-of-the-art in technologies that address societal challenges. In its most recent round of funding for manufacturing projects, TIP awardees included those young, small companies which are the engines of innovation and the future generators of globally competitive jobs.

Advanced Manufacturing Technology Consortia (AMTech)
NIST is also requesting $12.3M for the Advanced Manufacturing Technology Consortia (AMTech) program, a new public-private partnership that will broadly benefit the Nation's industrial base by providing grants to form and fund industrial consortia to address industrial driven technological challenges that no one company can address alone. AMTech is modeled upon NIST's successful partnership, the Nanoelectronics Research Initiative, which in collaboration with industry, funds research consortia targeting the nanoelectronics technology sector.

AMTech will collapse the timescale of technological innovation by including partners that span the innovation lifecycle from idea to discovery, from invention to commercialization. Through cost-sharing and a common research agenda, these consortia would support the development of innovative new technologies directed at creating high-wage jobs and economic growth across the industry sector. These consortia will develop road-maps of critical long-term industrial research needs and provide support for research and equipment at leading universities and government laboratories directed at meeting these needs.

Out-Build: Building the Nation's Infrastructure – Cyber, Physical and Wireless

To meet the President's challenge to *"Out-Build"* other nations, NIST is requesting funds in the FY 2012 budget to strengthen the U.S. infrastructure in three main areas: the cyber infrastructure, the physical infrastructure and the wireless infrastructure.

Cybersecurity Infrastructure. A secure cyber infrastructure is vital to the economic vitality and national security interests of the United States. In addition to enabling more than $200 billion in annual e-commerce, interconnected networks of computers are essential for critical functions such as air traffic control, electric power distribution and the GPS in our cars. The nation's cyber infrastructure is central to maintaining the timely delivery and quality of public services that are part of everyday life. Our nation's computers face ever-increasing threats from malicious individuals, organizations, and nation states. Currently, our computer security tools are manually implemented, too complex to be effectively used, and too static to respond to rapid changes in the threat environment. This allows many attacks to succeed, causing significant damage and undermining confidence in vital commercial and public information systems. The result is a large, direct economic impact -- estimates show that Americans lose billions of dollars each year to cyber crime.

NIST is responsible for cybersecurity research, development of federal cybersecurity standards, establishment of methods and metrics for determining the effectiveness of security controls, and providing technical support to public and private sector implementation of security standards and controls. The FY 2012 budget request contains $43.4 million for cybersecurity related programs and activities that will strengthen NIST's contribution to the development and promulgation of effective and usable cybersecurity standards.

The cybersecurity infrastructure request has three initiatives.

- **Scalable Cybersecurity for Emerging Technologies and Threats ($14.9M)** The request would provide improvements to NIST's core cybersecurity work in support of the Comprehensive National Cybersecurity Initiative (CNCI), the Federal Information Security Management Act (FISMA), and other national priorities. NIST will develop improved security techniques, support the creation of consensus security standards, increase the interoperability and usability of security technologies, and expedite the secure adoption of emerging information technologies.

- **National Program Office for the National Strategy for Trusted Identities in Cyberspace (NSTIC) and NSTIC Grant Program ($24.5M)** The request would support a National Program Office (NPO) to coordinate federal activities needed to implement NSTIC. This initiative is in direct response to the recommendations of the *White House Cyberspace Policy Review* and will raise the level of trust associated with the identities of individuals, organizations, services, and devices involved in online transactions. NIST will be responsible for day to day and overall operation of the NPO. NIST will work with the private sector to identify potential funding opportunities for the delivery of NSTIC solutions. Of the $24.5 million for NSTIC, $7.0 million will support a National Program Office and $17.5 million will fund the pilot grants.

- **National Initiative for Cybersecurity Education (NICE) ($4.0M)** The request supports NICE, which expands the scope of the Comprehensive National Cybersecurity Initiative's (CNCI) Education Initiative from the training of the Federal workforce to a larger national education focus. NIST will develop a cybersecurity education framework that addresses: national cybersecurity awareness, formal cybersecurity education, Federal

cybersecurity workforce structure, and cybersecurity workforce training and professional development.

Interoperability of Infrastructure. Other critical emerging technologies such as the Smart Grid and national health care information systems have the potential to transform our society and revitalize the U.S. economy. To be effective, the many interconnected components in these systems must be fully interoperable to allow information to be exchanged and used seamlessly across systems. As a respected and trusted technical partner, NIST is uniquely positioned to bring together stakeholders from industry, government, academia, and standards development organizations to establish consensus-based interoperability standards and conformity tests. The President's budget request for NIST contains an initiative that will support continued efforts in these critical areas as well as provide the infrastructure necessary to address other emerging interoperability challenges.

- The **Interoperability Standards for Emerging Technologies Initiative ($23.8M)**, will focus on the development of standards to enable or accelerate the successful development of new technologies such as a smart electrical grid (Smart Grid), interoperable electronic healthcare records, and cloud computing. These technologies have the potential to transform our society and galvanize U.S. industry, and provide new opportunities for exports of U.S.-developed technologies. For each technology to be effective, however, many complex interconnected components must be built to enable full interoperability and reduce the full potential of these technologies. Lack of standards for interoperability can significantly slow adoption of these emerging technologies, dampen confidence in industry, and increase the risks of stranded investments in solutions that quickly become obsolete.

Physical Infrastructure. Buildings in the U.S. consume 72 percent of all electrical energy produced in this country. Emissions associated with buildings and appliances are projected to grow faster than those from any other sector. To ensure adequate supplies of energy and curtail the projected growth of carbon dioxide emissions, it is essential to reduce building energy consumption significantly while minimizing the environmental impacts of buildings during their life cycles. In addition, many of the nation's largest buildings and much of its infrastructure are concentrated in disaster-prone regions where hurricanes, earthquakes, floods and other hazards are common. Catastrophic failures in infrastructure as a result of natural disasters are costly and directly impact our personal and economic health. NIST is requesting funds for two initiatives that will further the development of a stronger building infrastructure.

- **Measurements and Standards to Support Increased Energy Efficiency and Reduced Environmental Impact initiative ($13.3M)** This initiative will fund research in Net-Zero Energy Building (NZEB) design. NZEB designs would use as much energy from renewable sources as they consume. Such design also doubles the service life of building materials, products, and systems in order to minimize their lifecycle impacts - this also takes indoor air quality into account. Current analysis methods are not able to assess the indoor air quality impacts of key design decisions or impacts of new technologies. This initiative will provide the measurement science required to achieve net-zero energy, high-performance buildings. It will also provide the measurement science to support gas measurement standards to ensure their accuracy and comparability.

- **Measurements and Standards to Support Advanced Infrastructure Delivery and Resilience ($10.6M)** The disaster resilience of our structures today is determined in large measure by the building codes, standards, materials, and practices used during their construction. There are gaps in the measurement science needed to improve the disaster resilience of infrastructure exposed to natural and man-made hazards. This request funds efforts to provide improvements to our nation's physical infrastructure to damage from earthquakes, windstorms, and fire. This funding will also develop comprehensive measures of construction practices so our Nation's building infrastructure can be both more efficiently built and more resilient.

Wireless Infrastructure. The request to create the Public Safety Innovation Fund (PSIF), a mandatory account within NIST funded at $100 million ($500 million over five years) is part of the Administration's Wireless Innovation and Infrastructure Initiative (WI3).

President Obama called for a National Wireless Initiative to make available high-speed wireless services to at least 98 percent of Americans. The WI3 will make it possible for businesses to achieve that goal, while freeing up spectrum through incentive auctions, spurring innovation, and supporting a nationwide, interoperable wireless network for public safety. An important element of this plan is the reallocation of the D Block for public safety, and some of the proceeds from the incentive auctions being dedicated to NIST research, experimentation and testbeds. The funds will also focus on applied development to foster the development of a next-generation Public Safety communications network.

Specifically, to spur innovation, the WI3 includes a Wireless Innovation (WIN) Fund for research and development of emerging wireless technologies and applications. NIST will focus on applied development to foster the development of a next-generation Public Safety communications network. The current systems for 4G high speed wireless services are not tailored for public safety's requirements. Developing and implementing such requirements, including capabilities to enable handsets to operate in peer-to-peer (or without the aid of a central network) will require technological leadership that NIST can help provide. NIST, in consultation with agency partners, including the National Institute of Justice at the Department of Justice and the Department of Homeland Security, will focus on developing and testing requirements, standards, wireless applications, and other wireless technologies in support of an interoperable nationwide Public Safety Broadband Network.

Out-Educate: Training the Next Generation of Scientists.

In order to *"Out-Educate,"* each agency must do its part. While NIST does not have a primary mission in education, the future development of the nation's scientists is critical to the future of NIST. NIST has an important role to play in helping to identify, recruit, and retain the next generation of scientists and engineers to help drive American competitiveness. There is one initiative associated with this area:

- **The Postdoctoral Research Associateship Program ($3.0M)** This highly competitive program is very effective at attracting outstanding scientists and engineers to consider a career in science by providing opportunities to work alongside NIST researchers. I want

to thank the Committee for its support in eliminating the cap on funding for the post-doc program. The elimination of this cap allows NIST to fund more associates. The requested increase will enable the program to offer at least an additional 23 positions per year and keep the pipeline of bright, new scientists flowing.

- **National Initiative for Cybersecurity Education (NICE) ($4.0M)** As mentioned earlier, the request supports NICE, which expands the scope of the Comprehensive National Cybersecurity Initiative's (CNCI) Education Initiative from the training of the Federal workforce to a larger national education focus.

Construction of Research Facilities (CRF): The FY 2012 request totals $84.6 million, a $62.4 million decrease from the FY 2010 enacted level. The request contains $25.4 million to continue the renovation of the 60-year-old Building 1 on the NIST Boulder campus, which houses the majority of research and measurement laboratories on the Boulder campus. The balance of the account, $59.2 million, will provide funding for NIST to address deficiencies and maintain NIST's laboratories and facilities. The decrease reflects the elimination of congressionally-directed projects from FY 2010.

Budget Decreases: Finally, let me touch on two areas in which the budget reflects savings:

The Administration's Administrative Efficiency Initiative challenged all agencies to identify savings as part of the budget development process. NIST's FY 2012 budget incorporates over $11 million in administrative savings across the agency in order to make the agency more efficient and effective in an era of tight budgets.

The Baldrige Performance Excellence Program (BPEP) requests $7.7 million, $1.9 million less than the FY 2010 enacted level. The FY 2012 funding supports the continued development of the Baldrige Program Criteria, dissemination of best practices, and the annual awards process. At the proposed level, BPEP will evaluate alternative sources of funding and alternative cost models consistent with the administration's goal of transitioning the program out of federal funding.

Summary

In summary, I would like to note that for more than 100 years NIST has maintained the national standards of measurement. This role was assigned by the U.S. Constitution to the Federal Government to promote industry and ensure market fairness. The FY 2012 budget request for NIST reflects the Administration's recognition of the important role that NIST plays in innovation and the impact that the research and services NIST provides can have on moving the nation forward by laying the foundation for long- term job creation and prosperity. By sustaining our investments in fundamental research, we can ensure that America remains at the forefront of scientific capability, thereby enhancing our ability to shape and improve our nation's future and that of the world around us.

I look forward to working with you Mr. Chairman and members of the Subcommittee and would be happy to answer any questions.

Mr. WOLF. Thank you very much, Dr. Gallagher.

You know, it is kind of interesting. I think, one, the subcommittee really, and I know Mr. Fattah shares this, too, really did everything it can to support NIST even in H.R. 1. I think you took less of a hit, you and the FBI.

It is interesting. You probably run and have one of the most important agencies for the future of the country in manufacturing, education and, yet, I look at this. There are empty seats here.

How many people here are with NIST? Raise your hand. How many people in the audience are not with NIST? Yeah. And are any of you reporters?

Okay. Well, I mean, where is everyone—and, yet, NIST really is very, very, very important.

I have a bill in that we are going to introduce in a week or two with Senator Warner of my State to deal with manufacturing. It puts together an incentive program. It is a repatriation bill to help bring back jobs from China and Mexico.

And manufacturing and creating jobs is very, very important and, yet, you know, there are still empty seats here if more people want to come.

But we have had other hearings that have been less important insofar as the future of the country and in an area that you could pretty much get a bipartisan consensus and, yet, I guess it is just the way life is.

I would appreciate if you would look into NIST's involvement in Information Sharing and Access Interagency Policy Committee and Watch List and Screening Subcommittee. That is quite a name. I wonder how they will give an abbreviation for that.

But I understand that the Departments of State, Homeland Security, and Justice are working together to determine the requirements each would need before procuring name-matching software.

As you are aware, NIST is involved in this process. I believe the agencies are asking NIST to compare and ascertain what software brings what strengths, weaknesses, capabilities when it comes to name-matching software.

I understand that the work of the subcommittee is still in the early stages and that NIST is participating to gain a better understanding of the requirements. We understand that each of the agencies has significantly different operational requirements so achieving consensus will be a challenge for the subcommittee.

However, as we approach the tenth anniversary of the 9/11 attacks, I think it is imperative for the government to work together on this program and that NIST should be an active participant.

I would hope that NIST will be a leader in the effort considering the good work that NIST has done on a number of homeland security issues.

And we had Director Mueller up here yesterday and, of course, on the 9/11 issue, a number of people from my congressional district died in that attack. And so we were looking forward to hearing from you of how this thing—you may not have to get in great detail here, but how we can kind of bring the three agencies together.

Dr. GALLAGHER. So thank you.

We are quite committed to this effort. NIST has long research experience in looking at text retrieval and these types of technologies. In fact, the Watson computer that everyone was watching on Jeopardy, some of that underlying technology that enabled that was actually based on some of that NIST research.

So this is a very active interagency process. And I think you characterized the situation well. It is early enough that what we are trying to do is coordinate and develop a set of coherent technical requirements so we can turn this into some definitive actions within the agencies.

And I know we are trying to get our technical people working with the agencies in that capacity.

RADIATION DETECTION AND MEASUREMENT

Mr. WOLF. NIST's physical measurements lab has developed expertise in radiation detection and measurement.

Has NIST been asked to perform any analysis of the U.S. radiation detecting capabilities in response to the disaster that continues to unfold in Japan with their nuclear facility?

Dr. GALLAGHER. The NIST program in advancing measurement science and radiation has been very active. It is one of the more concentrated efforts of the United States. NIST is very active at homeland security applications and screening and developing advanced screening technologies, nuclear forensic measurements.

The types of measurements that are needed in the situation that is unfolding in Japan right now are not ones that are pushing detection limits. There is a lot of radiation in the area.

And so these typically fall more in the kind of issues involving sort of sensor networks to measure diffusion. And those are really responsibilities of other agencies.

In all these cases, there is a very active interagency process and we are offering support as requested to any of those sort of ongoing efforts.

Mr. WOLF. And what about domestically here? I have seen the statement by the governor of New York with that one power plant that is up on the Hudson north of New York City. Has NIST been asked to engage in any studies with respect to the ability of U.S. nuclear facilities to withstand similar impacts, earthquakes, tsunamis, or other extreme weather events?

Dr. GALLAGHER. So, of course, the analysis to look at safety or security consequences falls to the Nuclear Regulatory Commission directly.

NIST works in partnership with the NRC to give them a technical basis for performing this type of analysis, so whether it is a fire risk, we do fire research that looks at flammability or degradation of electrical cables, whether it is looking at structural components in these types of buildings.

So we play a role, but it is a secondary role. We are trying to provide them the measurement tools and information that supports their responsibilities to analyze.

Mr. WOLF. So you have not been asked specifically by them?

Dr. GALLAGHER. Not that I am aware of.

NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM

Mr. WOLF. Okay. We had asked the director of NOAA, the Administrator, I think she said yes, but we are waiting to get a definitive answer, to put together a conference both on the East Coast and the West Coast, bringing in NOAA people, the U.S. Geological Survey people together to talk about the potential impacts of an earthquake either on the West Coast or East Coast and a tsunami. And I think she said yes. I will have to read the transcripts. But the way that it was put, I think she said she will do it.

Would NIST play any role in something like that?

Dr. GALLAGHER. We likely would. NIST is actually the lead agency in the National Earthquake Hazard Reduction Program which is a program established in 1977 and includes FEMA, the U.S. Geologic Survey, and the National Science Foundation. And so we would be very interested in participating in a workshop like that.

The main NIST role, of course, is to disseminate model codes and standards for adoption so that construction standards are brought up to a point where we have disaster resilient infrastructure.

I think the other lesson here with the situation in Japan is that it is important to look across all different types of hazards. So a lot of the damage that was sustained in Japan was actually water related damage from the subsequent tsunami and not the damage related to the shaking of the actual earthquake.

And this is a lesson that keeps coming up in the NIST work and it is important to look at all of the threats to structure and to make sure they are resilient across all of them. You could have an earthquake with a subsequent fire and you are actually looking at fire related hazards.

And so we would welcome a workshop like that and be happy to work with NOAA.

Mr. WOLF. Okay. Well, we will tell NOAA that.

Have your people had any thoughts or comments, I do not want to get too far off some of the budget issues, but on that about how well prepared—this subcommittee six or seven years ago when the Indonesian tsunami took place, we sent a letter to every governor up and down the East Coast, we contacted the UN to make sure that every locality had the necessary standards and warning systems. So the purpose of this would be to kind of do the same thing.

But any comments based on watching what has taken place, since you are the lead here, what has taken place?

Your heart goes out to the people of Japan. It just is so painful to watch both the radiation and the death and the number of people that have not been found.

As you look at that knowing what you know, your concerns with regard to here in the United States, both East Coast, West Coast, and the Gulf?

Dr. GALLAGHER. So, yes. We actually do worry about this quite a bit and not just the situation in Japan which is an unfolding tragedy but also looking very carefully at the situation in Christchurch, New Zealand with that earthquake and also with Chile which has similar building standards that we use in the United States.

And the answer is, yes, we do worry about that. In fact, one of my colleagues is testifying right now in front of the House Science Committee on the NEHRP Program. And to summarize what I think he is going to say about the program, we have made tremendous advances in being able to assess and predict risk areas.

I think that the codes themselves have shown dramatic improvement and we continue to take lessons learned. I think the fact that the property damage we saw in Chile was nothing like we saw in Haiti is a real reflection changes in building standards. We have also learned the weaknesses in terms how buildings perform under severe earthquake conditions.

One of the areas that I think we need to work on and an area I think I would like to work with you on is the Federal Government does not mandate building codes and standards. What we issue are model codes and standards. And the authority is actually at the state, local, and regional level.

And so as we look at collecting data and rates of adoption in moderate to high earthquake zones, this is an area that we are probably not doing as well as we could. And it comes back to—have we set things up in the way to be most efficient and giving these local jurisdictions the information they need to adopt stronger building codes and to assess what percentages of their buildings are compliant with different codes?

Obviously in older communities, they are going to be built to older building standards which may be much, much less resilient.

The other major concern I have is that we have focused on buildings quite extensively, but we also need to focus on the resiliency of the supporting infrastructure which is often called life lines, getting power and water and other key telecommunication infrastructure rapidly restored or highly resilient to these types of effects. And that compromises the ability of a community to respond if there is an earthquake.

GREEN TECHNOLOGIES

Mr. WOLF. Sure. Well, good. We will ask that NIST participate.

You have your top issues of manufacturing, education, and infrastructure. The NIST budget includes references to greenhouse gases, green technology, increased energy efficiency, reduced environmental impact.

How do these activities fit into NIST's core capabilities and research activities and standards and measurements? Are these new initiatives as critical to innovation, the economy, and life and safety issues such as nanotechnology, neutron research, or disaster resistant building, for example?

Dr. GALLAGHER. The activities in green technologies, if you will, at NIST reflect in some cases strengthening ongoing activities that we have had before. In some cases, they are new. But in all cases, they reflect industrial demand.

What we are seeing, for example, in the building technology area is at the local level and state level requirements being placed on promoting green building technologies, whether commercial buildings or residential buildings, and a lot of interest on the part of the construction industry for tools to assess the effectiveness of these technologies.

It turns out what we have done is a good job at looking at the performance of individual components. So we can look at how insulation performs or we can look at the efficiency of a particular window or door. We can look at the efficiency of a particular appliance, heating and cooling system.

There is almost no information on how to bring all these together and optimize them into a working building and to see whether they have the type of energy savings impacts.

And that is important to the industry because without that understanding by the consumer—they want to understand their return on investment—is this building going to save me money as I operate it and how soon will I realize the investments.

And so what we are trying to do is provide the measurement tools to remove a barrier, for adoption for some of these new technologies.

Similarly on the greenhouse gas monitoring, what is happening is commercial deployment of greenhouse gas monitoring networks. The company that was formerly known as WeatherBug announced a few months ago their intention to deploy commercial networks of sensor packages that would measure various greenhouse gases.

And they want that data initially to be of use to the research community, but ultimately their business model would be to make that available to local communities and other areas that would be interested in knowing their emissions of greenhouse gases.

If that data is not perceived as being reliable and interoperable, that you cannot compare a measurement taken in one part of the country with a package with another, so there is a lot of interest in how do we provide the measurement science to make sure that these technologies perform the way they are supposed to, which is a core NIST mission.

NATIONAL STRATEGIES FOR TRUSTED IDENTITIES IN CYBERSPACE

Mr. WOLF. You are requesting an increase of $24.5 million to increase the national strategy for trusted identities in cyber space. We understand that this initiative is supposed to enhance security for people when they conduct business online, whether it is buying a book from Amazon or check their banking accounts or pay bills.

They would only have one ID and password. Would you explain how this would work and could you expand on the statement in your budget materials that states that, "a user will no longer be required to maintain dozens of passwords from both public and private use?"

Dr. GALLAGHER. The idea behind NSTIC is to provide a strategy for one of the real perplexing problems in information technology which fundamentally is a communication infrastructure between computers.

And to use that infrastructure to carry out a transaction, whether you are just sharing information or whether you are going online to bank or submit your taxes, requires a transaction between your computer and the other device that you are using.

And to establish a trusted connection, there has to be an establishment of identity. I am who I say I am. And, of course, the level of integrity of that depends on what you are trying to do.

If it was accessing my bank account, I would want that to be a very strong form of negotiation, this is really me and nobody else, whereas if I am just posting some information on a site, I may, in fact, want the amount of information to be very low where I can ensure that I am anonymous.

And what we are seeing in the market is a real proliferation. There is no common way of doing this and no understanding of how robust these technologies are. And as consumers, we know this because we struggle with individual passwords or tokens or various other devices with really no interoperability between these. So every time you go to a new site, you have to recreate that.

The government's interest, of course, is that we also work with citizens. For example, if you are e-filing your taxes, you would want to have some assurance that you are logging in saying who you are. In other cases, you want to be anonymous.

So rather than have the government say this is the way it is going to be done, we do not think that is an appropriate approach for a number of reasons, the adoption would be low, the trust would be high for that type of a system, and we may not know the right technology.

What we would like to do is turn to industry and say, look, here is the functional requirements, here is the type of capability we would like to have, a trust infrastructure, if you will, an identity management infrastructure that people can opt into. They can use these types of credentials in multiple environments and they can control how much information they are willing to share when they are setting up a transaction.

So it is largely a standards effort. I think we are going to be working with industry to define these type of requirements, how will identities be established, how do you protect the privacy of the information you need——

Mr. WOLF. The privacy, I was wondering. The privacy issue is one that I think most people are getting very concerned with.

Dr. GALLAGHER. Very concerned. And I would say the existing approach is the worst imaginable approach from a security perspective because every time you go to a new Website and create a new account, you have to share an enormous amount of personal information to establish your identity.

And so we have all of this personal information about ourselves at all of these different locations. And the question is, if I am a small business and I want to set up a Web sales application, rather than have to collect all of that new information from all of my customers, can I use the fact that they can log on through some trusted, some identity management organization and basically rely on that.

So we think that this would be privacy enhancing, that there would be much less of your personal information out there and it would be used to establish identity and then protected. It would not be held by the government. You know, we would like this to be private sector.

If it is done correctly, the government can use these same technologies itself which is really, I think, the right approach rather than come up with something new.

Mr. WOLF. Well, the privacy issue even, you know, I saw a piece the other day that companies are now able to notice what television station you are watching, whether it is ESPN versus another channel, and, therefore, begin to tailor ads in the mail or to you through your computer based on that.

You really almost get the feeling from a privacy point of view, I mean, you go to the bank teller after the church, the ATM, and there is a camera there recording you. You get on the toll road out in northern Virginia to come into Washington—on the Greenway and the toll road—and use your smart pass. You then drive up to New York City with it and you go through the toll, through the tunnel.

And pretty soon everything seems to be almost out there. And there is the ability to track and know what the person likes to eat, what time they go into work, what time they leave to come home.

And I think from a personal privacy issue, I find it very troubling. I do not have the answer to it. And I do not bank online, but, I have five kids and they all bank online. They just think it is just the way to do it. So the privacy issue troubles me deeply.

And if you can get a young high school graduate to crash into the Department of Defense computer system and knowing what the organized crime in Russia is doing and knowing what the Chinese system that they have set up, almost nothing is not able to be penetrated now if they really set out.

Now, I am sure they are not going to set out to go after the individual consumer at Costco. But if they wanted to, they almost can do it now.

Does that trouble you?

Dr. GALLAGHER. Well, it does very much. I think that any powerful disruptive technology like information technology comes simultaneously with enormous advantages. I think back at just my 18 years at NIST and it is hard to believe the extent to which information technology has permeated everything we do.

Mr. WOLF. Yes.

Dr. GALLAGHER. And so with all of those advantages, of course, and that ability to move information come all of the possible downsides with that. And I think the challenge we face is that the rate of technology change has exceeded our ability for the policy to respond to it.

I mean, this has opened up new types of privacy concerns that we simply did not have before just because of how connected and how much information is being assembled. It just was not possible before.

So one of the challenges I always am looking at is how do we try to respond, with everything we are doing, with cybersecurity standards, with privacy.

The Department of Commerce has been very active in the privacy arena trying to basically at least articulate a set of guiding principles that we can start to address how we are going to think about privacy protection with internet-based technologies. And it is simply guiding what our actions will be going forward and being able to work effectively with private sector, with partner countries.

So we worry about this all the time and it has just moved so quickly that it stresses—you know, it is hard to extrapolate some-

thing you did in the past that really made sense then. In some cases, you almost have to start over.

Mr. WOLF. Yes. Look at the pain and suffering that WikiLeaks has created. I mean, what took place in WikiLeaks has resulted in the death of people and the fall of governments. It has done a pretty incredible thing.

We will go to Mr. Fattah now.

Mr. Fattah.

Mr. FATTAH. Thank you. Thank you, Mr. Chairman.

Thank you, Dr. Gallagher.

Let me just for the record also acknowledge that you were educated in Pennsylvania, University of Pittsburgh, a doctorate in physics.

And you have worked under a number of presidents. You started under the, I guess, the first Bush administration——

Dr. GALLAGHER. So I have been at——

Mr. FATTAH [continuing]. In your original role?

Dr. GALLAGHER. So I joined NIST in 1993, so actually at the start of the Clinton administration.

Mr. FATTAH. Okay.

Dr. GALLAGHER. And then through the Bush administration as well. And I actually was director of one of our neutron research facilities up until 2008 and was made Acting NIST Director at the end of the Bush administration and then nominated——

NUCLEAR REACTOR SAFETY REVIEW

Mr. FATTAH. So you bring a great deal of competence to the work that you are doing. And you also have a constitutional mandate provided through the Congress to set standards and measurements for the country. And we want to thank you for your service.

Let me start where the Chairman interestingly started at on this nuclear question. Now, the problem in Japan, as best as I can understand, is the most challenging part of it is the spent fuel in these pools, right, and the leaking thereof caused by the earthquake and then the tsunami?

We have in our country lots of spent fuel. I am a proponent of nuclear energy. I am for nuclear energy. But one of the issues is what you do with the spent fuel, and you have to cool it for some long period of time. And under the NRC rules, you put in these cooling pools for five years.

Now, we have some 63 metric tons of spent fuel in our country. Some of it has been in these pools longer than what is recommended and some of it is in dry cask.

Now, I guess the standard at the moment is that it really does not matter whether or not it is a dry cask or whether it is in a pool, right?

But the Sandia Lab has done some work in this regard and there seems to be on the science of this edging more towards, you know, because I am a layman when it comes to this, but to a common sense view that a dry cask might be a better circumstance, particularly from a security standpoint, you know, potential terrorist attack or something like that, but also even in the case of some other disruption like in the instance of Japan.

So on the question of when there is a safety review that the Administration has ordered, and I support the President's call for this safety review, when we get to the point of trying to figure out whether or not there is spent fuel in these pools well beyond the period that it needs to be there and whether it should go to dry cask, the question of dry cask or no dry cask, is this something appropriately for NIST to be in the loop on?

Dr. GALLAGHER. So I think the answer is possibly, but it would be indirect in support of the NRC. I managed our nuclear facility for four years at NIST, so NIST does not have a specific role here.

But speaking as a former manager of a nuclear facility, the one challenge you always face, and I think the challenge that NRC faces, that you have to look holistically at the problem. You want to look at overall the integrity, safety, and security of various options of storing fuel.

And as you pointed out, the problem we face with a once through fuel cycle is the fact that there is a lot of decay product still in the fuel when you are done using it. And as the element continues to decay, it produces heat.

And so the technical challenge everyone is facing is what is the right way to provide that cooling in various storage configurations.

So it is easy to cool in a pool, but you see the disadvantages of that long term. It is a very active system of pumps and heat exchangers and various things. And there is no down side to leaving it in a pool longer than it needs to because it is pretty cool.

So the challenge with dry cask, the advantage is that it is passive and can be made very hard, the disadvantage is how do you provide passive cooling that is adequate to preserve the integrity of the element. You want to keep the metallic, the fuel cladding because that is what holds those components in there to then maintain its integrity.

So I think that for the engineers that will have to look at this, the best environment they can be put in is to step back from some of the policy consequences of these and just look at it from a technology perspective, what can be done to look at enhanced fuel cladding integrity, what can be done to look at advanced passive cooling technologies.

I think what they can do if they do that is they can give us the technical options that let—because there is all sorts of tricky policy questions that I know you have to deal with as you look at these options and the impact of proliferation and various other things, but at least then we have all of the technology——

Mr. FATTAH. There are a lot of policy implications, but this is a safety review, right? So, again, I start over with the fact that I am pro-nuclear. I think we should be even more aggressive. I think we should look at small modular nuclear reactors. But I also think that we should act in intelligent ways to protect public safety.

So this notion that it is an equal choice between a cooling pool and a dry cask to me, and I do not have a doctoral degree in physics, even from a distinguished university, but it does not sound to me like it is an equal choice either way.

And I think that this is the kind of thing where NIST, if you are setting standards, it might be useful—so I would love for you to re-

view some of the work that has been done on this question and see what you think.

I mean, I am not trying to jump in front of the NRC, but I just think that it is an important question because absent the spent fuel being in the pool, much of the calamity of the Japan nuclear reactors would not exist. And even if it was in dry cask and there was some rupture, the level of problem would be lessened in a very considerable way.

But I do not know. The Chairman started on this. I just wanted to jump in.

MANUFACTURING

I want to go to your other work. Now, as a state legislator, I was one of the sponsors of the Ben Franklin Technology Program in Pennsylvania which has worked very, very well in taking excellent research from our universities and bringing it to bear in terms of economic development.

And now you are engaged in that in a number of different ways through the Manufacturing Extension Partnership and through the TIP Program. And TIP is an outgrowth of the earlier program, the advanced technology program, right, and it is focused on small and medium size manufacturers?

So I have seen some of the work that has been done. I was out at a manufacturer in Pennsylvania in my district in Philadelphia. They make fishing reels. It is called Penn Fish & Tackle or Penn Fishing Reels. It is in North Philadelphia.

They make the world-class saltwater fishing reels, Mr. Chairman. They sell for about $1,500 a piece and they have no competitor in the United States at all. And people buy from all over the world.

But the Manufacturing Extension Partnership helped provide some technical assistance in the manufacturing process through a grant and a collaboration.

And I also know another manufacturer who is in bio-tech. It is a very different process. He is in Philadelphia, in the Spring Garden area, and he is making glass that you work with small chemical and biological formulations in the whole DNA area.

And through the Manufacturing Extension Partnership, they hooked him up with some people in Chapel Hill who helped design how this little firm manufacturer of 14 people could be major players in a world that, otherwise, they would have been frozen out of by larger players. So the program has worked well.

I know the chairman and I have gotten letters from Manufacturing Extension Partnerships from I think every State now and talking about the great work. And we are very interested. I have said that it is my most important priority. I notice that the Chairman has an important affinity for helping in this area.

So you have a number of different programs in the manufacturing area. This is the largest of them, is that correct, in terms of dollar amounts?

Dr. GALLAGHER. Probably not, only because such a large portion of the laboratory program also works towards manufacturing. But it is the largest program that is specifically focused on providing services directly to manufacturers.

Mr. FATTAH. Okay, well if you could walk through all of the efforts that NIST is working at, and how they work together or separately to help manufacturers? If you could spend a couple of minutes on that that would be helpful.

Dr. GALLAGHER. So thank you. The NIST role in manufacturing is interesting because it comes in sort of two major ways. One of them is through that core mission that the Constitution gave us in Article 1, Section 8 which is to establish a system of weights and measures and to deploy that system into commerce. And so a lot of the NIST laboratory work is actually not defining what the meter is and what the second is. That is an important part of what we do, but it is realizing active measurement in commercial environments. How do you measure deformation when you are trying to bend sheet metal to form cars? Or what are the materials properties of advanced materials if you are light weighting? Or how do you characterize new nanomaterials? Or how do we look at biological materials?

So an enormous amount of our mission, core mission work in measurement science is removing measurement barriers to manufacturing. Similarly our role in standard setting. The United States is quite unique in that standards are not set by a government agency. Standards are set by industry. And that approach to industry-led technical standards is one that we support. So instead of having us issue standards, we have a supporting role. We coordinate federal agencies' use, but we are also there to support the industry efforts to make sure standards are based on good methodology and so that in the end you want to measure something because you want to know that a standard was put into practice. It does not matter if it is on a piece of paper. You want to show that a product or service can, you know, can perform the way you wanted it too.

So the NIST laboratories all the way through have these enormous efforts in providing unique measurement capability, lowering measurement barriers to manufacturing, and supporting technology standards. In addition to that the extramural programs in our ITS account provide a very special kind of service to industry. And as you pointed out, MEP is a great example.

The MEP program only provides up to one-third of the funding for the MEP centers. What MEP really did is not set something up from scratch. It tied efforts that were in all fifty states together. It created a network of extension programs where they were working, often set up through a state university, or through a state-led program, working with manufacturers where they were trying to support their local business community. The power of networking similar state efforts together, though, is very real. And it allowed the states to both share information very quickly on best practices, what kinds of services were most effective. It also allowed us to collect metrics. You know, what worked? And what was the impact of these different services. And one of the things that happens then is we saw a surprising amount of uniformity across all of these fifty, these centers across all fifty states.

And the reason I bring that up is that, you know, one of the issues that comes up every time we talk about manufacturing programs, and an area that I would like to work with this committee

on, is this tricky question of the appropriate federal role. And I think it is tricky because states have always played a major role in economic development in this country. And so you end up in this, this decision about, you know, how far should the federal government get involved if the states are already there?

One of the natural roles for the federal government, though, is helping the states work together. So this idea of networking and working across and sharing information, facilitating information across states is very powerful. And I think MEP may be one of the best examples of that.

Mr. FATTAH. Well this biotech company in my district is a good example of that. I mean, we have some very fine universities and people who can be helpful to businesses. But in this particular case the expertise that was needed for this company happened to be in North Carolina. And it was through MEP that that connection was made. And so I think that that is very useful. Because, you know, as we compete on the world stage, we are not competing as an individual state or a parochial community. I mean, a lot of the business location decisions are either, is it North America, or is it some other place? And so it is very useful now.

CONSTRUCTION OF RESEARCH FACILITIES

You talked about your lab program. Part of your budget request is for continued construction at the lab. Is this at the Colorado lab? Or which labs? Because you got some dollars through the stimulus program for construction, is that correct?

Dr. GALLAGHER. That is correct. So the Recovery Act included funding for internal construction at NIST. Those funds have been obligated. And there is a lot of construction underway, if you were to visit either in Gaithersburg or in Boulder, Colorado. And that is one of the reasons the construction request is down considerably in 2012 because we are dealing with this wave of ongoing construction. The situation in Boulder is that facility was in very poor shape. It was built in the 1950's. It had the unfortunate accident in history, I guess, of being built before there were, you know, central air conditioning and air ventilation systems. So for a laboratory facility it was a real problem.

So what we did is a study to show whether it was most cost effective to build new. For very high performance buildings it is cheaper to just build it from scratch. And that building is under construction now and will be done sometime next year. And what functions are most cost effectively addressed by just renovating the existing building. So the funds in the 2012 are to initiate and continue that renovation part of the project. And the reason I focused on it was the timing is really important. Because if you are going to do renovation you are displacing existing activities. And so the most efficient way to do this is to roll right after the completion of the new building and move through the renovation phase. If that is interrupted, you know, what will happen of course people will set up their equipment in these spaces and then we will later have to move them out and then move it back in. So we are trying to optimize the phasing of that project in Boulder.

Mr. FATTAH. And this is a relatively small agency. What do you have, some 2,900 scientists? You can go out to one of the national

labs like Sandia which has, you know, got 3,300 Ph.D.'s and another 4,000 or 5,000 workers there. So, you know, in comparison. So one of the questions is, I know we are dealing with kind of incremental questions about your budget from 2010 enacted to next year. But as you look forward over the next ten years, are we looking at a need to grow the entity in non-incremental ways in order to take further advantage of our resources and to compete better? Or are we about where we need to be with relatively small or, you know, not so small increases? I guess it depends on how one might look at it.

Dr. GALLAGHER. So I think the Administration's view is that NIST has to grow. It was one of the three agencies, and in fact Congress I think would agree because the COMPETES Act, which this committee supported very strongly, called for substantial growth in three agencies as well. The DOE Office of Science, NIST, and National Science Foundation. Looking at NIST——

Mr. FATTAH. For doubling them——

Dr. GALLAGHER. For doubling——

Mr. FATTAH. Right.

Dr. GALLAGHER [continuing]. That is correct. One way to look at, you know, what is the optimal size, this is always difficult to do. But NIST is unusual in a couple of ways. One is its size, it is relatively small compared to the other major national laboratory activities. It is also, it is very diverse technically. It is probably the broadest collection of technical activities because the measurement science field does not confine it very much. So it is extremely broad. And if you look at serving industry as a primary mission area the amount of technological activity in industry has continued to grow over the last twenty years whereas the NIST laboratories have been flat or decline. So as a percentage of the industrial effort we have lost a lot of ground in the last thirty years.

It comes back to this role of government question. I think, you know, we have tended, it has tended to be easier to focus on those areas where there is an overriding national need. Energy, defense, aerospace, where we can justify the stronger involvement. When you look at activities that are most crosscutting I think that has been the harder issue. And I think that comes back to a point the Chairman raised at the very beginning. Where we are looking at the enthusiasm gap maybe in the attendance of the hearing. But I think——

Mr. FATTAH. That is all right. The Chairman and the Ranking Member, we are very enthused. So even though no one else may be, we are enthused. But thank you, sir, for your testimony. Thank you.

Mr. WOLF. Thank you. We are going to go to Mr. Aderholt in a minute. I just want to just ask one question, to give you time, okay? It will be good when we can remove this issue from the political attack and debate back and forth. I worry, my wife and I, we have five kids and I have fifteen grandkids. And I worry about the future of our country. And Norm Augustine made a comment at an event that I had on a bill to create a deficit commission to deal with that. He said in the sixteenth century, Spain was the number one country, and that is no longer the case. Seventeenth century, it was France. We used France at Yorktown to gain our independ-

ence. The nineteenth century, the British century. The twentieth century, he said was the American century. But yet it was in doubt, in essence, what the twenty-first century would be. Would it be the American century, or would it be the Chinese century?

I believe if we come together, we are going to have differences on a lot of different issues. But if we can come together with the American ingenuity, and the free enterprise system, it can be the American century. But I worry when I see the Chinese and others so cooperating with their government, in manufacturing, and doing things like that, that we could see us begin to decline. And as these jobs leave America, that the manufacturing jobs leave. And some have said, "Well, it is manufacturing but we have the R&D." Well if all the manufacturing leaves the R&D begins to go. And we are seeing companies, American companies, opening up amazing facilities and beginning to move a lot of the R&D offshore.

So for, you know, my grandchildren, and for the future of America. But this issue becomes so politically charged. So how do we take it out of that? And some have said on the MEP, "Well, it is too much government involvement." Well, the internet came through the government. You know, and I would hold my credentials as a conservative Republican up against anybody in this Congress. But I want to help America. And on the bill that I have, with regard to repatriation of jobs, I have actually had somebody say, "Well, would be an expenditure there?" We give tax credits to companies to return home. We also will reshape some EDA grants to go to a locality so that if they are going to bring a plant back from China that they can have an opportunity for a water and sewer grant. Or something like that.

But so I would hope that we could, and I think it is important for your agency to stay totally out of these political debates. But hopefully we have to come together to fashion a policy that we can, and in the aviation area, much of the aviation with regard to Boeing really came out of much of what was done in the Defense Department. And we see the spinoffs in NASA. So some time I would be interested, and I want to go to Mr. Aderholt, to hear your comments. And not here at the hearing, but you can come by to tell me. What you think we can honestly, ethically, and morally do to enhance the manufacturing base of this country?

When I see Apple, you know, many people have iPods, iPads, iPhones. A large number are being manufactured in China. Well, they ought to be manufactured in Alabama, or in Pennsylvania, or in Virginia. And it takes a certain technical skill to do that. But I would like to know what you think. And after I put in my bill with Senator Warner in a week or two maybe you can just set up a time to come on by. When you are going to be downtown, do not make a, and we can see what we can do to actually craft a manufacturing program that brings jobs back and creates jobs for American citizens, and yet can eliminate this debate that we are having so we can have a unified policy. So the twenty-first century will be the American century.

MANUFACTURING EXTENSION PARTNERSHIP PROGRAM

Mr. ADERHOLT. Thank you. Thank you, doctor, for being here. The Alabama Technology Network, the ATN, is a recipient of MEP

funds. And I think we have, and our district has been most impressed by the work of NIST through those funds. And the Alabama Technology Network, they tell us that for every dollar it receives in their MEP funds the government gets back about $76 in return. The Alabama Technology Network has attracted significant private investment and saved or created well over a thousand jobs in Alabama last year. What my question would be, can you tell us a little bit how those MEP funds are allocated? Just for our clarification?

Dr. GALLAGHER. Thank you very much. It is always great hearing the success stories coming from the MEP program. It is a remarkable partnership with small- and mid-sized manufacturers. The way the funding currently works in the program is actually in two parts. The one-third, the maximum one-third federal cost share part that supports the day-to-day operations of the MEP centers constitutes up to about $110 million of the request level. The remainder is what we call next gen. It is basically the part of MEP that is working with centers. It is actually done competitively. We issue a call for ideas and the centers can compete for these additional funds to develop if they have ideas for new services. In other words, how to match small- and mid-sized manufacturers with new technologies. A very active area right now as manufacturers try to diversify their products and move into new markets. Or to work with small- and mid-sized manufacturers to increase their exports. Most of the growing markets are overseas and this is a barrier for many small- and mid-sized businesses. How do they work if they are going to start working with exports? Or how did they become part of an important supply chain? So we have been working with DOD and the defense logistic agencies so that when Defense needs parts in certain areas we can rapidly hook them up with manufacturers who are willing to supply those types of parts and components. Buy American Acts, you know, when there is a requirement under a certain type of construction to supply something that is Buy America to satisfy it what we can do is use this MEP network to get that request out to the manufacturers and say, "Hey, can you make this?" And provide that as an opportunity.

Those types of, those are sort of new ideas that are coming from the manufacturers about ways that this programs can support them. And that is what the additional $30 million is used for. We use it as a competitive program to help them take an idea like that and develop it into a program. And then as I said, what happens, because the program ties all of these centers together through this network, is they can rapidly see what works and what does not and can adopt these programs for their own use.

Mr. ADERHOLT. What as far as the state allocations, is every state guaranteed a certain amount? Or is it awarded on merit? Or how does that operate?

Dr. GALLAGHER. I do not know the algorithm that determines, I do not believe there is a state cap for how much each state can get. What there is in the statute is the federal share can account for no more than one-third of the total funding. What the other two-thirds are made of actually varies a lot from state to state. In some cases the states are directly investing in these activities and are full participants with funding. In other cases fees that are collected

from the manufacturers make up part of it. So it is very diverse in terms of how states, you know, how the centers approach the remainder of the cost share. And they, the way we determine who runs a center is on a merit basis. So there was initially a competition and we evaluated that, and there is a regular review process that is carried out. And that is what the MEP staff are doing, is working with the centers. We want the centers to succeed, so it is not a punitive review. But we are trying to make sure that these centers are delivering the maximum benefit as possible. So if there is a center that is having problems we work with them as much as possible before we would go to a, you know, we would need to recompete.

Mr. ADERHOLT. Well I think one reason it has been significant in Alabama is because we have lost a lot of manufacturing jobs in Alabama, which a lot of states have. And not to say that Alabama is the only state that falls into that category, but needless to say some states have fallen in that category more so than others especially when it comes to manufacturing. And you may not know this, but do you know if there is any way that those states that have lost more manufacturing jobs, is that taken into account when these funds are distributed?

Dr. GALLAGHER. No, we have not been adjusting the distribution funding based on these changes in manufacturing levels. Because the programs themselves are saturated. In other words they are, you know, as effective as this program is it is not large enough to address all of the small- and mid-sized manufacturers who might desire these services. So even though there has been sizable manufacturing reductions in certain states it is not at a level where there is excess capacity in the MEP centers to our knowledge at all.

Mr. ADERHOLT. So based on your comments when I originally mentioned the MEP program, you have seen a lot of successes through those funds, I take it? Throughout your time at the Department of Commerce?

Dr. GALLAGHER. I have to confess, it is one of the most enjoyable parts of my job, is to go visit some of these manufacturers and see what they are doing. You get very excited that, you know, you are seeing all of the things that we care about. The American ingenuity, the excitement in moving into new areas. And anyone who has not done it should because you will realize immediately when you start visiting these companies that manufacturing is not what many people picture it to be. This is some cutting edge, high technology work in very small firms. This is not just sitting and doing repetitive manufacturing tasks over and over again. American companies, when they are succeeding, they are providing the highest performance products. They have some of the highest productivity levels in the world. And you see it all when you go into some of these centers. So it is some of the most exciting, it is one of the most exciting things I get to do in my job.

Mr. ADERHOLT. Thank you. Thank you, Mr. Chairman.

Mr. WOLF. Thank you, Mr. Aderholt. I just, the staff just gave me this thing here, an AP story. It is in Tokyo. Japan's Northeastern coast has been rattled by a strong aftershock. The Japanese meteorological agency has issued a tsunami warning for a wave of up to one meter. The warning was issued for a coastal area

already ravaged by last month's tsunami. Officials said the quake was a 7.4 magnitude and hit twenty-five miles under the water and off the coast. And I just hope we can get the head of NOAA to tell us that they are going to put one of these conferences are. But what if 7.4 hit off the coast of California? Or off the coast of Atlantic City? What would the impact be? I know that is a different configuration, and but——

Dr. GALLAGHER. Yes, I do not have a detailed knowledge of the seismological conditions there. I know that the type of geological structures that we have on the West Coast in some cases are quite similar to the one that is causing these earthquakes in Japan. I know that USGS has risk hazard maps. That is one of the things that has developed under NEHRP. And what we are developing is a capability to look at the structural integrity of how we built things according to these maps. So our ability to start understanding the risk is improving. But off the top of my head I cannot project what it would be like.

TECHNOLOGY INNOVATION PROGRAM

Mr. WOLF. You are requesting a total, this is the Technology Innovation Program, a total program level of $75 million and eighty FTEs for the Technology Innovation Program. This amount is $30 million above, or 67 percent higher, than that which is in H.R. 1. What research efforts have been funded thus far under the program?

Dr. GALLAGHER. Thank you. So the TIP program, of course, is one of a few that are called proof of concept programs in the federal government that are designed to look at high risk, high payoff advances in science and technology in a focused area. The program is fairly modest in size for a program that is trying to do that. So what we have tried to do to maximize impact is take advantage of the fact that the program calls for us to define what is called a critical national need. Justification for why we would make federal investments in a particular area. And we have tried to focus those so that within, we get high quality proposals in that area.

The first of the competitions was held in 2007. It was in the area of civil infrastructure, looking at new technologies to assess the condition of road surfaces, bridges, this type of physical infrastructure that we rely on. We are taking this infrastructure well past its design lifetime and of course the big challenge is how do you assess condition to make meaningful maintenance or replacement decisions? And we think technology could play a role.

All the other competitions that have been held since, in 2008 and 2009, have been in the area of manufacturing. Either nanomanufacturing or biomanufacturing. We are looking at these emergent areas where as a country we have made deep investments in the underlying research and now we are beginning to see the real promise coming out in terms of technologies that are being made. And so we think that is, those have been ripe areas.

So the program has focused, with the exception of the first call in civil infrastructure, in the areas of manufacturing, in advanced manufacturing.

Mr. WOLF. Well in last year's hearing the TIP program was discussed and you referred to it as a pilot then. The program was just

begun in 2007. You reported that NIST would have to evaluate the results of the program to determine if it should continue. So have you taken that analysis?

Dr. GALLAGHER. Well the discussions are certainly still continuing. My feelings have not changed since last year. That if the intent of the program is to have a broad national impact in looking at breakthrough technologies in all areas of national need, it is hard to imagine how we would do that with a program that has been funded at $70 million to $75 million a year. So what we have done is we have tried to create much narrower focal points for the program so we can have an impact there. And we continue to look at the size of the program whether this makes sense to do it.

In the context of the 2012 request I think one of the reasons it has an increase has to do with the fact that these narrower areas of focus have been in manufacturing. So this is really reflecting the Administration's desire to increase funding in breakthrough technologies for manufacturing. I do not think that means we have stopped looking at the effectiveness of the program. And we will continue to work with the committee as we have those discussions.

Mr. WOLF. Because we have here, you stated last year that TIP, you could really not, you expected impact, unless the funding were significantly increased. And the climate that we are in now really will not allow that option, even if we wanted to do it. So does that make this relatively small program a lower priority in comparison with your core research activities?

And as you know, I think, Mr. Fattah is supportive and I am supportive. I mean, we are not looking to rip the NIST budget up. And I think we would like to plus it up, if we could. But make sure that, you know, I can spend a little bit on this, and a little bit on that, and a little bit on this, and a little bit on that, and you get nothing. Whereas if you really hit. So if you had to prioritize programs given the fiscal constraints, you know, where does TIP rank in relation to other core NIST programs? And the MEP that we have been talking about? And I know it is hard to say what one of your children do you want to put out for, you know, but because of where we are now I think we have got to look at some of those things.

Dr. GALLAGHER. So I, yes, this is always tough. And I think, your priorities depend on where you set funding levels. I think my feeling remains unchanged. That as TIP was designed, which was to have broad national impact in a broad set of areas of critical national need, it is underfunded to do that. And in fact the way the authority was put together requires a lot of program management. So we have a lot of staff managing this relatively small program.

From that context, if the decision is made, as you do your very difficult job of optimizing these budget choices, that we cannot grow that program. It would not rank very high on my priorities because I think given a smaller amount of money I can think of programs that could have a much bigger impact.

One of the reasons we proposed the Advanced Manufacturing Technology Consortia Program, AMTech, is precisely for that reason. It is a relatively small program. But what AMTech is designed to do is to bring competing companies together to not just work to-

gether but to fund the work they are doing together. The model is really SEMATECH.

Mr. WOLF. Well then are there other programs? Assuming the committee had a conversion like Paul on the road to Damascus and said, "Well this is just, we have got to do this." Are there other areas—and I am not going to pin you down here because I think you have to think about this because you are talking about real live programs and people. Are there other areas that you would say, "This I think is so significant for the future of America that I would prepare to," I mean I have got some other questions, some we will get to, some we will not, and we will just submit them for the record. But, "I would be prepared to give up there."

Again, we are not looking to take you down. And I think if you can just think about that and let the staff know. Are there some other areas that because you like to do this, I mean, I would like you to be able to move ahead and clean the clock of the Chinese, if you can. But, so where would we get that if we wanted to give you that increase? And I cannot speak for Mr. Fattah, but I think he would feel the same way as we were to——

SMART GRID

Mr. FATTAH. You can speak for me anytime, Mr. Chairman.

Mr. WOLF. No, well I, no I cannot, either. But if you could sort of let us know, I do not know how close we are coming, but we have a smart grid question here. You are requesting $9 million to continue research on smart grid. What is smart grid? And why is this important research? And where do we rank with respect to other nations?

Dr. GALLAGHER. So smart grid is the combination of information technology with the technology used to manage the distribution of electricity. What that means is pretty diverse. It goes all the way from equipment that is on the high voltage lines that manage the actual power management at the national and regional level, all the way to smart meters and smart appliances that could go into homes. So you could imagine within a given building you are enhancing your ability to manage when you consume electricity and can you take advantage of pricing.

Mr. WOLF. Which is important.

Dr. GALLAGHER. Which is very important, because if you do not do that, you cannot store electricity anywhere. So you have to build your system for where your peak loads are, and that is a very expensive proposition. So if we can enhance our ability to manage it there is a very large benefit.

Mr. WOLF. How do we compare with other nations?

Dr. GALLAGHER. Right now we lead the world, I believe, in the development of smart grid technologies. The challenge here is, there is some research challenge. But the real issue is you are developing something kind of like the internet. You are going to have a bunch of different devices that need to talk and work with each other. So coming up with a set of standards that industry can agree on, in terms of how they are going to share information, or how a certain device is going to connect and talk to another device, how that is going to be done securely so we do not introduce new vulnerabilities into the system as we increase its ability to do all

the good things is an enormous challenge. It is very similar to creating a set of standards around, for example, 4G wireless technologies, or the internet. It is allowing this sort of very high degree of interoperability.

At the present time my personal view is that the effort on working with industry, we have 600 or 700 participants in this effort. We are working with all the major companies, utility companies, utility commissions. And this, the level of complexity of a system like that is very high. And this is moving as fast as any technology of this complexity I have ever seen.

Mr. WOLF. So this is important?

Dr. GALLAGHER. This is incredibly important.

CLOUD COMPUTING

Mr. WOLF. You know, I was the author of the bill to, called Journey Through Hallowed Ground, to preserve and protect land coming from Gettysburg down to Route 15, down to Monticello. Gettysburg Civil War, Monticello the Revolutionary War. VEPCO wants to bring, and some others, to take up, so the smart grid is important. I am not so sure that most of that power is not coming to Northern Virginia or the Shenandoah Valley. It is heading up to New York City. So I am for anything that you can do to kind of make sure that you can do whatever you would have to to protect and preserve, but at the same time. So I just wanted to get that on the record. But if you can keep us informed on that, too, because I am interested because of the impact that it is having on the State of Virginia.

On cloud computing you are requesting an increase of $5 million. Would you explain what cloud computing is? Please explain, and I am going to combine some of these questions and then to go to Mr. Fattah. And how you are working to ensure that government information will be as secure as more and more information is outsourced? And then, I am combining, we have read that IBM is investing in a new cloud computing data center in Singapore. They have seven such cloud labs in the Asia Pacific region. Where do we stand with respect to our competitors in cloud computing? So what is it? And where do we stand?

Dr. GALLAGHER. Cloud is a frustrating term because it is a little bit like manufacturing. It is one of these terms that is so broad that a lot of different things fit into it. In short, cloud is basically exploiting the internet to provide certain types of functions that you would normally now deal with in what is called an enterprise mode.

So if I am an organization and I need certain computing capacity, I would need to buy the computers, buy the servers, buy the internal internet, buy the software that I run on those servers and everything would be controlled and run by my own organization.

What being on the internet at very particularly high speed internet allows you to do is basically break that model. For example, I don't need to buy the software. I might simply be able to let folks in my organization use web applications that would provide that service, so I don't need to build a data server. I can actually store the information through the internet and somebody else can provision it.

What it actually does is, it is the full use of the internet to provide either IT services, IT software or IT capacity. And the advantages are pretty significant because it is a change in business model fundamental. It allows for very great efficiency. They can rapidly deploy and you don't need to write software and buy machines. You can very rapidly reconfigure information.

Mr. WOLF. Why would IBM invest in a new cloud computer data center in Singapore? There are seven cloud labs in the Asian-Pacific region. Where do we stand? Where does America stand?

Dr. GALLAGHER. Well, again, I think that in the information technology arena, American companies are still at the forefront, so I think in terms of——

Mr. WOLF. But, you know, it is like a guy in a race. You can be in front, but last time he would have been so far that nobody would have been near him but somebody's near him now and so I think it is somewhat deceptive to say we are out in front. How far out in front? Are we gaining or are we falling behind? So I mean, why would IBM—I worry some of these companies—it is Asia, Asia, Asia, but how do we compare with abroad and why would they not build them here in the United States? And are U.S. companies making similar investments here in River City where we live, here in the United States?

Dr. GALLAGHER. Well, the answer is yes. I think companies like Google and Gmail and Amazon, these are all very much cloud-service type activities. I think this is going to be a global phenomenon. This is basically a business model approach and most IT related activities are going to end up being cloud based, so I think you are going to see IT investments in cloud services all over the world because the market is growing all over the world. The challenge in this is that a narrower issue, which is if we are going to ask federal agencies to start preferentially looking at cloud before they make big investments in buying, what are the ramifications of doing that?

If it is just a data service, where is that data residing? Do we still meet our obligations to protect that data? Do we, once the data is in the cloud, are we handcuffed to that one provider because if I change the company that is providing my service the data can't get moved over there.

Is it useable? Are these things still providing the same functionality we had before? So the NIST effort is really trying to address what the federal CIOs are dealing with. If I am going to look at cloud for either storing data or providing some applications or web services, how do they meet their obligations that are still there to protect the information to ensure data portability and ensure usability?

Some of that, what we will do right now is we will leverage existing policy, but I think the thing that makes cloud so tricky is it basically breaks existing policy. Everything we tell agencies to do now in terms of how they manage their assets has to do with how they control all of the assets. It is their computers, their people running the computers, and all of the services are on their sites and that is no longer the case under various types of clouds, so how do they continue to meet their responsibilities under this?

So we will use Scotch tape and bailing wire initially to develop in areas where we think it is okay to do that with existing policy. But the real challenge is, it tends to be a standards and a conformity assessment problem. How do we get industry to show us that they can meet our requirements in a way that is robust and it is a way that we can actually trust a particular cloud service that meets our needs to protect public information that we have in our systems and protects all of the requirements that haven't changed?

Mr. WOLF. Are foreign information technology firms investing here in the U.S.?

Dr. GALLAGHER. I am sure they are. Again the question is, to what extent federal agencies are going to use those types of services, and I think that is what the Federal CIO community is actively struggling with now. How do they reinterpret their obligations to protect information in the context of all these new services? And we are doing everything we can to provide a basis for them to do that.

Mr. WOLF. Mr. Fattah.

Mr. FATTAH. Well, this is a very sensitive area, but I am not going to delve into it other than saying that we do have certain protections related to the ownership of broadcast and communications entities, and farm land, and I think we have to think anew, because that was done a long time ago, about what other areas from our own national interests we need to section off from, you know, significant foreign ownership because we are competing with economic competitors and we have to be careful that we don't want them to understand our—you know, to be too kind of close in to our huddle either. So you have to kind of think this through and move in this internet age.

But I want to go back to the original subject because I want to make a request of you, but I want to mention, and one day we will get you to Philadelphia and take you around, but Cardel Industries is a fascinating company in Philadelphia, a manufacturer, a couple of thousand employees, no competitor in the U.S. They make what are called refurbished auto parts, and a number of places have required them because they are cheaper to use these refurbished auto parts. This is 10 percent of the manufacturing job base in Philadelphia. It is a fascinating company, family owned. They have a chaplain service. They have prayer in the morning and they get to work.

And they have been doing this so well that, you know, like I said, they have no other competitor anywhere in the U.S. Over in West Philadelphia is a place, we have a high school there called West Philadelphia High and it competed in the XPRIZE to develop a car that could go 100 miles on a gallon of fuel and they beat out Toyota and they beat out MIT and they beat out—they were the only high school among 110 teams. And they would have won the final, but their car only ran 80 miles, so they didn't win, but they hooked up with the entity that did win, Edison, and now they are working on manufacturing this car.

It is fascinating. It is not so much the kind of IQ only. The part of it is the desire and the enthusiasm to get something done and

these kids have done a remarkable job of—I mean, all these companies have spent over $100,000,000 on their entries in this contest.

So part of what we have to do is, we have to challenge ourselves and then we also need to find opportunities for us to demonstrate our interests in this area, which gets to my request. And I am sure that the Chairman will join in with me. I would be very interested. I am going to send you a letter, because I have done this for the Chairman, I am going to send you a letter asking if, through the MEP program, we could put together essentially a catalog of American manufacturers so that when people are looking to have something made, then we are trying to get something done, and they want to use an American company to make it, they have some sense about where they can go to get it done, you know.

So you have this Cover Sports in Philadelphia. They make tarps, but they also have a little contract with DoD, just a little teeny $100,000 contract where they make these bags made of some of the tarp material for some of the nuclear waste on the subs. So, you know, we need to focus our efforts on making sure that the capabilities that exist here are utilized.

So I am going to send you a letter, and I am going to get the Chairman and do—our staffs will work together to get it over, and I think it will be good because then, at least when people want to buy something who need a product or a widget made, there is really no reason for them to be looking some other place to get it made, and there are people here who can do anything, and I think that is part of how America is number one today, how it could be number one tomorrow, but we have to make sure that people know about these capabilities, and they don't exist only in Philadelphia.

We have 1,300 manufacturers. We've got 5,000 in the region, but there are manufacturers all over our country. Some are in the MEP program. Some are not, but I think at a minimum if we could get a, you know, obviously in this day and age they wouldn't be in print, but it would be probably in some online format, so that companies and individuals and inventors who want to get their product made can find someone who can do it.

BALDRIGE PROGRAM

Mr. WOLF. I think that is a good idea because I think when particularly some of the Fortune 500 are looking to, let us say in the space program, to do a certain thing, they have places they can go to. Maybe the MEP people could put that all together that they could look for an American manufacturer before—or even someone who is somewhere in the area who could then add on and do that. I think that makes a lot of sense.

The Baldrige Program, is it core scientific NIST activity? And we are down so that is why we have been moving, so there is a vote on and we will have to leave in a minute. Is it a core scientific NIST activity? You are reducing it from $10,000,000 to $8,000,000 with plan to transition out.

Dr. GALLAGHER. It is not a scientific activity, but it has been a core NIST activity since it was first created in the late 1980s.

Mr. WOLF. Yes, I remember it as being at Commerce, but how do you envision this transition to non-governmental funding taking place?

Dr. GALLAGHER. I don't know the answer to that yet. So what we have done is we have signaled that we would like to move in this direction with this request and what we are doing right now is engaging with the Baldrige Foundation. Baldrige is really already a public private partnership?

Mr. WOLF. Is it? Is their funding, is it all private?

Dr. GALLAGHER. Yes, there is a foundation with an endowment. They provide funding through the endowment. Of course, at the time it was set up, the cost share was set up one way and so the endowment size was limited to the size of the contributions into the endowment, so it lowered the barriers for doing that.

So I think the name of the discussion now is—has the program matured to the point where it is worth reevaluating where you draw that public/private line, and that is the discussion we have started with the foundation. And I think until we see what the options are and what the consequences of the options are, it is premature to start talking about what the implementation would be towards a particular goal.

Mr. WOLF. All right. And that is underway?

Dr. GALLAGHER. That is underway.

POSTDOCTORAL RESEARCH ASSOCIATESHIPS PROGRAM

Mr. WOLF. That is underway. You are also here on, we covered MEP pretty extensively. Is that the education one there? Page 9 on post-doctoral research. You are requesting an increase of $3,000,000 for a total of $14,400,000 for your post-doctoral research program. We are concerned. I am. I should say "I" rather than "we." But America is falling behind our competitors with respect to the number of students in technical fields. Would the additional funding enable NIST to hire up the authorized level of 120 associates? And with regard, if you can make that fast so I can then go to Mr. Bonner, he can ask whatever questions.

Dr. GALLAGHER. The answer is yes. It was designed to restore the program to its full scale, so.

Mr. WOLF. And are you concerned about America's competitive edge falling behind?

Dr. GALLAGHER. Yes.

Mr. WOLF. You are. And if you have any studies where we have directed NSF to do a study on how do you get young people to be active and major in the sciences, and from maybe up to fifth, the numbers fifth or sixth grade to begin to go. What do you think we have to do to encourage more people perhaps on a longer-run basis? And maybe if you could call the head of NSF and see what they are doing and how you may cooperate with them, I would appreciate it.

Mr. BONNER. Mr. Chairman, I don't know where we are, and I apologize for being late.

Mr. WOLF. That is okay.

Mr. BONNER. I can put these question in the record. That's fine. If you are close to concluding——

Mr. WOLF. No, you are fine. No, no. You go ahead. No, no.

Mr. BONNER. Dr. Gallagher, forgive us, those of us who came in late for these——

Mr. WOLF. There are so many hearings and people bounce back and forth.

Mr. BONNER. Not having the benefit of hearing the conversation between you and the Chairman and the Ranking Member, I wanted to just ask a couple of quick questions. In your testimony you identify only two proposed cuts, I believe, to the fiscal year 2012 budget, and forgive me if this question has been posed and it has been answered, but in light of the serious financial situation that we are in, acknowledging that what you do at NIST is critically important to our country's future, can we tell our constituents back home and the taxpayers of this country that that is all we can squeeze out of this funding request?

Dr. GALLAGHER. This tension between looking at the fiscal situation, trying to get the budget deficit down and looking at, particularly in this request is dissident, and I think what the Administration did was to set a top level number that was fiscally responsible, but then optimize under it.

What happens at NIST is that the mission of NIST to promote innovation and industrial competitiveness, basically, is exactly aligned with what the President put as the centerpiece of driving economic growth through supporting technology innovations.

So it is hard to see in our programs that it is uncomfortable. I can tell you almost all of my programs are looking at increases, but it is really where the optimization took place. What we tried to do is, since all of our programs were ones that were aligned with this priority is, we certainly looked internally and have tried to target Administrative savings. We are trying to improve alignment with outside agencies who are doing similar things. We are trying to drive efficiencies that way.

I think this is a very responsible request from that point, so I think you certainly can reassure constituents that we are doing everything we can. We are very cognizant of this need. It is quite real.

MEP COST-SHARE

Mr. BONNER. Then the other question. The Hollings MEP has been successful in my home state, and I am from Alabama. In leveraging state and local funds to support efficiencies, especially in the manufacturing industry such as timber, pulp and paper, which has just been so devastated over the last, really over the last several years, but certainly over the last few years, of your other programs can you highlight which have such a significant state matching requirement and is this a model that should be better utilized where appropriate?

Dr. GALLAGHER. So the MEP program sets a limit on the federal share, up to one-third. It doesn't actually stipulate a state funding level. In fact, the approach across the United States is pretty diverse in terms of how the MEP centers provide the remaining two-thirds.

It does align very well with what states have always focused on, this type of outreach to business. So most cases the states are involved and frankly the success of the MEP centers is strongly related to how involved the states are. That is one of the key ingredients for success.

Many of the programs in NIST actually work closely with the states, all the way from our laboratory program—because NIST has no regulatory authority where technical, non-regulatory agencies do. For example, even in weights and measures programs where we are defining how do you do certain measurements, we work with all 50 states because they are the ones that actually set the requirements, so we are working with every state in those areas.

The TIP program, which provides funding for high risk, high payoff research has a mandatory 50 percent cost share requirement and the makeup of that requirement is quite diverse but often includes public universities and other funds.

So we were talking about when you are in this area of innovation, you know, one end is pure research and we are very comfortable with the federal government. The other end is purely commercial and we know there is private sector activity. It is the area in the middle that is tricky but it is critically important because if you don't connect the two sides, we don't get the optimum efficiency out of our ability to take up new ideas and turn them into successful products and services.

And I think one way of getting around that is to have public-private partnerships, cost sharing and other arrangements to make sure that that is handled correctly. It is a very important point.

Mr. BONNER. Thank you.

Thank you, Chairman.

Mr. FATTAH. Mr. Chairman, can I follow up on that real quick? Is the one-third federal participation in terms of MEP, is that in the America COMPETES Act? Is that a statutory requirement?

Dr. GALLAGHER. It was in the original authorization language for MEP. In fact, in the COMPETES Act there is a requirement to study that cost share, so the GAO was asked to specifically look at the cost share, determine whether it should be increased to as much as 50 percent. They just released a report this week that we will have to take more particular——

Mr. FATTAH. My point is that this is something that the Congress said.

Dr. GALLAGHER. That is correct.

Mr. FATTAH. That you are following.

Dr. GALLAGHER. That is correct.

Mr. FATTAH. And we also are studying whether we might make some changes in it, and that is important to note because I know a number of states feel burdened. They love their program, but obviously that is something that if we said it, we are going to have to change it. Thank you.

Mr. WOLF. Thank you for your testimony. There will be other questions from probably a number of others submitted for the record. And I, personally, want to thank you for you and your people and for what you do. There has been a little concern that I have had quite frankly and I think if you just look in my voting record, I am a conservative Republican. I am pro-life, strong on fighting for strong defense and all the things, but I really get a little concerned when I see the criticism with regard to a number of federal employees.

And I just looked at your bio. You were with the Agency for 19 years. You can go out, as I said to Director Mueller yesterday, you could go out and make a lot of money. Are you married? You have family? Yes. You can make a lot of money. IBM, these guys would pick you up at a drop of a hat. And you have stayed, and so I appreciate the fact that you haven't turned this into a coin operated thing where you can go out and work for the Chinese or do something like that or work with a maker online but stayed to do what is good for the country. So, thanks.

The Honorable Chaka Fattah
House Appropriations Subcommittee on
Commerce, Justice, Science and Related Agencies

Questions for the Record
Hearing on the FY 2012 Budget Request
of the National Institute of Standards and Technology

1. The budget request for Construction of Research Facilities includes $59.2 million for safety, capacity, maintenance and major repairs. What is the current state of the maintenance backlog at NIST facilities, and how does the budget request address this problem?

   Answer: The Safety, Capacity, Maintenance and Major Repairs (SCMMR) annual base program provides funding for safety improvements as well as ongoing, recurring, and preventative maintenance and major repair of the NIST physical plant in Gaithersburg, Maryland; Boulder and Fort Collins, Colorado; and Kauai, Hawaii. The current deferred maintenance backlog is approximately $463 million. The $59.2 million requested in the FY 2102 budget will allow NIST to continue the annual routine maintenance as well as continue to address the most critical backlog items to meet NIST's research mission.

2. I understand that NIST provides some training for middle school science teachers. Can you give us an idea of the ways in which the teachers and their students benefit from this training and how it helps advance the overall goal of advancing education in science, technology, engineering, and mathematics? In what other ways is NIST helping to improve student education in science, technology, engineering, and math?

   Answer: The goals of the NIST Summer Institute are to increase understanding and awareness of science in middle school teachers in Maryland, as it relates to the science and engineering topics of measurement science research at NIST. The program introduces teachable ideas in line with middle school curricula, with lessons that can be immediately implemented. Benefits for the teachers include: increasing the teachers' understanding of the subjects they teach; connecting NIST research to an ever-growing number of classrooms and middle school students; rekindling teachers' enthusiasm for science; increasing knowledge of how scientific research is performed; creating a teacher-to-teacher network from different schools across the country; and linking teachers to scientists and engineers at NIST with whom they can consult when they have questions on science, technology, engineering, and math (STEM) topics.

   NIST has educational programs that address kids K-12 all through the STEM pipeline to postsecondary programs and beyond. Ongoing K-12 programs include the Adventures in Science program that runs from October to April on Saturdays, and Adopt-A-School, where NIST staff can volunteer to local school districts in several capacities, including tutoring, presentations, and mentoring.

There are also several large one-day events that take place at NIST, such as Take Our Daughters and Sons to Work Day (both Gaithersburg and Boulder campuses) and the program"Science: Get Psyched!" at the Gaithersburg campus. NIST staff often act as mentors for high school interns and also for individual science projects varying from those for local science fairs to those submitted for the nationwide Intel Science Talent Search. The NIST Chapter of the Sigma Xi also sponsors a Measurement Science Award for High School Students' Science Fair Projects. High school students have the opportunity to apply for internships across the NIST laboratories, through a program called SHIP (Summer High school Internship Program). They also can receive mentoring for science projects, again ranging from local science fairs to the Intel Science Talent Search.

NIST provides opportunities for undergraduate students, graduate students and postdoctoral associates to engage in world-class research at NIST's unique research facilities. The Summer Undergraduate Research Fellowship (SURF) program is a 12-week program where students apply through their universities and if chosen, can participate in research projects from areas across NIST's laboratories in Gaithersburg and Boulder. In addition, NIST participates in the Department of Homeland Security (DHS) Summer Internship program to promote research areas of interest to DHS. The NIST-Boulder campus offers the Professional Research Experience Program (PREP), which awards fellowships to qualified applicants and provides valuable laboratory experience to undergraduate students, graduate students, and postdocs. NIST partners with different universities and provides facilities and mentors for numerous graduate students and postdocs in both formal and informal collaborations. The formal collaborations include NIST's joint institutes: JILA (with University of Colorado); University of Maryland Biotechnology Institute (with University of Maryland), Hollings Marine Laboratory (with College of Charleston, The Medical University of South Carolina, NOAA and South Carolina Department of Natural Resources), and the Joint Quantum Institute (with University of Maryland).

The largest NIST postdoctoral program is the NIST Postdoctoral Research Associateship Program, which has a 55 year history of excellence in identifying and recruiting world-class postdoctoral scientists and engineers to work at NIST. An outgrowth of this program is the National Institutes of Health/NIBIB/NIST Joint Postdoctoral Research Associateship program, emphasizing interdisciplinary research at the interface of the biological and physical sciences. Outstanding international scientists and engineers also have the opportunity to do collaborative graduate and postdoctoral research work at NIST through NIST's Foreign Guest Researcher program.

Most of the NIST educational programs are supported "in-kind", *i.e.*, individual NIST staff members contribute their time, either during work hours (with supervisor approval) and/or after-hours to organize or participate in these events. There is no separate NIST budget set aside for these activities, although individual NIST Organizational Units may contribute when appropriate. The exceptions are the NIST Summer Institute for Middle School Science teachers and the NIST Postdoctoral Research Associateship Program.

The Honorable Tom Graves
House Appropriations Subcommittee on
Commerce, Justice, Science and Related Agencies

Questions for the Record
Hearing on the FY 2012 Budget Request
of the National Institute of Standards and Technology

1. On April 7, 2011, I wrote the attached letter asking you to represent in detail how your agency would operate with a 25 percent reduction in funds, a 20 percent reduction in funds and a 10 percent reduction in funds. Will you provide the Committee with a copy of the reply for the record?

Answer: NIST defers to the Department for a response.

The Honorable Frank Wolf
House Appropriations Subcommittee on
Commerce, Justice, Science and Related Agencies

Questions for the Record
Hearing on the FY 2012 Budget Request
of the National Institute of Standards and Technology

Scientific and Technical Research Services

Tsunami Response

1. NIST's Physical Measurements Lab has developed expertise in radiation detection and measurement. Has NIST been asked to perform any analysis of the U.S.'s radiation detection capabilities in response to the disaster that continues to unfold at the Japanese nuclear facility?

   Answer: At this time, no one from the Physical Measurement Laboratory has been asked to perform any analysis of the U.S.'s radiation detection capabilities in response to the disaster that continues to unfold at the Japanese nuclear facility.

2. Has NIST been asked to engage in any studies with respect to the ability of U.S. nuclear facilities to withstand similar impacts, e.g. earthquakes, tsunamis, or other extreme weather events?

Answer: Currently, no one from NIST has been asked to engage in any studies with respect to the ability of U.S. nuclear facilities to withstand similar impacts, e.g., earthquakes, tsunamis, or other extreme weather events.

Priorities

3. What are NIST's top three funding priorities in this bill?

Answer: Of the entire requested increase, NIST would place top priority on the combined $120 million increase for initiatives in support of manufacturing. NIST programs targeting manufacturing include the Laboratory programs ($85.3 million) and the Industrial Technology Services programs: $12.3 million for the new Advanced Manufacturing Technology Consortia (AMTech) program, the $17.6 million increase to the MEP program and the $5.2 million increase for the Technology Innovation Program.

4. At any point has NIST conducted a base analysis of its research programs to determine if any programs have become obsolete or should be reduced in funding in order to accommodate higher priority or more current needs?

Answer: The NIST Laboratories regularly assess and refocus their scientific capabilities in order to provide the most advanced and relevant measurement science and engineering support to NIST's stakeholders in industry and academia. However, the demand to provide new services and capabilities as well as maintaining existing services that are still relevant to stakeholders in industry and academia exceeds the savings in resources and staff that can be made available by eliminating lower priority activities.

5. The NIST budget includes references to greenhouse gases, green technology, increased energy efficiency, reduced environmental impact. How do these activities fit into NIST's core capabilities and research activities in standards and measurement? Are these new initiatives as critical to innovation, the economy, and life and safety as nanotechnology, neutron research, or disaster resistant buildings, for example?

Answer: Developing new and cleaner sources of energy while reducing atmospheric emissions from energy production is an Administration priority. This goal is especially challenging, given the Nation's dependence on fossil fuels and projections that U.S. energy demand will grow 29 percent by 2030.[i] NIST's efforts in support of this are focused on creating measurement tools and standards for developing cleaner electrical power and improving energy efficiency, issues that are directly linked to NIST's core

mission of providing measurements and standards. In the area of energy efficiency NIST's efforts in developing measurement technologies, standards and test methods that can support the next generation of higher efficiency photo-voltaic panels will support an industry that in 2010 accounted for 93,000 jobs in the United States. NIST work in developing measurement tools and standards for energy efficient buildings will help reduce U.S. energy consumption, as buildings use 40 percent of all U.S. electricity production. Furthermore, NIST work on development of standards for the Smart Grid is critical to the actual deployment of the Smart Grid which will rely on the adoption and production of several new technologies. This work will create opportunities for U.S. manufacturers and the potential for creating new jobs -- which currently estimated by GridWise Alliance, a Smart Grid industry group, could number up to 280,000.

Another area of environmental stewardship that NIST is exploring involves manufacturing. The manufacturing sector, including all buildings used for manufacturing, is the largest consumer of energy (45 percent),[ii] the second largest consumer of mined materials (21 percent),[iii] a major producer of solid waste (10 trillion kg per year),[iv] and a significant user of hazardous materials—all of which are implicated in global environmental problems. Increasingly stringent regulatory restrictions, consumer preference for environmentally friendly products, and other factors are forcing manufacturers to pursue more sustainable processes. To address sustainability effectively, manufacturers need to measure, control, and manage sustainability in terms of economic, environmental, and societal impacts across the five major phases of a typical product's life cycle: raw material selection, product realization, distribution, customer use, and material recovery. NIST is supporting this by improving methods and standards for life cycle analysis, material recycling, and integrated design and production.

Internet Security

6. NIST is requesting an increase of $24.5million to create a National Strategy for Trusted Identities in Cyberspace (NSTIC). Please explain how this initiative and why it is necessary?

Answer: The request for NSTIC would support the development of a vibrant Identity Ecosystem where individuals, businesses, and other organizations enjoy greater trust, privacy and security as they conduct sensitive transactions online – and that can serve as a platform for innovation in the United States. Of that $24.5 million, $7.0 million would support the National Program Office (NPO), and $17.5 million would support the NSTIC Grant Program to conduct pilot projects of trusted authentication systems for various applications such as government services, e-commerce, and health IT. The NPO would reside within the Department of Commerce to coordinate Federal Activities needed to implement the Administration's National Strategy for Trusted Identities in Cyberspace (NSTIC). This initiative was established in direct response to the recommendations of the *White House Cyberspace Policy Review* to will raise the

level of trust associated with the identities of individuals, organizations, services, and devices involved in online transactions.

A core focus of NSTIC is to help the country address some of the key barriers – such as cost, interoperability and privacy – that have prevented Americans from obtaining and regularly using stronger authentication technologies. Passwords today are easily defeated through a variety of attacks from cybercriminals and identity thieves, and do not provide appropriate levels of security for many online transactions. Because of this, many transactions that could be online – in health care, banking, government, and other sectors – still require individuals to appear in person. NIST will work collaboratively with industry to develop standards and best practices that will remove these barriers, enabling American consumers, businesses, governments and other organizations to more easily adopt stronger types of authentication that augment or replace passwords.

The National Program Office (NPO) will be responsible for coordinating the processes and activities of organizations that will implement the Strategy. NIST – with its long history of working collaboratively with the private sector to develop standards and best practices for cybersecurity and identity management – is uniquely suited to work with the private sector to bring the collective expertise of the nation to bear in implementing the Strategy.

The NPO will lead the day-to-day coordination of NSTIC activities, working closely with the Cybersecurity Coordinator in the White House. The National Program Office will:

- Promote private-sector involvement and engagement
- Support interagency collaboration and coordinate interagency efforts associated with achieving programmatic goals
- Build consensus on policy frameworks necessary to achieve the vision
- Identify areas for the government to lead by example in developing and supporting the Identity Ecosystem, particularly in the Executive Branch's role as a provider and validator of key credentials
- Actively participate within and across relevant public- and private-sector fora
- Assess progress against the goals, objectives, and milestones of the Strategy and the associated implementation activities.

For further information, please refer to the recently released National Strategy for Trusted Identities in Cyberspace (NSTIC), http://www.whitehouse.gov/sites/default/files/rss_viewer/NSTICstrategy_041511.pdf.

7. Please expand on the statement in the NIST budget materials that states that, *"a user will no longer be required to maintain dozens of passwords, for both public and private use."* So people will have one id for both work and private use? Where will the privacy boundaries be?

Answer: NSTIC does not envision – nor does it mandate – that consumers will have only one ID. Rather, NSTIC is focused on the creation of a robust, private sector-led Identity Ecosystem, where consumers could choose from dozens of providers of strong, interoperable, privacy-enhancing credentials for online identification and authorization. The strategy envisions that these providers would each be competing in the marketplace for business, and that consumers could choose to use as many digital identities from as many identity providers as he or she would like.

Of course, an individual would be free to choose to use only a single identity provider, much as many people today choose to use the same username and password for logins at multiple sites. But to be clear, NSTIC would not require this, nor is NSTIC focused on trying to drive consumers to such an outcome.

NSTIC proposes to rely on the private sector – not government – to develop a wide range of identity solutions that Americans can use to better protect their privacy and security in online commerce. Central to the NSTIC vision is a system that allows individuals to have multiple identities and, when an individual so chooses, to engage in online activity anonymously and pseudonymously.

Protection of Privacy is one of the NSTIC's guiding principles. NSTIC will protect privacy through ensuring that any identity solutions deployed under NSTIC adhere to eight Fair Information Practice Principles (FIPPs). In brief, the principles say that personally identifiable information (PII) must be:

- collected and used only in ways that are clearly communicated to individuals
- collected or kept only as needed for a designated purpose
- secured against unauthorized access.

Auditing and accountability processes also must be in place to ensure the FIPPs requirements are being followed.

8. What are the short and long-term goals of the NSTIC?

Answer: For FY 2012, key NSTIC goals include:

- Formal establishment of the National Program Office
- Establishment of a private-sector led steering body, as described in the Strategy, to bring together interested stakeholders and administer the standards development and accreditation process for the NSTIC.
- Material progress in developing consensus among stakeholders that can produce draft standards in areas such as technology, privacy and operating rules
- Selection and execution of at least three pilots which explore NSTIC use cases and lay the foundation for the creation of the Identity Ecosystem.

The long-term goals of NSTIC are to develop a vibrant Identity Ecosystem where individuals, businesses, and other organizations enjoy greater trust and security as they conduct sensitive transactions online – and that can serve as a platform for security, privacy and innovation in the Unites States.

The NSTIC envisions that identity solutions will be:

- privacy-enhancing and voluntary
- secure and resilient
- interoperable
- cost-effective and easy to use.

9. Who are the public and private partners in this effort?

Answer: Both public and private partners are involved in this effort. In the public arena, the Department of Commerce is the lead agency involved with the implementation of NSTIC. The Department of Commerce plans to establish a National Program Office (NPO), led by the National Institute of Standards and Technology and the National Telecommunications and Information Administration, to coordinate the federal activities and private sector efforts needed to implement the NSTIC. The office would become the focal point to bring the public and private sectors together to meet this challenge. The President's FY 2012 Budget request supports this plan to establish the NPO.

The Strategy itself was authored by the White House. The Department of Commerce, Federal Trade Commission, Department of Homeland Security, and General Services Administration were among the agencies consulted by the White House in the creation of the Strategy.

All agencies have a role in making the NSTIC successful. The NSTIC was developed to align with other existing government efforts, including Homeland Security Presidential Directive 12 and the Federal Identity, Credentialing, and Access Management program. By implementing these efforts, all Federal agencies support the NSTIC and the use of secure, efficient, easy-to-use, and interoperable identity solutions.

In the private arena, no private organizations are formally involved with NSTIC; however, many provided input as the draft strategy was refined. Organizations representing 18 different business and infrastructure sectors and 70 different non-profit and federal advisory groups were consulted in developing the Strategy. The NSTIC has received wide support from a number of companies, industry associations, privacy advocates, academics and other stakeholders; a list of comments on NSTIC from them is at http://www.nist.gov/nstic/what-others-are-saying.html.

Just as with the NSTIC's development, the implementation of the NSTIC will require broad collaboration and coordination with industry; State, local, tribal, territorial, and international governments, communities of interest and advocacy groups. This

implementation will be private sector-led; the role of the government is to act as a partner and supporter of the private sector, to lead by example as an early adopter, and to advocate for and protect individuals, striving for the enhancement of privacy and protection of civil liberties.

10. Why does the U.S. need to conduct research in this area?

Answer: The Identity Ecosystem is composed of technology and policy that must evolve to accommodate:

- Rapid and unanticipated advances in technologies that continuously revolutionize what can be done and how it is done
- Continuous innovation in imaginative new services, resources, and capabilities that increase the value of cyberspace to all sectors of society
- Ever increasing needs and expectations for cyberspace.

As these trends constantly reshape cyberspace, the Identity Ecosystem must be continuously improved, stretching to meet new needs, enable new opportunities, and address future cyberspace threats. This requires the Federal Government to work in partnership with the academic and private sectors, both domestic and international, on interdisciplinary S&T and R&D. Sustained, strategic investments will allow the U.S. to continually improve the security, reliability, resilience, and trustworthiness of the identification, authentication, and authorization of entities in cyberspace. Moreover, these efforts should extend beyond the technical to address issues like usability, privacy, incentives, and processes. The Federal Government will also continue to promote the transfer of government-sponsored S&T and R&D results to the private sector, to ensure that the Identity Ecosystem adopts and deploys the advances that emerge from this effort.

Smart Grid

11. Per the *Energy Independence and Security Act of 2007*, NIST leads a nationwide effort to expedite development of interoperability standards that enable two-way flows of energy and information on the Smart Grid. NIST is requesting an increase of $9 million to continue its research on Smart Grid research. What is the Smart Grid and why is this an important area of research?

Answer: The Smart Grid refers to the modernization of the electrical grid through the application of information and communications technologies that enable the integration of renewable and distributed energy sources, provide consumers with tools to manage energy usage and control their costs, make the grid more efficient and reliable, and ensure electric vehicles can be supported without overloading the grid. Efficient and reliable operation of the grid utilizing these new technologies requires research to develop new measurement capabilities and models that do not exist today. For example, the introduction of renewable energy sources into the grid requires new modeling techniques to accurately forecast and

measure renewable energy production and control loads more dynamically to maintain balance in the grid. Another example is the need for research to address the ever-changing cybersecurity threats to the Smart Grid.

Research on the Smart Grid is an important area of research because we need to contend with an electrical grid that consists of more than 9000 power generation plants that are connected to more than 300,000 miles of transmission lines supplying electricity to residential and business consumers all over the country. The introduction of distributed renewable energy sources such as solar panels, wind turbines, and fuel cells brings additional challenges in integrating these systems seamlessly into the grid through the use of smart meters. The benefits of a Smart Grid will truly be realized with the development and deployment of smart appliances that will use demand pricing information to operate in a manner providing consumers the greatest economic benefit, while also helping achieve the goals of minimizing energy consumption. Investments in the development and acceleration of Smart Grid standards will reduce our dependence upon and vulnerability to foreign oil, and threats to the nation's electrical grid, while improving cyber security of the grid, and grid reliability. It will also enable the development and deployment of electrical vehicles. All these factors will directly contribute to the development of U.S. jobs. Major appliance manufacturers such as Whirlpool Corporation and GE have publicly announced plans for introduction of smart appliances, and have indicated the lack of interoperability standards as the greatest risk to their plans. Thus, interoperability and seamless communication flow between these different components and systems is essential

12. Where does the U.S. rank with respect to other developed nations and their use of smart grid technology?

Answer: The U.S. American Recovery and Reinvestment Act of 2009 (Recovery Act) provided $4.5 billion to jump start smart grid deployment, and coupled with private matching investments, this represents a $10 billion initial investment in smart grid deployment. This U.S. Smart Grid Investment Grant program became a model for similar grants programs in other countries such as China and Australia. The U.S. is also regarded as the global leader in the development of the technical standards underpinning the Smart Grid. However, these Recovery Act grants are a small part of the investment that is needed to modernize the electric grid in the U.S., the majority of which must be made by the private sector. The Electric Power Research Institute estimates that Smart Grid investment will require between $338 billion and $476 billion over 20 years. The U.S. is rapidly falling behind other major economies in the actual deployment of Smart Grid technologies. China announced an investment of $7.3 billion in stimulus grants, loans and tax incentives in 2010. In addition, State Grid Corporation of China has just announced that it plans to boost the investment in the country's power grid to $391 billion over the next five years. Sweden became the first European country to convert 100 percent of its meters to smart meters while the U.S. is at about 17 percent. The U.S. is far behind several other countries in renewable power generation capacity enabled by the Smart Grid, such as solar power. Germany has 9,785 MW in capacity as compared to 1,256 MW for the U.S. in 2009. Although the Recovery Act funding will support deployment of nearly 1000 phasor measurement units (PMUs) in the U.S. over the next several years, China has already deployed 1500 PMUs and additional deployments are ongoing.

Health IT

13. NIST is requesting an increase of $9 million to accelerate industry-led standards development related to the deployment of a nationwide network and interoperable electronic health records. Is this program one of NIST's priorities?

Answer: The Health IT program, to enable a nationwide network and interoperable electronic health records, is one of NIST's priorities. It is consistent with congressional and administrative priorities and with key activities assigned to NIST in the Health Information Technology for Economic and Clinical Health (HITECH) Act. In addition, a major objective outlined in the U.S. Department of Commerce's Strategic Plan: FY 2011-2016 is to provide the measurement tools and standards to enable innovation and enhance efficiency, and specifically directs NIST to develop interoperability standards for health IT so that industry has "confidence to invest in these new technologies by broadening the market and decreasing the limitations inherent in legacy systems."

Despite progress since the passage of the HITECH Act, today's healthcare industry lags behind other fields in the use of information technology. For example, even though $1 out of every $6 of the U.S. economy is spent on healthcare, 7 out of 10 primary care doctors still do not have electronic health records and only 44 percent of hospitals anticipate being prepared for meaningful use stage 1. Greater adoption and use of electronic health records can reduce the number of medical errors and lead to direct reductions in healthcare costs. Standards-based interoperability is essential to realize wide deployment of electronic health records and their full potential to improve the quality and efficiency of the Nation's healthcare system.

The requested increase will build on NIST's previous successes in this area and will allow NIST to continue its responsibilities articulated in the HITECH Act. Specifically, NIST will:

- Accelerate development and harmonization of standards in health IT for clinical areas identified as national-level priorities
- Create a health IT testing infrastructure
- Enhance the security and privacy of health IT systems
- Perform foundational research to develop and implement an objective, repeatable procedure for measuring and evaluating the usability of health IT to help developers of software and computer systems for doctors' offices, clinics, and hospitals improve the ease of use of electronic EHRs
- Enable health care delivery beyond traditional physical locations
- Perform cutting edge R&D on related emerging technologies.
- Collaborate with ONC on development, implementation, and operation of the permanent EHR certification programs
- Collaborate on the standards, certification criteria, and test tools for Stage 2 Meaningful Use and Stage 3 Meaningful Use

With this funding, NIST will enable a robust U.S. healthcare system that is safer, more affordable, and more accessible, and that will support all healthcare applications including clinical applications, home e-based healthcare, clinical research, medical training, and public health, facilitated by new standards and testing for health IT.

14. What is NIST doing in this area?

Answer: NIST has been collaborating with industry and others to improve the healthcare information infrastructure since the 1990s. NIST IT researchers have an internationally respected reputation for their knowledge, experience, and leadership. Since 2004, NIST has worked closely with the Department of Health and Human Services' Office of the National Coordinator for Health IT (HHS/ONC).

The role of NIST is further articulated in the Federal Health IT strategic plan and the Health Information Technology for Economic and Clinical Health (HITECH) Act to:

- Advance healthcare information enterprise integration through standards and testing
- Consult on updating the Federal Health IT Strategic Plan
- Consult on voluntary certification programs
- Consult on health IT implementation
- Provide pilot testing of standards and implementation specifications, as requested.

Currently, NIST health IT research and development areas include:

- Providing technical expertise to leverage industry-led, consensus-based standards development and harmonization of basic standards needed for EHRs, including finding patients, discovering patient information, retrieving patient information, sending patient information and allowing information to be sent, such as lab test results.
- Developing test tools to ensure that the standards are complete and unambiguous and can be implemented correctly.
- Collaborating with ONC on the development, implementation, and operation of the temporary certification program, having already developed the 45 test procedures used by vendors to ensure that EHRs adhere to the standards and criteria defined by HHS/ONC for Stage 1 Meaningful Use.
- Advising the HHS Office of the National Coordinator for Health IT (ONC) and the HHS Office for Civil Rights (OCR) on processes and technologies to secure health information as well as leveraging current and emerging security automation specifications and apply them within the context of healthcare, as well as engaging in broad outreach and awareness activities focusing on current and emerging threats to health information, as well as technologies and methodologies that can be used to help combat those threats, resulting in stronger protection of health information.

- Developing a road map for research and development that will incorporate key elements of user-centered design principles and standards-based approaches to evaluate and compare the usability of EHR systems.
- Initiating cutting-edge R&D in areas such as medical device interoperability, defining improved methods for acquiring and displaying images for telemedicine applications, identifying best practices and support standards development for the long-term preservation and management of electronic health records, as well as conducting research related to ubiquitous delivery of physiological signals to/from the human body via radio frequency-enabled wearable or implantable devices.

Cloud Computing

15. NIST is requesting an increase of $5 million to define government cloud computing business cases. Please explain cloud computing and NIST's role in this arena? Will cloud computing eventually take away the need for government agencies to spend funds on technology refreshment?

Answer: Although the power of modern cloud computing systems is new, the ideas behind cloud computing reach back decades. In the early 1960s, researchers proposed the idea of computing as a utility, similar to other services such as gas or electricity. Around the same time, techniques to make a single computer appear to be many separate "virtual" computers were developed and implemented on mainframe computers. Some of the building blocks for cloud computing were in place, but performance and costs were barriers, and networking was inadequate. Therefore, cloud computing is a model of computing that evolved from prerequisite technologies which have matured to the point where this vision of Information Technology as a utility service is viable. An abridged version of the NIST definition, widely cited, is: "Cloud Computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released by the user."[v]

This most visible early NIST contribution was the cloud computing definition, which has been widely adopted and helps to clarify a complex emerging information technology paradigm. NIST serves as a technical advisor to the Federal CIO Council, and has issued Special Publications which provide cloud computing security guidance. More broadly, NIST has a technology leadership role in accelerating U.S. government agency adoption by collaboratively developing a U.S. Government Cloud Computing Technology Roadmap. This roadmap, which is targeted for an initial draft release at the end of FY 2011, will identify high priority security, interoperability, and portability requirements which must be met to support U.S. government adoption of cloud, and the standards, guidance, and technology which are needed to satisfy these requirements.

NIST is well qualified and particularly effective in this role because it is recognized as a neutral objective party and has proven and productive processes that are effective in technology collaboration with government agencies, industry, standards organizations, academia and the international community. This experience and expertise positions NIST to lead and facilitate translation of USG functional mission requirements into specific technology requirements, and to facilitate the ability to leverage the strengths and work of different organizations toward a common purpose of maturing technology.

Cloud computing will not, in the foreseeable future, directly eliminate all requirements for technology refresh capital investment. However, cloud computing does have the potential to greatly reduce the requirements, and the expectation is that the trend will expand over time. First, cloud computing leverages excess capacity, so even in the case where the government adopts a private (government owned and operated) or government community cloud computing model, less infrastructure will be required. Second, cloud computing services procured through a public cloud computing model eliminate the requirements for government upfront capital investment in infrastructure. Fewer government owned and operated infrastructure translates into lower technology refresh requirements.

16. How is NIST working to ensure that government information will be secure as more and more information technology operations are outsourced?

Answer: To help U.S. government agencies make risk based management decisions regarding when and how to apply the cloud computing model, NIST is actively involved in translating U.S. government agency mission requirements into technical security requirements. NIST is also focusing on portability and interoperability, which are tightly coupled with security. NIST is working with federal CIOs, state and local governments, industry, industry consortia, and academia, including security experts, to assess the extent to which existing security requirements, standards, and guidance support the cloud computing model. NIST is working with these same stakeholders to prioritize and develop guidance. In 2010 and 2011 NIST issued three Special Publications which apply to cloud computing:

- Final Guide to Security for Full Virtualization Technologies, January 2011 (Final)
- Guidelines on Security and Privacy Issues in Public Cloud Computing, January 2011 (Draft)
- NIST Definition of Cloud Computing, January 2011 (Draft).

NIST is planning release of a fourth Special Publication by May 2011: DRAFT NIST Cloud Computing Synopsis & Recommendations.

A complete review of the NIST Cloud Computing work can be found on the NIST cloud web site (http://www.nist.gov/itl/cloud/index.cfm); particularly under the "Useful Information for Cloud Adopters" link.

17. I have read that IBM is investing in a new Cloud Computing Data Center in Singapore. They have seven such "cloud labs" in the Asia Pacific region.

Answer: [NOTE TO DOC: NO ANSWER IS NEEDED SINCE THERE IS NOT A QUESTION ASKED]

18. Where does the U.S. stand with respect to our competitors and cloud computing?

Answer: U.S. firms are commonly recognized as leaders in the development and implementation of the cloud computing model. The majority of commercial cloud computing services are provided by firms that originated in the U.S., although their services are marketed and supplied internationally. Many of the beneficiaries of cloud computing are small businesses and organizations which have not historically investing in Information Technology.

The U.S., including industry through representation in Standards Development Organizations and consortia, is active in the development of standards. However, there is a keen competition internationally to shepherd the formal standards development process to ensure that U.S. firms do not dominate the cloud computing space as the cloud computing model matures and expands.

The U.S. government is aggressive in pursuing the implementation of the cloud computing model to reduce costs and improve services, but not more aggressive than other countries. For example, the European Commission has launched a Digital Government Initiative which includes cloud computing as a central strategy, the Japanese METI Digital Japan Creation Project plan includes a nationwide Cloud Computing infrastructure, referred to as the Kasumigaseki Cloud, and China is building a city-sized cloud computing and office complex that will include a mega data center. Industry analysts cite the latter as one of the projects fueling that country's double-digit growth in IT spending.

19. Are U.S. companies making similar investments in the U.S.?

Answer: NIST may not be the appropriate agency to determine this since it is outside our area of responsibility.

20. Are foreign information technology firms making investments in the U.S.?

Answer: NIST may not be the appropriate agency to determine this since it is outside our area of responsibility.

Postdoctoral Research Program

21. NIST is requesting an increase of $3 million for a total program of $14.4 million for its Postdoctoral Research Program. Will the additional funding enable NIST to hire up to the authorized level of 120 associates per year? On average, how many postdoctoral research students does NIST support each year? Is this number going up or down?

Answer: It is expected that the extra $3 million of funding will be able to increase the level of centrally-funded postdoctoral associates to approximately 45-50 per year, as compared to the 30-35 centrally-funded positions that are currently possible. In the years 2008-2010, we have been supporting an average of 33 postdocs per year from the central funds.

The postdoctoral program did benefit from the approval of the ARRA-funded projects specifically for the postdoctoral research program, and we had a temporary increase in the overall awards in the years 2009 and 2010 to 111 awards in 2009 and 64 awards in 2010.

22. What does NIST think the U.S. should do to encourage more of our young people to enter the sciences so that the U.S. can remain competitive in the long-run?

Answer: The U.S. needs to provide opportunities to engage the entire pipeline of potential scientists and engineers, from K-12 to postgraduate and beyond, and to develop opportunities at every level. First, at younger ages, especially for middle and high school students, to keep science, technology, engineering, and mathematics topics interesting, and to raise awareness about the diversity of opportunities available in STEM fields. This includes providing opportunities for the teachers to enhance their classroom practices and STEM lessons, to transfer to their students an enthusiasm toward STEM fields, to provide a better understanding of the areas that they teach, and raise awareness in the students of the relevant of STEM fields in their everyday lives. Then, attention is needed to retain the interest in STEM fields and the opportunities to develop that interest through undergraduate and graduate education, to develop and maintain a well-qualified STEM workforcewhich also comes from diverse demographic backgrounds. Finally, providing formal training programs to early professionals in STEM fields, as well as formal training for continuous workforce development are key elements to enable the U.S. to respond to changing technological requirements.

Baldrige Program

NIST is proposing to reduce funding for the Baldrige program, from nearly $10 million to $8 million, with a plan to transition the program out of Federal funding.

23. While a worthwhile program, the Baldrige program appears to be a program that is more readily suited to the private sector, particularly in these lean budget times. This program has been around for some 24 years and has assisted the private sector in developing quality and performance strategies. Is the Baldrige program a core, scientific NIST activity?

Answer: While the Baldrige Program is not a scientific activity, its enabling legislation, which called for the Program "to improve performance and competitiveness of U.S. organizations in ways that enhance economic security and improve quality of life," supports NIST's mission "(t)o promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life." . The FY 2012 budget request will evaluate alternative sources of funding and alternative cost models consistent with the Administration's goal of transitioning the program out of federal funding.

24. How does NIST envision this activity's transition to non-governmental funding taking place? What would be the likely alternative sources of funding?

Answer: NIST plans to explore alternatives to the current public-private partnership model per the requested FY 2012 budget proposal. As part of the evaluation, NIST will examine potential alternative sources to replace the $9.6 million in Federal funding that supports oversight, training, and product and criteria development. The Foundation presently has a limited endowment and would be unable to provide direct support beyond its contribution of $1.3 million, at least for the near future.

Corporate Services

25. How does NIST's Corporate Services program, which is essentially flat-lined at $19.5 million in FY 2012, differ from its Working Capital Fund?

26.

Answer: The NIST's Corporate Services program provides Information Technology (IT) support for NIST's technical programs to ensure secure, centrally managed IT infrastructure resources as well as provide software applications which enable and manage the dissemination of NIST scientific data to the public. In addition, the Corporate Services program provides the resources for the Commerce Business System and the interfacing internal and external administrative and management systems for adequate financial management. The NIST Working Capital Fund presented in the budget reflects the full-time equivalent employment and obligations associated with the reimbursable work performed by NIST for other agencies and the public.

27. A portion of the Working Capital Funds are from appropriations from Federal clients in return for NIST technical services. An October 2010 GAO study on NIST's Working Capital Fund found that NIST lacks a high-level, senior management focus on managing its interagency workload. What has NIST done to address this concern given the number of other Federal agencies who are seeking expert assistance from NIST?

Answer:
By February 2, 2011, NIST developed a Corrective Action Plan to address all the concerns identified by the GAO in their study. Implementation of this Plan is ongoing.

NIST has taken the following actions to address this GAO concerns:

1. NIST senior management has created an Interagency Agreement Team (IAT) to overhaul NIST processes for handling Other Agency Agreements to establish a solid reliable process that is timely and predictable, to ensure a smooth flow of funding for critical programs from outside sources, to ensure that NIST is managing the funds from other agencies in a manner that is consistent with current regulations, and most importantly, will improve NIST's ability to meet its mission requirements.

Goals of the IAT:

a. Understanding of the current processes at NIST.
b. Development of new processes that ensure positive control over agreements in all phases of their life-cycle.
c. Recommendations to the NIST Associate Directors (AD) on how best to implement the new processes throughout NIST.
d. The Interagency Agreement team will encompass members from the AD for Laboratory Programs and AD for Innovation and Industry Services and the Department of Commerce General Law Division.

2. Pat Gallagher, NIST Director sent a memo dated March 23, 2011, to the NIST Associate Directors reinforcing the importance of managing Interagency Agreements.

4. The NIST Associate Directors for Management Resources, Laboratory Programs, and Innovation and Industry Services are communicating to their respective Organizational Unit (OU) Directors, Deputy Directors, Division Chiefs and staff the importance of managing Interagency Agreements.

5. NIST is developing and implementing an OU Director Certification process where the Director of an OU formally certifies by signature that appropriate current resources exist to begin and perform new and existing work in a reasonable time frame, i.e., within 120 days, and implementing a oversight process.

6. NIST will hold senior management accountable for strategically managing Interagency Agreements by tasking the Office of Workforce Management (OWM) with developing quantifiable performance metric(s) that are being included in their performance plans for FY2011

Industrial Technology Services Account

Technology Innovation Program

28. If we have to prioritize NIST programs given the fiscal constraints the Committee is under, where does TIP rank in relation to core NIST research and MEP?

Answer: The President's Budget for FY 2012 requested increases for targeted programs including NIST research programs, MEP, and TIP, as priorities for stimulating innovation and providing support to manufacturers

Advanced Manufacturing Technology Consortia

29. NIST is requesting an increase of $12 million to establish an Advanced Manufacturing Technology Consortia (or AMTech) to establish industry-led long-term research and development grants and research projects. Grants will be competitively awarded to consortia comprised of industry, universities, and private sector partners. What sort of industry research needs does NIST envision will be supported with this funding?

Answer: AMTech creates the possibility for multiple industry stakeholders to share financial and scientific resources, together with State and local government interests as well as technical innovators at universities and government laboratories. The AMTech program fills a critical gap by providing these resources for directed basic research that is seen as too long-term and has too much scientific risk for industry to invest in on its own. Research challenges addressed by an AMTech consortium are pre-competitive: all industry members will benefit from the R&D outcomes and the partnerships are built on open access to intellectual property. The research topics will vary by consortia and could range from new techniques and methodologies necessary to reliably manufacture advanced materials in order to take advantage of the unique properties that have been identified in the laboratory but have not yet been transitioned into products, to R&D needed to develop instrumentation and manufacturing technologies that would benefit multiple industry partners.

30. The NIST budget states that it is proposing this program because U.S. research and development efforts have shifted toward short-term research. Is NIST seeing a general shift toward short-term gains as opposed to long-term research goals? Is the U.S. again undermining its manufacturing base for short-term gain?

Answer: The U.S. economy—once the most R&D intensive in the world—now ranks 7th with an R&D intensity of 2.77 percent. A component of this decrease is the decline in federal R&D spending, which over the past 50 years has declined as a share of GDP by 163 percent. With respect to manufacturing, this sector has an R&D intensity of 3.7 percent based on industry's own R&D funds, which when compared with other R&D intensive sectors which have intensities ranging from 6 to 22 percent paints a rather stark picture.

Additionally the composition of R&D, is important because U.S. industry has progressively shortened its investment time horizons in response to pressures from global competition (the world now conducts approximately $1.3 trillion of R&D each year). This increases the pressure on government to help industry over the "valley of death," as the early-phase research that proves new technological concepts is called. Instead, government funding as a share of GDP is declining. With industry no longer have the capability or incentive to make these risky long-term investments, and the majority of federal funding targeted at pure basic R&D, or mission oriented R&D, there is a lack of investment in critical directed basic research needed to increase the efficiency of current high-tech industry and to transition critical new technologies from the laboratory to the domestic marketplace.

31. How will NIST measure the success of this program?

Answer: Continual evaluation will be an integral element of the AMTech program in order to determine the long term impacts, and more importantly in order to be able to effectively manage the R&D portfolios within each of the funded consortia. Metrics of the program will include:

- Creation of Industry roadmaps
- Attraction of industry and state funding of directed basic research
- Attraction of State and venture funds to support commercialization
- Funding research activities and support graduate and post-doctoral researchers
- Production of new scientific knowledge and marketable inventions
- Creation of new companies and jobs in high value added sectors.

Manufacturing Extension Program

32. NIST is requesting an increase of $18 million for the Manufacturing Extension Program for a total program level of $143 million, a 14% increase. This funding will support existing investments in environmental business practices; renewable energy; market diversification; and export opportunities for domestic manufacturers, for example. What will this additional funding provide? Additional funds to each center or will NIST manage the increase centrally?

Answer: Building on competitions started in FY 2010, additional funding will be competitively awarded to MEP Centers and other not-for-profit organizations to focus on the development and expansion of next generation services to respond to manufacturers' challenges and position them to respond to new business opportunities. These services include technology innovation and commercialization, market diversification, supplier development, export opportunities for domestic manufacturers, and environmentally sustainable business practices.

33. In response to growing threats from low priced imports and the reduced competitiveness of U.S. manufacturing, MEP refocused the MEP national network towards the next generation of products, focusing on increasing the number of new technologies manufactured in the U.S.-through supplier development, sustainability, workforce and continuous improvement activities. Is there an overall focus for the MEP program or can each Center determine its own research goals?

Answer: MEP's focus will remain on supporting U.S. manufacturers by providing the tools and services needed to increase profits, create and retain jobs, and save time and money. The nationwide network will continue to build on existing services that encompass innovation strategies, process improvements, green manufacturing, and developing the tools needed to solve manufacturers' challenges and help identify opportunities for growth. MEP centers customize their services and tools to address the needs of the manufacturers in their service regions. As future MEP competitions are held, centers will be encouraged to propose projects that foster innovative and collaborative approaches to address manufacturer's needs.

Public Safety Innovation Fund

34. The Administration is proposing a spectrum auction to finance a government-wide Wireless Innovation and Infrastructure Initiative. As part of this initiative, NIST is expecting to receive $100 million in FY 2012 for a Public Safety Innovation Fund to work with industry and public safety organizations to conduct research and develop standards and technologies. As part of this program, NIST will develop a Public Safety Broadband Demonstration Network, which NIST anticipates will later be used as a public safety education center where first responders can run emergency scenarios. The legislation authorizing this auction has not been sent to the Congress. Does NIST have any idea when that legislation will be sent to the Congress?

Answer: The Administration has developed the draft legislation and provided it to Congress.

35. When does NIST anticipate that the broadband network will be operational?

Answer: NIST's Public Safety Broadband Demonstration Network is currently operational with a limited number of industry participants. However, over the next few months the capabilities of the Network project are set to expand as new industry partners join the project. NIST has partnered with the Department of Commerce's Institute for Telecommunications Sciences (ITS) through their joint Public Safety Communications Research (PSCR) program in creating this Network. As of March 31, 2011, NIST and ITS have signed agreements, called cooperative research and development agreements or CRADAs, with over 20 companies. Over the next few months, many of these companies will deploy equipment on the Network.

NIST's PSCR program has undertaken this project because Congressional legislation has made broadband spectrum cleared by the Digital Television (DTV) transition in the 700 MHz band available to public safety. New public safety broadband communications will allow for a

unified system to foster nationwide interoperability. PSCR is deeply involved in the rapidly progressing 700-MHz broadband activities. This Network project will serve as a vendor-neutral environment where public safety, industry, and other stakeholders can observe how new broadband technologies can meet public safety's communication needs. Additionally, it provides manufacturers a location for early deployment and evaluation of their systems in a multi-vendor environment. No government or independent laboratory facilities currently exist in the United States to test and demonstrate the behaviors of this yet-to-be-deployed first-responder network.

Results and lessons learned from the PSCR program's Demonstration Network will be available to all emergency responders, vendors, carriers, academia, and other pertinent stakeholders to understand how the broadband systems function and determine how the systems will meet user needs. Interested agencies can visit the Network and witness demonstrations of the technology executing public safety specific test cases that relate directly to their operational environments. Additionally, the Federal Communications Commission has granted several waivers to states and localities around the Nation to begin building broadband systems. The Demonstration Network will provide a place where early builders (waiver recipients) can gain information about the technology that will help them make informed decisions when procuring systems.

36. How will this work build on the work that has already been done?

Answer: NIST has worked through its Public Safety Communications Research (PSCR) program for over a decade to forward standards and perform research, development, testing, and evaluation for public safety communications. PSCR will use all of this experience and work to build the technical foundation for a truly national and interoperable public safety broadband network.

PSCR's staff of federal engineers has been deeply involved for many years in the acceleration and adoption of Project 25's (P25) wireless communications standards. P25 is a suite of standards for Land Mobile Radio (LMR). LMR is the primary voice communication system (with limited low-speed data) for the vast majority of first responders today. Additionally, PSCR created, in partnership with DHS, a P25 Compliance Assessment Program that has helped public safety purchasers have an increased level of confidence that the equipment they purchase meets the requirements of the standard.

PSCR has also led an effort with P25 to modify the existing standards to improve voice intelligibility on behalf of the fire fighting community. Fire fighters had pointed to incidents when alarms and alerts essential to keeping them safe while fighting a fire were causing serious communication problems. PSCR worked with the fire fighting community to document, quantify, and put forward technical changes to P25 to improve the problem. In June 2008, PSCR published a technical report that details the testing completed and results and information gleaned from the testing. Additionally, PSCR worked with public safety practitioners to develop a best practices guide that enhances audio quality and intelligibility.

PSCR has also been at the forefront of broadband communications for public safety. PSCR provided the technical expertise necessary to establish an initial set of broadband requirements for the public safety community working in partnership with the National Public Safety Telecommunications Council's Broadband Task Force. Building on that effort, PSCR is currently working with industry on a 700 MHz Public Safety Broadband Demonstration Network project in Boulder, CO as mentioned in the previous answer. The Demonstration Network project is the only government or independent lab facility located in the United States to test and demonstrate public safety 700 MHz broadband networks and applications. This project brings together public safety users, federal policy makers, and industry to help understand the capabilities that broadband can provide and the unique requirements public safety has.

Additionally, PSCR has spearheaded efforts to bring interoperability to Voice over Internet Protocol (VoIP) technologies commonly used to bridge incompatible public safety wireless voice communications systems.

PSCR created and led a VoIP project to develop common requirements for bridging these interoperable systems and worked with the leading VoIP vendors to demonstrate how creating "profiles" based on usage scenarios could improve interoperability problems. As a result of this work, approximately 80% of manufacturers have adopted the VoIP implementation profile.

Outside of communications, NIST can build upon its 110-year history of assisting in the development of standards and technologies. These activities are at the core of NIST's mission. In addition to informing the development of standards for Smart Grid and electronic health care records, and a variety of other technologies, NIST has helped identify research and development priorities and administer grants for many multi-billion dollar programs. NIST has a long history in forwarding public safety related research and development efforts. NIST's Office of Law Enforcement Standards (OLES) has worked with various federal sponsors including the Departments of Homeland Security (DHS) and Justice (DOJ), numerous Standards Development Organizations (SDOs), industry, and the public safety community to establish body armor, forensics, and other public safety related standards.

37. Some ten years after the horrible events of 9/11, what is NIST's estimation of how far the U.S. has come with respect to ensuring that police and firefighters can talk with each other in a given city if another tragedy occurs?

Answer: NIST focuses primarily on standards and research, development, testing, and evaluation of public safety communications technologies. NIST's other federal partners in promoting the improvement of public safety communications have primary responsibility for the policy, governance, and assessment aspects of this effort. These include the Department of Homeland Security's (DHS) Office of Interoperability and Compatibility (OIC), Office of Emergency Communications (OEC), and the SAFECOM program; the National Telecommunications and Information Administration (NTIA); and the Department of Justice (DOJ).

Based on NIST's experience in standards and research and development testing and evaluation it is clear that the Nation has made much progress towards greater interoperability and improved communications. Localities and states have made major investments in new equipment and federal grant dollars have backed up these investments. An emphasis on collaborative planning at the local, regional, state, and national levels has improved coordination and investment decisions. NIST has also been active in working with its sponsor, DHS OIC, to accelerate standards for existing communications systems and bring new technologies to the market. However, this progress varies from city to city, county to county, region to region and state to state. Fundamentally, public safety still employs a wide variety of technologies that use a diverse set of spectrum bands. These conditions inhibit interoperability. A national public safety broadband network has the potential to overcome both of these issues.

In keeping with this, the Administration has begun focusing on setting the foundation for the potential communications revolution that a national broadband network could unleash. This effort offers a once in a century opportunity to build a new network from scratch using common technology and common spectrum across the Nation. To help ensure the investment the Nation makes in creating this Network is as efficient as possible, NIST has been working closely with its federal partners and the public safety community through its Public Safety Communications Research (PSCR) program.

As mentioned in the previous answer, PSCR provided the technical expertise necessary to establish an initial set of broadband requirements for the public safety community working in partnership with the National Public Safety Telecommunications Council's Broadband Task Force. Building on that effort, PSCR is currently working with industry on a 700 MHz Public Safety Broadband Demonstration Network project in Boulder, CO. The Demonstration Network project the only government or independent lab facility located in the United States to test and demonstrate public safety 700 MHz broadband networks and applications. This project brings together public safety users, federal policy makers, and industry to help understand the capabilities that broadband can provide and the requirements for public safety.

Construction of Research Facilities

38. NIST is requesting $25.4 million to complete the next phase of renovations at the Boulder lab. The FY 2013 request is $3.4 million. Will FY 2013 be the final funding amount needed for completion of the Boulder facility renovations? What improvements has NIST realized as a result of these ongoing renovations?

    Answer: FY 2013 will not be the final requested funding year for the Building 1 Renovation project. The renovation effort is part of a comprehensive multiyear plan for the construction of new laboratory space and the phased renovation of existing laboratory space at Building 1 of the over 60-year old Boulder, Colorado NIST site. This overall effort will address a number of inefficiencies and safety issues such as lighting, power distribution, power quality, electromagnetic interference, and standby emergency power for critical laboratory functions. Once completed, the renovation will provide lab spaee with enhanced temperature control to +/- 0.5 degree C, humidity

control to +/- 5%, continuous air flow with filtration to class 10,000, and new service corridors to provide lab support space for utilities in addition to the pedestrian corridor.

Building 1 is comprised of a central "spine" and six wings. The renovation is planned as a series of wing renovations that require funding over several years. Funding provided in FY 2010 and 2011 is being used to complete the planning and design for the entire renovation project, as well as to complete the partial renovation of Building 3 and to complete exterior renovations to Building 1 that include service corridors and other mechanical equipment rooms and spaces for utility distribution. The renovation of Building 3 will permit the relocation of the Instrument Shop Facility that is currently housed in Wing 3, and is the first step in vacating Wing 3 so that interior renovations can begin. With $25.4 million of funding in FY 2012, the exterior renovations and the interior renovation of Wing 3 will be fully funded. The renovation of Wings 4, 5, and 6 will be completed with future year funding requests.

Without these renovations NIST will be prevented from performing the most demanding research and measurement needed by industry and the scientific community. Even for the limited range of work that can be attempted, current laboratory conditions create significant inefficiencies, and the aging facility systems present life safety concerns. In terms of lost productivity, much research and many measurements can only be conducted sporadically when environmental conditions are temporarily stable and much experimental data and construction of nanoscale devices becomes worthless because of corruption due to poor laboratory conditions. This reduced productivity represents a direct loss of about $10 million per year to NIST Boulder laboratory programs. But the impact on the Nation is much greater. The results of numerous external economic impact studies demonstrate an economic benefit to the U.S. of about 40 dollars for every dollar invested in NIST research and measurement. The $10 million productivity loss represents a loss of about $400 million per year to the U.S. in unrealized economic benefits.

39. The remaining $59 million in the FY 2012 request is for NIST's safety, maintenance, and major repairs account. NIST received an additional $33 million for this account in the *American Recovery and Reinvestment Act*. In addition, the Boulder Lab received nearly $85 million and the NIST's Gaithersburg, Maryland location received $59 million in the *American Recovery and Reinvestment Act*. In total, NIST Construction received $360 million in the ARRA. As of March 25, 2011, NIST has obligated about $75 million, or 21%. About $285 remains unspent. In light of these balances, does NIST need all of the $59 million in FY 2012?

1. **Answer**The remaining $59 million in the FY 2012 request is for NIST's safety, maintenance, and major repairs account. NIST received an additional $33 million for this account in the *American Recovery and Reinvestment Act*. In addition, the Boulder Lab received nearly $85 million and the NIST's Gaithersburg, Maryland location received $59 million in the *American Recovery and Reinvestment Act*. In total, NIST Construction received $360 million in the ARRA. As of March 25, 2011, NIST has

obligated about $75 million, or 21%. About $285 remains unspent. In light of these balances, does NIST need all of the $59 million in FY 2012?

Answer: Under the ARRA program, NIST received $180 million for NIST's internal construction projects and $180 million for the external competitive construction grant program to be awarded to eligible institutions of higher education and other non-profits. The entire $360 million was obligated by September 30, 2010. As each of the projects progress through the construction phase, funds are disbursed (outlayed) to the contractors/grantees. All of the NIST construction projects are currently under construction including 10 of the ARRA construction grants projects; the remaining 6 grants will be under construction by this summer. The $59 million requested for the Safety, Capacity, Maintenance and Major Repair program (SCMMR) in FY 2012 provides funding for continued maintenance, repairs, and improvements for all of NIST's facilities.

With the ARRA funds for internal projects, NIST focused the SCMMR component of the $180 million on projects to enhance its energy efficiency goals and improve the performance of its aging facilities. These projects included: replacement of old, inefficient fume hoods with state-of-the-art variable air volume hoods; replacement of 40-year-old obsolete air handlers and related equipment with energy efficient equipment; installation of high performance, energy efficient windows in NIST Gaithersburg's 40-year old buildings; continued replacement of old lighting with energy efficient lights and motion-detecting sensors for automatic shut-off of lights in unoccupied areas; and installation of photovoltaic systems for solar power at the Gaithersburg site and at the radio station in Kauai, Hawaii to help lessen NIST's reliance on fossil fuels.

The FY 2012 budget request of $59 million represents NIST's annual program which addresses its aging and deteriorating buildings and infrastructure, which, if not addressed could threaten NIST's ability to provide the laboratory environment required for 21st century measurement science and research. Independent analysis recommends an annual investment of SCMMR funding equal to three to four percent of the value of the facilities, which would be approximately $70 to $80 million, annually. These independent engineering studies documented the need for increased funding to prevent building and infrastructure failures. The recommended funding level is based on the industry/commercial funding standard that will eventually allow the agency to adequately address its critical facility needs. There is current major repair backlog of approximately $463 million that these funds will be used to begin to address.

NIST's Role in Testing Name Validating Software

2. Please provide a report on NIST's involvement in the Information Sharing and Access Interagency Policy Committee Watchlisting and Screening Subcommittee. The Appropriations Committee understands that the Departments of State, Homeland, and

Justice are working together to determine the requirements each would need before procuring name matching software. The Committee understands that the above-mentioned agencies are asking NIST to compare and ascertain which software brings what strengths, weaknesses, and capabilities when it comes to name matching software. The Committee understands that the work of the Interagency Subcommittee is still in the early stages and that NIST is participating to gain a better understanding of the requirements. The Committee understands that each of these agencies has significantly different operational requirements, so achieving consensus will be a challenge for the Subcommittee. However, as the nation approaches the 10th anniversary of the 9/11 attacks the Appropriations Committee believes it imperative for the government to work together on this program and that NIST should be an active participant. The Appropriations Committee hopes that NIST will be a leader in this effort, considering the good work that NIST has done on a number of homeland security fronts.

Answer: NIST continues to be very much engaged in the activities and meetings of the Information Sharing and Access (ISA) Interagency Policy Committee (IPC) Watchlisting and Screening Subcommittee. As the work of the IPC allows all of the involved agencies to better understand and define the common operational requirements, NIST can take a more active role. However, requested validation of name matching software is not a simple task, but rather would require establishing a larger program including the requirements, representative and ground truthed datasets, metrics and methods, and the appropriate application of security and privacy protections. Due to these complexities, NIST feels that a cautious and informed approach is needed given that name matching is a new technical domain for NIST.

As an aside, NIST informed the Chair of the Subcommittee, Neal Latta, of a recently announced series of competitions, called The MITRE Challenge (http://www.mitre.org/work/challenge/), which is an open competition to encourage innovation in technologies involving identity resolution/multicultural person name matching; this may be relevant to the interests of the Subcommittee.

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[i] U.S. Energy Information Administration, "Annual Energy Review (AER): Energy Consumption by Sector," 2008, http://www.eia.doe.gov/emeu/aer/consump.html

[ii] Ibid.

[iii] Bureau of Economic Analysis

[iv] Office of Technology Assessment, Congress of the United States, *Green Products by Design: Choices for a Cleaner Environment*, OTA-E-541, 1992

[v] For the full definition, please see http://csrc.nist.gov/publications/drafts/800-145/Draft-SP-800-145_cloud-definition.pdf.

FRIDAY, APRIL 1, 2011.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

WITNESS

DR. JANE LUBCHENCO, UNDER SECRETARY OF COMMERCE FOR OCEANS AND ATMOSPHERE AND NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION ADMINISTRATOR

Mr. WOLF. We want to welcome you, Dr. Lubchenco for being here today. We want to discuss NOAA's fiscal year 2012 budget request which is $5.486 billion. This amount is $723 million or 15 percent higher than 2010. NOAA's budget request represents about 62 percent of the Commerce's entire budget request for fiscal year 2012.

Between 2008 and 2010, NOAA's funding increased by 22 percent, higher than any other program in this bill, more than the FBI, more than the National Science Foundation.

As we have been telling all the agencies that are testifying before us this year, the Congress will not be in a position to provide such increases.

The fiscal crisis facing the Nation is real and will require a level of austerity that goes beyond the President's budget.

We are going to ask, though, if you can help us, knowing that there are some things that you would not want to do, but I think you will have a better sense of what the priorities ought to be.

And so it is kind of like if you are shaving, cutting back, or doing something, I think you can help us insofar as to say, well, you know, the committee, this issue is really one that will—and so we do not want to postpone this, but we will postpone that program to be able to do this. But if you can help us as we go through that.

With regard to that then, I recognize Mr. Fattah for any opening statement.

Mr. FATTAH. I will reserve my opening statement because of the advent of votes, and we want to move through this, so thank you very much. Welcome.

Mr. WOLF. Thank you.

Your full statement will be in the record. You can proceed as you see appropriate.

Dr. LUBCHENCO. Thank you, Mr. Chairman. I appreciate that very much.

Ranking Member Fattah, Chairman Wolf, thank you very much for your leadership and support of NOAA. Your continued support for our programs is greatly appreciated as we work within the Department of Commerce to improve science, products, and services that are vital to supporting America's businesses, also its communities and its people.

The vital role that NOAA plays in the protection of life and property has recently been exemplified by the actions that NOAA has taken in the wake of the tragic events in Japan earlier this month.

The earthquake and resulting tsunami had far-reaching effects, and many of NOAA's programs played a critical role in life-saving information, providing that to emergency officials and the public both here and around the world.

Today I am honored to be here to discuss the President's fiscal year 2012 budget request which promotes innovation and American competitiveness and lays the foundation for long-term economic growth while making responsible reductions.

The budget recognizes the central role that science and technology play in creating jobs and improving the health and security of Americans and those abroad.

I wish to highlight the following in our fiscal year 2012 request: key savings, climate services, weather, satellites, research and innovation, fisheries and protected resource management, and coastal and ocean services.

The fiscal year 2012 request, as you noted, is $5.5 billion, a decease from the fiscal year 2009 request and an increase above the fiscal year 2010 enacted due primarily to our requirements to execute the restructured Polar Orbiting Civil Satellite Program.

As part of the Administration's Administrative Efficiency Initiative, NOAA analyzed its administrative costs and reduced nonessential spending by $67.7 million.

The fiscal year 2012 request includes proposed budget neutral reorganization that brings NOAA's existing but widely dispersed climate capabilities under a single management structure called the Climate Service.

If approved by Congress, it would have a budget of $346 million. Our climate services demonstrate the utility of improving our scientific capability.

Advances in science make it possible to provide useful information about the months to years time frame, data which is of potentially immense use to businesses, communities, and military operations.

The National Weather Service provides critical information to communities and emergency managers and is the Nation's first line of defense against severe weather.

The fiscal year 2012 request of $988 million envisions using cost-cutting and cutting-edge technologies to deliver more reliable forecasts, reduced weather related fatalities, and improve the economic value of weather, water, and climate information.

NOAA's satellites provide data and information for forecasts that enable safe transportation, earlier response to severe weather, and smart construction, as well as emergency rescue operations.

The fiscal year 2012 budget request for the satellite service is $2 billion invested in multiple satellite acquisition programs. This includes an increase of $688 million for the Joint Polar Satellite System. This program is essential if we are to maintain the quality of our severe storm warnings, long-term forecasts, and receive emergency distress signals in a timely fashion.

In parallel to creating a Climate Service, NOAA would strengthen and realign its existing core research line office.

The Office of Oceanic and Atmospheric Research will refocus its work to be the innovator and incubator of new science, technologies, and applications within NOAA as well as an integrator across all of NOAA, consistent with the President's call for science and innovation.

NOAA's request includes $212 million to continue strengthening core capabilities such as improving our understanding of ocean acidification and its impacts, and promoting conservation and use of coastal resources through our renowned Sea Grant Program.

Rebuilding our Nation's fisheries is essential to ensuring long-term sustainability and to protecting the livelihoods of fishermen and related industries.

In fiscal year 2012, NOAA is requesting a billion dollars to support the National Marine Fisheries Service including investments to expand annual stock assessments and improve the timeliness and quality of catch monitoring in recreational fisheries.

Complementing science with robust management, we will continue to support the voluntary establishment of catch share programs which have yielded significant financial and ecological benefits and the improved safety for fishermen.

Over half of the U.S. GDP is generated in coastal counties and it is expected that the Nation's coastal population will grow by more than 11 million by 2015. To continue delivering a dynamic range of services to promote safe, healthy, and productive oceans and coasts, the fiscal year 2012 budget includes $559.6 million for the National Ocean Service.

In closing, I would like to note that I have a nickel in my hand. I believe that this nickel represents one of the best bargains that this country has. It costs each American less than five cents a day to run NOAA.

This nickel gets you the world's best weather information and allows us to save lives and property when severe storms strike. This nickel means that our coasts are more healthy and vibrant and in turn our coastal communities more prosperous.

This nickel helps American business owners succeed from the fishermen on the coast to the farmer in the heartland and everything in between. This nickel helps keep our homeland secure.

We take our work seriously because we know that citizens and businesses depend on us each and every day. I look forward to working with the Members of this committee and our constituents to achieve the goals that I have laid out in the fiscal year 2012 budget. And I am happy to answer any questions you may have.

[The information follows:]

WRITTEN STATEMENT OF
JANE LUBCHENCO, Ph.D.
UNDER SECRETARY OF COMMERCE FOR OCEANS AND ATMOSPHERE
AND NOAA ADMINISTRATOR
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

ON THE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION'S
FY 2012 BUDGET REQUEST

BEFORE THE
COMMITTEE ON APPROPRIATIONS,
SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES
U.S. HOUSE OF REPRESENTATIVES

April 1, 2011

Chairman Wolf and members of the Committee, before I begin my testimony I would like to thank you for your leadership and the support you have shown the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), one of the Nation's premier environmental science and stewardship agencies. Your continued support for our programs is appreciated as we work to improve the products and services that are vital to supporting America's businesses, communities, and people. I am honored to be here as the Under Secretary of Commerce for Oceans and Atmosphere at NOAA to discuss the President's FY 2012 budget.

Secretary Locke is singularly focused on how the Department of Commerce can help American businesses compete for the jobs of the future. As part of the Commerce Department, NOAA generates value for the Nation by providing the information and services that communities, managers, businesses, and individuals rely on every day to make decisions about their lives and businesses. NOAA touches the lives of every single American; we work 24/7 to keep families safe, property protected, living marine resources vibrant, communities thriving, and businesses strong. NOAA works everywhere, in every state, and from the surface of the sun to the depths of the ocean. Our research informs our many services and science guides our stewardship of the oceans, coasts, and Great Lakes.

The vital role NOAA plays in the protection of life and property has recently been exemplified by NOAA's action in the wake of the earthquake and resulting tsunami in Japan last month. NOAA played a critical role in issuing life saving information to emergency officials and the public in the U.S and around the world. I'm sure I echo the sentiments of many when I say that our hearts, thoughts and best wishes are with the people of Japan and the survivors of the cataclysmic earthquake and tsunami that, in a matter of minutes, took the lives of thousands and forever changed the lives of millions. NOAA will continue to provide whatever support we can as those affected recover and rebuild from this tragedy.

The President's FY 2012 budget request promotes innovation and American competitiveness and lays the foundation for long-term economic growth, while making responsible reductions. In particular, the budget recognizes the central role that science and technology play in stimulating the economy, creating new jobs, and improving the health and security of Americans.

FY 2012 BUDGET REQUEST AND FY 2010 HIGHLIGHTS

Secretary Locke has brought a dedicated focus on efficiency and good management to the Department of Commerce. As part of the Administration's Administrative Efficiency Initiative, an aggressive government-wide effort to curb non-essential administrative spending, NOAA analyzed its administrative costs and reduced non-essential spending by $67.7 million. Beyond administrative savings, NOAA engaged in a rigorous review of its programs and activities and identified additional savings that were achievable. For example, we were able to reduce the cost of operating our current satellite programs, and we restructured our international portfolio of climate research. Further, as a member of the newly established Gulf Coast Ecosystem Restoration Task Force we are working with federal and state agencies to find efficiencies, improve coordination and accountability in restoring Gulf Coast ecosystems.

In short, the FY 2012 budget for NOAA reflects our efforts to focus on program needs, identify efficiencies, and ensure accountability. It sustains core functions and services, and proposes increases for only the most critical programs, projects, or activities necessary to address the growing demand for NOAA's science, services, and stewardship. The FY 2012 request is $5.5 billion, which is a decrease from the FY 2011 request. The FY 2012 request is an increase above FY 2010 enacted due primarily to our requirements to execute the restructured civil polar satellite program. As I will discuss later, this new generation of satellites is needed to replace satellites that will go out of service in the years to come. They are essential for both routine weather forecasts on which the private weather industry depends, and for storm warnings and watches that only the government can issue. The expenditures on satellites are mission critical for NOAA. People's lives and property depend on them. This year 21 people have been rescued because of NOAA satellite tracking, and 91 have been rescued since last October. Beyond weather forecasts, fishermen and recreational boaters count on NOAA satellites to keep them safe in the event of an emergency at sea.

The FY 2012 NOAA budget recognizes that environmental and economic sustainability go hand in hand. We learned through the BP Deepwater Horizon oil spill and other events that we cannot have healthy economies without healthy communities and healthy ecosystems and that good science and stewardship is good business. NOAA's 2012 budget makes the investments needed to save lives and livelihoods, to understand these critical connections, and to ensure sustainable communities, economies, and ecosystems.

Now I will turn to the details of the FY 2012 budget request and outline areas of significant investment.

Climate Service

The FY 2012 budget request includes a proposed budget-neutral reorganization that brings

together NOAA's existing widely dispersed climate capabilities under a single line office management structure called the Climate Service. The proposed organization mirrors the structure recommended by the National Academy of Public Administration expert panel that, at Congress' request, completed a study on options for a climate service in NOAA. The principal goal of this budget-neutral reorganization is to better align NOAA's existing assets under a unified leadership to more efficiently and effectively respond to the rapidly increasing public demand for climate services. The Climate Service would provide reliable and authoritative climate data, information, and decision-support services, and to more effectively coordinate with other agencies, partners, and the private sector. And -- important to this committee and to me -- the proposed structure would strengthen the world-class science for which NOAA is justly known. Without continued advances in the science that supports our mission, the utility of services will degrade with time. Hence, the success of this organization requires attention to strengthening our core science capacity, strengthening the service-provision capacity and strengthening the connections between the two.

NOAA is continually improving our scientific and technological capacity to develop and deliver a range of science and services. For example, NOAA's improved maximum precipitation predictions have been used to develop new standards for dam design that are being implemented around the Nation to improve dam safety and reliability. Similarly, through collaboration with the National Association of Home Builders and the Department of Housing and Urban Development, NOAA developed an Air Freezing Index that the home building industry estimates saves $300 million annually in construction costs and the equivalent of 9 million gallons of gasoline.

The budget-neutral realignment of resources within the current NOAA budget would not change staffing levels, would not require employee relocations, physical relocation of programs or labs, any new facilities, and would not increase the size of NOAA's overhead. The Climate Service headquarters would be located in Silver Spring, Maryland.

The NOAA Climate Service, if approved by Congress, would have a budget of $346.2 million. Of this amount, NOAA proposes $3.0 million to support the Regional Climate Centers (RCC) in FY 2012. This funding will maintain support for RCCs as critical NOAA partners in the development and delivery of regional climate services. The RCCs will be aligned with the six NOAA Climate Service Regions and fully integrated as core components of NOAA's regional climate services partnership. Each center will function as a source of expertise in the region, working to identify stakeholder needs and matching these needs with the emerging science and decision support services flowing from the Climate Service's core capabilities. For example, this work could improve products for farmers, who already rely on NOAA climate data, particularly in El Niño/Southern Oscillation years, to make smart decisions about what variety of seed to plant and the amount of fertilizer to use. These types of forecasts can potentially provide a $500-$960 million per year benefit to the U.S. agriculture industry.

National Weather Service (NWS)

NOAA's National Weather Service (NWS) is the Nation's first line of defense against severe weather. NOAA provides weather, hydrologic, and climate forecasts and warnings for the United

States, its territories, and adjacent waters for the protection of life and property and the enhancement of the national economy. More sectors of the U.S. economy are recognizing the impacts of weather, water, and climate on their operations and are becoming more sophisticated at using weather-related information to make better decisions. The NWS provides critical information to communities and emergency managers. In 2010, the United States experienced a number of extreme weather events including the historic winter blizzards in the Northeast early in the year, historic flooding in the Midwest and Tennessee, and the third most active Atlantic hurricane season on record. The tragedy of the March 2011 tsunami in Japan, which had far reaching effects including the U.S. West Coast, reinforces the very real threat of severe weather events, and underscores the value of comprehensive warning systems and a prepared public.

The FY 2012 request for NWS is $988 million. The request envisions using cost-cutting and cutting-edge technologies to better support the programs necessary to achieve NOAA's vision of delivering more reliable forecasts, reducing weather-related fatalities, and improving the economic value of weather, water, and climate information.

Weather-related air traffic delays cost the U.S. economy over $41 billion in 2007, according to the Congressional Joint Economic Committee. Two thirds of these delays could be avoided with more accurate and better-integrated weather information for decision-making. To meet the rising demands of the air transportation industry, NOAA is involved in a collaborative partnership with the Federal Aviation Administration (FAA) and other Federal agencies to create the Next Generation Air Transportation System (NextGen). NOAA requests a $26.9 million increase to modernize our aviation weather forecasts and warnings. This funding supports NextGen development activities, allowing for better integration of weather information into decision-making solutions for the FAA – potentially reducing the number of air delays.

Wind shear is hazardous to aviation and critical to hurricane formation and intensity. The Nation's upper air (UA) network enables unmatched ability to detect this wind shear and enables much improved ability to define the jet stream core by providing approximately 78,000 atmospheric profiles (wind, humidity, temperature, pressure and altitude) per year from ground level to up to 60,000 feet. To improve the UA network, NOAA requests a $5 million increase for new GPS radiosondes to provide a 50 percent improvement in wind measurement accuracy and a 6-fold improvement in vertical resolution. With this investment, NOAA will fully fund the purchase of GPS radiosondes for all 102 UA observing stations, ensuring improvements to weather models.

Large maritime data voids exist where no meteorological or oceanographic data are routinely sampled due to poorly maintained buoys. This lack of data makes it difficult for forecasters to make accurate and timely marine warnings and forecasts and to measure the accuracy of their forecasts. NOAA currently operates 101 moored weather observation buoys and 49 coastal marine automated network stations. However, over the last eight years, system performance has trended downward to the current low of 67 percent data availability as of February 2011. This trend will continue downward to 65 percent data availability by 2011 without increased support. NOAA requests a $4 million increase to provide operations and maintenance funding for damaged and destroyed buoys and to comply with new international regulations. Funds will also be used to begin reducing the backlog of deferred maintenance by employing charter vessels to

supplement the diminishing availability of U.S. Coast Guard ship time for servicing the weather buoy network.

In FY 2012 NOAA requests a total of $41 million, including $10.2 million from mandatory funds provided by the Deficit Reduction Act of 2005, to support our tsunami warnings and research activities. Within minutes after the March 11th earthquake struck, NOAA issued its first tsunami warning for Japan, Russia, Marcus Islands, and Northern Mariana Islands as part of the coordinated global response to this tragic natural disaster. Shortly thereafter, timely watches, advisories, and warnings were extended to vulnerable coastal areas of Alaska, British Columbia, California, Washington, Oregon, and Hawaii well ahead of the arrival of the first waves. To maintain the effectiveness of these services, NOAA's Tsunami Program will use the FY 2012 funding to continue operations of NOAA's Deep-ocean Assessment and Reporting of Tsunami (DART®) buoy network , maintenance of its 164 sea-level stations, and funding of its two Tsunami Warning Centers (TWC). NOAA will continue to expand community preparedness and finalize the balance of the tsunami hazard mitigation models (to cover all US coastal areas). NOAA will also continue research to improve its tsunami warning and forecast capabilities, and the completion of high resolution models for tsunami inundation forecasts for tsunami threatened local communities.

Although NOAA's Tsunami Warning Centers and DART stations are operated by NWS, NOAA drew from the capabilities of all our line offices to provide a comprehensive response to the March 2011 tsunami. The following are examples of the contributions from other parts of NOAA:

- NOAA's DART stations, a result of research performed at NOAA's Office of Oceanic and Atmospheric Research, detected and tracked the tsunami as it traveled from Japan across the Pacific Basin.
- National Ocean Service tide gauges, which help detect the presence of a tsunami wave, use GOES satellites operated by NOAA's Satellite Service to relay data to the tsunami warning centers.
- NOAA response teams from the National Ocean Service are in California to assist with detection of submerged debris resulting from the tsunami in marine transportation arteries along the coast.

Finally, the underpinning of NOAA's products and services mentioned previously is the model-based guidance of NOAA's operational high performance computing (HPC). HPC provides models and model-based estimates of both current and future states of the Earth's environment, which are a key component of modern weather forecasts. NOAA requests an $11 million increase towards transitioning NOAA's HPC to a new contract, as well as continuing regular improvements to our numerical weather prediction modeling.

National Environmental Satellite Service (NESS)

NOAA's satellites provide the data and information for forecasts that are vital to every citizen in our Nation. From safe air, land, and marine transportation to construction and emergency rescue missions, we all use satellite products in our everyday lives. In FY 2010, our satellite program

saw a major milestone accomplished with the launch of Geostationary Orbiting Environmental Satellite (GOES) – 15, the final spacecraft in the latest series. GOES-15 joined three other GOES spacecraft in assisting the Agency's forecasters to more accurately track life-threatening weather from tornadoes, floods, and hurricanes to solar activity that can impact satellite-based electronics, communications, and power industries. In FY 2010, NOAA satellites also provided key support in the rescue of 281 people throughout and near the United States by providing their location to emergency responders.

The proposed reorganization would also affect some programs within the National Environmental Satellite, Data, and Information Service (NESDIS), which would be renamed the National Environmental Satellite Service (NESS), as all three of its Data Centers would be transferred to the Climate Service. The FY 2012 budget request for NESS is $2 billion, which we will invest in multiple satellite acquisition programs for the continuity of critical weather, climate, and oceanographic data. NOAA requests an increase of $687.8M for the Joint Polar Satellite System (JPSS), which is NOAA's responsibility under the former National Polar-orbiting Operational Environmental Satellite System (NPOESS) program. Polar satellites provide critical weather forecasting for the $700 billion maritime commerce sector and provide a value of hundreds of millions of dollars to the fishing industry. The satellites save approximately $200 million each year for the aviation industry in ash forecasting alone and provide drought forecasts worth $6-8 billion to farming, transportation, tourism and energy sectors. Both civilian and military users will use JPSS data and products, which will continue to fulfill NOAA's requirements to provide global environmental data used in numerical weather prediction models for forecasts. On behalf of NOAA, the National Aeronautics and Space Administration (NASA) will serve as the lead acquisition agent for JPSS, which supports the afternoon mission requirements. The Department of Defense will continue the acquisition of early morning orbit assets. NOAA is committed to working with our partners to complete the transition from the NPOESS program and to assure the continuity of Earth observations from space.

The GOES-R series satellites will provide critical weather observations for severe weather events, such as hurricanes, and also provide key enhancements in observational capabilities for climate, oceans and coasts, and the space environment. This program is the next-generation of geostationary satellites and provides mission continuity through 2036. NOAA continues to support the GOES-R program with a re-phasing, taking us from a two-satellite program to a four-satellite program with the addition of two optional satellites (GOES-T&U), while still providing continued satellite engineering development and production activities for GOES-R and GOES-S.

An uninterrupted climate record is critical to understanding global sea level rise, which directly threatens coastal communities and ecosystems through increased exposure and erosion, more intense storm-surge and tidal flooding, and loss of natural habitat due to drowned wetlands. Therefore, NOAA is requesting an additional $33.0 million to continue development of the Jason-3 satellite, which will provide continuity of sea surface height measurements, ensuring an uninterrupted climate record of over 20 years. The Jason-3 mission is a joint U.S. – European funded partnership. NOAA requests an $11.3 million increase to partner with the Taiwan National Space Organization for the launch of 12 satellites to replenish and upgrade the Constellation Observing System for Meteorology, Ionosphere, and Climate (COSMIC) satellite constellation. This program is a cost effective means of obtaining information about temperature

and moisture in the atmosphere around the globe, which will improve forecasting accuracy.

In addition, a requested increase of $47.3 million will support, in cooperation with NASA, refurbishing the existing NASA Deep Space Climate Observatory (DSCOVR) satellite and its solar wind sensors and developing a Coronal Mass Ejection Imager. The data and information provided by DSCOVR will support the operations of the Space Weather Prediction Center, which generates accurate and timely 1 to 4 day space weather forecasts and warnings. Space observations of geomagnetic storms are vital to reduce negative effects to power grids, GPS, telecommunications, the health and safety of astronauts, and the viability of satellite systems.

Oceanic and Atmospheric Research (OAR)

The major change as a result of the proposed reorganization to create a Climate Service (described above) is that NOAA would also strategically realign its existing core research line office, the Office of Oceanic and Atmospheric Research (OAR), to strengthen the agency's overall science enterprise and advance the atmospheric and ocean, coastal, and Great Lakes research and applied science goals expressed in the *America COMPETES Reauthorization Act of 2010*. OAR will refocus its work to serve as an innovator and incubator of new science, technologies, and applications, and an integrator of science and technology across all of NOAA.

NOAA is committed to strengthening and integrating NOAA's science enterprise consistent with the President's call for science and innovation. NOAA's request includes $212 million for OAR to continue strengthening core capabilities, such as improving our understanding of ocean acidification and its impacts, and promoting conservation and use of America's coastal resources through our renowned Sea Grant Program, one of our many direct links to universities, citizens, and communities around the Nation. NOAA will also invest in the future by supporting innovation in weather forecasting science that can inform clean, renewable energy generation, which is related to an MOU with the Department of Energy. In FY 2012, NOAA requests $2 million to support research in targeted wind resource regions across the Nation. Funding will advance weather forecast accuracy and quality to allow for more efficient implementation of wind power usage in the United States.

Another core capability at NOAA is exploration. The NOAA Ship *Okeanos Explorer* is among the most technologically advanced research vessels and platforms for ocean exploration in the United States. In FY 2012, NOAA is requesting an additional $1.5 million to advance the operations of the *Okeanos Explorer* with the operation of telepresence technology, which enables scientists, educators, and others to participate and lead ocean exploration missions from remote shore-based Exploration Command Centers; to operate and upgrade the ship's autonomous and remotely-operated vehicles; provide additional scientific days at sea; and reduce our huge knowledge gap of what lies in the deep ocean.

National Marine Fisheries Service (NMFS)

NMFS conserves, protects, and manages living marine resources to sustain marine ecosystems, affords economic opportunities, and enhances the public's quality of life. Rebuilding our Nation's fisheries is essential to preserving the livelihoods of fishermen and related industries. In

2008, U.S. commercial and saltwater recreational fisheries supported 1.9 million full- and part-time jobs and generated $163 billion in sales impacts.[1] In FY 2012, NOAA requests $1.001 billion to support fisheries and protected resource management to ensure an optimal balance between conservation objectives and economic opportunities.

NOAA is making important strides to end overfishing, improve fishery management, and put fisheries on a path to sustainability. Working with the Regional Fishery Management Councils, in FY 2010, five fisheries stocks were rebuilt. Based on estimates, rebuilding U.S. fisheries would increase the current dockside value by an estimated $2.2 billion (54 percent) annually from $4.1 billion to $6.3 billion annually. In FY 2012, NOAA will continue to maximize the potential of the Nation's most economically important fish stocks through sound science and management. NOAA will invest $67 million to expand annual stock assessments to continue to ensure Annual Catch Limits (ACL) are based on the best available science. ACLs and accountability measures (AM) are required under the 2007 reauthorization of the *Magnuson-Stevens Fishery Conservation and Management Act* for all non-exempt fish stocks, including overfished stocks, by the end of 2011 to end overfishing. This investment will help verify that NOAA successfully ended overfishing ensuring ACLs are set at the most optimal level possible so that the return for fishermen is maximized while maintaining the health of the resource.

NOAA will invest $3 million to improve the timeliness and quality of catch monitoring in recreational fisheries to ensure recreational fisheries are not unnecessarily restricted due to a lack of data. This is part of a broader effort to work more closely with the recreational fishing community.

In addition to sound science, robust management strategies are vital to sustainable fisheries. In 2010, NOAA released the National Catch Share Policy, and we will continue to support consideration of catch share management by the Councils. Catch share programs, which include limited access privilege programs and individual fishing quotas, dedicate a secure share of fish to individual fishermen, cooperatives, or fishing communities. In the United States, catch shares are currently successfully implemented in 15 fisheries from Alaska to Florida, and local Fisheries Management Councils are in the process of developing them in several additional fisheries. Catch share programs are difficult and sometimes controversial to implement, and we recognize that some in Congress are concerned about them. But they have yielded significant financial and ecological benefits to the fisheries that utilize this system. Both here and in other countries, catch shares help to eliminate overfishing and achieve annual catch limits, improve fishermen's safety and profits, and reduce the negative biological and economic effects of the traditional "race for fish." This budget includes $54 million to support the voluntary establishment of catch share programs by those Councils that want to utilize this tool to achieve the *Magnuson- Stevens Act* requirements. We want to support those Councils that believe that catch shares are the way to better manage their fisheries but need assistance in designing and implementing them.

In addition to fisheries, NOAA manages protected resources, such as marine mammals and turtles. This requires balancing conservation objectives and economic opportunities, including commercial fishing activities and energy development. Investments in priority research in

[1] Fisheries Economics of the United States, 2008:
http://www.st.nmfs.noaa.gov/st5/publication/fisheries_economics_2008.html

recovery actions are required to mitigate harm and maximize economic potential. In FY 2012, NOAA will invest an additional $2.5 million dollars to increase NOAA's capacity for protected species stock assessments that provide the foundation of information for decision makers. We will continue supporting the Species Recovery Grants Program with a requested $8.0 million increase to provide grants to states and tribes to conduct priority recovery actions for threatened and endangered species, including restoring habitat, monitoring population trends, developing conservation plans, and educating the public.

Managing fisheries and protected species to their full biological and economic potential requires additional efforts focused on maintaining habitat and ecosystem functioning. NOAA requests $24 million for the Community Based Restoration Program, including a new $5 million effort to address larger restoration projects. NOAA plans to increase fish passage, spawning, and rearing habitat by implementing large-scale ecological restoration in targeted areas such as wetlands. To support the restoration and protection of the Chesapeake Bay, we request a $5 million increase for regional studies in the Bay. NOAA supports the President's Executive Order to restore the Chesapeake Bay by providing enhanced understanding of the relationships between the Bay's living resources and habitat, coordinating protection and restoration of key species and habitats across jurisdictional lines, and supporting a coordinated system of monitoring platforms distributed across the Bay.

National Ocean Service (NOS)

In July 2010, President Obama signed Executive Order Number 13547 that adopted the Final Recommendations of the Interagency Ocean Policy Task Force and established the National Policy for the Stewardship of the Oceans, Coasts, and the Great Lakes – reinforcing the notion that "healthy oceans matter." NOS supports this policy by translating science, tools, and services into action to address coastal threats such as climate change, population growth, port congestion, and contaminants in the environment. A pivotal event in 2010 was the explosion of the BP Deepwater Horizon oil rig on April 20. Within hours, NOAA responded, providing targeted weather forecasts and oil spill trajectory maps and mobilizing personnel and assets to respond to what evolved into the largest oil spill in U.S. history. The Office of Response and Restoration (OR&R) played a critical role in our response and is leading our efforts to assess damage caused by the event. Over half of the U.S. Gross Domestic Product is generated in coastal counties,[2] and it is expected that the Nation's coastal population will grow by more than 11 million by 2015 so NOS' services will become more vital to the coastal environment and economy.[3] Increasing population density, growing economies, and increased vulnerability to damages from hazards such as sea level rise or storms, habitat loss, and other threats makes the task of managing coastal resources more difficult. The President's FY 2012 Budget includes $559.6 million to enable NOAA to continue delivering a dynamic range of nationwide coastal and Great Lakes scientific, technical, and resource management services to meet the vision of being a Nation with safe, healthy, resilient, and productive oceans and coasts.

Human uses of ocean resources (e.g., ocean-based energy, marine aquaculture, commercial and

[2] Kildow, J. T., C. S. Colgan, and J. Scorse. 2009. *State of the U.S. Ocean and Coastal Economies 2009.* National Ocean Economic Program.
[3] Population Trends Along the Coastal United States: 1980-2008, NOAA 2004

recreational fishery products, shipping and navigation services, and other activities) need to be managed holistically. In FY 2012, NOAA requests $6.8 million to develop an agency-wide capability to conduct and support Coastal and Marine Spatial Planning (CMSP) in U.S. waters. CMSP will help us manage ocean resources in a systematic way by evaluating competing ocean uses, assessing opportunities and potential cumulative impacts, and working with industry, state and local decision makers and other stakeholders, to explicitly make trade-off decisions. CMSP is designed to focus on up front planning. There are no regulations involved. It does not add another layer of government but is designed to be more efficient, effective, and reduce redundancies in decision making. With the new Ocean Policy we are already witnessing efficiencies in our mapping and data collection across the Federal government, with data and information from the Departments of Defense and the Interior, and from Coast Guard, being integrated into a common database, which will be available to the public in the future.

The Final Recommendations of the Interagency Ocean Policy Task Force include a framework for implementing CMSP across the United States in a manner that respects regional variation of issues and priorities. This initiative will significantly advance the Nation's capability to effectively and transparently match competing human uses to appropriate ocean areas. To further support CMSP and regional ocean governance, NOAA requests $20 million to establish a competitive grants program that will support regional ocean partnerships, such as the Gulf of Mexico Alliance, South Atlantic Governor's Alliance, and the West Coast Governor's Agreement on Ocean Health that are vital for advancing effective ocean management. In addition, a proposed increase of $1 million in our mapping program will significantly improve the accessibility of integrated ocean and coastal mapping data.

The BP Deepwater Horizon oil spill is a stark reminder that spills of national significance can occur despite the many safeguards and improvements that have been put into place since the *Oil Pollution Act of 1990* was enacted. The risk of oil spills remains a concern given increases in marine transportation, pressures to develop domestic areas for drilling offshore, aging infrastructure susceptible to sea level rise and violent storms in U.S. coastal areas, and opening the Arctic to both shipping and oil development. NOAA's OR&R is the lead trustee for the public's coastal natural resources and an international scientific leader for oil spill response, assessment, and restoration. NOAA requests $2.9 million to develop an oil spill research and development program within OR&R to advance response technologies and capabilities, especially in deep water and Arctic environments. With this funding, NOAA will support external grants for essential research to provide useful information, methods, and tools for planners, oil spill responders, and assessment practitioners. Also in support of oil spill response, NOAA requests a $5.0 million increase to implement the U.S. Integrated Ocean Observing System (IOOS®) Surface Current Mapping Plan using high frequency (HF) radar surface current measurements. HF radar provides information vital to oil spill response, national defense, homeland security, search and rescue operations, safe marine transportation, water quality and pollutant tracking, and harmful algal bloom forecasting.

The BP Deepwater Horizon oil spill made it apparent that the economic and social well being of our coastal communities depends on the environmental suitability of our coastal resources. Numerous coastal communities, not only in the Gulf but all along our coasts, are being impacted by the loss of fishing opportunities. In FY 2012, NOAA requests $8 million to create a National

Working Waterfronts grant program to assist fishing-dependent coastal communities. These grants will assist distressed or at-risk fishing communities by providing resources for planning, capacity building, and other activities to support economic diversity, resource conservation, and economic capital growth.

Program Support

To deliver sound science and services, NOAA must continue to invest in its information technology (IT) infrastructure, the maintenance and construction of NOAA facilities, and the specialized aircraft and ships that complete NOAA's environmental and scientific missions. A requested $9.1 million increase will reduce the risk of cyber attacks by enhancing security monitoring and response capabilities and consolidate our IT infrastructure into a single enterprise network. This budget includes an additional $10 million to support major restoration and modernization projects to address critical facility condition deficiencies and to improve safety and operating conditions in support of NOAA's mission. The FY 2012 request ensures that NOAA's fleet of vessels is able to provide reliable, compliant, and high-quality ship support to NOAA programs through several increases. For example, $3.4 million is requested to support environmental compliance costs, including ensuring that NOAA ships are not contributing to water quality degradation. Efforts to extend and maintain the life of the NOAA ships will be supported through an $11.6 million increase for repair periods.

Also critical to the execution of NOAA's mission is our investment in the future. Students in K-12 we support today become our workforce of the future; undergraduate and graduate fellowship recipients provide immediate dividends; and each and every citizen touched by our literacy and outreach efforts become stewards of our natural resources. These down payments help to fulfill the President's commitment to education. The FY 2012 budget includes $20.8 million for NOAA's Office of Education to implement and manage scholarship programs aimed at fostering competitiveness in science, technology, engineering and math by providing quality educational opportunities.

Conclusion

Overall, NOAA's FY 2012 budget request reflects the commitment that Secretary of Commerce Gary Locke and I have made to the President to out-educate, out-build, and out-innovate our competitors in support of robust economic job growth. We have made tough choices to cut lower priorities and identify cost-savings measures. The resources that are requested in this budget are critical to the future success of meeting our needs in climate, fisheries, coasts, and oceans. I look forward to working with you, the Members of this Committee, and our constituents to achieve the goals I have laid out here through the implementation of the FY 2012 budget. Thank you for the opportunity to present NOAA's FY 2012 budget request. I am happy to respond to any questions the Committee might have.

Mr. WOLF. Well, thank you very much.

And I support your programs. I think they are very important.

TSUNAMI WARNING PROGRAM

I want to cover an issue that I think is very important and I am going to give you a letter to this effect, but I will read the first question.

I would like to talk to you about funding for NOAA's tsunami warning activities which have been the subject of focus again after the recent events in Japan.

NOAA's base funding for its tsunami warning network has been about $28 million since fiscal year 2008. In addition to this base funding, following the Indonesian tsunami in 2004, NOAA received three supplemental appropriations to improve its tsunami warning programs and activities.

I believe very strongly in the need for these predictions and warning programs. We discussed this when Secretary Locke came before us a few weeks ago.

I inserted a letter in the record that I had written to the states back in 2005 urging them to help their coastal communities become tsunami ready.

I wrote the then head of NOAA in 2004 urging him to review NOAA's tsunami programs.

I have drafted a new letter which we will give you so it is officially sent. And I want to discuss it with you today.

I am asking NOAA to convene two summits this year, one on the West Coast, one on the East Coast—and as soon as possible—to bring together NOAA and the U.S. Geological Survey which is out in my area in northern Virginia.

I used to work at the Department of Interior for five years. I was a deputy to Secretary of the Interior, Rogers C.B. Morton. And some of the best minds are out there in the U.S. Geological Survey with regard to earthquakes.

To bring together NOAA, the U.S. Geological Survey, and state and local officials to talk about tsunami awareness, educational needs, and preparedness activities as well as a deep ocean assessment and reporting of tsunami programs is important.

And the end to that, I would ask you as you do it on the East Coast to involve the nations in the Caribbean, too, because as we were checking on this back in 2004 and 2005, they were in danger and there was some concerns with regard to Puerto Rico and places like that.

So we will give you the letter at the end of the hearing, and I will just read briefly the letter.

But it said in light of the recent earthquakes in coastal regions of Haiti, Japan, and Burma and the devastating tsunami that struck Japan last month, I believe it is imperative for the National Oceanic and Atmospheric Administration to work closely with state and local officials in the United States to strengthen our preparedness for a tsunami.

The tsunami alerts issued in Hawaii and the West Coast states immediately following the Japanese earthquake are a stark reminder of the danger U.S. coastal states face.

In order to better prepare the U.S. for future tsunami events, I urge you to immediately begin planning two conferences including one on the East Coast and one on the West Coast and invite governors, all the governors up and down, and other state and local officials because we found in 2004 and 2005 that many localities really did not have a tsunami warning program.

They did not have very much going. Some were participating and some were not. But to have the governors and local officials from coastal states in the region to discuss deep ocean assessment and reporting of tsunami, DART system alert and evaluation programs.

I also believe it important to include the U.S. Geological Survey in the summit. Please provide a report to me within 30 days of the date of this letter regarding your efforts to plan and host these conferences.

And I know you know a lot of people, some at universities and maybe people at Caltech and maybe people at other MIT who are experts. But I would like to see you do that.

Dr. LUBCHENCO. Mr. Chairman, thank you so much for recognizing the importance of this very critical topic.

NOAA has been working very diligently to raise awareness of the importance of tsunamis. We currently work quite closely with the USGS on—the tsunami warnings that we were able to issue following the Japan earthquake, the Haiti earthquake, and the Chili earthquake, all of those depend directly on our connections to the USGS.

Mr. WOLF. Right.

Dr. LUBCHENCO. We take that scientific information, run models that are appropriate to particular ocean basins and then utilizing our DART tsunami buoys to issue warnings and advisories appropriately.

But equally important is your highlighting the communities' understanding how to respond appropriately when there is a warning, to understand what it means for them and what they should do.

NOAA has identified that there some 250 communities at risk around the coastal areas of U.S. states and territories. And we have a tsunami ready program that works with local communities to have signage, to have warning systems, to have trials, drills to have people understand what they are supposed to do so that they can act in a manner of minutes which is often what is required.

We currently have 83 communities that have been certified as tsunami ready and part of our ongoing efforts involve adding additional ones through time to that number. We have seen the benefit of that.

For example, in this last tsunami warning, both along the West Coast of the U.S. as well as in Guam and Hawaii, our tsunami warnings were issued. The first one was issued within nine minutes of the earthquake happening in Japan. And the response in U.S. states and territories was quite effective. No lives that I know of were lost. And many of the——

Mr. WOLF. Excuse me. You may want to check your microphone——

Dr. LUBCHENCO. Thank you very much. I apologize. I looked at it when I started and it looked like it was green, but obviously not enough.

Mr. WOLF. I hear you fine, but apparently the reporter was having a problem.

Dr. LUBCHENCO. Okay. So you are absolutely correct. This is a vitally important topic.

We just had tsunami awareness week last week with a whole series of activities designed to help raise awareness, but it is such a timely and important topic we would be open to discussing additional ways to——

Mr. WOLF. Well, I would really like you to just put the conferences on to tell us that this is important. The fact is it would be helpful to just say today we will do this and not only with regard to the tsunami but also with regard to the earthquake issue.

There is a concern with regard to the power plant up there in New York City, north of—up there on the Hudson River. I mean, I just would like you to say, "Mr. Wolf, it is a good idea and we are going to move on this and we are going to deal with this, one on the East Coast, one on the West Coast, not only on the tsunami issue but also on the earthquake issue."

I mean, you have the metropolitan New York City. You have millions of people that live there. And so I followed it. I do not represent New York, but I have heard Governor Cuomo. He has made a pretty powerful case.

And so what I would like you to do is to agree, and I do not know why you would not—I mean, this ought to be something that we move ahead on.

You know, there is a song that I sometimes quote by Simon and Garfunkel and they sang it in Central Park. It is called The Boxer. And the words say, "man hears what he wants to hear and disregards the rest." Sometimes we may only be hearing what we want to hear. And I do not want us to disregard the rest.

And I would like to see you, I have great respect for you and I think NOAA does exceptional work, to bring together a top team in the East Coast and a top team in the West Coast and invite all of the governors and all—I mean, your testimony almost indicated there are some that are not doing what they should be doing.

Also I know Mr. Serrano who is not here has interests with regard to Puerto Rico, and involving also the Carribean nations because Haiti has been devastated with regard to that.

So I guess the question is, not to put you on the spot, but would you do this, tell us that you will do one on the East Coast and one on the West Coast?

Dr. LUBCHENCO. Mr. Chairman, I think that's a terrific idea. We would be delighted to work with you and explore the possibilities, the timing, what it would look like. May we work with your office to do that?

Mr. WOLF. Okay. Well, fine. Good. I appreciate that. And your people have done a good job. And I am just afraid of when something happens, the whole world focuses.

I remember when the Indonesian tsunami hit. And then after about a year, it was a big issue at the UN and then it sort of just drifted away. And now you never heard about it until we saw what we have seen and feeling the hurt and the pain and suffering of the Japanese people.

I know the French sent a team there and they are looking to see what lessons learned so they can come back, and I think it is important for us to do this.

And I would assume that every governor working with the National Governors Association would be very interested to come and to kind of find out because particularly in these days of budget issues, people are focusing on different things to sort of force people's minds back to focus on this, to make sure that everything that can be done is being done.

So we will be glad to work with you, do whatever you think is appropriate. I do not have to attend but, I think I just want the very best minds that we have both on the East Coast and the West Coast.

And I think Caltech has some pretty good people and I know that—I think we should hear what MIT and others have to say, okay, let's bring the very best, and maybe you would have the same team do it for the West Coast as the East Coast or maybe you would even decide that, you know, because of variances, it would change. But I would hope we could do that and you can run it.

Dr. LUBCHENCO. Mr. Chairman, we saw in the aftermath of the Indian Ocean tsunami, because that did raise awareness, it enabled us to—Congress acted as a response of that, in response to that. And that was what prompted our significantly adding to the tsunami DART buoy network that are very important in detecting tsunamis.

So I think you are absolutely correct. This is a moment in time where people are focused on this and we need to capitalize on it.

Mr. WOLF. And it was this committee that actually pushed it. I remember I said we are going to write a letter to every governor. We are going to force everybody to focus on this. At first, it did not seem that any one paid attention and then all of a sudden, the interest came and now until we see what unfortunately took place in Japan.

So, anyway, I appreciate it very much. We will help you every way we possibly can. If you need approval to reprogram, I mean, you just tell us and we will be there and help you.

Next we are asking everyone who comes before the subcommittee about the priorities for fiscal year 2012. Given the funding constraints that we are under and we will continue to be under, what are your top three appropriation priorities?

And what I have been saying to most of the—hello, Mr. Bonner—what I have been saying to most of the witnesses is that I wish we could fund all of what you are asking for, but we are facing a fiscal crisis in the country. We have $14 trillion of debt.

I was listening to the news coming in and there is a new report out on PIMCO.com about the unfunded liabilities of the Nation. So until we deal with the fundamental issues of the entitlements, Medicare, Medicaid, and Social Security, these tough times will continue.

It would be my hope that we could have a bipartisan agreement. I personally was not appointed to the Bowles-Simpson Commission. It was an idea that Jim Cooper and a group of us came up with and the President appointed. But the Administration walked away from it. I would support the Bowles-Simpson Commission. I would

try to make some changes in it, but we have got to do this thing hopefully by the end of the year.

And so until there is a bipartisan agreement to come together to deal with the big entitlement issues, you are going to really find pressure on these programs and other programs.

Once we reach that agreement to deal with the entitlements, then I think you will see a continuation and kind of a removing of the lid, if you will, on some of the fundamental programs and also including programs for cancer research and Alzheimer's research and infrastructure, things that we need as a Nation. But you are going to have to deal with the entitlement issue and it has got to be done.

So what are your three top appropriation priorities?

FISCAL CHALLENGES

Dr. LUBCHENCO. Mr. Chairman, we take the current fiscal challenges that the Nation is facing very, very seriously which is why in constructing this budget we did a very careful questioning of every single item that is in our budget.

I mentioned that we had achieved some actually quite painful administrative cost savings of $67.7 million. We have also reduced programs and other areas that under other circumstances I think would be very appropriate, very worthwhile, very important programs. And we just decided we could not do them this year. So we have already gone through a very serious exercise of questioning everything.

The items that we are asking for in this year's budget request represent things that are essential to our mission of saving lives and property, stimulating the economy, and they are ones that I believe will bring great benefit to the American people on the short term as well as the long term.

The analogy that was used by the National Academy of Sciences in their report about when it comes time to lighten an air load, what you do not want, if an airplane is overweight and you need to jettison something, do not jettison the engines that enable the plane to fly.

And, in fact, a lot of what NOAA does is comparable to that. Whether it is fisheries or whether it is coasts or satellites, those programs are all ones that directly serve the American public.

JOINT POLAR SATELLITE SYSTEM

Now, the largest budget number in our request is clearly for satellites, $2 billion. And of that, a very significant one is this Joint Polar Satellite System which provides us with the wherewithal to do severe storm warnings and long-term forecasts as well as search and rescue, all vitally important to the American public.

We currently have a polar orbiting satellite that is in space now that is providing that information for us. If we do not have the funds in both fiscal year 2011 and 2012 to build the next satellite and the instruments that go on it to replace the one that is there now and the one that we are going to launch in the fall, we will have a data gap.

In fact, because of the current situation in fiscal year 2011, we already have a delay in the launch of from 12 to 18 months. And

that will likely result in a data gap starting in as early as 2015 where we may have coverage—where we will not have coverage by a polar orbiting satellite run by the U.S.

And the consequences of that are quite, quite serious. We will not be able to do long-term weather forecasts that we do today. Our severe storm warnings will be seriously degraded.

And we recently took the exercise of looking back at some very severe storms of last year and asking the question what would our forecasts have been like if we had not had that polar orbiting satellite information.

And with your permission, I would like to request entering into the record——

Mr. WOLF. Without objection.

Dr. LUBCHENCO [continuing]. The analyses that we did for this.

[The information follows:]

Impact of Loss of US Polar-orbiting Satellite Data on Nation's High-Impact Weather Forecast Capability

A Case Study of the 5-6 Feb-2010 East Coast Storm

Impact Study
Loss of Afternoon Polar-orbiting Satellite Data

- NOAA maintains a polar-orbiting satellite that covers the afternoon orbit.
- Data from that satellite provide essential information for severe storm warnings, medium- and long-term weather forecasting for U.S. civil and military use in the U.S. and around the world, search and rescue, and weather forecasts for Alaska, among others.
- Other polar-orbiting satellites operated by, e.g., DOD and the Europeans, provide complementary information, but each orbit produces unique information.
- Impact of the loss of only the afternoon polar-orbiting satellite data on severe storm warnings was assessed by comparing forecasts produced by the National Center for Environmental Prediction model for the 2010 winter storm referred to as "Snowmaggedon" – Feb 5-6, 2010.

Impact Study
Loss of Afternoon Polar-orbiting Satellite Data

- Three images are shown:
  - Observed weather
  - Predicted weather – labeled "forecast **with all** NOAA orbiting satellite data"
  - Simulated forecast that would have been predicted if data from NOAA's polar-orbiting satellites were not available – labeled "forecast **without NOAA afternoon** orbiting satellite data" . This does include other available satellite data.

- Results:
  - **24-hour Precipitation Forecast over Mississippi-Alabama (slide 4)**: Forecast without NOAA afternoon orbiting satellite underestimates rain by factor of 2; The actual forecast that incorporated orbiting satellite data more closely predicted heavy rainfall
  - **5-day Snow Forecast for DC and Mid-Atlantic Coast (slide 5):** Forecast without NOAA afternoon orbiting satellite data does not predict the paralyzing snow observed on 6 Feb. The actual forecast predicted paralyzing snowfall for DC/Mid-Atlantic coast

- Conclusion: Model runs without NOAA afternoon satellite data would likely not predict the severity of high-impact weather with sufficient accuracy or lead-time to allow pro-active community preparedness and mitigation

Heavy Rainfall Event in Southern US
February 5, 2010

Forecast comparison using NOAA's Polar-orbiting Operational Environmental Satellite data

Observed Precipitation

1 day forecast **with all** NOAA orbiting satellite data

1 day forecast **without NOAA afternoon** satellite data

24 Hr Accumulated Precipitation Totals (inches) for 5 Feb (am)

Result: Up to a 50% error increase in precipitation rates in southern US

Impacts: Future errors of this scale could result in flood forecast error providing less time for population to react and increasing risk to life and property (hours vs days)

"Snowmageddon"
February 6, 2010

Forecast comparison using NOAA's Polar-orbiting Operational Environmental Satellite Data

Observed Snowfall

5 day forecast **with all** NOAA orbiting satellite data

5 day forecast **without NOAA afternoon** orbiting satellite data

24 Hr Accumulated Snowfall Totals (inches) for 6 Feb (am)

Result: In DC and Mid-Atlantic coast, models without NOAA orbiting satellite data did not forecast this paralyzing event and ***under-forecast snow by at least 10 inches***

Impacts: Aircraft and airline passengers would have been stranded, ground commerce would have been halted with no mitigation plans, population would have been unprepared for paralyzing snow-depth

Dr. LUBCHENCO. And we used two scenarios. One was for the snowmageddon which everyone will remember February of 2010 and the forecast that we did for that was quite accurate. It predicted a horrendous storm and that is exactly what happened. That depended directly on the polar orbiting satellite information.

If we take that out of the model and re-run the model, which would give us an idea of what would happen in the future without that polar orbiting satellite, we would have grossly underestimated the severity of that storm. We would have estimated it might have been off by 200 to 300 miles in terms of where it was and we would have underestimated the amount of snowfall by at least ten inches.

So emergency preparedness would have been impaired. Aviation and surface transportation would have been much, much worse than it was.

So that program which is one of our high dollar numbers in this budget is really, really important. And the longer we delay both with funds in 2011 as well as 2012, the longer this gap will be. And for every dollar that we do not spend even in 2011, it will cost three to five dollars down the road to bring that program back up to speed.

Mr. WOLF. Well, this is not an entitlement hearing. You are not the director of OMB and I understand that. But it is the "man hears what he wants to hear and disregards the rest." What the fundamental disregarding of this Administration is they are disregarding.

And I am going to put in the record today at this moment the PIMCO report.

[The information follows:]

Bill Gross

Investment Outlook

PIMCO

April 2011

Skunked

That adorable skunk, Pepé Le Pew, is one of my wife Sue's favorite cartoon characters. There's something affable, even romantic about him as he seeks to woo his female companions with a French accent and promises of a skunk bungalow and bedrooms full of little Pepés in future years. It's easy to love a skunk – but only on the silver screen, and if in real life – at a considerable distance. I think of Congress that way. Every two or six years, they dress up in full makeup, pretending to be the change, vowing to correct what hasn't been corrected, promising discipline as opposed to profligate overspending and undertaxation, and striving to balance the budget when all others have failed. Oooh Pepé – Mon Chéri! But don't believe them – hold your nose instead! Oh, I kid the Congress. Perhaps they don't have black and white stripes with bushy tails. Perhaps there's just a stink bomb that the Congressional sergeant-at-arms sets off every time they convene and the gavel falls to signify the beginning of the "people's business." Perhaps. But, in all cases, citizens of America – hold your noses. You ain't smelled nothin' yet.

I speak, of course, to the budget deficit and Washington's inability to recognize the intractable: 75% of the budget is non-discretionary and entitlement based. Without attacking entitlements – Medicare, Medicaid and Social Security – we are smelling $1 trillion deficits as far as the nose can sniff. Once dominated by defense spending, these three categories now account for 44% of total Federal spending and are steadily rising. As Chart 1 points out, after defense and interest payments on the national debt are excluded, remaining discretionary expenses for education, infrastructure,

Lack of Discretion

Federal Spending by Category	Share of Total Expenses: 2011	Share of Total Expenses: 40-Yr Average
Entitlement Expenses	44%	42%
Defense	24%	24%
Non-Defense Discretionary	25%	23%
Net Interest Payments	7%	11%
Total Federal Expenses	100%	100%
		Normal

Source: White House Office of Management & Budget, USA Inc.

Chart 1

agriculture and housing constitute at most 25% of the 2011 fiscal year federal spending budget of $4 trillion. You could eliminate it all and still wind up with a deficit of nearly $700 billion! So come on you stinkers; enough of the Pepé Le Pew romance and promises. Entitlement spending is where the money is and you need to reform it.

Even then, the situation is almost beyond repair. Check out the Treasury's and Health and Human Services' own data for the net present value of entitlement liabilities shown in Chart 2.

Pee-U

Source: A Basic Summary of America's Financial Statements, USA Inc., Mary Meeker

Chart 2

The above four multi-trillion-dollar liability balls are staggering in their implications. Remember first of all that the nearly $65 trillion of entitlement liabilities shown above are not some estimate of future spending. They are the discounted net present value of current spending should it continue at the projected demographic rate (importantly – it is much higher than the annual CPI + 1% used as a discounter because demand for healthcare rises much faster than inflation.) And while some Honorable Congressional Le Pews would counter that Medicaid is appropriated annually and therefore requires no discounted reserve, those words would surely count as "sweet nothings," believable only to those whom they romance every several years at the polls. The incredible reality is that the $9.1 trillion federal debt that constitutes the next-to-tiniest ball in our chart is nothing compared to unfunded Medicaid and Medicare. It is like comparing Pluto to Saturn and Jupiter. The former (the $9.1 trillion current Treasury debt) does not even merit planetary status in our solar system of discounted future liabilities. It's really just a large asteroid.

Look at it another way and our dire situation becomes equally revealing. Suppose that the $65 trillion of entitlement liabilities were fully funded in a "lock-box," much like Social Security is falsely imagined to be. Just suppose. And say the cost of that funding (Treasury debt) was the same CPI + 1% that was used to produce the above discounted present value in the first place. Actually, that's not a bad guesstimate for the average yield of all Treasury debt. If so, then the interest

expense on the $75 trillion total debt would equal $2.6 trillion, quite close to the current level of entitlement spending for Social Security, Medicare and Medicaid. What do we pay now in interest? About $250 billion. Our annual "lockbox" tab would rise by $2.35 trillion and our deficit would be close to 15% of GDP! The simple conclusion would be this: Unless you want to drastically reduce entitlement spending or heaven forbid raise taxes, then Pepé, you've got a stinker of a problem.

Previous Congresses (and Administrations) have relied on the assumption that we can grow our way out of this onerous debt burden. Perhaps we could, if it was only $9.1 trillion, as shown in Chart 2. That would be 65% of GDP and well within reasonable ranges for sovereign debt burdens. But that is not the reality. As others, such as Pete Peterson of the Blackstone Group and Mary Meeker, have shown much better and for far longer than I, the true but unrecorded debt of the U.S. Treasury is not $9.1 trillion or even $11-12 trillion when Agency and Student Loan liabilities are thrown in, but $65 trillion more! This country appears to have an off-balance-sheet, unrecorded debt burden of close to 500% of GDP! We are out-Greeking the Greeks, dear reader.

If so, and if the USA were a corporation, then it would probably have a negative net worth of $35-40 trillion once our "assets" were properly accounted for, as pointed out by Mary Meeker and endorsed by luminaries such as Paul Volcker and Michael Bloomberg in a recent piece titled "USA Inc." However approximate and subjective that number is, no lender would lend to such a corporation. Because if that company had a printing press much like the U.S. with an official "reserve currency" seal of approval affixed to every dollar bill, that lender/saver would have to know that **the only way out of the dilemma, absent very large entitlement cuts, is to default in one (or a combination) of four ways: 1) outright via contractual abrogation – surely unthinkable, 2) surreptitiously via accelerating and unexpectedly higher inflation – likely but not significant in its impact, 3) deceptively via a declining dollar – currently taking place right in front of our noses, and 4) stealthily via policy rates and Treasury yields far below historical levels – paying savers less on their money and hoping they won't complain.**

If I were sitting before Congress – at a safe olfactory distance – and giving testimony on our current debt crisis, I would pithily say something like this:

> "I sit before you as a representative of a $1.2 trillion money manager,

historically bond oriented, that has been selling Treasuries because they have little value within the context of a $75 trillion total debt burden.

Unless entitlements are substantially reformed, I am confident that this country will default on its debt; not in conventional ways, but by picking the pocket of savers via a combination of less observable, yet historically verifiable policies – inflation, currency devaluation and low to negative real interest rates. Our clients, who represent unions, cities, U.S. and global pension funds, foundations, as well as Main Street citizens, do not want to be shortchanged or have their pockets picked. It is incumbent, therefore, in order to preserve the integrity of the U.S. Treasury market along with its favorable global interest rates, and to promote a stable U.S. economy, that entitlement spending be reduced, and that future liabilities be addressed in terms of healthcare and Social Security cost containment. You must attack entitlements and make 'debt' a four-letter word."

Thank you, and like Pepé Le Pew, why don't you try changing your stripes or at least pretend you're a French-speaking cat. The odor in these chambers is all too familiar and a skunk needs all the help it can get.

William H. Gross
Managing Director

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Mr. WOLF. I agree with everything you have said, maybe even more. I take my responsibility seriously. I mean, I worry about some of these things. My wife and I, we have 15 grandkids. But you have got to deal with the entitlements too.

And so far, the President and the Administration has been AWOL. They appointed Erskine Bowles and Simpson and they have walked away.

And I agree to the engine analogy. I agree with everything. I mean, let it be said that I agree with the administrator. But where we have differences, and, again, it is not fair and I am going to leave it because you are not Jack Lew at OMB, it is the entitlements.

And if Tom Coburn and Dick Durbin can agree to come together to link arms, probably, you know, having a concern, but link arms, then the President ought to be able to do it.

Now, Tom Coburn is being criticized by Grover Norquist, but he is not afraid of that. He is willing to say this is what I believe in and this is what I am going to do to save the country. And we expect the President to do the same thing. If Durbin and Coburn can do it, then the President can do it.

And so I have said enough. But it is not enough just to say, you know, the engine story and we want to invest in every nickel. We are borrowing now 40 cents of every dollar from someone for every dollar that we spend. So of that nickel, we are borrowing it. And we are also borrowing from China, this fundamentally immoral nation, what they are doing to people insofar as religious freedom and human persecution and things like that.

So until we deal with this issue of the entitlements, all these things are going to be squeezed. And so when they are squeezed and people come down and criticize on the forums, you say until you are—I have said I am prepared to vote for Bowles-Simpson or Simpson-Bowles, whatever they call it.

Dr. LUBCHENCO. Uh-huh.

Mr. WOLF. And I am going to say if you do not like the discussion, you tell me what you are prepared to do on the entitlement issue. If you are going to be AWOL and just talk about it and throw a rock at something, have a little cut, then that is that. That is not the way we are going to solve the problem.

NATIONAL WEATHER SERVICE

Let me ask you about the Weather Bureau. I would place the National Weather Service at the top of NOAA's priorities. The fact is before I go to bed, I always watch the weather. It is sort of just—yet, the Weather Service budget has not increased at the same rate as the rest of NOAA.

Does your budget priority prioritize the Weather Service and what else among NOAA's programs would you categorize as critical to life and safety? But where does the Weather Bureau come in?

Dr. LUBCHENCO. The Weather Service is absolutely critical to saving lives and property. And they depend on the satellites, for example, which is one of the reasons why—in fact, 98 percent of the information that goes into our numerical models for weather come from satellites.

So the Weather Service cannot do its job without having that information from the satellites, both the geostationary as well as the polar orbiting. So it is not really easy to separate out from a functional standpoint. They need one another.

So the Weather Service is vitally important and they do a spectacular, magnificent job not only in providing basic information to citizens and emergency managers but also in providing opportunities for the private sector to add value and sell additional products or provide additional services.

So AccuWeather, the Weather Channel, for example, take the basic information, add value to that. And so there's an opportunity to grow businesses and we have seen that in this particular instance. So it is a priority. I would love to have even more in our budget for the Weather Service.

What I believe is in our request is a responsible amount that will enable us to do what we need to do. And it depends on other parts of NOAA to do that efficiently. It depends on the ships and the planes to get information to service our tsunami DART buoys, for example.

So the different parts of NOAA actually interact with one another and complement one another.

Mr. WOLF. Okay. I am going to go to Mr. Fattah now. But with Mr. Bonner walking in, I just wanted to—I had asked the administrator to put together a conference on the East Coast and the West Coast to deal with the whole issue of the tsunami issue and the earthquake issue.

But I would also say that I think the Gulf ought to be included because Mr. Bonner represents the Mobile area. So I would urge that it be not only the East Coast and the West Coast, I would amend my letter, but to also say the Gulf to make sure what impact it would have on them.

Dr. LUBCHENCO. Mr. Chairman, when you were discussing that, you mentioned the Gulf and the Carribean, so I understood that to be the case.

Mr. WOLF. Thank you.

Mr. Fattah.

Mr. FATTAH. Let me thank you, Mr. Chairman.

And let me start with this whole question of life savings now. As I understand from the work of my staff, this work of people who are fishing for a living is the most dangerous work in the country and that there are over 118 deaths per 100,000 and that NOAA's satellite services have helped rescue over 6,500 and saved the lives of people through these satellites.

I am concerned about the satellite gaps that you mentioned. And, you know, we talk about the Gulf. Through your work, you have been able to cut in half the error rate on hurricane forecasting.

Now, in the Philadelphia area, we do not get a lot of hurricanes, but I know my colleagues in other parts of the country do so that when we get to forecasting severe weather, you have been able to cut this margin in half over the last decade. And I understand there is a significant financial cost on the evacuation side of a million dollars per mile.

So the satellite is development the largest part of the increase that you are asking for, right? So that is what I want to focus in

on. So on one level, you are saving lives, but I want to talk—unfortunately, this is the Appropriations Committee, so I want to talk about money.

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH. The other thing that is happening with these satellites is that it protects and enhances financially a number of industries.

And my question is, for instance, start with the National Weather Service, are there any fees that NOAA charges.

So, for instance, we talk about the maritime industry and say, you know, 90 percent of the world's trade is handled through this industry. You talked about AccuWeather and the Weather Channel and others who are valuable and taking this public information and using it. In the fishing industry, there is a lot of money made.

Are there ways for NOAA, and I do not mean today, but over the near-term future, are there ways to look at where there are abilities to extract fees for services that you are now providing that are having a direct impact in terms of various industries that may at some point provide some of the resources that we need?

SATELLITES

I mean, satellites are not cheap. They cost a lot of money. And if we talk about satellites, that we can cut the error rate on hurricane forecasts in half in a decade, that is saving lives, that is saving money. But in the meantime, there are other benefits that are being provided, and they are being provided in ways in which some people are making lots of money.

And so I wonder if you could comment on whether there are ways to monetize some of the services that NOAA provides.

Dr. LUBCHENCO. Thanks, Mr. Fattah. Thank you for highlighting the importance of those satellites to a variety of both issues having to do with life and property as well as economic issues.

And let me give you a few numbers that are directly relevant and illustrate your point and then answer your question.

For the search and rescue function that the polar satellites are involved in, in 2010, 295 lives were saved by the rescue beacons that are activated, that signals go to the satellites. And we estimate that if we do not have this Joint Polar Satellite System that the time for search and rescue, the response time would be at least doubled without our polar orbiting satellites.

So that just gives you some sense of what the consequences are. And, of course, in an emergency, it is often minutes that are important to saving lives.

Relative to the economic benefits, the maritime commerce sector represents $700 billion a year. And that sector depends directly on maritime weather information and that comes directly from these polar orbiting satellites.

The fishing industry is hundreds of millions of dollars and they, too, depend on the weather information from these satellites.

The aviation industry only for ash forecasting, our polar satellites save them $200 million a year, save the aviation industry $200 million a year for ash forecasting alone.

And then if we look to on the land, equally important, providing drought forecasts is worth $6–8 billion to farmers, to transportation, to tourism, and energy sectors.

So cutting across multiple different sectors of the economy, these polar orbiting satellites are vitally important. And, of course, they interact with and support the work of the National Weather Service, enable them to do all these, run the models.

The research arm within NOAA develops the new knowledge that enables those improvements in weather forecasting. And so that is an interconnected part of NOAA that results in these economic benefits.

Now, that said, your question is, you know, what is the business model for all of this and are there alternatives. The United States' current model for this is to have essentially a partnership between the government, the private sector, and universities where each has a distinct role and where those roles are complementary, not in competition.

And the basic philosophy is simply that the government provides the fundamental information that allows saving lives and property and economic benefit. And it is very difficult to tease out what part of a weather forecast enables somebody to operate safely on the sea versus what part of it is important to saving lives and property.

So because it is fundamental to saving lives and property, that basic information is deemed to be appropriate to be provided by the government.

The fee-for-service model is not one that we employ. The concept is that there is significant opportunity within the current model for businesses like the Weather Channel or AccuWeather to take the basic information and tailor it to add significant value and then sell that product.

Mr. FATTAH. Well, you know, I would not be raising this question except that the question becomes this: Will the service be provided at all? You follow me?

Dr. LUBCHENCO. I understand.

Mr. FATTAH. If the point is that there is $2 billion in your budget for satellites, satellites are needed, they are needed to save lives.

Dr. LUBCHENCO. Correct.

Mr. FATTAH. And you have saved lives.

Dr. LUBCHENCO. Correct.

Mr. FATTAH. They are needed to forecast severe weather and to cut down the margin of error so that, for instance, our neighbors in the Gulf know when a hurricane is coming and you have cut that margin of error in half. These are all public spirited and very important things.

In addition to all of this, you also are facilitating others making hundreds of billions of dollars.

Dr. LUBCHENCO. Correct.

Mr. FATTAH. So the question becomes, if we are going to have either no satellites or have significant gaps, as I would understand it, there is no substitute for this satellite program anywhere in our government.

Dr. LUBCHENCO. That is correct.

Mr. FATTAH. Okay. So either we are going to have the satellites or we are not. And then the question is dollars. And we have an

allocation and, you know, we are limited to an allocation. We have got to figure out how to make all this work. And the Chairman is absolutely right that these are untenable options.

So I was just wondering, because I know, for instance, some of our economic competitors do this a little bit differently.

Dr. LUBCHENCO. They do.

Mr. FATTAH. I mean, Germany has a different approach, right? So I was just wondering whether or not there were other models we could look at. And, again, we cannot create them overnight.

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH. It may be they are not even useful in the way that we function here in our country, but we should at least be knowledgeable because if the satellite is not there, then all of these industries are going to be impacted, and it is going to harm—for instance, the drought information, that is $6–8 billion, or the maritime trade which is another $700 billion.

So, you know, we have to think through, these services and, I mean, we are putting a billion dollars just in terms of the fish side of this deal, right?

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH. People who go fishing, you know, they get fishing licenses. They do other things. They pay. I am just trying to figure out, if you are saving the lives of fishermen and rescuing people, whether there are ways in which there are opportunities for the government to get some of these costs reimbursed.

So this is kind of a straight business question. And I know you have advised the Bush administration, the Clinton administration. So you have been at this for a long time. You are one of the most distinguished scientists in this area.

This is not really a scientific question. It is a business question about whether or not the services that we now provide, are there ways to monetize that and ways in which those who are benefitting in a specific way that generates profit might also share the burden.

Dr. LUBCHENCO. Congressman Fattah, I understand exactly what you are asking. And as you know, you mentioned Germany, other European nations also have different models. They do use a fee-for-service model. It is a very different philosophy. And there are other models out there.

I believe that our model is actually one that enables and supports businesses and economic prosperity and growth. But these are fundamentally, you know, basic questions that deserve to be asked. Are there other models that would be an improvement and what do they look like?

In the meantime, we are challenged with providing the services under the current model and still struggling to try to minimize the gap that is already going to be happening. So that is the challenge.

Mr. FATTAH. I do not want to trade our economy for one of our European ally's economies. You know, I think our model has obviously worked very well for us. We are at a point, though, where we are saying perhaps we will not have a satellite system there. You follow me?

So if the question is, we cannot generate the money on the public side to finance the work of NOAA, if we have to make cuts that are untenable in either the Weather Service or in the satellites, in

any of these programs, are there other ways to think about doing this because you are saving lives?

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH. And you are also helping industry.

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH. And so the only reason I ask the question is because whatever we are doing is now being overwhelmed by our fiscal circumstance.

Dr. LUBCHENCO. I understand.

Mr. FATTAH. Thank you very much.

I will yield back.

Mr. WOLF. Mr. Bonner.

Mr. BONNER. Thank you, Mr. Chairman.

Dr. Lubchenco, welcome.

Dr. LUBCHENCO. Congressman, nice to see you.

Mr. BONNER. Nice to see you. And I would say for the record while I appreciate the chairman's recognition that the Gulf of Mexico needs to be considered in any survey such as that.

The administrator has been to Mobile. She has been to the Gulf and was a frequent visitor during the oil spill last year for which we personally express our gratitude for your interest and your leadership in that.

I am going to focus a little bit on the oil spill——

Ms. LUBCHENCO. Uh-huh.

Mr. BONNER [continuing]. Because, and I say this very carefully, no one would say that what we have gone through compares with what the people of Japan are going through. That earthquake, tsunami, and then the issues with their nuclear plants is beyond comprehension.

That said, many people along the Gulf Coast felt they went through an environmental/economic tsunami last year because it was the worst oil spill on record in the history of this country. And it may be years or decades before we know the full impact of that tragedy that we are approaching the one-year anniversary on.

I thanked you earlier. I repeat not only your leadership but also the staff at NOAA for the work that you all did during the early period following the April 20th incident. Your satellite modeling capabilities came to full utilization during the crisis and offered our best hope that federal, state, and local responders had to track the movement of the oil in a timely fashion so that we could position the very limited resources that either industry or government had to try to protect sensitive wetlands, the coast, and the other areas of those states that were impacted.

GULF OF MEXICO RESTORATION

As many of my colleagues in Congress have heard me say before, while we weathered the early storm, the long-term economic and ecological impacts remain in question.

So along those lines, in your written testimony, you note that NOAA's ongoing participation in the Gulf Coast Ecosystem Restoration Task Force, which I think is being led by Ms. Jackson of the EPA, that includes scoping the programmatic EIS as well as under the NRDA claims.

Given the importance of the fisheries economically to our region and to the Nation and the impact the oil spill has had on that sector, do you believe apart from the mandate of the Oil Pollution Act of 1990 and Natural Resource Damage Assessment process that economic consideration should carry equal weight to environmental restoration?

Dr. LUBCHENCO. Congressman Bonner, thank you for recognizing the ongoing challenges to the Gulf. I know that it is an issue that many people in the Gulf struggle with on a daily basis. And I know that they often feel the rest of the country has moved on and they are still in great pain. All of our folks that are in the Gulf recognize that.

And as you indicated, there are long-term challenges for the Gulf. The Natural Resource Damage Assessment process is focused directly on the damage that was done to natural resources and the public's loss to those natural resources. And that is the process that is underway now to evaluate what the impact was, not just the short-term, but the long-term impact.

And economics plays into that. This is a scientific, economic, and legal process for determining the impact to the resources and the public's loss to those resources. And that process which is a joint one between the states and the federal government, there are three federal trustees of which NOAA is one, and there are five state trustees. That trustee council works together to do the analyses.

NOAA is providing a very significant fraction of the scientific information to enable understanding of what were the long-term impacts to different economically important species, to a variety of other species that are important to those species, and to other parts of the coastal and the open water portions of that ecosystem.

That process continues to be underway. We have had on the order of I think 80 different, somewhere between 70 and 80 different research expeditions on ships to continue to take samples in addition to a lot of intense sampling along the shore.

That process is ongoing and is obviously designed to build the most effective case possible against the responsible parties to ensure that they pay for the restoration of those natural resources and the public's access to them.

So that is just a short summary of what that process is all about. I want to emphasize that the NRDA process, the Natural Resource Damage Assessment process is completely independent of the claims process that Ken Feinberg is leading for individuals and businesses to file claims.

The NRDA process is only about loss to natural resources and the public's access to them, so it is a very different beast, if you will. Part of the NRDA process is not just determining the impact but determining the restoration that will address the impact.

And so there is very active consideration of the range of possible restoration activities. Unfortunately, this is going to take time to play out and I think everyone would wish that we could, you know, push the fast forward button and be farther along, but many of these populations are ones that it is going to take a while before we know the full impact. So we do not want to pre-judge prematurely and not have the responsible parties pay what they actually should pay.

Mr. BONNER. Well, the reason I asked about the economic is—and you mentioned Mr. Feinberg is leading the claims process. I would say he should be leading it. He got a pay raise to $1,250,000 a month and, yet, we have got businesses that are struggling to survive that have been paid pennies on the dollar. But just——

Dr. LUBCHENCO. Fortunately, I do not have anything to do with that.

Mr. BONNER. The chairman is not holding you responsible for OMB. I am not holding you responsible for Mr. Feinberg.

Dr. LUBCHENCO. Appreciate you both.

Mr. BONNER. Your agency has also been helpful, hats off, for the announcement regarding additional safety of testing Gulf Coast seafood. A recent poll, I hate to even repeat the numbers because it is very troubling, but 70 plus percent of the American people lack confidence in Gulf Coast seafood and, yet, it is probably the most tested seafood for safety of any seafood from the Pacific to the Atlantic to the Chesapeake.

I doubt there is another—that is a good question. Is there any other seafood in our country that is being tested as thoroughly and closely as Gulf Coast seafood right now?

Dr. LUBCHENCO. To the best of my knowledge, no, sir.

Mr. BONNER. Well, can you tell us, and we are not competing against Chesapeake seafood, it is good seafood, especially with the chairman, but what steps can you, additional steps can you take to continue to communicate with consumers?

I know the secretary of Defense indicated that they are buying more Gulf Coast seafood for our soldiers and sailors and airmen, but what steps can NOAA specifically do to communicate that Gulf Coast seafood is being tested, is safe, and people can purchase it and enjoy it with confidence?

Dr. LUBCHENCO. Congressman Bonner, we, as you know, did close areas in response to the presence of oil and then reopened them only when our extensive testing showed that the seafood was free of any contamination by either oil or dispersants which some people were concerned about as well.

And we do, in fact, continue to test. And we have announced an ongoing program to do exactly that. As you note, however, there continues to be suspicion. And, you know, I think this is a cognitive dissonance in the minds of many people.

After seeing day after day images on TV of this oil flowing and on the surface and oiling birds, I think it is hard for people to understand how it could not be contaminating everything in the Gulf. And so I think that is just a matter of human nature, if you will.

Fish can process hydrocarbons. They can cleanse themselves of it. And the testing that we have done is for twelve different compounds of hydrocarbons called polycyclic aromatic hydrocarbons, PAHs, and——

Mr. BONNER. I would ask you to spell it, but I bet you could.

Dr. LUBCHENCO. I probably could. So we test for those twelve PAHs that are known carcinogens. We developed, as a result of the spill, a brand new test to identify a compound that was in the dispersants to be able to know whether it was residing still in flesh of fish and other seafood.

So we know from that testing that the fish, the crabs, the shrimp that are being caught from the Gulf are, in fact, free of those hydrocarbons and the dispersants. But more has to be done than simply asserting that it is safe. That obviously has not been enough to convince people either in the Gulf region or around the country.

NOAA has been working very carefully and closely with our Sea Grant Program in the Gulf states to help address this. Part of this is providing information, holding public hearings, holding sessions with folks so that they have access to people who have the information and can try to dispel much of the misinformation that continues to be out there. So we have been doing that throughout the spill and continuing now as a way of continuing to provide information to people.

You also mentioned the recent announcement of the Programmatic Environmental Impact Assessment process, the PEIS, which is a formal portion of the NRDA process that involves public hearings. The major purpose of those hearings is to solicit ideas from the public, from academic scientists, from anybody with some great ideas about what restoration should look like.

And a part of those seven, it is either seven or nine different hearings, I cannot remember which, around the Gulf, about half of which have now happened, part of those hearings involve opportunities for citizens to ask questions. And over and over and over, we are getting questions about seafood safety. So we are taking every opportunity even under the context of the NRDA process and this PEIS to provide additional information.

On top of that, the seafood industries of the relevant states did receive some money from BP to launch a public awareness campaign about safety. We have not done that for them, but we have provided them information.

So we have been working closely with the seafood industry to try to help get over the hump, if you will, and restore their credibility. This is an ongoing effort. We continue to be involved and we will support it to the best of our ability.

Mr. BONNER. Mr. Chairman, I have a lot more questions, but could I get three more in?

Mr. WOLF. Go ahead. Take your time.

Mr. BONNER. And thanks for mentioning the Sea Grant Program. LaDon Swann in our area certainly does a good job.

Dr. LUBCHENCO. Terrific.

Mr. BONNER. He will be pleased to know that he got a shout out from the administrator.

STOCK ASSESSMENTS

As we have discussed previously, I and others have called on NOAA to fund fishery independent——

Dr. LUBCHENCO. Uh-huh.

Mr. BONNER [continuing]. Data collection of the reef fishery in the central Gulf Coast. I want to thank you for committing additional funding in a tight budget environment to the Gulf for this purpose.

I believe this data is vitally important to provide the most accurate stock assessments that we can arrive at. Can you share any

information resulting from this effort and do you plan to continue supporting it if you can?

Dr. LUBCHENCO. Congressman, we absolutely do plan to continue to support this. Fishery independent survey information is vitally important. And we have not had as much of it in the past as we need and we are very seriously committed to acquiring that information. That is true for both commercial as well as recreational fisheries.

And one of the things that I know you are aware of is my personal commitment to build much better relationships with the recreational fishing community, to acknowledge how important they are.

I think they felt for many, many years that NOAA was ignoring them and what they do and what they represent, their economic value to the country, but also just the importance that they bring to families and friends to just get out and have a good time, recreation. All of that is vitally important.

And so one of our challenges with recreational fisheries is having adequate information about both the status of the stocks as well as what the activities are involved in and this year's budget does reflect a serious commitment to improving the quality of the information both on the stocks as well as on who is catching what, when, and where.

Mr. BONNER. You mentioned in an earlier answer referenced the fishery closures during the oil spill that were necessary obviously. During that time, there were no fish landed to provide data for the collection efforts.

Was your use of fishery independent data collection increased during that time or do you have a data gap during those closures?

Dr. LUBCHENCO. Congressman, I do not know the answer to that, but I am happy to find out and get back to you.

[The information follows:]

Representative Bonner: Was your use of fishery independent data collection increased during that time or do you have a data gap during those closures?

Answer: Some data was lost due to the oil spill (Deepwater Horizon: DWH) and the diversion of vessels for response efforts. Less data invariably leads to potential decreased accuracy in stock assessments; however, it is difficult to determine the exact impact. The data that was collected was useful, thus still supporting stock assessments. See below for more details on the number of lost days at sea (DAS).

FY10 SEFSC SURVEY IMPACTS

• The Southeast Area Monitoring and Assessment Program (SEAMAP) is a State, Federal, University program for collection, management and dissemination of fishery-independent data and information in the southeastern United States. NMFS conducts surveys in federal waters and the states conduct relatively the same survey in their state waters so the two surveys complement each other. The SEAMAP Spring Plankton Survey lost 7 DAS in the Gulf of Mexico from the usually 60 DAS that are used to cover the entire Gulf of Mexico and part of the Caribbean. The SEAMAP Reef Fish (i.e. red snapper) survey lost 8 DAS out of the 38 DAS that had been allocated. As a result, planned survey work was not finished in the western Gulf of Mexico.

• The South Atlantic Reef Fish Survey was allocated 39 DAS and lost 5 due to DWH. It is not a component of SEAMAP.

• The first SEFSC/NEFSC Cooperative Survey was canceled. This survey of both the southeast and northeast U.S. continental shelf ecosystems, would allow NOAA to understand how the resources (i.e. fisheries and protected species) in one system depends on the neighboring system. The loss of this survey will negatively impact NMFS's ability to build a cohesive view of marine ecosystems along the east coast.

• Summer groundfish, shark/red snapper longline and the SEAMAP reef fish surveys were used to collect DWH samples and at times had to be diverted to collect samples but for the most part were able to continue with the planned stations.

CATCH SHARE PROGRAMS

Mr. BONNER. And then just a couple more. NOAA has dedicated a significant portion of the NMFS budget to the implementation of catch share programs which I believe have merit.

One concern that some of the fishermen in my area have, however, is that you are aggressively moving forward with the National Catch Share Program in advance of a complete stock assessment.

Can you comment on those concerns?

Dr. LUBCHENCO. Certainly, Congressman. The stock assessment challenge is an ongoing one and we need the best possible and the most current possible information. And when you consider over 200 stocks that are priority stocks, the ones that are caught most often, that is a significant challenge.

And that is why in this year's budget request we are asking for an increase and $15 million for stock assessments to be able to have better and more current information on an ongoing basis.

That information is important regardless of the management tools for a particular fishery. Catch shares are a management tool. They are not imposed by NOAA. Each fishery management council makes decisions in the form of a fishery management plan for each different species or groups of species that are caught together. And we are encouraging councils to consider catch shares where they are appropriate. And councils are, in fact, doing that.

And the funds that are in this year's budget request in support of catch shares are to enable the catch share programs that have been approved recently, some of which, for example, the West Coast Trawl IFQ was seven years in the making, so it is a long-term process. It has to be carefully designed, carefully planned. And these funds will enable those programs to continue to happen.

The one hallmark of catch share programs is that they require considerable information about catches on an ongoing basis. So observer programs and monitoring is vitally important to the success of these programs. And that is part of what the additional resources help support is this additional observer and monitoring coverage.

So what the Federal Government is doing using this West coast program as an example, is helping with the majority of the costs for this additional monitoring and observing early on. So year one, 90 percent of the cost the Federal Government is bearing. Year two, 50 percent. Year three, 25 percent. Year four, zero.

So it is to transition the fishery into more productivity, less overfishing, more economic viability with the idea that then the fishery assumes the—this is the fee for service. They are paying directly for this additional monitoring that is needed.

The benefits of are that it ends over-fishing. Overfishing typically does not happen in a catch share program. It also reduces by-catch, the unintended catch of other species which can—especially in the Gulf, there is very significant impact to many different species that are important for recreational fisheries that are caught as bycatch in a commercial program, for example.

So a reduction of by-catch. It is also the case that in catch share programs, fishermen can choose—they know what their quota is going to be for the whole year, so they can choose to fish when the price is right, when the market price is right, when the conditions are safe so they do not have to go out and be competing against other fisherman under horrendous weather conditions.

So the track record for catch share programs is very, very impressive which is why we are encouraging councils to adopt them where they are appropriate. But they are not a panacea. They are not going to solve all of our over-fishing and they are not appropriate for every particular fishery.

So they need to be well-designed. They need to, for example, ensure that all the big guys do not buy out the little guys which can happen if you do not design it properly.

So there are a lot of important design considerations that are very important and that is why it needs to be done well and carefully.

Mr. BONNER. Well, I could go on and on, but we have got other colleagues.

Chairman, thank you very much.

And, again, Madam Administrator, thanks for your leadership.

Dr. LUBCHENCO. Thank you, Congressman.

Mr. WOLF. Thank you, Mr. Bonner.

I am going to follow up on one of Mr. Bonner's issues to ask you a question along that line. We are going to go to Mr. Austria and then Mr. Schiff.

When I think in terms of the—we have some questions here which we hope that we will get to—aquaculture and where some of the seafood is coming in from Vietnam and from China with the other chemicals and it is just a disgrace. And then I think of the Gulf.

Could we not and what would your position be if we in the committee directed you—and before I tell you what I would like to direct you to do, think in terms of when cranberries were hit very hard back in the 1950s. You may be too young to remember the cranberry issue. You were probably—maybe you were not even born. I will put it that way.

Eisenhower made a major effort, had cranberries in the White House on Thanksgiving and they brought the cranberry industry back. The same thing happened in the 1960s with regard to tuna. Tuna went through a very difficult time. They found botulism in tuna. They put together a major program.

Could we not direct you or what are your feelings to mandate BP to put together a major advertising program, particularly when you think of where some of the stuff from Vietnam and from China, some of the pits that their fish has come out of there, a major advertising program working with the Gulf from Florida to Alabama to Mississippi to promote Gulf seafood whereby BP would not do it because I do not think they have the credibility, frankly, whereby they would work with a consortium to advertise so that everyone when they are watching, instead of seeing some of these drug ads that you are seeing every other 30 seconds, you would see an ad to encourage Gulf seafood?

What would your position be if we were to put language in directing the Administration to approach BP to fund the program in cooperation with the Administration and with the Gulf Coast states to promote seafood from the Gulf similar to what was done in many respects with regard to cranberries?

Do you remember the cranberry case?

Dr. LUBCHENCO. Not well. I remember it vaguely, but I love cranberries.

Mr. WOLF. It devastated the industry. Massachusetts was heavily hit. The bogs were hit. Wisconsin was hit. President Eisenhower made a deal, made an effort at Thanksgiving time to have cranberries to show. And it came back.

Do you remember the tuna fish botulism issue?

Dr. LUBCHENCO. No, I do not.

Mr. WOLF. Does anyone remember? Yes? And they brought it back. I bet everyone here. Who has had tuna fish in the last week here? I mean, everyone. And so I would like to see——

Mr. BONNER. Let the record show almost every hand went up.

Mr. WOLF. Every hand went up. I would like to see if you would look at it working with Mr. Bonner's office and working with the committee. We could put language in to direct, and we would need your cooperation, the Administration, because you are now looking at prosecuting cases with regard to BP, direct BP within the next, you know, quickly, 30 days, this is not something we want to drag out, we want to take advantage of the summertime, for a major advertising program and bid it out working with the governors and yourself to promote Gulf seafood throughout the United States and throughout the world.

Would you be open to that? What are your thoughts about that?

SEAFOOD SAFETY

Dr. LUBCHENCO. So I think there are a number of issues that are relevant to your suggestion, Mr. Chairman, one of which is that NOAA does test seafood, but——

Mr. WOLF. But it was so tested and so clean and clear and good. We have to tell other people about it.

Dr. LUBCHENCO. I understand. I understand. The Food and Drug Administration, FDA, is the federal agency that has responsibility for certifying that seafood is safe. So what I am saying is NOAA and FDA have complementary but different roles.

And so there are a number of agencies that have been involved and would need to be involved. All I am saying is this is not just a NOAA issue.

Mr. WOLF. Well, I think it is a White House issue.

Dr. LUBCHENCO. And the White House has already asked BP to fund this campaign that I mentioned with the seafood industry in the Gulf to promote awareness.

Mr. WOLF. Beginning when?

Dr. LUBCHENCO. It is underway now, but I do not know. Maybe Congressman Bonner has more knowledge about where it is.

Mr. BONNER. Well, it is whatever is happening is not enough.

Dr. LUBCHENCO. Exactly.

Mr. BONNER. And I will give you a quick example. In Alabama, our governor, brand new governor that just got elected in Novem-

ber, was negotiating directly with BP to get some tourism dollars. We got I think $14 million. Louisiana and Florida got $30 million because their governors had negotiated a better deal.

I think what the Chairman is saying is is that if the Administration will continue to put pressure on the responsible party, I think this is a great idea, Mr. Chairman, of trying to not necessarily—and the administrator is right. FDA, there are a lot of agencies that would have to play a role in this, but if you could continue to put pressure on the responsible party to do their part and then some——

Dr. LUBCHENCO. Uh-huh.

Mr. BONNER [continuing]. We could go a long way toward getting us over what could be even a more challenging summer if those claims and the other part of this process do not continue to pan out.

Dr. LUBCHENCO. I believe we need to be doing more. And NOAA would like to be helpful in that process just understanding that there are others involved as well.

Mr. WOLF. If you could work with the subcommittee and Mr. Bonner. And we would, if we could, carry language to tell them that we are going to carry it, but urge them to do it and develop a consortium. And I would urge you to look at the cranberry in the late 1950s——

Dr. LUBCHENCO. Uh-huh.

Mr. WOLF [continuing]. And the tuna fish issue and then anything we could do, you know, whether it be a letter, so I do not think we want to wait until we have a 2012 bill. I think we want to kind of move something quickly so it is in play——

Dr. LUBCHENCO. Uh-huh.

Mr. WOLF [continuing]. Ideally and you need one person to be the coordinator. I mean, personnel is policy——

Dr. LUBCHENCO. Absolutely.

Mr. WOLF [continuing]. And the right person who can—well, thank you.

Mr. BONNER. Thank you.

Dr. LUBCHENCO. Congressman, could I just add one other quick thought to this? You were highlighting the need or an ideal situation where we would be eating more of our seafood from U.S. waters.

Mr. WOLF. That is from a country that has 35 Catholic Bishops in jail, has plundered Tibet, has hundreds of Protestant pastors in jail, is shooting people, taking their kidneys and selling them for $50,000, and is spying on us.

That would be my choice. I would rather take fish and seafood from the Gulf than from China who has the 2010 Nobel Peace Prize winner in jail and his wife is under house arrest.

Wouldn't it be better—or Vietnam where they got the consular U.S. embassy staff guy and shut his foot in the door and slammed it and slammed it and slammed it and, yet, we are taking all of that because many times you have these big law firms in this town that are representing the Chinese government and the Vietnamese government.

Let's take the seafood from Alabama, from Mississippi, from New Jersey, from places like that. And that is the point of trying to—

not to punish China, although I would be certainly anxious to do that, but to enhance the American seafood industry. And if you look at some of the places that we are getting the seafood from, the shrimp, they are literally cesspools. And so if we can help our own people.

Dr. LUBCHENCO. I wanted to connect what you were suggesting in terms of having more seafood from the U.S. waters with our current budget request because we, in fact, have a goal of recovering all of our fisheries and ending overfishing. And that is what much of our policies are designed to do.

Based on estimates, if we recover all of our fisheries that are currently depleted, we could increase economic benefit of $2.2 billion from that industry from $4.1 to 6.3 billion annually. We are on track to end overfishing, but we have a lot more to do. And much of what we are asking for in this budget will give us more ability to do that economic recovery, end overfishing, and have more great healthy seafood from our waters.

Mr. WOLF. Good.

Mr. Austria.

Mr. AUSTRIA. Thank you, Mr. Chairman.

Doctor, thank you for being here. Thank you for your hard work and commitment. We appreciate it very much.

Let me kind of switch gears here a little bit. I know you touched briefly on this earlier, but I just want to get some more clarification.

It has been suggested that if adequate funding for the Joint Polar Satellite System is not provided quickly, there is the possibility of that data gap by 2017. I want to learn more about this data gap and the impact it is going to have.

So could you please describe exactly what this data gap would look like and the possible effects it would have on particularly the military side and civilian use? In other words, what are the short-term, long-term effects of such a data gap on our national defense?

Dr. LUBCHENCO. Thank you, Congressman, for asking about that.

JOINT POLAR SATELLITE SYSTEM

If we do not have adequate funds in both 2011 and 2012 for this Joint Polar Satellite System, the consequences will be multiple. Because of the Continuing Resolution in this year, we already have a delay in the launch of this Joint Polar Satellite System of at least 12 to 18 months and it is likely to be longer depending on how long it takes to resolve the current budget situation for 2011.

That delay in launch will likely result in a gap in time where we will not have a U.S. civil polar orbiting satellite in place and the consequence of that will be to our ability to do long-term weather forecasts, severe storm warnings, search and rescue, and weather for Alaska. Those are sort of four different categories.

You asked specifically about consequences to the military. They depend directly on our long-term weather forecasts to make decisions about troop deployments, for example, or refueling in air. So those are two specific examples of how the long-term weather forecasts provided by NOAA are utilized by the military.

So in addition to those direct impacts, having maritime weather information is vitally important to the Navy. And those polar orbit-

ing satellites provide the eyes on the water, if you will. They give us information about weather situations on the oceans all around the world.

And so it is quite likely that the quality of our maritime weather information that supports naval operations would be degraded. So there are multiple consequences.

Mr. AUSTRIA. Okay. And I know we are running short. We have a vote here shortly.

One other area I wanted to touch on real quick was one of the most successful programs I think that NOAA has that connects research to the ground and on the ground challenges that our State in Ohio and in other states around Lake Erie, local entity space, is the Sea Grant Program which was discussed briefly.

Dr. LUBCHENCO. Uh-huh.

Mr. AUSTRIA. And I think one of them is run out of the Ohio State University back in Ohio.

Dr. LUBCHENCO. Right. Correct.

Mr. AUSTRIA. And it is obviously focused on the Great Lakes and the work that is being done there, Ohio State's program leads binational efforts between the U.S. and Canada on Lake Eries and the Great Lakes.

How do you plan to use the Sea Grant Program to help in running the new Climate Service proposed in your budget? In other words, how is that going to impact or what are your plans with this program as you restructure with the Climate Service Program?

CLIMATE SERVICES

Dr. LUBCHENCO. Congressman, the climate services, many of which we already provide some of, and the proposal in this budget is to do a budget neutral reorganization so that we can provide climate services more effectively than we can now.

And I should clarify that when I say climate in this regard, it is anything more than 14 days. So our weather forecasts are zero to ten-ish. Anything more than 14 is climate. So when I say climate services, it is information of the a couple months from now or next year. That is climate in the way that we talk about it.

That climate information, the climate services are directly relevant to Sea Grant programs and enable them to add value to provide information to many of their constituents in making the decisions that they make and in turn, they provide a critically important flow of information in the other direction where they are eyes and ears on the ground, out in the field, working with folks all around the Great Lakes in this case to give us information about what do communities around the Great Lakes want to know about how conditions, you know, a year from now or two years from now are affecting their businesses or their lives.

So they will help through a regional organization of regional climate centers. Sea Grant programs can help feed into that better understanding of what people's needs are, so——

Mr. AUSTRIA. So do you envision with the Climate Service now using the established network relationships of——

Dr. LUBCHENCO. Absolutely.

Mr. AUSTRIA [continuing]. Working together or are we now going to have a new competing set of outreach programs?

Dr. LUBCHENCO. We have established regional climate centers that are collocated with our National Weather Service regional offices. And those will be tapping into existing networks like Sea Grant and other existing networks, many of which with our universities, to provide this tailoring. We are not going to set up a whole new structure. We are going to tap into existing networks and Sea Grant Program is a great one.

Mr. AUSTRIA. Thank you very much, Doctor. I appreciate it.

Thank you, Mr. Chairman.

Mr. WOLF. Mr. Schiff.

Mr. SCHIFF. Thank you, Mr. Chairman.

I just wanted to follow up briefly on JPSS. I share the concerns about the delay in that program.

In the *Washington Post* yesterday, there was a story about the importance of JPSS in making accurate weather forecasts. Looking at just the example of the February snowstorms in Washington last year, forecasts without the satellite would have seriously underpredicted the snowfall that closed down the city. Many businesses and families would have failed to anticipate the seriousness of the blizzard and people could have been put at risk.

Under the current budget circumstances, what is your best estimate for when JPSS satellite will launch? The first phase of the project, the NPP satellite, is due to launch this fall. Is that still on track?

JOINT POLAR SATELLITE SYSTEM

Dr. LUBCHENCO. Yes, the NPOESS Prepartory Project (NPP), Congressman, is still on track. The launch date for JPSS–1 is highly dependent on funding, funding in 2011. So the launch date because of the Continuing Resolution, the launch date for JPSS–1 has already been delayed by 12 to 18 months. It might be longer than that depending on when we have a budget. And the launch date for JPSS–1 was originally 2015, so it has been pushed back 12 to 18 months beyond that.

So we have a current satellite in the sky now that is providing the information we are talking about. NPP will be the next one that will be providing that information. It was originally designed not as an operational satellite but as an experimental satellite. This is a NASA satellite that was designed to test out some new instruments that would then be used by what is now the JPSS series of satellites.

So its life span as a risk reduction NASA mission, was designed for five years. Originally NASA had assigned mission success criteria of three year for NPP. So there is some uncertainty in exactly how long this data gap would be. But if you do the math, it is looking like there is a very, very high likelihood that we are going to have a significant data gap when we have no polar orbiting civil satellite that the U.S. runs that is giving us this vital information for severe storms, for long-term weather forecasts, and for search and rescue.

Mr. SCHIFF. That is a grave concern. If the, and I know this is still somewhat speculative given the budget situation, but if you do get the greater longevity of five years, what will the gap look like then or even under that best case——

Dr. LUBCHENCO. We would still have a gap under those circumstances. And I think just a couple of other things that are relevant for this issue. The amount that we need in 2011 is $910 million. So that is the $382 million that was the 2010 enacted level plus $528 million above that. So it is a very sizeable amount. And I fully realize that that is the case.

But for every dollar of that that we do not have in 2011, it will take three to five dollars down the road to bring that program back up to speed and all the money in the world is not going to close that data gap. So this is fiscally, I think—well, there are fiscal issues here as well as public safety and economic consequences.

Mr. SCHIFF. Thank you.

And in the interest of time, I yield back, Mr. Chairman.

Mr. FATTAH. And just one quick point before we go, Mr. Chairman, is that the other thing we are doing is we are paying for these satellites as if they are only being utilized in one budget year rather than looking at the cost over the number of years they are being in service, they are going to be in service. It is like paying for a house all at once——

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH [continuing]. Versus paying for it over the life of its use. Thank you, Mr. Chairman.

Mr. WOLF. Thank you.

Mr. Honda.

Mr. HONDA. Thank you, Mr. Chairman.

I want to go over some of the other questions that were asked previously. You talked about the polar orbiting civil satellites. That is both polars that we are talking about?

Dr. LUBCHENCO. Yes, sir.

Mr. HONDA. Okay. I just wanted to know because you said it covers all the oceans, so I was trying to figure out how you did that without——

Dr. LUBCHENCO. So the polar orbiting satellites go around the poles.

Mr. HONDA. Right.

Dr. LUBCHENCO. And the earth is rotating under them. And so they see a different part of the earth every time they do a pass.

Mr. HONDA. Okay. It is like peeling an orange with that little machine?

Dr. LUBCHENCO. Repeatedly. Repeatedly.

Mr. HONDA. Then I understand now the distinction between Weather Service and Climate Service. And I think that that is an important understanding in order for us to understand why we should be staying on top of the budget because you just mentioned that creating a data gap is the gap is a gap and it will never be recovered because it is oriented to the time that has elapsed and you cannot go backwards and capture that data that has already elapsed; is that correct?

Dr. LUBCHENCO. The data gap that we would have, Congressman, where we would not have a polar orbiting satellite that the U.S. operates means that for whatever period of time that it is, we would not have information that would enable us to do severe storm warnings of the quality we do today.

For example, two to three days advanced warning for hurricanes or severe storms.

Mr. HONDA. I get that part. So the gap is created because?

Dr. LUBCHENCO. Because there is no satellite that is giving us information about development of severe storms or——

Mr. HONDA. We are not putting up a satellite to replace one that is coming down?

Dr. LUBCHENCO. That is correct.

Mr. HONDA. Okay.

Dr. LUBCHENCO. Sorry. I apologize.

Mr. HONDA. I just wanted to understand that if we do not have that up there and we want to be able to predict in the future, a gap is a gap because once time has passed, you cannot go back?

Dr. LUBCHENCO. That is correct.

Mr. HONDA. You cannot bank it and go back and see if you still have it?

Dr. LUBCHENCO. That is correct. Those polar satellites, both provide real-time information that enables us to do weather forecasts, but they also provide data about the earth that is irreplaceable.

Mr. HONDA. And in terms of the budgeting process, what are the things that Congress is doing that creates the challenge for you to be able to be continuous or be able to—that is going to create the danger of having a gap? What is it that we are doing or not doing?

Dr. LUBCHENCO. The challenge is in fiscal year 2011, the current fiscal year, lack of adequate resources will keep us from continuing the contracts.

Mr. HONDA. So if we do H.R. 1 and cut more into the current CR, there will be less money to do what you need to do that was planned for 2011?

Dr. LUBCHENCO. H.R. 1 would be insufficient to——

Mr. HONDA. H.R. 1 cut into your current planning, what you had done for the last CR, the CR that we are operating under right now?

Dr. LUBCHENCO. So even the existence of the CR now has already delayed the launch.

Mr. HONDA. Right.

Dr. LUBCHENCO. If we do not have the full $910 million in this fiscal year, we will have to terminate contracts and not be able to——

Mr. HONDA. It does create a gap.

Dr. LUBCHENCO. And that creates the gap.

Mr. HONDA. And that creates the danger in the future as far as——

Dr. LUBCHENCO. Correct.

Mr. HONDA [continuing]. Condition for satellites for weather Climate Service that we depend upon both military and commercial and domestic?

Dr. LUBCHENCO. Correct.

Mr. HONDA. Okay.

Dr. LUBCHENCO. And every dollar that we do not spend this year, it is going to cost three to five dollars down the road.

Mr. HONDA. I just wanted to make sure that we understood the gravity of not doing the work here in a timely manner with the

necessary funds for us to maintain, maintain the kind of services that we expect for everything from domestic to national security.

Dr. LUBCHENCO. That is exactly right, Congressman. It is a very grave situation.

Mr. HONDA. Thank you, Mr. Chairman.

Mr. WOLF. Thank you.

We are going to try to, Mr. Fattah and I am going to try to keep going back and forth, so we do not break the hearing. There may be a point that we have to, but——

Dr. LUBCHENCO. Okay.

Mr. WOLF [continuing]. On the satellite, a couple of fast ones. Given the current funding climate, there will be less funding. What contingency plans are you making to address the funding amount needed for the JPSS Program in order to remain on schedule?

Dr. LUBCHENCO. Congressman, the original request for fiscal year 2011 was over a billion dollars and we have scrubbed that budget and brought it down to $910 million dollar.

Mr. WOLF. But I guess the next question, and I apologize for breaking——

Dr. LUBCHENCO. Uh-huh.

Mr. WOLF [continuing]. I don't want to keep you sitting while we are——

Dr. LUBCHENCO. I appreciate that.

Mr. WOLF. Will Commerce reprogram funds in fiscal year 2011 to minimize the schedule?

Dr. LUBCHENCO. We have very little ability to do reprogramming at the scale that is needed to address the challenges of JPSS.

Mr. WOLF. If you do not reprogram funds, when do you anticipate the first JPSS to launch?

Dr. LUBCHENCO. That depends directly on when we get the resources and how much they are.

Mr. WOLF. Well, then I guess the big question is, it is very possible that the level of funding you are requesting for the satellite program is just not going to be there in 2011 or 2012.

Are there lower priority programs in other areas, because we would like to help you do this if we can, that you fund at reduced levels in fiscal year 2011 and 2012 in order to ensure that there is not a gap in weather satellite data? Are there other satellite programs that could be further reduced to provide more resources for this?

I am just trying to figure the reality, and the reality is the reality. And I do not know how well this has been accepted in the Senate either. Do you have any indication of how the Senate is thinking?

Dr. LUBCHENCO. I know that your counterparts in the Senate Appropriations are concerned about this, at least individuals with whom I have spoken.

Mr. WOLF. So then what would you say if there is a gap?

Dr. LUBCHENCO. Congressman, we just do not have—these are such big numbers relative to the rest of our budget. It is very challenging to identify anything that could make up this amount as important as this program is.

Mr. WOLF. Well, I can see you do not want to answer the question and I understand basically what— I think it is something you

are going to have to work with the committee on. And, you know, there is only going to be so much available. And I guess if you want to go ahead and we think this is such an important program——

Dr. LUBCHENCO. Chairman, we are happy to, you know, sit down and work through the numbers with you and your staff. I, frankly, do not see how we can manage this. I understand that it is a huge challenge and I am really pleased that you appreciate how important this program is.

Mr. WOLF. Mr. Fattah, you want to and I will——

Mr. FATTAH [presiding]. Let me stay on our satellite focus here. And I know the Chairman may go down and vote, and then he will come back and I will go down and vote.

Walk me through this, right? The length of the service of the satellite would be what, the polar satellite?

Dr. LUBCHENCO. I am sorry. Say that again, the——

Mr. FATTAH. How many years will we get benefit of the data from the satellite?

Dr. LUBCHENCO. From JPSS?

Mr. FATTAH. Yes.

Dr. LUBCHENCO. So typically our satellites, the polar orbiting satellites are expected to live five years. They have fuel enough for seven.

Mr. FATTAH. Okay. So five years, right? Prepare for the cost all in one year?

Dr. LUBCHENCO. Correct. Well, so the costs, we receive the money, for example, in this year. We build the instruments. We build the satellite. We test them. We refine then. We do all this stuff. And then we launch them years down the road. So the money, the big bulk of the money is in the years of construction.

Mr. FATTAH. Yeah. What I am trying to figure out is I buy a car.

Dr. LUBCHENCO. Right.

Mr. FATTAH. I bought a Ford Explorer, right?

Dr. LUBCHENCO. Right.

Mr. FATTAH. I am going to drive it for a period of years. I am going to pay for it over a period of years. I am trying to figure out whether you are buying this satellite all cash on the front end——

Dr. LUBCHENCO. No.

Mr. FATTAH [continuing]. Or whether there are costs associated in each year.

Dr. LUBCHENCO. There are costs associated in multiple years, but the bulk of the costs are before the satellite is launched. There are continuing costs after it is launched.

Mr. FATTAH. Okay.

Dr. LUBCHENCO. But it is a multi-year budgeting.

Mr. FATTAH. And there is no utility in looking at, for instance, leasing satellite space on other satellites that are commercial that are already in orbit or partnering up? I know you tried to partner with DoD.

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH. That did not work out. That marriage did not make it all the way through. Or are there efficiencies in terms of or duplications with NASA that help us and help the chairman try to think through these budget numbers?

Dr. LUBCHENCO. Right.

Mr. FATTAH. That is what I am—so that we can both get satellites and be able to afford them.

Dr. LUBCHENCO. Yes. I understand. We do not have any duplication with NASA satellites. We partner closely with them, but it is not a situation of duplication at all. They do different things.

We do already, excuse me, partner with many other countries.

Mr. FATTAH. You partner with Taiwan? You have some partnerships with Europe?

Dr. LUBCHENCO. With Europe.

Mr. FATTAH. But in this particular instance, there is——

Dr. LUBCHENCO. We do not.

Mr. FATTAH [continuing]. No substitute?

Dr. LUBCHENCO. That is correct. It should be noted, however, that the Europeans have a polar orbiting satellite as do we and we all use data from both of them, but they are nicely complementary and we need both. They do not duplicate one another.

Mr. FATTAH. On the dollars. The Europeans use data from ours and we use data from theirs?

Dr. LUBCHENCO. Correct.

Mr. FATTAH. Do we pay for data for theirs and do they pay?

Dr. LUBCHENCO. No. We give them our data. They give us theirs.

Mr. FATTAH. Free exchange of information?

Dr. LUBCHENCO. Correct.

Mr. FATTAH. All right. Okay. So there is no other——

Dr. LUBCHENCO. I like the way you are thinking. I wish I could be more helpful in identifying——

Mr. FATTAH. Well, you know, in many of the areas of the Commerce Department, which is the department you are situated in, they do charge fees——

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH [continuing]. For services that are rendered for people who are making money?

Dr. LUBCHENCO. Correct.

Mr. FATTAH. So I am just trying to figure out whether there are some ways inside NOAA——

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH [continuing]. For us to be as entrepreneurial. So this gap that we are going to have notwithstanding because of the CR, we are going to have a gap. Your plan in terms of data, and this has to do with both morning and afternoon and so on——

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH [continuing]. Information, right?

Dr. LUBCHENCO. Correct.

Mr. FATTAH. What is the plan just to deal with the gap? It has nothing to do with the money issue. But——

Dr. LUBCHENCO. So we——

Mr. FATTAH [continuing]. Say we have a 12-month gap, no satellite data. How are we going to——

Dr. LUBCHENCO. So for the period of time for which there is a data gap, we have the European satellite that would be providing half of what we have now. So it is not as if we have——

Mr. FATTAH. Have morning or afternoon?

Dr. LUBCHENCO. They have a morning orbit.

Mr. FATTAH. Right. Okay.

Dr. LUBCHENCO. Actually, they have a midday orbit. Sorry. And ours is afternoon. And so it is not that there will be no data. It is that there will be half as much data and, therefore——

Mr. FATTAH. But if you were trying to tell my colleague from Alabama in terms of challenges, the data is going to be off by a significant amount because of this gap——

Dr. LUBCHENCO. That is correct.

Mr. FATTAH [continuing]. Right?

Dr. LUBCHENCO. And, for example, our hurricane models, if we are going to pick on Alabama for a moment, our hurricane models——

Mr. BONNER. I am glad I came back.

Dr. LUBCHENCO [continuing]. Are dependent on information from both of those satellites. And we will have half of that information. And so the models for that for other severe storm warnings for Philadelphia——

Mr. FATTAH. You are going to be off by a day or two?

Dr. LUBCHENCO. They will be off by a number of days and they will not be as high quality. So the track of hurricanes, we will not know that track as well. So you will end up evacuating a much larger section of the coast or underestimating snowfall by ten inches.

Mr. FATTAH. That is about a million a mile on the evacuation cost?

Dr. LUBCHENCO. Correct.

Mr. FATTAH. But this gap is going to happen. There is no sense—I mean, we are going to have a gap.

Dr. LUBCHENCO. That is right.

Mr. FATTAH. But what I am trying to understand is, are there other things that we can do? You know, NASA is under the jurisdiction of the subcommittee and the chairman. I mean, do they have satellites that could make up some of this data over the period of the gap?

Dr. LUBCHENCO. They do not have satellites that have these instruments——

Mr. FATTAH. Okay.

Dr. LUBCHENCO [continuing]. That are flying in this orbit.

Mr. FATTAH. Okay.

Dr. LUBCHENCO. This is unfortunately a unique satellite.

Mr. FATTAH. All right. I will yield back.

Mr. WOLF [presiding]. Thank you.

We understand that the NPP is supposed to launch in October 2011 and remain viable for five years. JPSS is supposed to launch in September 2016. I understand it takes about a year to calibrate.

Really what would happen if the NPP launches unsuccessfully? What are the contingency plans, if any?

Dr. LUBCHENCO. If NPP is unsuccessful, we would have an even longer data gap than we are currently anticipating.

Mr. WOLF. You know, one of the problems of all the administrators, and I do not want to talk now, people come who run agencies and sign contracts and say they are going to do things that do certain activities within so many years. Then they leave. And then, I mean, you can see the cost overruns that people have looked at. I guess that is why the Senate has some problems.

So I think you have to look at the whole big picture. And you are having fewer satellites at a higher cost and, yet, whoever signed this at the time had these optimistic projections. And that is what you are really faced with. What do you actually do now to kind of deal with it?

Dr. LUBCHENCO. Mr. Chairman, when I came into this position, this committee and others challenged us to fix the flawed NPOESS Program which had many of the challenges that you identified, cost overruns, delays and many problems that were really, I believe, inexcusable.

This Administration made a serious commitment to fix the problems with that program and this JPSS Program is a result of those fixes. This was to be a transition year. We are on target. We have fixed the management problems.

And one of the reasons that we are up against a wall right now is simply the past problems with that program have given us very little wiggle room at this point. That is why it is so dire.

So you are right. Part of where we are now is a function of history and it is very unsatisfying to all of us.

NEXTGEN

Mr. WOLF. Okay. Some other questions we will have. Let me go to aviation weather forecasting. NOAA budget includes an increase of $27 million to fund Next Generation air transportation, NextGen. That represents a third year development.

Would you please tell the committee what improvements to the Nation's aviation weather system you expect as a result of this investment and describe the partnership you have with the FAA?

Dr. LUBCHENCO. The Next Generation Program is a multi-year effort to significantly increase the quality and the timeliness of information for aviation. The request for this year is for NOAA's part, our contribution to that NextGen Program.

It specifically will develop what is called the 4D weather cube which is envisioning essentially a cube of air and understanding and being able to model what happens in that parcel of air through time.

And so it is much higher resolution information that will enable much more accurate and more timely weather information for the aviation industry that is so heavily impacted by adverse weather.

The FAA estimates that two-thirds of the weather delays by the aviation industry could be prevented with more timely and accurate information about weather. And that is what NextGen would do.

Mr. WOLF. What is your partnership—I am going to run out and vote again—but what is your partnership with FAA and how much are they putting into this?

Dr. LUBCHENCO. Mr. Chairman, I do not have that number, but I will get it to you. It is a partnership. We provide our part of it in a program that was jointly designed with them, you know, taking and drawing on our expertise and utilizing—you know, they do their part of it and we do our part. And I am more familiar with our part.

[The information follows:]

NEXTGEN ROLES—NOAA AND FAA

In the NOAA hearing transcript, Mr. Wolf asked Dr. Lubchenco to provide FAA's contribution, financial or otherwise, to the NextGen aviation weather program.

To differentiate between NOAA and FAA contributions to the NextGen program, NWS is responsible for developing the 4–D Weather Data Cube infrastructure for NWS, populating weather information in the Cube, improving forecast accuracy and forecast capabilities, and connecting NWS infrastructure to the Federal Aviation Administration (FAA). FAA is responsible for developing the 4–D Weather Data Cube infrastructure for FAA, receiving weather information from the NWS, and disseminating and integrating weather information into decision support for effective National Airspace System management. This is in accordance with the NextGen Joint Planning and Development Office (JPDO) Integrated Work Plan (IWP). To minimize duplication, the NOAA NextGen Weather Program and the FAA's NextGen Net-enabled Weather (NNEW) Program continue to closely coordinate and align program goals and requirements to meet NextGen weather needs. During 2010, the FAA and NWS developed the Joint System Specifications v.42 to ensure alignment of technology development between agencies for meeting the NextGen weather initiative goals. The FAA and NWS completed and adjudicated the Integrated Program Management Plan for NNEW and the NOAA NextGen 4–D Weather Data Cube in December 2010. Both programs are currently developing an Integrated Configuration Management Plan, due in draft in June 2011, and an Integrated Risk Management Plan, slated for completion in fall 2011.

FAA does not currently provide any financial contribution to the NWS NextGen aviation weather program. NOAA and FAA do have an agreement that FAA will reimburse NWS for NextGen weather capabilities that are above and beyond what NWS would otherwise have a requirement to implement; however, as NWS starts to implement Initial Operating Capability (IOC), FAA does not reimburse NWS for its NextGen activities.

Mr. FATTAH [presiding]. Can we just revisit for a second? This is a pocket of air? I know you are a great scientist, but could you help us? We are politicians. How do you——

Mr. BONNER. Speak for yourself. What about statesmen?

Mr. FATTAH. You are going to take a pocket of air and study it over a period of how long?

Dr. LUBCHENCO. So this is actually not my area of expertise, so——

Mr. FATTAH. Quantify a pocket.

Dr. LUBCHENCO. So instead of modeling, let's say, the entire U.S. or, you know, a city or a state, as weather systems are moving across the country, there are all sorts of dynamics that affect where the weather goes, where a storm goes, how intense it is, whether it is snow or rain. And obviously there are things happening at different altitudes and different places. It interacts, you know, when it goes over a mountain range.

Mr. FATTAH. How much air are we talking about here in this pocket?

Dr. LUBCHENCO. So I actually do not know the size of the cube, but I will get that to you. Why don't I just get you a description of what that 4–D weather cube is? I would be happy to do that.

[The information follows:]

Representative Fattah: Dr. Lubchenco offered "So I actually don't know the size of the cube, but I will get that to you. Why don't I just get you a description of what that 4–D weather cube is? I would be happy to do that.

Answer: As the lead agency for the Department of Commerce's participation in the multi-agency Next Generation Air Transportation System (NextGen), National Oceanic and Atmospheric Administration (NOAA) is responsible for providing aviation weather information to NextGen decision makers and users. The 4-Dimensional (4–D) Weather Data Cube is a weather information management and delivery system designed to support the time critical decisions made by managers of the National Airspace System. The 4–D Weather Data Cube consists of an information technology (IT) architecture (software, hardware, and communications circuits) and

advanced weather forecast information content. The Cube's contents and its supporting services will provide users with access to global aviation weather information through a single access methodology. This concept allows each participating agency (Federal Aviation Administration (FAA), NOAA and Department of Defense (DoD)) to coordinate their existing, agency-specific efforts to fulfill aviation-weather requirements to provide a mutually supportable, national—and eventually global, construct. This Federal effort addresses a way to satisfy public and private sector aviation weather needs while allowing each agency to maintain various independent capabilities consistent with their own requirements. A foundational element of this effort builds upon and takes advantage of evolving information technology advances.

Modernizing the nation's current air traffic system, which is based on technology invented during World War II, is universally seen as critical to coping with the congested airspace over the United States and to accommodate growing traffic. Under NextGen, a greater level of automation will help air traffic decision makers manage a highly flexible system to maximize the use of available airspace. This system requires high resolution, accurate digital weather information that can be easily ingested by automated air traffic management systems. The NextGen 4–D Weather Data Cube will provide a consistent view of the weather relevant to aviation decision makers through a single access methodology, ensuring that all users have access to the same information.

The NextGen 4-Dimensional (4–D) Weather Data Cube is fully described in the NextGen Concept of Operations and the NextGen Integrated Work Plan. This "Cube" is characterized by:

(a) Improvements to IT infrastructure comparable to those already employed by other governmental agencies and by industry to provide greater and easier access to NOAA weather information for aviation decision-makers. Greater access to aviation-relevant weather information will facilitate better integration of this information into aviation users' decision-making processes.

(b) More consistent aviation weather information, providing a common operational weather picture needed for consistent decision making across the National Airspace System.

(c) Improvements to accuracy of weather information. The research and development (R&D) needed to meet the stringent weather requirements of NextGen will take an extended, multi-year effort to complete. This long lead-time R&D will improve the overall accuracy of aviation weather information and will provide forecasters with a more solid foundation upon which to add their expertise to move toward meeting NextGen requirements.

(d) Improvements to aviation forecast generation techniques. NWS meteorologists require advanced tools and techniques to enable faster, more accurate generation of aviation weather information.

While the 4–D Weather Data Cube is intended to benefit the aviation community, improvements to IT infrastructure, forecast accuracy and more advanced forecast processes will have wider reaching benefits to governmental and private sectors that require environmental information. These results will improve other NWS service areas, such as support to Emergency Managers and improved forecasts for severe weather notification or flood warnings to the public. NOAA, other governmental agencies, private industry, and the public will have more effective and efficient access to accurate, consistent, and timely weather information to drive their decision-making systems and processes.

BACKGROUND

The air transportation industry is an important element of the U.S. economy and weather impacts to the National Airspace System result in significant economic losses. The industry generates 5.4 percent of America's Gross Domestic Product, $640 billion in revenue and over 11 million jobs. The Congressional Joint Economic Committee estimates that air traffic delays cost the U.S. economy over $41 billion in 2007, of which 70 percent are related to adverse weather. The FAA has determined that two-thirds of these weather delays are avoidable; more accurate and better integration of weather information into decision-making can potentially reduce the number of delays by 46 percent and save $19 billion annually. As air traffic increases, delays and the associated economic toll will only increase. By 2025, US air traffic is predicted to more than double, which is not manageable by the current air traffic control system. The NextGen 4–D Weather Data Cube will provide the National Airspace System with authoritative and timely aviation decision support information in an effort to reduce air traffic delays from severe weather. By 2025, all aircraft and airports in the National Airspace System will be connected to the

NextGen network and will continually share information in real-time to improve efficiency, safety, and enable the predicted increase in air transportation.

NOAA is statutorily mandated by 49 U.S.C. 44720 to provide weather information to the FAA. In addition, the Vision 100—Century of Aviation Reauthorization Act (Pub. Law No. 108–176, 117 Stat. 2490 (2003)) directs the Department of Transportation (DOT), FAA, Department of Commerce, National Aeronautics and Space Administration (NASA) and NextGen Joint Planning and Development Office (JPDO) to conduct integrated planning for research to operations to support NextGen. This investment represents a coordinated effort spanning two NOAA line offices with linkages to numerous IT, observation, and service improvement projects. NOAA NextGen investments will result in a significant increase in weather prediction and dissemination capabilities with wide-ranging benefits across the spectrum of NOAA product users. The weather information in the NextGen 4–D Weather Data Cube will enhance decision-support systems by offering consistent information at high spatial and temporal resolutions.

GULF OF MEXICO DISASTER RESPONSES

Mr. BONNER. Mr. Fattah, so you do not have to worry, I am going to ask a Mobile, Alabama question.

Mr. FATTAH. I am going to come down to the experience of Trent Jones——

Mr. BONNER. Good. We want you there.

Mr. FATTAH [continuing]. Little pocket of land.

Mr. BONNER [presiding]. Madam Administrator, as you can appreciate with the vote series, I think we have got three or four additional votes, we are trying to be respectful of your time——

Dr. LUBCHENCO. I appreciate that.

Mr. BONNER [continuing]. And trying to get the chairman an opportunity to come back and complete the questioning that he has and other Members might have. Since I am the only Member here, let me ask you.

You came down in January of 2010 and we had the pleasure of welcoming you to Mobile for the groundbreaking of NOAA's Gulf of Mexico Disaster Response Center.

Do you have an update that you can share with us and, if not, could you give us one at your convenience that would give us some idea in terms of how the building is coming along, the staffing of it, and could we anticipate that it might be ready before the upcoming hurricane season?

And since the chairman is back, I will just leave that on the record for a later response.

Dr. LUBCHENCO. Perfect. I would be happy to give you that information, Congressman.

[The information follows:]

Representative Bonner in regard to Disaster Response Center: Do you have an update that you can share with us and, if not, could you give us one at your convenience that would give us some idea in terms of how the building is coming along, the staffing of it, and could we anticipate that it might be ready before the upcoming hurricane season?

Answer: The DRC is scheduled to open in July/August 2011. The actual date of opening is dependent upon the remaining construction schedule. NOAA's vision is to use the DRC as a regional integrative force for disaster preparation and response, and foster federal interagency cooperation, federal/state collaboration, and directly link NOAA capabilities to the emergency management community.

Mr. BONNER. Thank you.

Dr. LUBCHENCO. Thank you.

Mr. WOLF [presiding]. Thank you.

I think we have covered hurricanes. We will have some additional questions.

CATCH SHARE PROGRAMS

Now, on the fisheries catch shares issue, you are seeking an increase of $37 million to implement additional fisheries catch shares. I understand this has been very controversial in some fisheries.

If catch share programs have been used, in use since 1990, why are they so controversial and has NOAA changed the way that they are implemented?

And obviously there was a vote on the House floor too. And I am glad Mr. Bonner is here too. I had a question. We were talking to the staff yesterday.

If people are concerned that the catch shares program is harming small fishing operators, could you reserve a portion of the catch for these small operators rather than having them openly compete against larger fishing vessels, basically almost a small business set-aside that you have at SBA, but that you would have for fishermen so that you would take some controversy? Have you looked at doing that?

Dr. LUBCHENCO. Mr. Chairman, yes, indeed we have. It is a very viable model and one that is used in some existing catch share programs. This is an assertion that is often made about catch share programs, but the reality is any particular catch share program can be designed to prevent that from happening. So the design is of critical importance.

Mr. WOLF. But we have a quote from the Environmental Defense Fund report on catch shares and the Environmental Defense Fund is a strong proponent of catch shares. It seems to support the concerns stating that as a result of catch shares programs, "the total number of available crew positions decreased by half and the viability of some small scale operators in ports may indeed be reduced."

So, I mean, this is a concern that it fosters consolidation in the commercial fishing and drives out smaller operators.

Dr. LUBCHENCO. Mr. Chairman, the real driver here is the fact that in many fisheries, there has been overfishing. And any attempts to end overfishing are going to have some consequences to some individuals. That situation exists regardless of whether catch shares is the management tool or traditionally managed other tools such as days at sea are used.

Mr. WOLF. But have you not seen—I have seen a report that some of the smaller ones are having a harder time with this. The bigger operators can——

Dr. LUBCHENCO. So, again, some catch share programs in the past have not had provisions to prevent consolidation.

Mr. WOLF. Well, you know there was a vote on the floor?

Dr. LUBCHENCO. I am well aware of that.

Mr. WOLF. So the sentiment is, and I am just saying I do not know what my—I do not come from an area that is heavily involved——

Dr. LUBCHENCO. Uh-huh.

Mr. WOLF [continuing]. In that, but I respect both sides. And I think both make a legitimate case. The question is, would you be able to look at a—you know, and the Small Business Administration or DoD, they had small business set-asides——

Dr. LUBCHENCO. Uh-huh.

Mr. WOLF [continuing]. To do something whereby everyone knows they are somewhat protected because, I forget what report Leslie showed me, but it showed that smaller fishermen were having a hard time. And if they are, you know, you could bring a couple big guys in and knock them out. So that was the question of a set-aside.

Dr. LUBCHENCO. Mr. Chairman, that is a very real concern. It is one that I share and is one that is fixable either when the program is designed or retroactively. And one thing that we have done in our Catch Share Policy is to require that the design elements be reviewed.

Mr. WOLF. I am going to let Mr. Fattah finish.

Dr. LUBCHENCO. Okay.

Mr. WOLF. And then I will be right back. It is not a very good way to run a——

Dr. LUBCHENCO. I understand.

Mr. WOLF. Otherwise, you would be sitting here without anything to do for about an hour and a half.

Dr. LUBCHENCO. This is preferable.

Mr. FATTAH [presiding]. If you want to finish the answer to the Chairman's question for the record, that would be good.

Dr. LUBCHENCO. Okay. I will do that. Thank you.

I think that there has been a lot of misunderstanding about catch shares. There are a lot of assertions that are simply untrue.

One of them is that NOAA is making fisheries become catch shares. This is patently false. NOAA encourages the councils to consider catch share programs, but it is the actual councils themselves that decide whether a catch share program is appropriate for any particular fishery or not.

So they are voluntary programs. There is nothing mandatory about them. They are voluntary programs and they are chosen by the councils that include fishermen on them. And so there are many, many fishermen that are champions of catch share programs.

I think a lot of the concern about catch share comes from two corners. One is individuals concerned about what the initial allocation of shares would be and it is sort of the devil you know versus the devil you do not know. If there is uncertainty about what your allocation would be, you are nervous and you think it might not be to your advantage, especially if you do not have a strong catch history. So that is one source of concern.

The other source is simply many recreational fishermen do not see any utility in catch shares for them because they are more appropriate for commercial fisheries.

And so I think for both of those reasons, there is a lot of confusion about them. But the track record for catch shares is actually very compelling in terms of the economic and the environmental, the safety benefits of them.

Mr. FATTAH. Well, let me put into the record an article that appeared in the *Boston Globe* on this point. It is an editorial saying that this program has worked very well——

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH [continuing]. In New England and articulates a little disagreement between my good friend, the governor of Massachusetts——

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH [continuing]. The secretary of Commerce on the matter.

[The information follows:]

The Boston Globe

GLOBE EDITORIAL

No need to lift catch limits

January 13, 2011

NEW ENGLAND fishermen who catch ground fish like cod and flounder are in the midst of a pioneering season marked by hard limits on overfished stocks and a new system of dividing most of the catch among boats based on their locations and past volume of fish. Not surprisingly, there have been start-up problems. But the solution is to fix those bugs, not to ask — as Governor Patrick did — for a wholesale lifting of the caps on the depleted species. Commerce Secretary Gary Locke was wise to turn Patrick down.

Many fishermen are doing fine with the new system. After adjusting for inflation, total revenues for ground fish by Massachusetts fishermen were 21 percent higher in 2010 than the average for comparable months in 2005 to 2009. The number of boats grossing more than $300,000 in the first five months of the current season rose to 41 from 21 a year ago.

The fishermen who are struggling are ones whose quotas, based on their catches in past years, are meager. Under the new system, they were supposed to have the option of leasing quotas from other fishermen, but often they cannot afford a price that makes sense to other boat owners. Special assistance by the Department of Commerce to fishermen in this plight makes much more sense than raising quotas for all 500 of the boats covered by the new rules. ■

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Mr. FATTAH. But it says that the fishermen in Massachusetts have had a 21 percent higher result than in 2010 under this program and that it is working very well and that the bugs should be worked out.

I am not really a fisherman, so I do not know the details. I do know that you are spending about a billion dollars on this, the fish question, all of these various programs.

And, again, I am going to be asking GAO to take a look at where there are opportunities for taxpayers to share in the burden but not carry the entire burden of any number of these programs.

But I know that my ranking member, Mr. Dicks, would want me to ask you about salmon in Washington State so that you can put something on the record about where we are there. I know that your request is somewhere in the 50 plus million dollar range there, but if you could comment in his absence on both the hatchery efforts, and that would be helpful to me.

PACIFIC SALMON

Dr. LUBCHENCO. So I suspect the program that Congressman Dicks is interested in is the Pacific Coastal Salmon Recovery Fund, PCSRF.

Mr. FATTAH. Interested is an understatement.

Dr. LUBCHENCO. Fair enough. He is, as am I, a strong champion of that program. It has accomplished some very good things. It is a program that we continue to support.

The amount that is requested in the fiscal year 2012 budget is less than the enacted, but it is a respectable amount that can do some very important things. I am a strong champion. I have seen firsthand much of the good that has come from that program. It takes a watershed approach and works with communities to recover habitats that are important for salmon.

And salmon are one of those species where you cannot just manage the ocean side. You cannot just manage the land side. You have to manage them in an integrated way. And this PCSRF Program really focuses on the land side. And it is the example of the kinds of programs we need for many other endangered species, but it is a successful program.

Mr. FATTAH. Where are we at between where this is impacted in some ways by some of the treaties with sovereign Indian tribes and this hatchery issue between a more natural approach and some that takes a more, I guess, scientific approach for lack of a better term? How is that working out?

Dr. LUBCHENCO. The hatchery program is very complex and there are lots of different dimensions to it as you indicated. So is that another understatement? Is that what you were going to say?

Mr. FATTAH. Understatement.

Dr. LUBCHENCO. There are tribal issues. There are genetic issues in terms of impact of hatchery raised fish on wild caught fish. We are currently in the process of reviewing the comments to the document that was out for public review and are on track to have a revision of those that we would be happy to share with Congressman Dicks and anyone else on the committee who would be interested once we have made those changes.

Mr. FATTAH. And I guess you really cannot jump ahead and tell us whether or not there is some concern between how this is affecting the natural—I mean, you understand the Native Americans. Their assertion is that it is somehow, I do not know what the term would be, at least changing the species, I guess is the best way I would say it in a neutral way.

Dr. LUBCHENCO. Congressman, there is good genetic information that hatchery fish in some instances have a negative impact on wild salmon. And so the management challenges are how do you get the best from hatcheries without the problems. That is the challenge. And that is the balancing act that we are trying to do. They can provide good benefit, but they also we now realize can have significant detriment. And so how do you have the benefit without the detriment? How do you minimize the detriment?

Mr. FATTAH. Thank you.

I am going to give it back to the Chairman and I am going to go vote.

Mr. WOLF [presiding]. You do not want to miss this one. Thank you, Mr. Fattah.

NOAA is proposing a $346 million reorganization with regard to the Climate Service. The House Science Committee, as you know, has raised serious concerns about the establishment of a Climate Service. And the amendment to H.R. 1 prohibits funding of it.

And so your budget proposes a new NOAA Climate Service built largely by taking resources away from your Office of Oceanic and Atmospheric Research. There are significant concerns about the wisdom of this, as you know, the Hall amendment that Chairman Hall as the chairman of the authorizing committee, which passed by an overwhelming vote. I forget the exact number.

But please outline for us how you intend to ensure that the science mission of NOAA will not be sacrificed for or driven by politics in a reorganization like the one you have proposed.

CLIMATE SERVICE REORGANIZATION

Dr. LUBCHENCO. Mr. Chairman, the proposed reorganization that would result in the Climate Service is budget neutral. And what it does is take existing climate sciences and services that are now in three different parts of NOAA and brings them together into a single new line office.

Bringing them together can have great benefit because then they can interact more directly and that is the intent of creating this Climate Service. It is simply an internal reorganization to make things more effective.

Mr. WOLF. But have you talked to Mr. Hall, Chairman Hall, because, I mean, what was the vote? Does anyone recall what the vote was? It was fairly substantial.

Dr. LUBCHENCO. I understand that there is a concern about anything that says climate. And this particular formulation has been through a very exhaustive review by the National Academy of Public Administration at the request of Congress. And the review of NAPA, the National Academy of Public Administration, took a very hard look at is this reorganization a good idea? Should it look like the way NOAA has proposed or something else? What is needed to make it most effective, et cetera?

And their report which was issued last fall said a Climate Service is strongly needed, would be of great service to the country. The way NOAA has proposed is basically the right structure. There were a few things they suggested and we have adopted their recommendations. And they agreed with us that creating the Climate Service would be in the country's best interest.

One of the concerns that Mr. Hall has had has been that the science that remains in the Office of Oceanic and Atmospheric Research should remain strong. I could not agree with that more. One of my priorities is to ensure that NOAA is not only a strong science agency but continues to have strong, good science.

Mr. WOLF. Well, we understand, though, that some of your outside stakeholders have opposed this. And I guess the question is, have you resolved this with Chairman Hall because, I mean, with the vote that you have now in opposition to it, I just—where are you with regard to that?

Dr. LUBCHENCO. I have made every attempt to discuss the areas where there are disagreement. I believe that what we have proposed actually does address the concerns part from the word——

Mr. WOLF. What about the stakeholders? We have been told universities and others who currently receive funding have been somewhat concerned about the quality of science generated by NOAA knowing that it will decline as private sector research dollars are reduced. And some universities have expressed concern. Most of the stakeholders, are they for this or opposed to it?

Dr. LUBCHENCO. Most are strongly supportive of this. In fact, I am unaware of the ones of which you speak. I think there was confusion early on because the size of the line office that is named Oceanic and Atmospheric Research will decrease. It looks as though we are funding less science.

Mr. WOLF. Right. We have the question that, in fact, if you look at the budget, it looks like it is being cut in half.

Dr. LUBCHENCO. Correct. But, in fact, that is not the case because the same science that was in OAR is now in or would be in this Climate Service. So it is the same science. It would still be done. It will still thrive.

Mr. WOLF. You can appreciate the concern, though, that people would have.

Dr. LUBCHENCO. I absolutely can.

Mr. WOLF. Okay. I will be right back.

Jo, you can do whatever you want to do and I will be back in about two minutes.

Mr. BONNER [presiding]. As the chairman was saying, likewise, OAR's Laboratories and Cooperative Institute programs are being cut nearly in half from about $109 million to $62 million. Again, this is fewer research dollars going out the door to scientists.

Why the dramatic shift in resources toward in-house research and can you help us understand how some might question the results of in-house research?

Dr. LUBCHENCO. Mr. Congressman, or should I say, Mr. Chairman——

Mr. BONNER. How about Jo?

Dr. LUBCHENCO [continuing]. This is a matter of appearances. The reality is there is no change to the dollars that are going to

science or to the dollars that are going out the door. The same science is being done. But instead of all being in a single structure, it is now split between two structures, the Office of Oceanic and Atmospheric Research and the Climate Service if this proposal is accepted.

So the reality is we are not funding less science. We are not funding different science. We are not changing anything other than the fact that the climate scientists that were in OAR are now in the Climate Service.

Other science remains there and will continue to thrive. The climate science would now be housed, I need to make this clear, we have not made these changes and we will not make these changes if they are not approved, but the proposal is to have the climate science be in this climate services line office specifically so that it can be more closely aligned with the delivery of services.

So information to people, to communities, to businesses about what is happening months to years from now, that is climate service information. And if that is collocated with the climate scientists in this Climate Service line office, that interaction can be more productive and more effective.

So what we are trying to do is in the best interest of good government, of reorganizing where there is a compelling need to do things in a way that is more effective, and, in fact, without any diminution of the amount, the caliber, the quality of the science that would be done.

Mr. BONNER. So no less science, just——

Dr. LUBCHENCO. No less science. It is no less science, no fewer bodies of people doing the science. They are simply reporting to a different boss, if you will.

Mr. BONNER. Okay. How would you, though, address concerns that would be raised about reducing the peer review standards that extramural research undergoes before ideas are awarded?

Dr. LUBCHENCO. There will be no change in any of the peer review that we typically do. That is a hallmark of holding our own feet to the fire and making sure that we have robust, good science. Peer review is an integral part of that and that will not change.

Mr. WOLF [presiding]. We are back.

Dr. LUBCHENCO. This is definitely multitasking.

Mr. WOLF. We are really multitasking.

Mr. Fattah.

Mr. FATTAH. Mr. Chairman, I know we have been around this a number of different times. I am not going to belabor it. But I would just reiterate that on the satellite issue and the gap, obviously it is a very problematic situation.

And if there are other ways that you believe that there is any help in terms of the gap, you know, that the issue of shortening the gap is obviously that is totally in our control, but the gap itself and whether you think that there are other ways we can prevent or shorten this gap, I think that that information would be helpful.

And, Mr. Chairman, I do not have any further questions for our witness today.

Mr. WOLF. Okay. Thank you.

Well, we have a couple more and then we will probably—I think there is a motion to recommit. It will be ten minutes, so a while.

In February of 2011, NOAA released its draft aquaculture policy for public comment. According to this report, wild stocks are not projected to meet increased demand even with rebuilding efforts. So future increases in supplies are likely to come either from foreign aquaculture or increased domestic aquaculture production.

According to NOAA's draft, about 84 percent of the seafood consumed in the United States is imported. Is that accurate?

SEAFOOD IMPORTS

Dr. LUBCHENCO. Yes, sir, I believe so.

Mr. WOLF. And where is it mainly imported from?

Dr. LUBCHENCO. Mr. Chairman, it comes from many other parts of the world.

Mr. WOLF. What are the top five?

Dr. LUBCHENCO. Asia.

Mr. WOLF. I mean, countries rather than——

Dr. LUBCHENCO. I do not have a list, but I would be happy to get that to you.

[The information follows:]

Representative Wolf request:

1) What are the top 5 countries of seafood imports (wild and farmed) by percentage?

2) Of the top 5 countries that we import the most seafood from, how many times do they inspect seafood a year (if any) before they export?
3) Is the US doing a better job today than 5 years ago? (i.e., Are we reducing imports?)

Answers:

1) What are the top 5 countries of seafood imports (wild and farmed) by percentage?
For 2010, the corresponding top 10 countries are:

COUNTRY	*RANK (BY QUANTITY)*	*METRIC TONS*	*PERCENT OF TOTAL*	*THOUSANDS OF DOLLARS*
CHINA	1	569,288	24.0%	$2,386,127
THAILAND	2	415,783	17.5%	$2,271,913
CANADA	3	303,727	12.8%	$2,307,603
VIETNAM	4	137,998	5.8%	$867,183
INDONESIA	5	125,064	5.3%	$990,167
ECUADOR	6	110,277	4.6%	$648,260
CHILE	7	66,223	2.8%	$592,180
MEXICO	8	52,109	2.2%	$372,919
NORWAY	9	51,585	2.2%	$474,526
PHILLIPINES	10	48,048	2.0%	$229,977

2) Of the top 5 countries that we import the most seafood from, how many times do they inspect seafood a year (if any) before they export?
All five countries have competent authorities that apply the concept of Hazard Analysis Critical Control Point (HACCP) similar to that of the U.S. Food and Drug Administration and NOAA Fisheries' Seafood Inspection Program. It is a requirement that all seafood imported into the U.S. meet the requirements of the Seafood HACCP regulation (21 CFR 123). This regulation requires a preventive approach to food safety hazards. While it is known that Canada generally requires HACCP audits four times per year, it is not known at this time what the inspection frequency is for the four other top countries from which the U.S. imports the most seafood—China, Thailand, Vietnam and Indonesia.

3) Is the US doing a better job today than 5 years ago? (i.e., Are we reducing imports?)
No, the U.S. has not reduced imports over the past 5 years. Rather, imports have increased over this time span. The United States has been a net seafood importer for both volume and value since the 1970s. Exports have grown slowly from $3.1 billion in 1996 to $4.4 billion in 2010. Imports, on the other hand have more than doubled in the same time period, growing from $7.0 to $15.3 billion to meet domestic demand for seafood. The deficit has steadily increased with a record $10.9 billion deficit in 2010. However, the purpose of import inspections by the U.S. Food and Drug Administration is to support public health, not to limit imports reaching the U.S. market. Any technical barriers to trade would subject the U.S. to trade sanctions by the World Trade Organization.

U.S. Seafood Import and Export Values, 1996 - 2010
Imports
Exports
Billion Dollars
16
14
12
10
8
6
4
2
0
'96
'97
'98
'99
'00
'01
'02
'03
'04
'05
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**Data for Question No. 3 has been compiled from the U.S. International Trade Commission's database, which includes tariff and trade data from the U.S. Department of Commerce and the U.S. International Trade Commission.

Mr. WOLF. Is China high?

Dr. LUBCHENCO. It is certainly up there. I do not know exactly where it ranks.

Mr. WOLF. And is Vietnam high?

Dr. LUBCHENCO. I suspect for shrimp farming, it probably would be.

Mr. WOLF. Do our people go over there and inspect? The record will not pick up a shake. You are going to have to tell us yes or no.

Dr. LUBCHENCO. Mr. Chairman, I actually do not know what kind of inspection happens, if any. I will have to get back to you on that. The Food and Drug Administration is involved here as well which is why I am a little uncertain.

Mr. WOLF. Given our continued trade deficit, what effort has NOAA undertaken to ensure that domestic aquaculture can keep pace or even outpace our foreign competitors?

Dr. LUBCHENCO. Mr. Chairman we believe that aquaculture is vitally important and that it can be done in a sustainable fashion which is why we released our draft aquaculture policy for public comment.

We believe that there are good checks and balances that can be utilized to ensure that aquaculture is sustainable and that it is vitally important to the Nation to be able to have sustainable aquaculture so that we have more healthy seafood to address part of the trade deficit and to be a complement to wild caught fisheries. And that is exactly what this aquaculture policy has been designed to do.

Mr. WOLF. Are we doing better today than we were five years ago or about the same or what?

Dr. LUBCHENCO. I will have to get back to you on that. I think it is likely that we are importing more than we did, but I will double check.

Mr. WOLF. That is why I am so sympathetic to what Mr. Bonner wants to do. If you are sitting in a seafood restaurant in south Philadelphia or southern Alabama or down in the Gulf Coast or in Maine and you had a choice of taking fish from the Gulf caught by Americans, processed by Americans or taking it from China or from Vietnam with the health conditions, almost every American would say—and I would hope you could really, particularly building on what Mr. Bonner is saying, that you could really take it upon yourself to really be the initiator in the Administration to do this. It is not a Republican or Democratic issue. It is an issue of our country.

I am sure if you were to dig or if any of the reporters out here were to dig and they would look at the Chinese firms and the Vietnam, the Vietnamese firms that are exporting in and then tie it into their lobbyists here in town, tie it into the big law firms that they have, you will find there are probably some or the largest law firms.

Some of his people in the Gulf are lucky if they can afford to hire law firms to draft their will. And it is just out of balance.

And I would hope that, you know, I do not think the amount of money you want to put in for this is really enough, and I would hope that you could really spur it on and to build again on that

to get back to the committee on the whole issue of putting together one person to advertise and promote, so we can create American jobs. The Administration wants to create jobs here. The same thing would hold true along the Atlantic seaboard and, you know, the New Jersey area and places like that.

But if you can supply, and I am anxious to see even before it gets to the record, so if you can tell us maybe by the end of the day somebody to call, what are the top five and what percentage do they—and also whether or not those facilities are inspected by the Food and Drug Administration or by NOAA, and I am sure NOAA does not, and how many times a year they inspect them. And I would appreciate that.

Dr. LUBCHENCO. And just to be clear, Mr. Chairman, you are asking about just seafood imports regardless of whether it is wild caught or farmed?

Mr. WOLF. Yes, ma'am.

Dr. LUBCHENCO. Uh-huh.

Mr. WOLF. For your educational program, you are dramatically cutting NOAA's education programs from $54 million in fiscal year 2010 to $21 million in 2012. Why are you doing that?

NOAA'S EDUCATION PROGRAMS

Dr. LUBCHENCO. Mr. Chairman, I will verify this, but it is my recollection that what is not in the current budget are the congressionally directed funds that were added in last year. And so the request, I believe, is similar to what it was last year.

I am a very strong proponent of our educational programs. I think they are very——

Mr. WOLF. That is a big cut though.

Dr. LUBCHENCO. I understand.

Mr. WOLF. That is taking an engine off. You made the analogy earlier. That is taking an engine off if you are cutting the education programs.

In the past, the ocean education activities of the JASON Project were funded through earmarks. Is the funding in your fiscal year 2012 budget request for competitive opportunities for groups like the JASON Project to apply for support for science education activities?

Dr. LUBCHENCO. I do not know, sir.

Mr. WOLF. Have you ever met Dr. Ballard?

Dr. LUBCHENCO. Oh, yes. And I am well familiar with the JASON Project. It is terrific. And I know a lot of teachers, my sister included, who is a teacher who has participated in that program. It is a terrific program.

Mr. WOLF. Well, then if you could answer that and then tell us how they would compete because if you cannot have an earmark on an issue with regard to science, the ocean, how would they compete in order to promote exploration and education with regard to NOAA?

Dr. Ballard has noted that we have better maps to Mars than we do of the earth's oceans. And do you want to say something about that letter or give it to you?

Dr. LUBCHENCO. I would, please. It is my understanding that JASON could compete for funding. I think the point is more that the funds are not as much as we would like them to be.

Mr. WOLF. But if there is very little in the bank and everyone can compete, legally under the law, they would have the opportunity to compete. But practically speaking, they may be foreclosed.

Dr. LUBCHENCO. Well, they would have the ability to compete.

Mr. WOLF. Yes.

Dr. LUBCHENCO. I think there are more good science education opportunities for oceans and atmosphere than we can possibly fund with the resources that we have.

Mr. WOLF. I think the JASON Foundation has been funded for years through this committee. I think Mr. Regalua, if I recall, was the beginning. And I think they do tremendous work.

I had an opportunity. I was invited to introduce Dr. Ballard at the Rachel Carson Intermediate School in Fairfax County.

Dr. LUBCHENCO. Uh-huh.

Mr. WOLF. And it was the same night I think of the seventh game of the world series. And I said to the people I will come, but I really do not think there is going to be very many people. When I walked into the school and into the auditorium, it was actually the gymnasium, it was packed and it was packed with young kids, some with their parents, but young kids who were really excited to listen to Dr. Ballard.

We have very few programs that really bring young people in whereby they have that. So I would hope that you could be very sensitive as that goes on.

Mr. FATTAH. Mr. Chairman, that is one reason why we should revisit this congressional directive spending issue and maybe one day we will in the future.

Mr. WOLF. One or two other questions and we will have a lot for the record, but I know there is going to be a vote pretty soon. And I do not want to keep you away.

The National Ocean Service is also proposing a new $8 million program called Working Waterfronts to assist fishing dependent coastal communities. Funds would support socioeconomic studies, community-based planning, and capacity building and economic development and transition projects.

This sounds like an EDA program in NOAA. Should this be funded out of EDA and not out of NOAA? Shouldn't you take that money and put it into satellites?

WORKING WATERFRONTS

Dr. LUBCHENCO. Mr. Chairman, we at NOAA collaborate closely with EDA on a variety of our programs and this would be a nice complement to the things that they do. This particular program is really focused very specifically on fishery dependent communities that are undergoing transition.

Mr. WOLF. But shouldn't it really be in EDA, I guess? I mean, the question, how does this program rank in priority to the National Ocean Service program like Navigation Services?

Dr. LUBCHENCO. They are both important.

Mr. WOLF. Well, I know. Marine Sanctuaries. I mean, if we had to rank and——

Dr. LUBCHENCO. I understand.

Mr. WOLF [continuing]. Somebody said, okay, Madam Administrator, I know you do not want to tell us what one, but how do they rank, Marine Sanctuaries or this program? What is the most important?

Dr. LUBCHENCO. That is a tough one. They are so very different.

Mr. WOLF. But if you had to answer. I am not going to make you answer, but if you had to answer. The answer is Marine Sanctuaries or Coastal Zone Management Grant.

Okay. We have another vote. I appreciate your testimony. I think the satellite issue will be a difficult one. I think you are going to have to work the Senate hard. I think everyone will help. I doubt that will be the amount of money that you really think. And so I think it is important for you to be talking to the staff about the reprogramming and with Mr. Fattah and see how we do it.

The last thing is, and I would hope that you could respond, I am hopeful, and we did not want to surprise you, but now that we have raised the issue on the conferences on the—here is the letter that, we will just give it to you, that you can get an answer to us on or not even, but just tell people that we are going to move ahead on this summit or whatever you want to call it, it is your thing, to bring together all the people that should be interested in it who may not be and who may be on the East Coast including the Gulf and also on the West Coast and including in the whole issue of earthquakes also——

Dr. LUBCHENCO. Uh-huh.

Mr. WOLF [continuing]. Because I do not think you can talk just about tsunamis without earthquakes.

Dr. LUBCHENCO. Correct. Right.

Mr. WOLF. And hopefully someone from the media will call you by the end of the day to see if you are going to be doing it. But I hope you will. And we would be certainly open to, you know, the reprogramming. I do not think we are talking about a lot of money.

I think you do have some of the best minds there, but to sort of sensitize communities that may not be sensitive to it and also involve in some of the Caribbean areas and also Mr. Serrano I know has an interest in Puerto Rico. So if you can get back to the committee and let us know what you are going to do with regard to that.

Dr. LUBCHENCO. We will do that, Mr. Chairman. And as you can appreciate, you know, the budget uncertainties this year make everything a real challenge. And, you know, I think this is a good idea. We would like to work with you to figure out how we might do it.

You know, simply reprogramming is not—the biggest challenge, I think, is just figuring out, given where we are this fiscal year and given the CR's, especially just the uncertainty with planning is a challenge for everything. That does not mean we will not try to do this. It just means—and I know you appreciate how challenging this year is.

Mr. FATTAH. Well, we can find, you know, the Pew Foundation or Rockefeller, someone to help. But I think the point is that we should probably do it versus have a calamity and wish we had done it.

Dr. LUBCHENCO. I think that is a very good suggestion to look for partners. And I think that we should definitely pursue that idea.

Mr. WOLF. Mr. Fattah has a good idea. Pew and the Council of State Governments funded the one on corrections. Did a pretty incredible job. And I think it would be good to partner with some of those groups on the outside. And I would imagine that you would be very, very anxious and very interested in doing that.

Dr. LUBCHENCO. Uh-huh.

Mr. WOLF. I thank you.

Mr. Fattah, you have any other——

Mr. FATTAH. No. I think Rockefeller would also be interested, you know, but there would be plenty of, I think, people who would be anxious to support the Subcommittee's interest in this matter.

Dr. LUBCHENCO. Uh-huh.

Mr. FATTAH. And I think the Chairman is right, which is that we need to get people together and talk and make sure that we are——

Dr. LUBCHENCO. It is the right time, the right time.

Mr. FATTAH. It is a good time to talk before the problem.

Dr. LUBCHENCO. Absolutely.

Mr. WOLF. Good. Thank you.

Thank you very much, and the hearing is adjourned. And, again, sorry.

Dr. LUBCHENCO. Thank you so much. I appreciate your time.

Commerce, Justice and Science Subcommittee Hearing

National Oceanic and Atmospheric Administration Appropriations

Question for the Record

Chairman Frank R. Wolf

April 1, 2011

Dr. Jane Lubchenco

Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator

Priorities

QUESTION: The Subcommittee is asking everyone about priorities for FY 2012. Given the funding constraints that we are under—and that we will continue to be under—what are NOAA's top three appropriations priorities?

ANSWER: NOAA is proposing a variety of activities that support the Administration's economic and environmental priorities. The FY 2012 President's Budget request is the result of a rigorous review and prioritization of the agency's programs and activities. Low priority programs or activities have already been curtailed or eliminated, core functions and services are sustained, and increases are requested for only the most critical programs, projects, or activities necessary to meet the growing demand for NOAA's services.

Identifying the top three appropriations priorities would be an oversimplification of the requirements to meet NOAA's mission. However, some of the most critical national services that NOAA provides focus on the National Weather Service and the observations that support weather prediction and warnings. NOAA relies on advanced numerical models, large super computers to run those models, and a robust global observing system needed to initialize the models all of which are critical to protecting lives and property.

Satellites provide 93 percent of the data used in the extended National Weather Service numerical weather prediction models and are especially important for the predictions beyond two days. Data from polar-orbiting satellites provide critical global observations required to resolve the subtle changes in the environment that are fed into the computer models that predict the potentially deadly weather conditions (from tornado outbreaks to winter storms to tropical storms) days in advance. The advanced microwave and infrared sounding instruments on polar-orbiting satellites provide the largest positive contributions to the numerical forecasts used to make predictions of severe weather events beyond two days.

The Joint Polar Satellite System (JPSS) is the program that will eventually replace the current U.S. civilian polar-orbiting satellite system, the NOAA Polar-orbiting Operational Environmental Satellite (POES), however, the program is in jeopardy if NOAA does not receive the $1.070 billion requested in the President's FY 2012 Budget request. Due to inadequate funding of the JPSS program in FY 2011, we are already facing a nearly 100% chance of a gap in data between the NPOESS Prepatory Project (NPP) satellite and the first JPSS satellite. Since the National Weather Service's numerical weather prediction models depend on this data, losing this satellite data means that model forecasts beyond two days will be degraded and will not have the accuracy needed to provide advance warnings of severe weather that could be critical to saving lives and protecting property and critical infrastructure.

Overall, NOAA programs are interdependent and a timely example of the interdependencies is the NOAA forecast and response to the recent earthquake and tsunami in Japan. While NWS received significant attention for the DART buoy network and Tsunami Warning Centers that were critical for providing warnings and forecasts, NOAA's ability to deliver these forecasts and our continued response spans the organization. For example, OAR-built the tsunami-detecting buoys and developed plume models to forecast the potential effects of radiation, OMAO ships deployed those DART buoys, GOES satellites operated by NESDIS relayed critical tide gauge data, and NOS monitored tide and water level gauges.

QUESTION: I would place the National Weather Service at the top of NOAA's priorities. Does NOAA's budget prioritize the Weather Service? What else among NOAA's programs is categorized as critical to life and safety?

ANSWER: This FY 2012 President's Budget request is the result of a rigorous review and prioritization of the agency's programs and activities. The National Weather Service (NWS) is a high priority as reflected by the request of $988 million which envisions using cutting-edge technologies to better support the programs necessary to achieve NOAA's vision of delivering more reliable forecasts, reducing weather-related fatalities, and improving the economic value of weather, water, and climate information.

NOAA has several programs that are critical to life and safety and many are interdependent. For example, NOAA's satellites provide the data and information for NWS and NOS forecasts that are vital to every citizen in our Nation. From safe air, land, and marine transportation to construction and emergency rescue missions. In FY 2010, our satellite program saw a major milestone accomplished with the launch of Geostationary Orbiting Environmental Satellite (GOES) – 15, the final spacecraft in the latest series. Data from GOES spacecraft are critical for assisting the Agency's forecasters to more accurately track life-threatening weather from hurricanes to solar activity that can impact satellite-based electronics, communications, and power industries. In FY 2010, NOAA satellites also provided key support in the rescue of 281

people throughout and near the United States by providing their location to emergency responders. The FY 2012 President's Budget Request includes critical satellite investments that support the continued development of geostationary and polar-orbiting satellite to meet our national weather service needs into 2026.

The Joint Polar Satellite System (JPSS) is the program that will eventually replace the current U.S. civilian polar-orbiting satellite system, the NOAA Polar-orbiting Operational Environmental Satellite (POES). However the JPSS program will be in jeopardy if NOAA does not receive the $1.070 billion requested in the President's FY 2012 Budget request. Due to inadequate funding of the JPSS program in FY 2011, NOAA is already facing a nearly 100% of a gap in data between the NPP satellite and the first JPSS satellite. Since the National Weather Service's (NWS) numerical weather prediction models depend on this data, losing this satellite data means the forecasts beyond two days will be degraded and they will not have the accuracy needed to provide advance warnings of severe weather conditions that could mitigate the loss of lives and damage to property and critical infrastructure.

The Spring 2011 tornadoes have highlighted the importance of providing early identification of potential severe weather outbreaks so that local communities can begin preparations. The initial 3 to 5 day forecast is a capability that the NWS is able to provide because of the global data that are fed into the models that are provided by NOAA's polar-orbiting satellites. Satellites provide 93 percent of the data used in the extended NWS numerical weather prediction models for beyond two days. Satellites complement radar and other observations by providing information about the environment in which severe weather evolves. Weather radar is the primary observing system used in detecting and tracking individual tornadoes and flash floods as they form. The advanced microwave and infrared sounding instruments on polar-orbiting satellites provide the largest contributions to the numerical forecasts used to make predictions of severe weather events beyond two days. High resolution weather computer models predict evolution of storms from all of these observations in the 1-2 day period, but become increasingly dependent on polar satellite data for performance beyond two days.

Several programs were involved in the NOAA forecast and response to the recent earthquake and tsunami in Japan. While NWS received significant attention for the DART buoy network and Tsunami Warning Centers that were critical for providing warnings and forecasts, NOAA's ability to deliver these forecasts and our continued response spans the organization. For example, OAR built the tsunami-detecting buoys and developed plume models to forecast the potential effects of radiation, OMAO ships deployed those DART buoys, GOES satellites operated by NESDIS relayed critical tide gauge data, and NOS monitored tide and water level gauges.

In addition, it is expected that the Nation's coastal population will grow by more than 11 million

by 2015.[1] Increasing population density and growing economies will be vulnerable to damages from hazards such as sea level rise or storms, habitat loss, port congestion, contaminants in the environment, and other threats. To address these threats NOS supports the National Policy for the Stewardship of the Oceans, Coasts, and the Great Lakes by translating science, tools, and services into action.

Also, since the explosion of the BP Deepwater Horizon oil rig on April 20, NOAA's work continues, ensuring the safety of gulf seafood, assessing and cleaning up oil that remains on beaches and in the nearshore, and assessing damages as the lead Federal trustee for the Natural Resource Damage Assessment process.

Tsunami Predictions and Warnings

QUESTION: Please describe the tsunami detection and warning system currently in operation. What are the remaining weaknesses? What more needs to be done?

ANSWER: A comprehensive and effective tsunami warning process requires three parts:

- Observations to detect a tsunami and models to forecast path and impact;
- Timely and accurate alerts; and
- Community education and awareness to ensure proper public response to alerts and warnings.

NOAA has operational responsibility for the U.S. Tsunami Warning System. NOAA's National Weather Service (NWS) issues tsunami warnings, advisories, and watches for the entire coastline of the United States, its territories and commonwealths, and many nations in the Pacific and Caribbean (through agreements with the United Nations Educational, Scientific and Cultural Organization (UNESCO) Intergovernmental Oceanographic Commission (IOC)), to alert emergency managers and the public to take life-saving actions. Tsunami alerts and warnings are issued by two warning centers: NOAA's Pacific Tsunami Warning Center (PTWC) in Ewa Beach, Hawaii, and NOAA's West Coast and Alaska Tsunami Warning Center (WC/ATWC) in Palmer, Alaska. NOAA operates a suite of instruments and tools including an array of ocean buoys and monitoring stations moored to the sea floor, sea level gauges along the coast, orbiting satellites, and advanced computer modeling. NOAA's services include around-the-clock forecast and warning centers and extensive public outreach and education efforts, providing the essential detection and warnings necessary to alert emergency officials and the public about the threat of tsunamis as well as information to help communities prepare for those threats.

Using the recent Japan tsunami as an example, NOAA's PTWC issued tsunami warnings for Japan, Russia, Marcus Island, and the Northern Marianas Islands within 9 minutes of the earthquake based on its analysis of accessible global seismic data. Using readily-available seismic data, NOAA's WC/ATWC issued tsunami information statements assessing the potential preliminary threat for Alaska, British Columbia, Washington, Oregon, and California. NOAA's initial tsunami warnings were expanded to include Hawaii and portions of Alaska and the West Coast, based on warnings that were updated with more specific observational data as the tsunami

[1] Population Trends Along the Coastal United States: 1980-2008, NOAA 2004

wave moved across the Pacific Ocean. The information from the Deep-ocean Assessment and Reporting of Tsunamis (DART) stations along with coastal sea-level data was fed via satellite into NOAA's tsunami models that simulate the generation, propagation, and inundation of the tsunami. Coupled with data defining the shape of the ocean floor, the tsunami models provided predictions of arrival times, wave heights, and inundation areas for specific U.S. coastal locations to augment the original tsunami warnings and forecasts.

In addition to providing accurate observations and alerts for natural hazards, an educated and responsive public is critical to achieving community preparedness for any natural hazard and in particular a rare and unpredictable event such as a tsunami. Simply knowing the precursors to a tsunami – strong coastal earthquakes or rapidly receding water – and having a pre-defined action plan for moving rapidly to a higher location, have the potential to save countless lives even in areas where warnings are not received. To achieve this level of public awareness, NOAA has engaged in an extensive array of outreach and education efforts through programs such as the National Tsunami Hazard Mitigation Program and TsunamiReady.

On the national level, NOAA and our Federal partners work with local and state governments through the National Tsunami Hazards Mitigation Program (NTHMP), which is designed to reduce the impact of tsunamis on U.S. coastal communities. The NTHMP consortium includes all 28 U.S. coastal States, Territories and Commonwealths, U.S. Geological Survey, Federal Emergency Management Agency, and NOAA. TsunamiReady is a voluntary partnership between NOAA, state, and local emergency management agencies. The TsunamiReady™ program strives to increase public awareness of the threat that tsunamis pose, improve hazard planning, and strengthen warning communication linking the emergency management community and NWS with the public.

NOAA is focused on the following priorities to further enhance the Tsunami Program:

- Strengthen 24/7 operations at the PTWC and WC/ATWC;
- Sustainment of the Modernized Tsunami Warning Center Operations System;
- Operate and Maintain DART Station and Coastal Sea-level networks;
- Ensure the NTHMP is enabled to support consistent inundation and evacuation mapping and modeling and outreach and education;
- Develop a comprehensive U.S. Tsunami Risk Assessment (as recommended by the National Academy of Science);
- Expand the number of TsunamiReady communities;
- Expand the Inundation Tsunami Forecasting Capability to International areas; and
- Improve tsunami forecaster techniques through science and technology advancements.

National Telecommunications and Information Administration (NTIA) Spectrum Auction proceed funding was used to bolster NOAA's Tsunami Program during FY 2009-2012 by resolving significant capability gaps in many operational, mitigation and research activities. These activities include developing modernized and mirrored TWC IT systems; major upgrades and expansion of tsunami-reporting sea-level networks in the Caribbean and Pacific; acceleration of the transfer of tsunami research into operations (focused on tsunami forecast models), and

expansion of TsunamiReady and the National Tsunami Hazard Mitigation Program (NTHMP). These investments have made important improvements in the Tsunami Program.

QUESTION: What is NOAA's base budget for tsunami programs in FY 2012, and does that include any increases?

ANSWER: In the FY 2012 President's Budget, NOAA's base budget for Tsunami programs is anticipated to be $28.6 million. In addition, NOAA will receive $10.3 million in FY 2012 from the National Telecommunications and Information Administration (NTIA) Digital Television Transition and Public Safety Fund, which was funded by auctions of spectrum freed because of the digital television transition. Spectrum funding has allowed NOAA to make significant improvements in its Tsunami Program.

Satellites

QUESTION: NOAA's Joint Polar-orbiting Satellite (JPSS) is the successor to the former National Polar-orbiting Operational Environmental Satellite System (NPOESS) program that experienced schedule slips from 2008 to the current 2014 first launch, a doubling of costs from $6.5 billion to more than $14 billion, and a loss of capability from six satellites to four.

Given the current funding climate, funding levels for FY 2011 will be less than NOAA requested for the satellite programs. What contingency plans is NOAA making to address the funding amount needed for the JPSS program in order to remain on schedule, or will the schedule slip further?

ANSWER: NOAA did not receive the $1.060 billion requested in the President's FY 2011 budget which was needed to launch JPSS-1 in 2015. Given the vital importance of JPSS in maintaining the Nation's weather prediction capabilities, the Department of Commerce has chosen to move funds to JPSS. Please see the Department's spend plans submitted on June 15, 2011 for more details. These additional funds will provide for a launch of the first JPSS satellite in late calendar year 2016 which will minimize the duration of a gap in afternoon polar satellite coverage should one occur. The late 2016 launch date is predicated on receiving the full President's budget in FY 2012. Based on an independent analysis conducted by the Aerospace Corporation, there is still a high likelihood that a data gap may occur between the end of the NPOESS Preparatory Project (NPP) mission and the date when JPSS-1 begins providing operational data post-launch. NOAA estimates that JPSS-1 will begin providing operational data in 2017.

NOAA is considering a number of contingency planning options, all of which assume a gap in polar satellite coverage, which would result in degraded weather forecasts later this decade. As part of our contingency planning NOAA will:

- Continue to use data from existing NOAA, NASA, and international sensors in the JPSS orbit for as long as they are viable.

- Evaluate planned national and international missions in the JPSS afternoon orbit to determine how best to use data operationally as soon as possible.
- Continue monitoring potential data gap and communicate details and operational impacts to NOAA users to prepare them for degraded products and services in the 2016-2017 time period.
- Initiate notices to its users advising them to expect and prepare for degraded products and services in the 2016-2017 time period.

QUESTION: Will Commerce reprogram funds in FY 2011 to try to minimize schedule slippage?

ANSWER: Yes, the Department of Commerce has chosen to move funds to JPSS. Please see the Department's spend plans submitted on June 15, 2011 for more details.

QUESTION: It is unlikely that the level of funding requested for the satellite program will be available in FY 2011 and FY 2012. What should the Subcommittee do about satellites in FY 2011? What about in FY 2012? Are there lower priority programs in other areas of NOAA that can be funded at reduced levels in FY 2011 and FY 2012 in order to ensure that there is not a gap in satellite coverage?

ANSWER: For FY 2011, the Department of Commerce has chosen to move funds to JPSS. Please see the Department's spend plans submitted on June 15, 2011 for more details. For FY 2012, the suite of programs in the President's Budget request represents the most important satellite acquisitions that the nation needs to protect life and property. The President's request for NOAA represents a comprehensive strategy that aims to address the multiple and interrelated missions of the agency. We believe that all of these missions have considerable value to the Nation. NOAA is available to work with the committee to provide information on the performance and value of these varied operations. JPSS is clearly a critical program, and we urge the committee to support our request for funding this valuable investment.

Since one-third of the nation's gross domestic product is weather and climate sensitive, NOAA believes that the investments in these operational satellite programs help to protect American lives, property, and critical infrastructure from harm by providing advance warning of approaching danger.

QUESTION: If NOAA does not reprogram funds, when does it anticipate the first JPSS to launch?

ANSWER: The Department of Commerce has decided to move funds to JPSS. Please see questions 6-7 for more details.

QUESTION: Does NOAA still expect the NPOESS Preparatory Project (NPP) to launch on October 25, 2011 as planned?

ANSWER: Yes, all indications are that NASA is still on schedule for an NPP launch in October 2011.

NPP is a NASA-led mission that was originally designed to reduce the risk of NPOESS development. Because of the need for continued polar-orbiting observations in the afternoon orbit at the end of the NOAA-19 mission, NOAA will be using NPP data operationally.

QUESTION: The NPP is supposed to launch in October 2011 and remain viable for five years. JPSS is supposed to launch in September 2016. It takes about a year to calibrate the instruments on both satellites. Please explain the data gap. What are the impacts to forecasting?

ANSWER: When NPP launches in October 2011, it will be subjected to a period of functional on-orbit check out, and calibration and validation (cal/val) while NOAA-19 is still operational. This cal/val period provides an opportunity for scientists and engineers to assess the performance of the NPP spacecraft and its instruments while weather forecasters still have access to useable operational data. During cal/val, NPP data cannot be used operationally, therefore, if NPP fails on launch or fails earlier than predicted, the lack of reliable data for operational use (i.e., data gap) will start when the instruments on NOAA-19 begin to degrade (near the end of the NOAA-19 design life) until JPSS-1 can be launched and checked out and the data declared ready for operational use.

Assuming a successful NPP launch and completion of cal/val as expected, NOAA plans to rely on NPP to provide five years of operationally useful data while developing, launching, and performing post-launch cal/val of JPSS-1.

NOAA would subject the JPSS-1 satellite to a cal/val period while the NPP satellite was still operational and providing data to the weather forecasters. NOAA recognizes that this requires it to accept the risk that all the NPP sensors would still be providing useable data at the end of its design life to allow sufficient time for cal/val.

Given the vital importance of JPSS in maintaining the Nation's weather prediction capabilities, the Department of Commerce has chosen to move funds to JPSS. Please see the Department's spend plans submitted on June 15, 2011 for more details. These additional funds will provide for a launch of the first JPSS satellite in late calendar year 2016 which will minimize the duration of a gap in afternoon polar satellite coverage should one occur. If NOAA does not receive the $1.070 billion FY 2012 budget as requested, JPSS-1 launch will slip into CY 2017 or CY 2018 thereby increasing the likelihood and duration of a gap in polar afternoon satellite coverage.

Even if NPP performs as expected, due to the schedule slip of JPSS-1, there is a high probability of a data gap starting in FY 2016 until whenever the JPSS-1 satellite is launched and its cal/val has been completed. If NPP fails on launch or fails earlier than predicted, the data gap will start at the time NPP fails until JPSS-1 can be launched and checked out and the data declared ready for operational use.

If there is a lack of data in the early afternoon orbit due to loss of NOAA-19 before NPP has completed its cal/val, or loss of NPP data before JPSS-1 has been launched and completed its cal/val, this would cause the degradation of weather forecasts for 24 hours and longer, resulting in forecasts that likely will incorrectly predict the magnitude of storms.

QUESTION: Can NOAA use data from DOD or European satellites to fill the anticipated gap?

ANSWER: Neither DoD nor the Europeans fly polar weather satellites in the afternoon orbit. NOAA has traditionally flown its polar-orbiting satellite in the afternoon orbit and no other nation has flown a satellite that provides the type of data required in that orbit.

NOAA ***does not*** assimilate data from DoD's Defense Meteorological Satellite Program (DMSP) mid-morning orbit into the weather prediction models. DMSP data is not of adequate quality for use in weather prediction models. The decision, to not use DMSP data, is not unique to NOAA. The European Meteorological and United Kingdom Meteorological offices have also independently decided not to use DMSP data because it is not of adequate quality for use in their numerical weather prediction models.

If NOAA did not have a polar satellite data source (POES, NPP or JPSS) in the afternoon orbit, and since NWS cannot rely on DMSP data, the NWS modeling effort would be based solely on the European data that is available in the mid-morning orbit. Reliance on this mid-morning orbit would result in a degradation of forecast accuracy by 1 to 2 days. Higher confidence forecasts would only extend out 5 days instead of 7 days as they do currently. This degradation would cause NWS to suffer a loss of decade's worth of continual improvements in forecast ability until a replacement operational satellite can be launched in the afternoon orbit with the requisite instruments which have been subjected to the necessary calibration and validation.

Additionally, the change from using Metop (mid-morning) and NOAA (afternoon) polar satellite data to solely Metop (mid-morning) would have a significant impact to the way data is made available for the models. NOAA would also assess the utility of data from foreign satellites (e.g., Japanese, French, Indian, and Chinese) and leverage as much useful data as possible. This type of change costs time, in terms of lost accuracy of weather predictions in the interim of making such a change, and costs money.

QUESTION: What happens if the NPP launch is unsuccessful? What are the contingency plans? How will NOAA fill this gap?

ANSWER: If the NPP launch is unsuccessful or NPP fails once in orbit, NOAA would rely on observations from NOAA-19, the primary polar operational satellite that is currently flying in that orbit, while it still operates. NOAA would also continue to access data from its older polar satellites, NOAA-18 and NOAA-16. These older satellites provide degraded data, and therefore, are relied on to provide secondary support in the afternoon orbit. NOAA would continue to use

these data as long as they are available and usable, recognizing that those satellites are operating beyond their design lives and are demonstrating increased unreliability.

NOAA would continue to make use of NASA Earth Observing System (EOS) data, recognizing that these research satellites have also exceeded their design lives and are also demonstrating increased unreliability. NOAA would also assess the utility of data from foreign satellites (e.g., Japanese, French, Indian, and Chinese) and leverage as much useful data as possible.

Finally, NOAA would work with its users to convey the likelihood of degraded products and services as a result of the loss of the NPP satellite and lack of a reliable replacement for measurements in the afternoon orbit. NOAA would attempt to make changes to its numerical weather prediction models using proxy data to substitute for real observations. However, there are no guarantees that these changes will compensate for degraded weather forecasts that would result due to the lack of actual observed data. NOAA would seek to accelerate JPSS-1 development, if feasible.

QUESTION: Provide the Committee with an update on the new program management for JPSS now that the Department of Defense is no longer a direct partner.

ANSWER: With the February 1, 2010 decision to restructure the NPOESS Program, there was no further need for the Tri-agency NPOESS Integrated Program Office. This decision has required NOAA, while working with its acquisition agent NASA, to determine the specific staffing skill sets that will ensure program success for the JPSS program. The four most senior positions -- the NPOESS Program Executive Officer (a NOAA employee), the Deputy Program Executive Officer (an Air Force officer), the Systems Program Director (a NOAA employee), and the Deputy Systems Program Director (an Air Force employee) -- all left the program between mid-2009 and mid-2010.

NOAA/NASA have made significant progress in transitioning to the JPSS program since the February 2010 decision while simultaneously finalizing the new relationship with DoD and the NPOESS prime contractor. NOAA/NASA have placed emphasis on the need to implement the necessary government program management oversight that had been lacking in the NPOESS.

NOAA will maintain overall responsibility for developing, funding, and implementing the JPSS program. NOAA will provide the strategic guidance to NASA as it administers the JPSS program and its acquisition requirements, budget and planning, constellation architecture, and launch dates. Strategic direction will be conveyed to NASA through formal Guidance Letters. NOAA will lead JPSS interactions and negotiations with the Department of Defense (DoD) as it develops its Defense Weather Satellite System (DWSS) program in the early morning orbit. NOAA will lead the discussions with international partners such as European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), Japanese Aerospace Exploration Agency, the Canadian Space Agency, and the French Space Agency, CNES, on JPSS-related activities.

The Department of Commerce and NOAA HQ are working closely with NASA HQ to provide the kind of programmatic and decision-making support to the JPSS program that was missing

under the tri-agency NPOESS program. The JPSS acquisition is being integrated into the NASA program management and engineering processes. The monthly NOAA-led Program Management Council is providing programmatic oversight.

A NOAA and NASA program management team is in place and operating. Given the current fiscal climate, the most critical NOAA and NASA positions are currently staffed, but the program has not progressed to the staffing levels required. Both NOAA and NASA JPSS staff are co-located in the same office complex which adjoins the NASA Goddard Space Flight Center. Staff transitions from the NPOESS Integrated Program Office (IPO) to JPSS or other NOAA programs have been completed.

QUESTION: What are the projected FY 2012 and outyear costs of JPSS if funding in FY 2011 is held at $382 million?

ANSWER: Even with more funding added to the $382 million for JPSS as detailed in the Department's spends plans submitted on June 15, 2011, full funding of the JPSS request in the President's FY 2012 budget ($1.070 billion) is crucial to prevent further launch delays. With respect to the outyears, NOAA is evaluating the JPSS program and potential options, and will be engaging in government and independent cost estimates over the next few months. This process will assist NOAA in determining an appropriate longer-term funding profile that will provide an executable program that meets the Nation's needs for weather and climate.

GOES-R

QUESTION: According to a September 2010 GAO report on the Geostationary Operational Environmental Satellite-R (GOES-R) program, two instruments have experienced technical issues that led to contract cost increases and significant work remains on other development efforts. In addition, since 2006, the launch dates of the first two satellites in the series have been delayed by about 3 years. The FY 2012 budget request for GOES-R is $617 million, a reduction of $50 million from the $668 million enacted for FY 2010.

What is the status of this program?

ANSWER: The GOES-R Independent Review Team declared in mid-2010 that the GOES-R program is poised for success. All the major contracts have been awarded and the GOES-R Program is within it lifecycle budget and is meeting all performance requirements. The GOES-R satellite, the first in the series, remains on schedule for an October 2015 launch readiness date (LRD). The President's FY 2012 Budget request supports a four geostationary satellite program. With the two additional satellites, GOES-T and GOES-U, the lifetime of the GOES-R series four-satellite program is extended by eight more years through 2036. The President's FY 2012 Budget request of $617.390 million represents a re-phasing of the GOES-R program and does not increase cost, schedule or technical risk to the GOES-R program development.

In FY 2012, the program will continue development of the instruments, spacecraft, and ground system. Funds will also be used to complete Critical Design Reviews (CDR) for the spacecraft

and ground system for a planned launch readiness of the first satellite in the series, GOES-R, in 2015. The GOES-S planned launch readiness is 2017. These funds will also procure instruments to support launch readiness of GOES-T in 2019 and GOES-U in 2024.

Since being baselined in FY 2008, during an independent cost estimate, the GOES-R Program continues to maintain the program's budget baseline. The program is working towards a system level Program Design Review currently scheduled for the 4th quarter FY 2011.

Aviation Weather Forecasting

QUESTION: The NOAA budget also includes an increase of $27 million to fund Next Generation Air Transportation (NextGen) development activities. This represents the third year of development.

What improvements to the nation's aviation weather system does NOAA expect as a result of this investment?

ANSWER: NextGen development activities will contribute to: 1) *Expanded Capacity* by providing air traffic managers the ability to better plan for predicted weather impacts on air travel, thus maximizing air space usage and optimizing flight routes; 2) *Improved Safety* by providing pilots and air traffic managers the ability to better assess and avoid hazards to air travel, such as severe turbulence, and 3) *Protecting the Environment* by enabling flight route optimization on the ground and in the air, avoiding ground delays or holding patterns that require unnecessary jet fuel expenditure.

This investment represents NOAA's commitment to the multi-agency Next Generation Air Transportation System (NextGen) initiative, and will result in the development and deployment of the NextGen 4-Dimensional (4-D) Weather Data Cube described in the NextGen Integrated Work Plan. "4-D" references weather from the surface up to aircraft flight altitudes, extending north-south and east-west, and current and future conditions. This "Cube" is characterized by:

a) Improvements to IT infrastructure comparable to those already employed by other governmental agencies and by industry to provide greater and easier access to NOAA weather information for aviation decision-makers. Greater access to aviation-relevant weather information will facilitate better integration of this information into aviation user's decision-making processes and systems.
b) More consistent aviation weather information, providing a complete picture of how weather will impact aviation across the National Airspace System.
c) Improvements to the accuracy of weather information. More accurate aviation weather information, achieved through higher-resolution weather models, will improve air traffic managers' ability to fine-tune their assessment of the impact of the weather on airports and air routes to safely maximize available air space.
d) Improvements to aviation forecast generation techniques. NWS meteorologists require advanced tools and techniques to enable faster, more accurate generation of aviation weather information.

While this investment is intended to benefit the aviation community, improvements to IT infrastructure, improved forecast accuracy, and more advanced forecast processes will have wider reaching benefits to governmental and private sectors that use environmental information. These improvements will be leveraged by other NWS service areas, such as support to Emergency Managers, and improved forecasts for severe weather notification or flood warnings to the public. NOAA, other governmental agencies, private industry, and the public will have more effective and efficient access to accurate, consistent, and timely weather information to drive their decision-making systems and processes.

QUESTION: Please describe NOAA's partnership with the FAA on this program.

ANSWER: NOAA and FAA have made great strides in the past several years and continue to improve upon the collaboration and communication between the two agencies. NWS and FAA have been working under the auspices of the Joint Planning and Development Office (JPDO) that manages the NextGen partnership of private-sector organizations, academia, and governmental departments and agencies. Since the inception of the JPDO, the weather community has been very active and has shown good coordination between agencies and stakeholders. NWS and FAA lead a multiagency advisory board to manage weather activities under the JPDO. This "NextGen Executive Weather Panel" has agreed on agency roles and responsibilities for research, development and implementation of NextGen weather capabilities. This agreement has led to clearer goals for each agency, efficiency gains, and reduction in duplicative efforts. NWS and FAA have developed an Integrated Program Management Plan, and are currently drafting integrated risk and configuration management plans. As we approach the development and implementation of improved weather infrastructures in both agencies, we have developed joint architecture specification documents that each agency will use as the blueprint for linking complimentary weather capabilities. In September 2010, NWS and FAA conducted a successful proof of concept of how best to provide weather information using the latest infrastructure technologies as the first major step in improving access to aviation weather information.

QUESTION: In an April 2010 report, the GAO was critical of interagency planning efforts with respect to the NextGen program. It is important that we don't have another failure as we did with the NPOESS program. Please provide an update on the overall management and progress of this program.

ANSWER: The GAO report highlights a number of challenges the JPDO and the overall NextGen initiative face. We are keenly aware of these challenges and are working diligently to mitigate any negative impacts. Specifically, the report highlights three areas: (1) limited funding and staffing to dedicate to NextGen activities, (2) competing mission priorities, and (3) undefined near-term roles and responsibilities of some partner agencies. To address the first of these areas, NWS has had a full time NextGen Weather Program Manager for the past 18 months who currently manages a dedicated staff of six federal and contract personnel. The program has also developed a plan to complete the management staff required for this effort. The delay in receiving FY 2011 funding will likely impact the development schedule. However, the FY 2012 budget request contains a significant increase to ramp up work on the NOAA NextGen Weather

effort. For the second challenge, the NOAA NextGen Weather Program is working closely with other areas of NWS to ensure NextGen technologies fit seamlessly into NWS operations and architecture for NWS to fully leverage in other weather services areas. For the final challenge, the roles and responsibilities agreement discussed above has significantly helped define agency goals and direction.

BACKGROUND

The air transportation industry is an important element of the U.S. economy and weather impacts to the National Airspace System result in significant economic losses. The industry generates 5.4 percent of America's Gross Domestic Product, $640 billion in revenue and over 11 million jobs. The Congressional Joint Economic Committee estimates that air traffic delays cost the U.S. economy over $41 billion in 2007, of which 70 percent were related to adverse weather. The FAA has determined that two-thirds of these weather delays are avoidable by integrating more accurate, more accessible weather information into decision-making, potentially reducing the number of delays by 46 percent, and saving $19 billion annually.

As air traffic increases, delays and the associated economic toll will only increase. By 2025, US air traffic is predicted to more than double, which is not manageable under the current air traffic control system. The NextGen 4-D Weather Data Cube will provide the National Airspace System with authoritative and timely aviation weather information in an effort to reduce air traffic delays caused by severe weather. By 2025, all aircraft and airports in the National Airspace System will be connected to the NextGen network and will continually share information in real-time to improve efficiency, safety, and improve capacity of the national air space.

National Weather Service High Performance Computing

QUESTION: The National Weather Service is seeking an increase of $11 million for a total program level of $40 million to continue its high performance computing contract. This effort supports ongoing hurricane forecast improvements.

Please provide an update on this program. Why is such a large increase needed?

ANSWER: The current NOAA operational High Performance Computing (HPC) contract expires at the end of FY 2011. In FY 2012 and FY 2013, NOAA must transition operations to a newly competed contract utilizing more technologically advanced supercomputing systems.

Increased funding is required to enable NOAA to:

a) bridge the period of time between the end of the current operational HPC contract and the stand up of new systems under a competitively awarded contract (that is, this funding will allow current supercomputers that support weather forecast modeling to continue to operate while new supercomputing capacity is being set up and prepared for operational use);
b) transition of up to two years to fully migrate, test and verify operational environmental models to produce reliable, timely and accurate science-based environmental predictions for the nation and global community;

c) implement planned improvements to numerical weather prediction (NWP) modeling; and
d) support on-going Hurricane Forecast Improvement Project (HFIP) modeling activities.

NOAA will acquire a new ten-year performance-based contract for scalable operational HPC. This new contract will include technology upgrades every three (3) years, resulting in HPC capacity increases. This strategy ensures that NOAA's environmental modeling is processed on reliable, state-of-the-art systems. This continual growth in capacity will enable NOAA to meet many of its Government Performance and Reporting Act (GPRA) measures through improved NWP modeling systems. These modeling systems allow NWS to meet Department of Commerce mission-essential weather services that enhance the economy and protect life and property.

QUESTION: Does NOAA anticipate any problems re-competing the contract?

ANSWER: NOAA does not anticipate problems re-competing the new operational HPC contract. As part of the acquisition process, NOAA has completed market research prior to releasing its final Request for Proposals. This market research included posting a Request for Information, vendor one-on-one meetings, posting draft Request for Proposals, hosting a Q&A Website, and holding an Industry Day/Pre-solicitation conference.

QUESTION: During the winter storms earlier this year, the National Weather Service website crashed because so many people were trying to access it. Have these problems been fixed?

ANSWER: At no point did the NWS website crash. NWS experienced unprecedented demands for Internet services because of the widespread nature of the late January/early February winter storm. Web traffic peaked at 15-20 million hits per hour, and totaled billions of hits. NWS websites receive an average of 70 million hits per day, or a few million per hour. As a result, two Internet farms were unable to handle the demand, resulting in slowed services and NWSChat was taken offline for approximately 90 minutes.

The Internet has become a key method to disseminate NWS information in recent years. The ability to keep Internet Services functioning has been a challenge as demand has doubled every two years. NOAA is in the investigative stage of re-architecting the NWS Internet presence. NOAA had planned to install new equipment as part of our upgrade to Internet services in early March. Recognizing the critical need, NOAA moved immediately to install critical components of the new equipment. This addition helped to partially meet existing demand. NOAA has also purchased additional communication bandwidth in early March and is assessing additional ways to make incremental progress towards maintaining reliability..

Fisheries Catch Shares

QUESTION: NOAA is seeking an increase of $37 million to implement additional fisheries catch shares programs. These programs have been controversial in some fisheries. If catch

share programs have been in use since 1990, why are they so controversial now? Has NOAA changed the way they are implemented?

ANSWER: NOAA has not changed the way catch share programs are implemented. However in November, 2010, NOAA released a national policy encouraging the consideration and use of catch shares as a fishery management tool. Catch shares remain a management tool for the Regional Fishery Management Councils (Council) to consider and programs are designed at the Council level with technical expertise provided by NOAA as needed. As with any management action adopted by the Councils, a catch share program is subject to approval by the Department of Commerce and must meet all legal requirements of the Magnuson-Stevens Act (MSA) and other applicable law.

Management of fisheries, like any regulated industry, can be controversial. The two most recent catch share programs were implemented in fisheries facing overfished populations and required reductions in catch levels to rebuild stocks to healthy levels. The controversy about reduced catch levels is often intermingled with discussions about catch shares. In situations where catch limits are decreasing, catch shares are an extremely dynamic and flexible tool, and, when properly designed, can ease the transition to sustainable fisheries. We have seen Councils take a wide variety of catch share approaches to address the different biological, economic, and social objectives that they are looking to achieve in sustainable fisheries. Matching the business goals and incentives of fishermen, with the Council regulatory program, is just one strength of a catch share approach.

QUESTION: Some concerns have arisen with respect to the creation of fishing monopolies whereby the catch shares program favors larger, better financed vessels that have the best fishing gear. A quote from the Environmental Defense Fund's report on catch shares—the Environmental Defense Fund is a strong proponent of catch shares—seems to support this concern, stating that as a result of catch shares programs, "the total number of available crew positions decreased by half and the viability of some small-scale operators and ports may indeed be reduced."

Please comment on this concern that catch shares will foster consolidation in commercial fishing and drive out smaller operators.

ANSWER: Councils have great latitude to design catch share programs to achieve a wide variety of management objectives, including addressing consolidation and ownership requirements, such that smaller operations remain competitive. Examples include the use of accumulation limits or excessive share caps, requirements for product to be landed in specific ports or by specific sizes of vessels, and setting aside a percentage of the allowable harvest to address community impacts.

The intent of a catch share-based fishery is to reduce the operating costs of holders of quota by giving them the flexibility to choose when and how much to fish. In addition, fishermen can seek to coordinate their landings to coincide with high market prices. The result is that

profitability can increase under a catch share system and sustain small operators that might otherwise exit the fishery due to dwindling profits.

Larger operations may have better access to capital which can give them an opportunity to purchase more (or additional) quota or upgrade vessels more easily than a small operator; however, that is true regardless of whether the fishery management regime is a catch share program or another management program. The MSA allows Councils to specify NOAA Fisheries Finance Program loans to assist small operators and first time buyers of catch share privileges.

There are real concerns with consolidation – even in relatively successful programs like the sablefish and Pacific halibut longline IFQ program in Alaska. It is important that NMFS and the Councils continue to monitor the biological and socio-economic performance of their fisheries and amend FMPs that are not working to meet the program objectives.

We heard concerns with respect to consolidation during the development of the NOAA Catch Share Policy and in response, key design elements connected to consolidation such as allocations, transferability, and fishing community sustainability, are among the guiding principles in the policy. In some instances, the Councils' goal may be to reduce overcapacity while providing more adequate year-round income for fishers and their crews, and that goal should not be precluded; however, we will work diligently with the Councils to ensure that the possible impacts of consolidation, such as lost crew positions, are considered and mitigated during the development of any catch share program.

An example of the effects of catch share management is the Pacific Coast Trawl Rationalization program (Rationalization program). This program has involved many complicated issues and decisions but we believe it will improve the status of the resources, provide sustainable and high-quality jobs, and benefit coastal communities.

The shore-based part of the program now allows fishermen the flexibility to choose when to fish during the year, rather than prescribing a level of fishing early in the season with 2-month trip limit periods. Given this flexibility, it appears that fishermen are choosing to fish at a slower rate in the early months of the year. At the April meeting of the Pacific Regional Fishery Council, the Council's Groundfish Management Team provided a status report on the shore-based part of the program that indicates that while the total number of vessels, landings, and dealers receiving landings are lower than during comparable months in 2010, average landings and revenues per vessel are actually higher than in 2010. In early 2011, average total landings per vessel was 137,152 pounds, compared with a range of 77,818 – 109,578 pounds during the same period in 2006 – 2010 (average = 97,133 pounds). Average total revenue per vessel for early 2011 was $88,149, whereas the average total revenue per vessel ranged from $47,029 – $63,388 for early 2006 through 2010 (average = $56,391). Although these preliminary data appear positive, NOAA is cautious about drawing any conclusions at this early stage. We will continue tracking the fishery throughout the summer and fall.

QUESTION: Of the 15 catch share programs that NOAA currently has in operation, what percentage include small scale operations that operate smaller vessels as opposed to the large scale fish operations, and what impacts has NOAA seen on the smaller operators as a result of the catch shares programs?

ANSWER: Most fisheries are comprised of a mix of vessel size and ownership components. Ten of the fifteen catch share programs (66 percent) include operations which operate single vessels. Catch share programs, which are developed by the Regional Fishery Management Councils, can be, and have been, designed to address issues of concern to smaller owner-operated vessels, for example by setting consolidation and ownership limits, establishing set-asides of quotas for particular fleets or ports, and providing assistance in the form of permit banks and loan programs to assist small entities and new entrants consistent with the Council's objectives. Under catch shares, a vessel owner has more flexibility to operate in a way that maximizes their efficiency and profit. These potential economic benefits of catch share programs can be particularly valuable to smaller operations. In the past, those small boats still had to compete with larger operations, but under a catch share program, how and when they fish is largely within their individual control.

Impacts to participants, including smaller operators, vary across programs, but have generally been positive. These include increased ex-vessel prices of fish, increased landings, increased value of harvesting privileges, increased season length, reductions in bycatch and improved safety. Catch share programs also improve the quality and quantity of fishery data, which leads to reduced scientific uncertainty and potential for increased catch quotas. At the same time, these programs can result in increased cost for the purchase of new shares. The Magnuson-Stevens Act allows Councils to specify NOAA Fisheries Finance Program loans to assist small operators and first time buyers of catch share privileges.

Catch share programs can be designed to minimize impacts on fishing communities that include smaller fishing operations and promote community sustainability. The Councils have the tools to develop programs that help communities by taking advantage of Magnuson-Stevens Act provisions under Section 303A to designate Fishing Communities (FCs) and Regional Fishery Associations (RFAs). These types of entities can be flexibly developed (e.g., a specific port, group of ports or communities, a group of fishermen using the same gear type or other grouping), while at the same time providing a structure and framework for anchoring quota with a particular community. NOAA can provide support and technical advice on developing FCs and RFAs, and encourage partnerships for community capacity building, which can be a tool for "mom and pop" operations to successfully and sustainably build and maintain their business.

QUESTION: NOAA is also seeking to increase loan authority in FY 2012 from $16 million to $24 million under NOAA's Fisheries Finance Program to provide quota share loans in support of the catch shares program. These funds will enable individuals or corporations to purchase catch share quotas. What will this additional authority provide and why is it necessary?

ANSWER: The Fisheries Finance Program (FFP) is a national loan program that makes long-term fixed-rate financing or refinancing available for the construction, reconstruction, reconditioning, and, in some cases, the purchasing of fishing vessels, shoreside processing,

aquaculture and mariculture facilities, and the purchase of individual fishing quota (IFQ). Vessel lending must be capacity neutral. For FY 2010, the enacted loan authority was $59 million for traditional direct loans and $16 million for IFQ loans. The Magnuson-Stevens Act (MSA) allows Regional Fishery Management Councils to request IFQ loan programs for entry level fishermen and fishermen who fish from small vessels. This program provides a mechanism for new entrants to finance acquisition of quota share, which is part of start-up costs, thus lowering the threshold for entry. For example, by providing financing to acquire quota share, a new entrant then may have sufficient cash flow to cover other expenses. Corporations are not eligible to finance IFQ, however they are eligible to borrow under the FFP traditional direct loan program.

Currently, only two Councils have utilized the MSA provisions, the North Pacific Council and the Gulf of Mexico Council. The North Pacific Council requested the FFP develop loan programs for the Northwest Halibut and Sablefish Individual Quota Share and the Bering Sea and Aleutian Islands King and Tanner Crab IFQ programs, which were authorized in 1993 and 2011, respectively. In addition, NOAA has received a request from the Gulf of Mexico Council to initiate an IFQ loan program for the Grouper/Tilefish and Red Snapper IFQ programs and it is planned for implementation in FY 2012. Given that roughly 80 percent of the current participants in the Gulf of Mexico fisheries are smaller operators, we expect the loan program would largely be used by these smaller operators. The additional loan authority requested in the FY 2012 President's Budget allows NOAA to support the additional IFQ programs the Councils may request.

It is important to note that the loans may not be used to acquire quota share beyond specific limits within each fishery (i.e., consistent with existing excessive share caps to limit consolidation). By providing this financing, NOAA supports a more competitive, market-oriented fishery that helps to preserve sustainable yields over time.

QUESTION: Will small scale or first time operators be able to qualify for these loans? Will any large corporations be eligible to receive loans under this program?

ANSWER: Small scale and first time operators will by definition be eligible for these loans. These loans are for the purchase or refinancing of Individual Fishing Quota (IFQ) in these fisheries, and the loans may not be used to acquire quota share beyond specific limits within each fishery (i.e., consistent with existing excessive share caps to limit consolidation). Corporations are not eligible to finance IFQ under the Magnuson-Stevens Act.

Fisheries Research and Stock Assessments

QUESTION: While there is a sizeable increase for catch shares, NOAA is reducing funds for fisheries cooperative research by 61%. What sorts of research will not be funded now because of this reduction from nearly $18 million to only $7 million in fisheries extramural research?

ANSWER: In the FY 2012 President's Budget, NMFS has requested a decrease of $4.565 million in funding for cooperative research for a total of approximately $13.2 million. These funds are requested within two programs. Within the Cooperative Research Program we are

requesting $7.2 million and within the National Catch Share Program we are requesting $6 million. Cooperative research leverages partnerships between federal, state, tribal managers and scientists, fishing industry participants, and educational institutions. These partnerships result in the collection of useful fisheries information as well as enhanced outreach opportunities with the fishing community. The FY2012 President's Request will continue to support these partnerships and will focus on high priority projects to minimize bycatch of fishery limiting species and address data gaps. Funds are provided through competitive grants and contract procurements, as well as cooperative agreements. The selection of cooperative research projects will be done in consultation with the Councils, Commissions, and stakeholders.

The $6.0 million for cooperative research in the catch share funding line will be used for cooperative research activities in the Northeast to reduce the catch rate of weak stocks in the New England Groundfish fishery. This research will help fishermen achieve their allowable catch levels for healthy stocks while avoiding stocks in poor condition. Additionally, this cooperative research funding will support industry-based fixed gear surveys that will assist in filling data gaps and enhance stock monitoring. This research will support the agency science used to set annual catch limits.

QUESTION: Why is NOAA backing away from cooperative research activities?

ANSWER: At $13.2 million, the FY 2012 President's Request is still $1.5 million above the FY 2009 enacted level while making significant investments in expanding stock assessments and other activities in direct support of implementing the Magnuson-Stevens Act. The agency recognizes the value of cooperative research in improving partnerships with the fishing community and supplementing its existing research programs and the current funding request would allow NMFS to continue to fund a number of beneficial projects. NMFS will continue to leverage cooperative partnerships to maximize agency investments in science. With demands for high-quality science and more focused management continuing to escalate, the interest in cooperative research projects to address regional concerns is consistently greater than available funding in all regions of the country, and must be balanced with many other competing priorities.

QUESTION: Another concern about fisheries management is that old or insufficient data are used to make decisions about how many fish can be caught. NOAA is asking for an increase of $16 million for a total program level of $67 million in FY 2012 for expanded stock assessments. NOAA is proposing to spend nearly as much money trying to tell fishermen where and when they can fish as it is on the science needed to make those decisions. Wouldn't it make sense to spend more funds collecting information on the fishery resources?

ANSWER: NMFS is requesting $67.1 million in the FY 2012 President's Request to expand annual stock assessments, an increase of $15 million. These funds will be used to improve assessments for high priority stocks; update assessments for stocks more frequently; and, conduct fishery-independent surveys to enable assessment of more stocks, including data poor stocks, 3-5 years from now. In addition to stock assessments the NMFS budget includes funds for survey and monitoring. Since reauthorization of the Magnuson-Stevens Act (MSA), NMFS has requested over $360 million for these two budget lines between FY 2008 and FY 2012, and

additional sums in other budget lines in support of MSA. For example, we have invested significantly in our fleet of fisheries survey vessels to collect the foundational data required for informed decision making, which further demonstrates that fisheries research has been a clear priority for NOAA. In 2007, *Henry B. Bigelow* was commissioned and started fisheries research in the northeast in FY 2008. Since then NOAA has received delivery of *Pisces* and *Bell M. Shimada* to support fisheries science efforts in the near future. The FY 2012 budget includes requested funds for fisheries survey vessel 6 which will replace *David Starr Jordan* to collect fisheries science data off the coast of California.

The National Catch Share Program (NCSP) also includes an important data collection component. Funding will support improvements in fishery dependent data collection systems, fishery data management, cooperative research related to catch share programs, and observers and monitors which are crucial to determine catch levels and share allocations. Without these data on at sea discards, bycatch, and on shore landings, catch limits would likely be set more conservatively, reducing the potential economic benefits of these programs. This increased monitoring leads to improved data collection, which can better inform stock assessments and management decisions.

Proposed Establishment of a Climate Service

QUESTION: NOAA's budget proposes a new NOAA Climate Service built largely by taking resources away from the Office of Oceanic and Atmospheric Research. There are significant concerns about the wisdom of this, as is evident from the Hall amendment to H.R. 1 which passed on the House Floor. Please outline for how NOAA intends to ensure that the science mission of NOAA will not be sacrificed for or driven by politics in a reorganization like the one proposed.

ANSWER: The proposed reorganization constitutes a consolidation and technical transfer of climate programs into a new Line Office that can better link climate science with decision support and other services being requested by the public. It does not eliminate or otherwise diminish any of NOAA's science mission, and NOAA's overall funding for cutting edge research – whether climate or other critically important areas like oceans and weather – is not proposed to be reduced.

The structure of the proposed Climate Service budget provides considerable transparency into the funding levels for the underlying programs, thereby allowing Congress and the public to ensure climate science is not diminished. The budget structure is clearly separated into categories of climate research, integrated services, and observations and monitoring.

Science is an essential component of all NOAA mission responsibilities, and underpins the agency's ability to provide quality services, based on sound science, and the proposed Climate Service would be no exception. Climate science and service must go hand in hand in order to develop products and services that can evolve and be initiated rapidly when needed, in response to scientific information as it emerges. The continuous advancements in climate science demand a close proximity to the service, not only so that those advancements can constantly improve products (science push), but also so that the users can be asking new questions of the science (user pull).

The proposal to bring climate science and services together under one Line Office is fundamentally sound and provides a tremendous opportunity to integrate science and service delivery without detracting from a commitment to pursue, fund, and sustain basic climate research and science. NOAA holds itself to the highest standards of data quality and transparency, and as a science agency is well positioned to provide trusted information on climate variability and change.

This Administration is committed to the honest and open conduct of science. One of the first actions of NOAA Administrator Dr. Lubchenco was to appoint a scientific integrity team at NOAA. Their charge was to review the state of science and scientific integrity at NOAA, to actively assist OSTP in developing recommendations that would strengthen the integrity of science in government, and to draft a scientific integrity policy for NOAA.

NOAA's first priority is to maintain the highest quality climate science while being responsive to user needs. The principal goal of the proposed Climate Service is to make the scientific data and information about climate easily accessible in order to help people make informed decisions in their lives, businesses, and communities.

The National Academy of Public Administration (NAPA) endorsed this approach in their study and recommended that NOAA bring its research, observation and monitoring, and service development and delivery capacity into a single line office. NAPA noted that, "It would undermine the whole concept of an integrated NOAA Climate Service if these research assets were not an integral part of the new line office." The National Academies of Science have also stated that a decision support initiative for climate should be "closely linked" to its research element (Informing Decisions in a Changing Climate, 2009).

NOAA is also using the proposed reorganization as an opportunity to strategically realign its existing core research line office, the Office of Oceanic and Atmospheric Research (OAR), to strengthen the agency's overall science enterprise. OAR will refocus its work to serve as an innovator and incubator of new science, technologies, and applications for NOAA's missions, and an integrator of science and technology across all of NOAA. The OAR Assistant Administrator would serve as vice-chair of the NOAA Research Council. Further, as leader of the central research Line Office, the OAR Assistant Administrator will become the senior advisor to the NOAA Chief Scientist.

QUESTION: What have NOAA's outside stakeholders said about this proposed reorganization?

ANSWER: NOAA's climate capabilities significantly matured and markedly grew in sophistication over the past 40 years. American's depend upon this essential information to make decisions for their family, business and community balance sheets and are now demanding more data, increasingly complex products, and advanced scientific study. As much as one-third of U.S. gross domestic product depends on accurate weather and climate information, and American businesses are using NOAA's climate information to make smart investments to manage their risks and reap economic benefits. For example, through an effort with the National Association of Homebuilders, NOAA provided climate data to help the home building industry establish the most cost efficient insulation standards for proteeting building foundations from

frost. By industry estimates, this information is said to save roughly $330 million in annual building construction costs and energy cost savings of 586,000 megawatt hours.

This is one example of the positive impact of NOAA's climate services that is fueling an increased demand and the widely recognized view that for NOAA to meaningfully rise to this national challenge, the establishment of a single management structure for the agency's core climate capabilities will be required. Throughout the Department's efforts to develop the proposed Climate Service reorganization, the Department consulted with and benefited from the input and advice of a wide array of external partners and stakeholders across public and private sectors.

Most prominently, Congress asked an expert panel of the National Academy of Public Administration (the Academy) to assist NOAA with "a study and analysis of organizational options for a National Climate Service within NOAA, emphasizing maximum effectiveness and efficiency." (U.S. Congress, House, Conference Committee Report to Accompany Consolidated Appropriations Act, 2010 11 Cong. 1 sess., 2009, Report 111-366 (Washington: GPO) p. 636).

In the conduct of the Academy's report to Congress, Building Strong for Tomorrow: NOAA Climate Service, a survey found that the "*themes that the Panel heard often and found compellingly stated were: strong support for the concept of creating a NOAA (or a National) Climate Service; the need to improve federal interagency coordination of resources and service delivery; the importance of partnerships with the public and private sectors; a need for more localized and more accessible research; the potential positive impact of using innovative service delivery technologies and tools; and the importance of supporting a user community that is large and diverse.*" (Building Strong for Tomorrow: NOAA Climate Service, pg 16).

The Academy report's survey results were based on over 40 interviews with NOAA staff, current and former government officials, and external stakeholders; three roundtable discussions with over 50 key NOAA climate constituents: (1) federal agency partners; (2) state and local government leaders; and (3) academics and other subject matter experts; and lastly, a national Online Dialogue that solicited ideas about how to structure and operate a NOAA Climate Service from June 14 to June 28, 2010.

The Academy's report, resounding as it is in its response, is one of an array of expressions of support for NOAA's proposed reorganization. Below are a number of additional examples of external stakeholder feedback:

> *"Establishing a NOAA Climate Service demonstrates that the administration and NOAA understand there is a real need to deliver climate services in this country. This is a giant leap forward in meeting this need. NOAA plays a central role in many aspects of climate science including climate modeling, observations, and assessments, and has a major role to play in the efforts to establish a more coordinated and integrated government-wide National Climate Service. The creation of a new NOAA Climate Service will allow it to be a more effective partner with other federal agencies, the private sector, and the research and academic community, in that effort."*
> Dr. Rick Anthes, President, University Corporation for Atmospheric Research

"NOAA's proposed climate service would be a welcome and critically needed asset to the public health community, both in the U.S. and around the world. Every key sector of the public health community, from first responders to those who provide food and medical supplies and services, would draw on the information. Forecasting air quality, drought, natural hazards and climate-sensitive diseases all impact public health. Better predictive tools, monitoring and other resources will inform our decision-making and advance our efforts to get further ahead of the curve. Lives can be saved as a result."
Georges C. Benjamin MD, FACP, FACEP (Emeritus), Executive Director, American Public Health Association

"I was delighted and thrilled to learn of the commitment by the Administration to form the NOAA Climate Service. I have been a long time supporter of this vision and it is very gratifying to see it accomplished. NOAA has worked for many years to become proficient in climate science, climate observation, and data management. Additionally, with vast experience in producing world-class weather forecasts, extension of these skills to climate is a natural step and will go far in improving the foundation for rational science based policy making. My thanks and congratulations to the hardworking NOAA team members who over many years have made this event possible."
Honorable Conrad C. Lautenbacher, Ph.D.,Vice Admiral (U.S. Navy Ret.)
Vice President, Science Programs, CSC, ATG, Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator, 2001-2008

"As climate adaptation becomes an increasingly important strategic path, the new climate service will provide essential information to the public and private sectors. The insurance industry is heavily dependent on public data and information related to climate, and the creation of a NOAA Climate Service with new data services will greatly enhance the industry's analysis of climate and extreme event weather risk."
Frank W. Nutter, President, Reinsurance Association of America

"Addressing climate change is one of our most pressing environmental challenges. Making climate science more easily accessible to all Americans will help us gain the consensus we need to move forward. The new NOAA Climate Service is a welcome addition to our national climate change capabilities. It will help bring people together so we can also bring about an economic recovery by more rapidly modernizing our nation's energy infrastructure."
Jim Rogers, President and CEO, Duke Energy

"I am very excited by today's announcement regarding formation of the NOAA Climate Service. Working in tandem with the highly skilled work force from the National Weather Service, the NOAA Climate Service will enhance NOAA's ability to deliver world class climate services and to address the wide variety of issues related to climate change.

NWSEO intends to work closely with the Obama Administration, NOAA's leadership and the NOAA Climate Service to effectively launch this new venture. We look forward to forging a close working relationship with the NOAA Climate Service, which

will effectively utilize the skills of NWSEO's members and satisfy America's needs to better understand and to predict climate change."
Dan Sobien, President, National Weather Service Employees Organization (NWSEO)

"Our organizations, representing hunters and anglers across the country, are very concerned about the impacts of climate change on fish and wildlife, and we recognize that providing good information to resource managers will be critical to helping ecosystems, fish, and wildlife adapt to the coming changes in climate.

While the broad implications of climate change are becoming better understood, the need for more regional and local understanding of future climate impacts is urgent. The federal government's investment in observing, researching, modeling, and developing tools to respond to the impacts of climate change will be significant, and the ability to disseminate that information to states, municipalities, and non-governmental organizations, while responding in turn to their specific information needs, is critical. NOAA's climate service can play an important role in gathering, analyzing, and presenting that information to those in need of it."
Randi Swisher, President, American Fly Fishing Trade Association;
Tom Franklin, Director of Policy and Government Relations,
Theodore Roosevelt Conservation Partnership; and
Steve Moyer, Vice President for Government Affairs, Trout Unlimited

More examples of the broad array of stakeholder support for NOAA's proposed Climate Service are available at: http://www.noaa.gov/climateresources/testimonial.html.

QUESTION: What is the future of the Office of Oceanic and Atmospheric Research? This reorganization takes their funding from $435 million to $212 million.

ANSWER: The proposed reorganization does not eliminate any of NOAA's research activities, and NOAA's overall funding for cutting edge research – whether climate or other critically important areas like oceans and weather – is not proposed to be reduced.

The change in proposed FY 2012 funding associated with the Office of Oceanic and Atmospheric Research (OAR) reflects the proposed transfer of the Geophysical Fluid Dynamics Laboratory, the Climate Program Office, and three divisions of the Earth System Research Laboratory –Chemical Sciences Division, Physical Sciences Division, and Global Monitoring Division –to the proposed Climate Service. The proposed transfer would not result in deviations from the core missions or activities of these programs.

As stated above, NOAA is also using the proposed reorganization as an opportunity to strategically realign its existing core research line office, OAR, to strengthen the agency's overall science enterprise. Just as OAR has served to incubate and advance climate science over four decades to a state where it can more readily inform climate services, through this reorganization OAR will renew its focus and work as an innovator and incubator of new grand challenges in science, technologies, and applications, and an integrator of science and technology across all of NOAA.

In cooperation with other NOAA line offices, including the Climate Service when approved, OAR will guide the analysis and direction of NOAA's agency-wide research portfolio. This responsibility includes identifying NOAA's science challenges and gaps, recommending novel approaches to research portfolio management, and integrating research across NOAA's Line Offices to gain a comprehensive understanding of the earth system. To this end, the OAR Assistant Administrator would serve as vice-chair of the NOAA Research Council. Further, as leader of the central research Line Office, the OAR Assistant Administrator will become the senior advisor to the NOAA Chief Scientist, responsible for providing him or her with science program analysis and policy support.

OAR will coordinate and manage emerging and transformational research portfolios including ocean acidification, improved meteorological, oceanic, and climatological observations, modeling, and forecasting to expand the use of renewable energy sources, unmanned air and underwater observing systems, high performance computing, and weather "warn-on-forecast" programs to increase lead time and accuracy for hazardous weather. OAR will also emphasize areas that are important challenges and opportunities for NOAA, such as fostering integrated ecosystem science beyond its current scope to include new tools for sustainable community planning, novel ways to observe the world around us, new ways to conduct fishery assessments, and innovative aquaculture and feed technologies. OAR will help move NOAA toward a fully integrated approach to environmental modeling that spans the full domain of physical, chemical, and biological systems.

OAR's research programs, conducted at NOAA laboratories throughout the country, at field stations around the globe, and at facilities maintained by an international network of universities and other partners, support the agency's mission — and the broader U.S. environmental, social, and economic sectors —through increased knowledge and novel advances in technologies that benefit society.

QUESTION: Some may be concerned that this Climate "Service" is being created while NOAA's Oceanic and Atmospheric "Research" (OAR) service is going to suffer. Upon reviewing OAR's budget, which is being cut in half, this appears to be the case. From a strictly numbers perspective, it certainly seems like NOAA will be spending less money on cutting-edge research and spending more money on disseminating climate data or on this "service." Please comment.

ANSWER: The proposed reorganization constitutes a technical transfer of climate programs into a new Line Office that can better link climate science with decision support and other services being requested by the public. It does not eliminate or otherwise diminish any of NOAA's cutting edge research activities, and NOAA's overall funding for cutting edge research – whether climate or other critically important areas like oceans and weather – is not proposed to be reduced. The funding associated with the labs and programs that are proposed to be transferred from OAR to the Climate Service will be maintained and in some instances, such as ocean acidification and weather radar research, the FY12 Budget proposes targeted new investments in OAR for cutting edge science.

QUESTION: The research being done in OAR is not science for its own sake. Investments in things like development of phased-array radar, use of unmanned aerial vehicles, and

improvements to supercomputing weather modeling hold the promise of improving NOAA services while reducing long-term costs. Won't this reorganization diminish the Office of Oceanic and Atmospheric Research and stifle these kinds of innovations?

ANSWER: NOAA agrees that research in OAR and all of the Line Offices is not done for its own sake, but rather focused on specific missions within the agency. The proposed reorganization will strengthen the link between climate science and services by placing the programs under unified leadership, while allowing the remaining programs in OAR to function as an innovator and incubator of new grand challenges in science, technologies, and applications, and an integrator of science and technology across all of NOAA.

The Office of Oceanic and Atmospheric Research (OAR) serves as NOAA's central research line office that supports and produces preeminent long-term and transformational research and technology innovation that advances NOAA's science, stewardship and service mission. Through the proposed reorganization, NOAA is strategically realigning OAR and renewing is focus on continuing the kinds of innovation that you mention, new grand science challenges, and strengthening the agency's overall science enterprise. In doing so, OAR will renew and expand its role as the focus for long-term research in NOAA to attain mission objectives.

Contrary to stifling innovation, the reorganization re-affirms OAR's essential role as NOAA's central research line office that supports and produces preeminent long-term and transformational research and technology innovation that advances NOAA's science, stewardship and service mission.

QUESTION: OAR's Competitive Research Program is being transferred to the new Climate Service, and the funding is dropping from $152 million to $71 million. Does this mean that fewer non-NOAA scientists will be able to compete for NOAA research dollars?

ANSWER: The proposed reorganization is a technical reprogramming and does not generate any savings by cutting competitive research or other climate programs. In fact, NOAA's FY 2012 proposal maintains NOAA's research funding levels and in some instances, such as ocean acidification and weather radar research, proposes targeted new investments in cutting edge science.

In terms of the specific Competitive Research Program referenced, funding for that activity is not being cut, but has rather been restructured to more accurately reflect in detail what the funding supports. The $152 million to which you refer is now reflected in a number of budget lines within the Climate Service and a portion ($4 million) remains in OAR for Integrated Ocean Acidification. The question of the future distribution of funding between intramural and extramural research is not addressed in the reorganization proposal, but NOAA does not envision any significant shift.

QUESTION: Likewise, OAR's Laboratories and Cooperative Institute programs are being cut nearly in half, from about $109 million to $62 million. Again, is this fewer research dollars going out the door to extramural scientists? Why the dramatic shift in resources

toward in-house research? Can NOAA understand how some might question the results of in-house research?

ANSWER: The funding change in the OAR's Laboratories and Cooperative Institutes Program reflects the proposed transfer of the three divisions at the Earth System Research Laboratory (Chemical Sciences Division, Physical Sciences Division, and Global Monitoring Division). The Geophysical Fluid Dynamics Laboratory is also proposed for transfer to the proposed Climate Service.

These research programs are proposed for transfer so that NOAA's climate capabilities can be housed under a single line office management structure. In this manner, NOAA can more efficiently and effectively respond to the rapidly increasing demand for easily accessible and timely scientific data and information about climate. The question of the future distribution of funding between intramural and extramural research is not addressed in the reorganization proposal, but NOAA does not envision any significant shift.

This transfer in funding does not equate to less research funding available for extramural scientists, or to a shift in resources toward in-house research. The change in funding simply reflects that these programs and their associated funding will be transferred organizationally to the proposed Climate Service where they will continue to support the same balance of internal and extramural research.

NOAA is in agreement and fully understands the value of extramural research and how some might question the results of purely in-house research. As such, NOAA is committed to maintaining and fostering cutting-edge extramural research of this nature. At the same time, NOAA recognizes the world class caliber of our scientists and the importance of research by federal scientists.

QUESTION: Others have also raised concerns about the shortsightedness of reducing the peer review standards that extramural research undergoes before ideas are awarded. Please address these concerns.

ANSWER: NOAA is committed to the highest level of rigor and scientific review when evaluating proposals for competitive award. NOAA has standardized evaluation criteria for all competitive assistance announcements, and those are publicly outlined in each competitive Federal Funding Opportunity on Grants.gov, Broad Agency Announcement (BAA) and Federal Register Notice.

The standardized review process is outlined below, including an initial administrative review for applicability and completeness, an external peer review by mail, a Panel review, and final recommendation by the Selecting Official.

Applicants are required to adhere to all the noted submission requirements and to provide a demonstrable link and/or to emphasize the manner in which study objectives results will serve to support NOAA's mission goals/priorities. The Program Office and/or Selection Official will determine which of the following criteria and weights will be applied. Some proposals, for example sponsorships, may not be able to address all the criteria like technical/scientific merit.

However, it is in the best interest of all submissions to prepare a proposal that can be easily evaluated against these five criteria:

Importance and/or relevance and applicability of proposed project to the mission goals: This ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, Federal, regional, State, or local activities: i.e., how does the proposed activity enhance NOAA's strategic plan and mission goals? Proposals should also address significance/possibilities of securing productive results, i.e., does this study address an important problem? If the aims of the application are achieved, how will scientific knowledge be advanced? What will be the effect of these studies on the concepts or methods that drive this field? What effect will the project have on improving public understanding of the role of the ocean, coasts, and atmosphere in the global ecosystem? Proposals may also be scored for innovation, i.e., does the project employ novel concepts, approaches or methods? Are the aims original and innovative? Does the project challenge existing paradigms or develop new methodologies or technologies?

Technical/scientific merit: This assesses whether the approach is technically sound and if the methods are appropriate, and whether there are clear project goals and objectives. Proposals should address the approach/soundness of design: i.e., are the conceptual framework, design, methods, and analyses adequately developed, well-integrated, and appropriate to the aims of the project? Does the applicant acknowledge potential problem areas and consider alternative tactics? This criterion should also address the applicant's proposed methods for monitoring, measuring, and evaluating the success or failure of the project, i.e., what are they? Are they appropriate?

Overall qualifications of applicants: This ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project. If appropriate, proposals should also address the physical environment and collaboration, if any, i.e., does the environment in which the work will be done contribute to the probability of success? Do the proposed experiments or activities take advantage of unique features of the intended environment or employ useful collaborative arrangements?

Project costs: The Budget is evaluated to determine if the cost is reasonable, allowable, allocable and necessary, and if it is realistic, and commensurate with the project needs and time-frame.

Outreach and education: NOAA assesses whether this project provides a focused and effective education and outreach strategy regarding NOAA's mission to protect the Nation's environmental resources. For example, how will the outcomes of the project be communicated to NOAA and the interested public to ensure it has met the project objectives over the short, medium or long term? Does the project address any of the goals or employ any of the strategies of the NOAA Education Plan?

Review and Selection Process: Upon receipt of a full application by NOAA, an initial administrative review will be conducted to determine eligibility for award, compliance with requirements and completeness of the application. This review includes determining whether:

Sufficient funds are available in the budget of the program office receiving the application to support the proposed project;

Statutory authority exists to provide financial assistance for the project or organization;

A complete application package has been submitted;

The Project Description/Narrative is consistent with one or more of NOAA's mission goals; and,

The proposal falls within the scope of an existing NOAA competitive announcement (Federal Register Notices can be found at http://www.Grants.gov to find recent competitive announcements) or duplicates an existing nondiscretionary project announced previously (if it does, it cannot be funded); and,

The work in the proposal directly benefits NOAA. If it does benefit NOAA directly, it needs to be funded by a procurement contract, not a financial assistance award.

Applications not passing the initial review will not be considered further for funding, and will not receive further review. NOAA will evaluate proposal(s) that pass the initial review and comply with all the requirements individually (i.e., proposals will not be compared to each other).

A merit review will be conducted by mail reviewers and/or peer panel reviewers. Each reviewer will individually evaluate the proposal(s) using the evaluation criteria provided above; a minimum of three merit reviewers per proposal is required. The reviewers may be any combination of Federal and/or non- Federal personnel. The proposal(s) will be individually scored (i.e., a consensus is not reached) unless all reviewers are Federal employees. If all of the reviewers are Federal employees, the program officer has the discretion to authorize a score based on consensus. NOAA selects evaluators on the basis of their professional qualifications and expertise as related to the unique characteristics of the proposal.

The NOAA Program Officer will assess the evaluations and make a fund or do-not-fund recommendation to the Selecting Official based on the evaluations of the reviewers. Any application considered for funding may be required to address the issues raised in the evaluation of the proposal by the reviewers, Program Officer, Selecting Official, and/or Grants Officer before an award is issued. The Selecting Official makes the final recommendation for award to the NOAA Grants Officer who is authorized to commit the Federal Government and obligate the funds.

QUESTION: Will the Climate Service maintain the function of the old OAR programs or will they change in nature or scope once they are part of the new Climate Service?

ANSWER: The missions of existing OAR programs that are proposed for transfer to the Climate Service in the reorganization will not change. Conducting climate research in the context of the proposed Climate Service will enable NOAA to more effectively transition research to services that support the many sectors NOAA serves. Existing research, modeling, monitoring, and

observational programs, including their internal vs. extramural funding distributions, are also envisioned to continue under the proposed Climate Service. That said, minor strategic re-directions of funding will continue to occur each year as a result of careful program reviews in the context of NOAA's Next Generation Strategic Plan and NOAA leadership approval in order to ensure the agency's portfolio of programs most efficiently and effectively meets the Nation's evolving needs. The core focus of NOAA's climate research is not envisioned to change.

QUESTION: Explain the Global Monitoring and Research programs at the new Climate Service. That program is growing from $14 million to $27 million, an increase of nearly 90%. What is this program? Please provide additional information on the scope of the research and other programs that will be conducted under the auspices of this program.

ANSWER: The Global Monitoring and Research program is largely comprised of activities conducted by the present day Global Monitoring Division (GMD) that is part of the Office of Oceanic and Atmospheric Research (OAR)'s Earth System Research Laboratory in Boulder, Colorado. GMD is renamed the Global Monitoring and Research Laboratory (GML) under the reorganization proposed in the FY 2012 budget. The Global Monitoring Division provides the best possible scientific information about atmospheric constituents that affect our climate. This includes ozone in the stratosphere, measuring the global distributions, trends, sources and sinks of tiny particles in the atmosphere and gases that affect the absorption of heat. This research will advance Earth system projections and provide scientific information to support decision making. GMD continuously monitors atmospheric gases, particles, and radiation across the globe to determine and evaluate trends influencing climate change, ozone depletion, and baseline air quality, and communicates its findings in usable and understandable forms. More information about GMD is available at: http://www.esrl.noaa.gov/gmd/

The total FY 2012 increase to this program includes two initiatives: $4.7 million for Monitoring Atmospheric Carbon Sources and $8.0 million for Carbon Observing and Analysis System with summaries below.

Monitoring Atmospheric Carbon Sources: +$4.7 million: As the need for greater information about the makeup of greenhouse gases in the atmosphere increases, in order to inform our deepening understanding of climate variability and change, NOAA's monitoring, modeling, and analysis capabilities must augment its capability to separate human from natural influences. With these funds, NOAA will work with universities and the Department of Energy's Lawrence Livermore National Laboratory to increase $^{14}CO_2$ measurements at NOAA sampling sites and to develop the infrastructure necessary to increase national measurement capacity. (^{14}C is also known as radiocarbon, which is a radioactive isotope of carbon, and is found in atmospheric CO_2 produced by natural sources (e.g., leaf decay) but not in atmospheric CO_2 produced by burning fossil fuels.)

Carbon Observing and Analysis System +$8.0 million: An accurate, reliable, and independent system for tracking sources and sinks of carbon dioxide and other greenhouse gases is needed to increase understanding of the carbon cycle and its impacts on climate variability and change. With these funds, NOAA will complete and sustain an observation and analysis system that will shed light on the regional uptake and emissions of greenhouse gases across North America.

Aquaculture Programs

QUESTION: In February 2011, NOAA released its draft Aquaculture Policy for public comment. According to this report, wild stocks are not projected to meet increased demand even with rebuilding efforts, so future increases in supply are likely to come either from foreign aquaculture or increased domestic aquaculture production, or some combination of both. According to this draft policy paper, about 84 percent of the seafood consumed in the United States is imported, about half of which is sourced from aquaculture. In 2009, aquaculture crossed the threshold of providing more than half of all seafood consumed worldwide. However, domestic aquaculture provides only about 5 percent of the seafood consumed in the United States. Given the U.S.'s continued trade deficit, what efforts is NOAA undertaking to ensure that domestic aquaculture can keep pace with our foreign competitors?

ANSWER: The United States is the third largest consumer of seafood in the world and demand exceeds domestic supply from wild stocks. Currently, the United States imports 84 percent of its seafood, and about half of those imports are from aquaculture. The current trade deficit in seafood is approximately $9 billion. Growth of domestic aquaculture would support fishing and agricultural communities and new aquaculture-based industries in the United States. The U.S. aquaculture industry (currently valued at about $1 billion/year) is dominated by the production of freshwater fish for human consumption. The marine aquaculture segment (about 20 percent of current production) is mainly comprised of shellfish farming, but also includes farming of finfish and algae in coastal waters and on land. Aquaculture in the United States can make major contributions to the local, regional, and national economies by providing employment and diverse business opportunities from coastal communities to the agricultural heartland.

The purpose of the Department of Commerce's (DOC) draft aquaculture policy is to "support the development of sustainable marine aquaculture within the context of the DOC's goals of encouraging economic growth and employment opportunities in the United States and of enhancing United States competitiveness in, and exports to, global markets". The DOC policy applies to a broad range of responsibilities at DOC relating to trade, technology, innovation and entrepreneurship, economic development, and environmental stewardship.

As a DOC bureau, NOAA will participate with the other DOC bureaus to implement this policy. NOAA also issued a separate, draft Aquaculture Policy to enable and foster the development of sustainable marine aquaculture in the U.S. Through this policy, NOAA is setting the framework for domestic aquaculture that will add to the U.S. seafood supply, support coastal communities and important commercial and recreational fisheries, and help to restore habitat and endangered species – while protecting our marine ecosystems and wild species. Together, the two policies provide a national approach for supporting and enabling sustainable aquaculture.

The FY 2012 NMFS budget requests $8.47 million for NOAA's aquaculture program, an increase of $2.4 million from the FY 2010 request. This increase will be used by NOAA Fisheries to develop aquaculture feeds that require less fish meal and fish oil which supports one of the Policy's and GAO's suite of priorities. The FY 2012 budget also requests $4.32 million for the Marine Aquaculture Program as part of the National Sea Grant College Program, a decrease of $477 K from FY 2010 enacted levels. Sea Grant works with other NOAA Line Offices

(NMFS, NESS, NOS) to support NOAA's efforts to increase the domestic production of safe and sustainable seafood via aquaculture in ocean, coastal, Great Lakes areas. This funding will allow Sea Grant to address sustainable aquaculture by funding competitive extramural research and transferring research and technology via the Sea Grant education and extension network. Sea Grant competitively funds external partners to promote sustainable aquaculture by: developing new species suitable for aquaculture; field-testing new environmentally compatible production systems to mitigate the environmental impacts of aquaculture; developing new technologies, including offshore, near-shore, and re-circulating aquaculture systems; improving and clarifying the regulatory framework and coastal zoning for aquaculture; addressing sociological and economic issues related to aquaculture; and providing coastal planning tools to site aquaculture facilities.

QUESTION: NOAA is requesting $8.5 million in FY 2012 for aquaculture programs. What will these funds support?

ANSWER: Funding supports operations at the NOAA Aquaculture Program headquarters office to lead and coordinate national regulatory, research, science, and outreach activities for marine aquaculture. NOAA Fisheries also uses funding to support regional aquaculture initiatives. Regional aquaculture coordinators, currently in place in the Northeast, Northwest, Southeast and Southwest, also coordinate activities among NOAA's NMFS Offices, National Sea Grant, state and tribal governments and agencies, and industry to further NOAA's aquaculture priorities. Examples of regional activities include a pilot project to train New England fishermen in aquaculture practices and crab disaster funding allocated to the State of Maryland to train watermen in oyster farming and provide incentives to start oyster farming ventures.

NOAA Fisheries uses funding to support aquaculture research and collaborations at NOAA Fisheries Science centers which provide external and internal research in focus areas such as assessing the environmental effects of aquaculture, technology transfer projects, hatchery methods for culturing marine species, addressing environmental effects of shellfish farming, examining the effects of ocean acidification on shellfish, and stock enhancement of depleted marine species.

Additionally, these funds will partially support the implementation of the new NOAA and Department of Commerce draft aquaculture policies. NOAA leadership is currently reviewing the draft aquaculture policies which were created within an open public forum. Public comment on the draft policies ended April 11, 2011.

The NOAA Aquaculture Policy currently seeks to:

- Enable sustainable aquaculture that provides domestic jobs, products, and services and that is in harmony with healthy, productive, and resilient marine ecosystems;
- Support aquaculture innovation and investments that benefit the nation's coastal ecosystems, communities, seafood consumers, industry, and economy;
- Provide the scientific information needed for permitting decisions;
- Allow NOAA to work with other federal agencies to clarify various regulatory responsibilities; and

- Help guide a coordinated federal regulatory process for permitting aquaculture facilities in federal waters.

The FY 2012 budget also requests $4.32 million for the Marine Aquaculture Program as part of the National Sea Grant College Program. As part of NOAA's broader aquaculture program, Sea Grant funds competitive extramural research and transfers that research and technology via the Sea Grant education and extension network.

NOAA Education Programs

QUESTION: NOAA is dramatically cutting NOAA's education programs from $54 million in FY 2010 to $21 million in FY 2012. Why is NOAA reducing these programs given the concerns about the need for promoting education in the sciences?

ANSWER: NOAA's education mission is viewed as a priority by the agency. In FY 2012, NOAA estimates an investment of approximately $52.7 million in education funding, of which $20.8 million is for the Office of Education through the "Competitive Educational Grants and Programs" budget line. This request includes $14.4 million for the Educational Partnership Program, $5.0 million for the Competitive Education Grants Program and $1.4 million to pay for the salaries and administrative costs. The balance of the FY 2012 NOAA Education request is within each line office.

NOAA continues to move forward to advance the agency's role in STEM education and to advance NOAA's education mission. In 2008 NOAA contracted the National Research Council (NRC) to perform a review of its Education program and provide recommendations for optimizing NOAA's investment in education. The NRC report "NOAA's Education Program: Review and Critique" was released in March 2010. The report is very supportive of NOAA's education programs and makes recommendations for moving forward. NOAA is using the recommendations from NRC to increase the overall efficiency and reach of its education efforts in the face of competing priorities.

To access the NRC report visit: http://www.nas.edu/morenews/20100303b.html.

QUESTION: What is the best way to leverage NOAA education programs to have the biggest national impact?

ANSWER: NOAA's education program is aligned with national Science, Technology, Engineering and Math (STEM) education priorities and we maintain strong collaborative working relationships with interagency and external partners. Education is a truly cross-cutting activity in NOAA that consists of many programs in the agency. NOAA's education programs and networks focus on areas where investments in science and management can best be leveraged in order to have the broadest impact with the resources available.

NOAA has several formal and informal education programs and initiatives covering a wide range of STEM fields, including ocean, atmospheric, climate, and environmental sciences. Combined, these programs form a robust education portfolio that not only makes use of NOAA resources and capabilities, but also leverages those external to NOAA through a wide array of partnerships with schools, academic and education institutions, and other federal agencies, to

reach diverse audiences across the Nation. For example, NOAA's Environmental Literacy Grants (ELG) Program leverages agency and external resources through grants and cooperative agreements with formal and informal educational institutions. Prior to developing each ELG federal funding opportunity, a gap analysis is performed to determine existing efforts and projects funded by other federal partners. This prevents duplicative efforts and ensures ELG competitions focus on the education areas with the greatest need. The NOAA Office of Education also works with colleagues from across NOAA's line offices in order to best integrate NOAA resources, data, and programs into new funding opportunities.

NOAA education programs focus on connecting the public, students (K-12 through post-graduate) and educators across the country with NOAA-related sciences with the ultimate goal of increasing STEM competitiveness, promoting environmental literacy and helping to create a future workforce that reflects the diversity of the Nation. The strength of NOAA's education portfolio is due to its diversity and cross-cutting nature. This not only brings together the expertise that is unique to each program, but also ensures that STEM education has an overarching presence and supports NOAA's broad mission.

QUESTION: In the past the ocean education activities of the JASON project were funded through congressionally-directed funding. Is there funding in NOAA's FY 2012 request for competitive opportunities for groups like the JASON project to apply for support for science education activities?

ANSWER: The FY 2012 President's Budget request includes $5 million for competitive grants. This would allow groups like the JASON Project to apply for support for their science education activities. Depending on the level of funding, competitive grant awards have ranged up to $1.5 million for a single award.

DSCOVR Mission

QUESTION: NOAA initially requested $11.5 million for DSCOVR in FY 2011. NOAA is now requesting $47.3 million for the DSCOVR Mission in FY 2012. This mission was suspended by NASA more than a decade ago as a result of doubts raised by the NASA OIG and the Congress. Why is appropriate to try to restart this mission in the austere budget climate we face now?

ANSWER: In 2009, the Administration did an extensive review of its options to maintain continuity of its near real-time, in situ solar wind monitoring capabilities. The review concluded that refurbishing NASA's DSCOVR satellite was the least expensive and lowest risk option for preserving this critical capability. A refurbished DSCOVR satellite would provide critical data which is needed to provide advance warning of solar storms that have the potential to damage critical infrastructure such as electric power grids, the telecommunication network, and airline operations. NOAA's Space Weather Prediction Center (SWPC) requires a continuous and uninterrupted source of solar wind data on which to base its geomagnetic storm warnings to its users. The current solar wind data source is the NASA Advanced Composition Explorer (ACE) satellite which is now operating 12 years past its design life. A replacement is needed before it fails and to assure continued warning and forecasting through the 2013-2015 Solar Maximum. Low reliability of the current satellite and sensors and the high risk of unavailability of the data pose one of the most serious gaps for NOAA's space weather services.

NOAA initially requested $9.5 million for DSCOVR in FY 2011. NOAA requested $47.3 million in the FY 2012 President's Budget to ramp up work in order to refurbish and launch DSCOVR in FY 2014. Given the potential impact of solar storms on the Nation's infrastructure and the aging ACE satellite, the DSCOVR satellite would provide critical data that would support SWPC forecast of geomagnetic storm conditions and imminent warning of adverse solar events for civil and military users. Early warning of these space weather events would allow for advance actions to minimize impacts on critical infrastructure such as electric power grids, the telecommunication network, and airline operations. The Administration has concluded that refurbishing the existing DSCOVR satellite is the most viable way to meet the Nation's needs.

QUESTION: The main purpose of the mission as initially proposed by then-Vice President Gore was to make a live image of the Earth from space available on the internet for educational purposes. Is that still part of the mission?

ANSWER: DSCOVR was built with both space weather sensors and Earth Imaging sensors on board. However, he President's FY 2012 Budget request of $47.3 million is to refurbish DSCOVR as a space weather mission only. NOAA's mission does not include refurbishment of the Earth Imaging sensors.

NASA was Congressionally directed to refurbish the Earth Imaging sensors and integrate them onto DSCOVR. NOAA has no plans nor has it budgeted any funds to process the Earth Imaged data.

National Working Waterfronts: New NOAA Program for Economic Development

QUESTION: The National Ocean Service is proposing a new $8 million program, "Working Waterfronts," to assist fishing-dependant coastal communities. Funds would support socio-economic studies; community-based planning and capacity building; and economic develop and transition projects. This sounds like an EDA program in NOAA. Shouldn't this program be funded out of EDA?

ANSWER: The Working Waterfronts program is an extension of the NOAA's National Ocean Service core mission. By building on long-standing NOAA partnerships with state governments, utilizing existing NOAA outreach networks to coastal communities (through Coastal Zone Management Programs, Sea Grant), and capitalizing on NOAA's expertise in coastal policy, education, and science-based problem solving, the Working Waterfronts program will allow the National Ocean Service to further achieve its vision of a nation with safe, healthy, resilient and productive oceans and coasts.

Economic development is specifically addressed in one of NOS's key authorities: the Coastal Zone Management Act (CZMA) (16 U.S.C. §§ 1451-1466). The CZMA provides the basis for protecting, restoring, and responsibly developing our nation's diverse coastal communities and resources. By taking a comprehensive approach to coastal resource management, the CZMA balances the often competing and occasionally conflicting demands of coastal resource use, economic development, and conservation. The CZMA specifically identifies economic development, addressing issues such as coastal-dependent uses, redevelopment of deteriorating

urban waterfronts and ports, public access, fisheries development and aquaculture, and restoration of historic, cultural, and esthetic coastal features. The Working Waterfronts program thus harmonizes with existing capacity and authority and is well-suited to be led by NOAA's National Ocean Service.

QUESTION: How does this program rank in priority in comparison with base National Ocean Service programs like Navigation Services, Marine Sanctuaries, Ocean Conservation, or Coastal Zone Management Grants?

ANSWER: The Working Waterfronts investment is intended to complement long-standing base programs (including Navigation Services, Marine Sanctuaries, Ocean Conservation and Coastal Zone Management Grants, among others) while emphasizing the need to support local reinvestment in the economies of coastal communities.

Coastal and Marine Spatial Planning

QUESTION: One of the priorities in the President's 2010 *National Ocean Policy* is to establish coastal and marine spatial planning activities. The National Ocean Service is requesting a total of $6.8 million to develop a prototype data portal whereby NOAA, its interagency partners and regional governments will be consolidating and disseminating coastal data sets. Would NOAA please provide more information on this program and why it is important?

ANSWER: There is currently no single repository for the multitude of coastal data collected within NOAA and the broader Federal Government. The Final Recommendations of the Interagency Ocean Policy Task Force recognized that creating a National Information Management System would be extremely useful to decisions made at the Federal, state, and local governments and lead to better outcomes. Within the $6.8 million request, a total of $3.4 million will go towards enhancing the applicability and interoperability of web-based and desktop decision support tools for planners to better understand site suitability, cumulative impacts, ecosystem services, and tradeoffs involved in alternative ocean use scenarios under a variety of environmental and socioeconomic conditions.

In addition, the request will support the institutional infrastructure needed to coordinate and facilitate the Coastal and Marine Spatial Planning (CMSP) process as outlined in the Final Recommendations of the Interagency Ocean Policy Task Force. CMSP is important because it is designed to benefit the Nation in multiple ways including:

- Improving existing decision-making and planning across multiple levels of government in 9 regions throughout the United States;
- Facilitating sustainable economic growth by providing increased efficiency, predictability and certainty for permitting and other economic investments;
- Minimizing user conflicts;
- Improving access to data and promoting transparency in decision making;
- Maximizing the ability of marine resources to continue to support a wide variety of human uses; and,

- Leveraging, strengthening, and magnifying local planning objectives through integration with regional and national planning efforts.

To make CMSP happen and see the benefits listed above come to fruition, this $6.8 million request will support efforts across NOAA with a special emphasis on supporting external partnerships with other Federal, state, tribal and regional entities. Specifically this request covers two important aspects of CMSP including: 1) work at the regional level through regional data integration and CMSP planning support; and, 2) building national capacity through the development of an interagency National Information Management System and Regional Data Portals which include visualization and other decision support tools.

- At the *regional level*, NOAA will work collaboratively with regional and interagency partners, to support the consolidation, synthesis, integration and dissemination of key data sets that will be used for assessing current and projected states of regional ecosystems, services, uses and governance. NOAA will also continue to provide this type of technical assistance and support capacity building at the regional scale to assist Regional Planning Bodies and stakeholders as they undertake the CMSP process.

- At the *national level* internally, NOAA will develop an agency-wide plan for integrating NOAA key spatial data into the CMSP process and will play a central catalytic and integrating role with interagency and non-governmental partners to design, construct, test and provide data portal(s) for key CMSP information and tools.

- At the *national interagency level*, NOAA will convene interagency partners to assist in defining requirements for data and systems development, standards and protocols, and a national strategy for integrating regional data management efforts under the National Information Management System (NIMS).

- Working with *external partners at the national and regional levels*, NOAA will also use these funds to enhance the applicability and interoperability of web-based and desktop decision support tools for planners to better understand ecosystem services, cumulative impacts, site suitability, and tradeoffs involved in alternative ocean use scenarios under a variety of environmental and socioeconomic conditions and will work to identify gaps in spatial data and derived products to effectively create and implement regional CMS plans.

QUESTION: Does NOAA anticipate that this program might impact fishing regulations or other coastal economic activities? Please explain.

ANSWER: NOAA does not anticipate that this program will negatively impact fishing regulations or other economic activities. Rather, Coastal and Marine Spatial Planning (CMSP)

should facilitate sustainable economic growth in coastal communities by providing greater efficiencies (e.g., better coordinated permitting and decision-making) and predictability for economic investments in ocean and coastal--based businesses. This should result in reduced costs and conflicts among competing uses.

CMS Plans are not legally binding and the CMSP process itself does not create any new regulation or permitting requirements for fishing or other uses. Instead, CMSP is proactive planning process that is designed to streamline permitting and regulations by, for the first time, bringing all the agencies that administer them together early on in this process to make shared decisions to better serve the public and reduce conflict.

Regional fishery management councils (RFMCs) currently play a major role in NOAA's ocean and coastal stewardship responsibilities. Together with NOAA Fisheries, the RFMCs develop Fishery Management Plans that are required under the Magnuson-Stevens Fishery Management Act (MSA), to incorporate many of the features of the CMSP process, such as science-based decision making and taking an ecosystem-based approach. As veterans of a similar process, the experienced voice of the RFMCs will bring immediate depth to the CMSP process, which is why the CMSP Framework recognizes that their involvement in CMSP is critical.

CMS Plans are expected to guide agency decision-making, including those made by NOAA and the RFMCs, to the extent consistent with existing law, including the MSA. Implementation of CMSP will occur under the MSA and other relevant existing authorities. Such authorities will not be superseded.

Cooperative Observer Program

QUESTION: Please explain why NOAA is phasing out about 1,000 "low priority" legacy weather spotters?

ANSWER: NWS is coordinating with the offices that will make up the proposed Climate Service (CS) to review and prioritize the existing 11,000 COOP sites as part of an optimization plan for the COOP Network. The U.S. Climate Reference Network (USCRN) is proposed to be transitioned into the CS and CS will implement a U.S. Regional Climate Reference Network (USRCRN). Some of these sites will be located in approximately the same location as COOP sites that are designated as U.S. Historical Climate Network (USHCN).

USCRN, USRCRN, and USHCN (COOP) programs are all important components of a joint NWS-CS effort to maintain a quality climate record at national, regional, and local scales, while fulfilling the NWS weather and water missions and providing data for many other NWS and CS stakeholder needs.

NOAA's planned approach for prioritizing, selecting, and modernizing COOP sites is based on evaluating the proximity of a COOP site to an installed or planned USCRN and/or USRCRN site. In addition, sites which do not meet the need for credible climate trend analyses will be prioritized for being phased out. These sites have been found to have data biases due to poor siting and challenges with instrument modernization, as well as issues related to delays associated with manual data transmission. While over half of the existing COOP network reports

daily through electronic means, this modernized network will transmit data in a more timely manner and will improve our ability to provide more reliable and accurate weather forecasts and long-term climate data records.

Commerce, Justice and Science Subcommittee Hearing

National Oceanic and Atmospheric Administration Appropriations

Question for the Record

Ranking Member Chaka Fattah
April 1, 2011

Dr. Jane Lubchenco

Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator

QUESTION: HR 1, the fiscal year 2011 appropriations bill passed by the House in February, would cut NOAA Operations, Research, and Facilities by more than $450 million, or 14 percent, below the fiscal year 2010 level.

- **How would this funding cut impact NOAA's work?**
- **How would it impact the work of the National Weather Service?**
- **Overall, how would the public be affected by a funding cut of this magnitude?**

ANSWER: On April 15, 2011, the President signed H.R. 1473, the "Department of Defense and Full-Year Continuing Appropriations Act, 2011" which provided NOAA an appropriation of $3.2 billion for Operations, Research, and Facilities, a reduction of $119 million from the FY 2010 Enacted and $117 million from the FY 2011 President's Budget Request. For Procurement, Acquisition, and Construction, NOAA received $1.4 billion; this is a $23 million reduction from the FY 2010 Enacted and $849 million less than the FY 2011 President's Budget. NOAA has been directed to draft a spend plan within 60 days of enactment.

QUESTION: The NOAA Inspector General noted last December that the Department lacks cohesive policies and procedures for program management and oversight of major systems acquisitions. What is the Department doing to address the IG's concerns and findings in this area, and particularly with regard to the satellite program?

ANSWER: The Department of Commerce has initiated an Acquisition Improvement Project (AIP) that includes the creation of a Department-wide Acquisition Project Management Framework. This framework encompasses the creation of a program management and oversight process and the identification of the products and associated analyses that will be required to manage systems acquisitions throughout the lifecycle of the program. The resultant framework is intended to lead to an integrated program management and oversight process for IT, non IT, and Facilities projects and programs.

The AIP is being conducted through six project teams, all being led by Department Bureaus. The acquisition program/project management framework is being developed by teams one,

two, and three. These three teams are working the requirements definition, validation, and control, the program/project management process and procedures and the roles and responsibilities. The teams are working in an integrated fashion to ensure alignment.

A draft framework has been developed and is currently being filled out with a goal of delivering the final framework at the end of October 2011.

QUESTION: With regard to NOAA's Education activities, the America COMPETES Act of 2010 included a provision directing that NOAA give consideration to the goal of promoting the participation of individuals from underrepresented groups in science, technology, engineering, and mathematics fields as well as promote the acquisition and retention of highly qualified and motivated young scientists to complement and supplement workforce needs. Could you please give us an update as to NOAA's efforts in these areas?

ANSWER: NOAA's Office of Education, Educational Partnership Program (EPP), directly supports the America COMPETES Act of 2010 provision and the President's "Educate to Innovate" campaign. Since 2001, EPP, through its Cooperative Science Centers, Environmental Entrepreneurship Program, and undergraduate and graduate scholarship programs, has trained 2,167 students in science, technology, engineering, and mathematics (STEM) fields, of which 1,783 are from underrepresented communities. NOAA, or a NOAA contractor, has hired 82 students in STEM fields of which 59 are from underrepresented communities. NOAA's FY 2012 President's Budget request of $20.8 million for the Office of Education (through the "Competitive Educational Grants and Programs" budget line) includes $14.4 million for the Educational Partnership Program. For more information about NOAA's Office of Education FY 2012 President's Budget request and the Educational Partnership Program, please visit page 6-158 of:
http://www.corporateservices.noaa.gov/nbo/fy12_bluebook/chapter6_2012_Education.pdf

QUESTION: The NOAA budget request contains additional funds to repair deteriorating research vessels. What type of research would be impacted if additional funds were not made available to keep these research vessels operational? Approximately how much do other federal agencies depend on NOAA vessels, and how will they be affected if the vessels are not repaired?

ANSWER: The in-situ observations made by the NOAA Fleet are critical to NOAA Line Office observational requirements for nautical charting, fisheries research, marine environmental assessments, coastal-ocean circulation studies, and oceanographic and atmospheric research. During the Deepwater Horizon response, for example, the NOAA Fleet played a critical role in assessing the impacts on coastal and marine ecosystems. The continued deterioration of the NOAA fleet would impact activities throughout NOAA, including critical programs at the: National Marine Fisheries Service Fisheries surveys (NMFS), Office of Atmospheric Research Oceanographic (OAR) research, OAR/National Weather Service (NWS) Climate research, NWS meteorological observations, and National Ocean Service (NOS) Hydrographic surveying. Specific projects that would be impacted

include: El Nino Southern Oscillation (ENSO) research, Deep-ocean Assessment and Reporting of Tsunamis (DART), Natural Resource and Damage Assessment (NRDA) research on Deep Water Horizon oil spill, Coral Reef Assessment & Monitoring Program (RAMP), and Cetacean Ecosystem Assessments.

The primary users of the NOAA Fleet are NOAA Line Offices including OAR, NMFS, NOS, and NWS. Currently, other federal agencies do not use the NOAA Fleet.

QUESTION: Funding for the National Marine Sanctuary Program has remained essentially flat since 2001. With increasing rents and inflation rates, aren't the sanctuary program's management capabilities being reduced more and more every year?

ANSWER: The President's Budget request for the National Marine Sanctuary Program (NMSP) base Operations, Research and Facilities budget is $46.0 million in FY 2012. To adapt to the fiscal environment the program has increased efficiencies through several actions, including sharing boats across sanctuary sites, reducing days at sea on large boats, and reducing the number of contractors. Additionally, the program has received inflationary adjustments each year.

NOAA's Office of National Marine Sanctuaries manages and operates the Nation's system of 13 marine sanctuaries and the Papāhanaumokuākea Marine National Monument. Individual sanctuary and monument offices are responsible for the daily operation of a wide variety of education, research, monitoring and management programs.

QUESTION: According to a recent study valuing the world's ecosystem services, coral reefs are estimated to provide $375 billion in environmental and economic services. However, NOAA is requesting a $2 million cut to the Coral Reef Conservation Program. What effect will this cut have on the recovery and protection of our valuable coral reefs?

ANSWER: The FY 2012 President's Budget request includes $27.0 million for the Coral Reef Conservation Program (CRCP) which will allow NOAA to continue to address the complex nature of the threats that face coral reef ecosystems, and to bring together expertise from across NOAA for a multidisciplinary approach to understanding and managing coral reef ecosystems. The CRCP addresses NOAA's legislative mandates to protect and conserve coral reefs (Coral Reef Conservation Act of 2000 and the Presidential Executive Order 13089 on Coral Reef Protection, which established the NOAA-co-chaired U.S. Coral Reef Task Force), recover threatened corals and other protected species (ESA), manage reef-dependent Federal fisheries and protect Essential Fish Habitat including deep coral and sponge communities (Magnuson-Stevens Fishery Conservation and Management Act (MSA)), promote sustainable use of the coastal zone under the Coastal Zone Management Act (CZMA), and improve management capabilities of the National Marine Sanctuaries Act (NMSA).

In the Consolidated Appropriations Act of 2010, Congress provided $2.3 million above the President's request for competitive research projects to be undertaken by external coral reef institute partners. These funds were awarded to projects in FY 2010 and no additional funding is required. This FY 2012 request is consistent with the FY 2011 and FY 2010 President's requests.

NOAA is pleased that Congress continues to express strong support for coral reef science and conservation. Since the passage of the Coral Reef Conservation Act in 2000, NOAA has made significant progress in mapping the locations of coral reefs in the United States, characterizing their status, researching the complex biological, physical, and chemical interactions in these ecosystems, describing the unique dependence of human communities on these resources and their services, and implementing projects to reduce stressors. Our objective is to use sound science to understand, sustainably use, and conserve these resources for the current and future generations.

QUESTION: What is the number and value of the current backlog of shovel-ready coastal habitat restoration projects? How is NOAA working to reduce this backlog? What types of jobs, both direct and indirect, bave the projects of the Community-based Restoration Program helped to create?

ANSWER: NOAA's Restoration Center managed the 2009 competition for the $167 million of American Recovery and Reinvestment Act funding for shovel-ready coastal habitat restoration. In response, NOAA received 814 meritorious applications requesting more than $3 billion in funding. NOAA was able to fund 50 of these projects, leaving a backlog of 764 shovel-ready projects estimated at approximately $2.8 billion. In addition, through our Open Rivers Initiative, NOAA received 36 proposals requesting more than $20 million for fish passage and dam removal projects nationwide. FY 2009 funding available for the program was $7 million. These estimates of the backlog of restoration projects are based on recent competitions for targeted funding and do not reflect the total number of restoration projects under development in communities around the nation.

To reduce the backlog, NOAA provides technical, management, and financial assistance for project implementation. States, local governments, and non-governmental organizations are encouraged to apply to NOAA's habitat restoration programs, such as the Community-based Restoration Program. NOAA's contribution is leveraged at a minimum of a 1:1 ratio with other sources of funding.

NOAA's restoration work, through its Community-Based Restoration Program and the Open Rivers Initiative, supports a range of job types. Direct jobs include laborers at construction sites, design engineers, biologists, landscape architects, hydrologists, and specialized botanists. Restoration projects also support indirect jobs in industries that supply materials such as nursery workers where plant material is grown, shipping or transport companies, and administrative, clerical, and managerial services. NOAA also helps develop the next generation of restoration professionals by supporting organizations that provide training and work experience to enter the coastal restoration field. This provides experience leading into the public, private, and non-profit job markets.

QUESTION: What is NOAA doing jointly with the other Estuary Restoration Act agencies to further federal restoration activities, and how is this work benefiting restoration more broadly?

ANSWER: The Estuary Restoration Act (title I of Pub. L. 106–457) (Act) was created in 2000 to promote a coordinated Federal approach to estuary habitat restoration; forge effective partnerships among public agencies and between the public and private sectors; provide financial and technical assistance for estuary habitat restoration projects; and develop and enhance monitoring and research capabilities.

The Act established an interagency Council to direct policy relating to the directives of the Act. The Council, consisting of representatives from the Department of the Army -U.S. Army Corps of Engineers, Department of Commerce, the Environmental Protection Agency, the Department of the Interior, and the Department of Agriculture, has since been providing guidance on the Act's financial and technical assistance program for habitat restoration projects. As such, the council developed (and is currently updating) an Estuary Habitat Restoration Strategy (Strategy). NOAA was elected Council Chair in 2009 for a three-year term.

Since 2009, NOAA has received funding to support estuarine habitat restoration projects that uphold the goals of the Act. In FY 2009 NOAA funded the McAllis Point Estuarine Habitat Restoration project in Galveston, TX. In FY 2010 NOAA (in coordination with the Council) provided funding and technical assistance to four projects: McDaniel Slough Tidal Restoration Expansion in Arcata, CA; Damde Meadows Tidal Restoration – Phase II in Hingham, MA; Molokai Fishpond and Fringing Reef Restoration Project in Kaunakakai, HI; and Port Susan Bay Estuary Restoration Project in Snohomish County, WA. The Council is currently reviewing projects to be funded in FY 2011. The Council is jointly collaborating to direct new resources toward restoration projects which will adapt to the stressors associated with climate effects (such as changes in sea level, precipitation and storm intensity). The Council is using a projects' ability to respond to climate effects as a priority-setting tool, while still addressing the other objectives and principles of the Strategy and Act.

NOAA, in coordination with the Council, continues to advance the goals of the Act to benefit our Nation's estuaries. The Strategy along with the monitoring and tracking tools are applicable and used by the greater coastal habitat restoration community. It is the goal of the Council to continue to foster cooperation between public and private organizations on estuarine habitat restoration. In addition, the Council is reaching out to other federal agencies to encourage collaboration on overarching national restoration policies.

Commerce, Justice and Science Subcommittee Hearing
National Oceanic and Atmospheric Administration Appropriations
Question for the Record
Rep. Tom Graves (GA-9)
April 1, 2011

Dr. Jane Lubchenco
Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator

QUESTION: On April 1, 2011, I wrote the attached letter asking you to represent in detail how your agency would operate with a 25 percent reduction in funds, a 20 percent reduction in funds and a 10 percent reduction in funds. Will you provide the Committee with a copy of the reply for the record?

ANSWER: On April 15, 2011, the President signed the Department of Defense and Full-Year Appropriations Act, 2011. The funding provided to NOAA in the Act is 3 percent below the FY 2010 enacted level. On June 15, 2011, the Department submitted to the Committees on Appropriations of the House and Senate the required spend plan. The proposed spend plan for NOAA is 2 percent below the FY 10 enacted level. The Department's spend plan proposes to transfer funds from the Bureau of the Census to NOAA to address a critical funding need for the Joint Polar Satellite System.

Commerce, Justice and Science Subcommittee Hearing

National Oceanic and Atmospheric Administration Appropriations

Question for the Record

Rep. José E. Serrano (NY-16)
April 1, 2011

Dr. Jane Lubchenco

Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator

Education Partnership Program

QUESTION: Dr. Lubchenco, your testimony states that "undergraduate and graduate fellowship recipients provide immediate dividends." These fellowships are provided through the Education Partnership Program (EPP) with minority serving institutions. I have been a vocal supporter of EPP from the beginning. From 2000-2010, the NOAA Cooperative Center for Remote Sensing Science and Technology at CUNY City College has trained 427 students. Nationwide 1,720 students have been trained as of December 2010. These students are getting advanced degrees, even PhDs, in NOAA mission sciences. Thus, EPP is not only training students who can become a part of NOAA's workforce, but also increasing the number of students from underrepresented communities educated in science, technology, education, mathematics (STEM) fields.

What is the possibility that the Education Partnership Program could become a line item in future NOAA budgets?

ANSWER: The Educational Partnership Program is the largest component of the NOAA Education Program. It is critically important to NOAA's mission to attract students to the NOAA workforce who are graduates with degrees in mission critical fields, including students from underrepresented communities. NOAA's FY 2012 President's Budget request totals $20.8 million for the Office of Education through the "Competitive Educational Grants and Programs" budget line. This request includes $14.4 million for the Educational Partnership Program. For more information about NOAA's Office of Education FY 2012 President's Budget request visit: http://www.corporateservices.noaa.gov/nbo/fy12_bluebook/chapter6_2012_Education.pdf

Caribbean Tsunami Warning Center

QUESTION: As you know, I have been a long time supporter of establishing a tsunami forecasting and warning center for the Caribbean.

On March 17th this Subcommittee had a hearing with Secretary Locke about the Department's FY2012 budget and I discussed the following questions with him.

On March 16th a 5.4 earthquake struck in the Atlantic Ocean northwest of Puerto Rico, causing tremors on the Island and in the Dominican Republic. Fortunately, the quake did not generate a tsunami but makes absolutely clear the need for a forecasting and warning system in the Caribbean.

NOAA has concluded that Puerto Rico and the U.S. Virgin Islands, along with four Pacific coast states, "face the greatest tsunami hazard in the United States."

On March 16th, Representative Pierluisi, in conjunction with Representative Christensen and myself, introduced legislation which would direct the National Oceanic and Atmospheric Administration (NOAA) to establish and operate an additional tsunami warning center to be located in the Caribbean region.

Administrator Lubchenco, what is the agency's position on establishing a Tsunami Warning Center for the Caribbean? How would the agency finance the establishment of said center and how would you prioritize it within your current capabilities?

ANSWER: At the present time, we believe that Puerto Rico is effectively served by the existing Tsunami Warning Center in Alaska. The average time to issue a tsunami message to emergency management officials in Puerto Rico and the U.S. Virgin Islands is about 3 minutes. While we are committed to addressing the tsunami hazard needs of the Caribbean, the primary challenge there is tsunami education and awareness. The coasts of Alaska, the.Pacific, Northwestern United States, Puerto Rico and the U.S. Virgin Islands are vulnerable to local tsunamis, similar to the one that devastated Japan. NOAA is working with federal, state, and local governments to educate the public about this threat and how to take appropriate action, not only when a tsunami warning is issued, but when there are indications of an earthquake or receding water. This awareness is of the utmost importance when there may be only minutes to reach safety. In FY 2010, NOAA accelerated the TsunamiReady Program for Puerto Rico & U.S. Virgin Islands by hiring an outreach manager for the Caribbean.

QUESTION: For the record, can you provide for us the average amount of time it takes for the warning center in Alaska to detect tsunami risk in the Caribbean? Most importantly, upon such detection, how long would it take to issue a warning to emergency management and civil defense officials in both Puerto Rico and the U.S. Virgin Islands? In the best case scenario, what is the record in terms of a warning from the Alaska center reaching Puerto Rico? How does that time compare for issuance of a similar warning for authorities in Alaska? What is the longest time it has taken for the Alaska center to issue a warning for the Caribbean? Are you comfortable that the Caribbean region is sufficiently protected by the current detection and warning system?

ANSWER: Tsunami warnings are issued based on seismic activity. The density of the seismic network that detects earthquakes is directly correlated to the timely issuance of tsunami warnings. The national seismic network surrounding Puerto Rico operated by USGS combined with the Puerto Rico Seismic network provides sufficient density to issue tsunami warnings quickly. Once an earthquake of a tsunami-generating magnitude is detected, the Tsunami Warning Center (TWC) in Alaska will immediately issue a tsunami warning.

The average time to issue a tsunami message to emergency management officials in Puerto Rico and the U.S. Virgin Islands is about 3 minutes. Most importantly, however, is that people know what to do when an earthquake occurs and also when a tsunami warning is issued. As an example of the speed with which tsunami information can be disseminated with the current warning system, after the March 16, 2011, 5.4 magnitude earthquake off the coast of Puerto Rico, the TWC in Alaska issued a tsunami information message 1 minute 49 seconds after the earthquake. On average, the TWC in Alaska issues tsunami warnings to the Alaskan Aleutian Islands at about 5 minutes after an event. This is primarily a result of the lower density of the seismic network in that region.

Given current technological capabilities and reliability, NOAA is confident that our tsunami warning center in Alaska can effectively warn the U.S. Commonwealth of Puerto Rico and the U.S. Virgin Islands. It should be noted that since the TWC in Alaska has been responsible for issuing tsunami warnings for Puerto Rico, no seismic event has reached the magnitude that mandated issuance of a tsunami warning. Should such an event occur, NOAA is confident it can issue a tsunami warning to Caribbean region within the above stated timeframes.

QUESTION: I understand that NOAA, through the National Weather Service specifically, is certifying communities in Puerto Rico and the U.S. Virgin Islands as "Tsunami Ready." Can you please explain the differences between Tsunami Ready certification and the capabilities of a Tsunami Warning Center?

ANSWER: The TsunamiReady™ program is a part of NOAA's education and outreach aspect of the broader tsunami hazard mitigation program. TWCs issue tsunami information, advisories, watches and warnings.

NOAA's TsunamiReady™ program is a voluntary partnership between NOAA, state, and local emergency management agencies. The goal of TsunamiReady™ is to create tsunami resilience in communities by better integrating tsunami hazard preparedness into coastal community culture, and providing coastal jurisdictions with a level of "minimal readiness" for the tsunami hazard. The TsunamiReady™ program strives to increase public awareness of the threat that tsunamis pose, improve hazard planning, and strengthen warning communications. There are currently 12 recognized TsunamiReady™ communities in Puerto Rico. For communities to achieve this recognition they must have the ability to receive NOAA's tsunami alerts, further warn the public, identify evacuation zones and conduct tsunami education activities.

QUESTION: Governor Luis Fortuño has committed $6 million, or roughly half the amount, it would take to construct a full-fledged warning center on terms equivalent or near equivalent to warning center operations now in Alaska and Hawaii. Can you work with me to find the necessary resources in NOAA's budget to move this forward?

ANSWER: NOAA is fully committed to providing the same level of tsunami service to the Caribbean as other U.S. coastal areas and to furthering awareness and planning efforts as described above. As stated above, NOAA is confident that our tsunami warning center in Alaska can effectively warn the U.S. Commonwealth of Puerto Rico and the U.S. Virgin Islands in the case of tsunami-generating seismic activity.

Commerce, Justice and Science Subcommittee Hearing

National Oceanic and Atmospheric Administration Appropriations

Question for the Record

Rep. Robert Aderholt (AL-04)
April 1, 2011

Dr. Jane Lubchenco

Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator

QUESTION: What is the relationship between NOAA's GFDL and Princeton University? How much funding for GFDL comes from the United States government?

ANSWER: NOAA's Geophysical Fluid Dynamics Laboratory (GFDL) is a NOAA Laboratory that develops and uses mathematical models and computer simulations to improve our understanding and prediction of the behavior of the atmosphere, ocean, and climate. GFDL builds models that are aimed at benefiting society, such as hurricane research and prediction, seasonal weather forecasts, understanding climate change, and finding ways to predict that change.

The relationship between GFDL and Princeton University is a strong one. The Cooperative Institute for Climate Science (CICS) was established as a result of competitive award. It is a direct collaboration between GFDL and Princeton to carry out scientific research in the climate sciences. CICS provides expertise and performs research in various aspects of the climate sciences including climate change and variability, and biogeochemical cycles. Through its graduate and postdoctoral and visiting scientist program, CICS educates and trains future generations of cutting-edge scientists for NOAA and the Nation.

As a federal laboratory, GFDL receives funding from NOAA's Office of Oceanic and Atmospheric Research (OAR) appropriation. In FY 2010, GFDL received $18.72M in ORF funding and $10.4M in PAC funding. In addition, in FY 2010 GFDL received approximately $1M from other government funding sources including Department of Energy, NASA, and transfers from other parts of NOAA.

QUESTION: What amount does GFDL pay to Princeton University, to rent the space?

ANSWER: GFDL pays $248,973 annually to Princeton University to rent its space.

QUESTION: What role does NOAA's Geophysical Fluid Dynamics Laboratory (GFDL) at Princeton University play in climate change research?

ANSWER: The Geophysical Fluid Dynamics Laboratory, in operation since 1955, is engaged in comprehensive, long-term research fundamental to NOAA's mission. In addition to climate change research and models, the scientific work of the Laboratory encompasses a variety of disciplines including meteorology, oceanography, hydrology, physics, fluid dynamics, chemistry,

applied mathematics, and numerical analysis. GFDL develops and uses mathematical models and computer simulations to advance our understanding and prediction of the atmosphere, ocean, and climate. For example, GFDL uses data from their models to make projections about future climate, ecosystems, air quality, and coastal environments.

GFDL research helps us predict weather on both large and small scales, including the effect of ocean variability on weather and how the atmosphere and oceans influence, and are influenced by, greenhouse gases and aerosols – one key component of climate change research. Specifically, GFDL's research has led to better hurricane forecast models that help protect life and property. Another example of GFDL's contributions include a team of scientists from GFDL and NOAA's Office of Response and Restoration who worked together after the Deepwater Horizon disaster using a high-resolution global ocean climate model to examine the likely extent of toxic concentrations of dissolved oil and of significant deep (1000-1300 m) oxygen depletion. They found that when the model took circulation and oxidation rates into account, the toxic concentrations of dissolved oil were likely to be locally significant, but regionally confined to the northern Gulf of Mexico.

While GFDL's principal research products are peer-reviewed publications on atmospheric and oceanic physics, chemistry and dynamics, natural climate variability, and climate change, GFDL also provides numerical models and data sets to its collaborators and the public. The Laboratory has research partnerships across many scientific disciplines and engages in climate assessment activities with academia, national and international governmental and nongovernmental organizations - totaling several hundred active collaborations.

QUESTION: Do you have independent parties evaluate the atmospheric, earth, land and ocean models developed at GFDL?

ANSWER: Yes, independent parties evaluate the atmospheric, earth, land and ocean models developed at GFDL. Specific examples where evaluations have led to productive outcomes include:

- Peer-review of GFDL-authored publications: During 2010, GFDL-affiliated authors and co-authors published 138 papers in peer-reviewed scientific journals. Independent i.e., non-GFDL scientists perform the external peer-review. Over the period 2006-2010, GFDL's peer-reviewed publications numbered over 600.
- External peer review of GFDL's science: External peer review was conducted by a panel comprised of national and international experts in July 2009. The Review content and resulting documents are available at http://www.gfdl.noaa.gov/2009Review.
- Publication of papers by non-GFDL scientists. At this time, it is difficult to track all of the papers that use GFDL models and their output, but this is expected to change with the introduction of digital object identifiers (DOI) for model datasets. Examples citing GFDL's climate models used in the IPCC's Fourth Assessment Report include:
    - Reichler, T. and J. Kim, 2008: Uncertainties in the climate mean state of global observations, re-analyses, and the GFDL climate model, Journal of Geophysical Research - Atmospheres

  - Walsh, J.E., et al., 2008: Global Climate Model Performance over Alaska and Greenland. Journal of Climate
- Publication of GFDL models: A variety of institutions use GFDL models for their own research, development, and operations, including the Department of Energy (DOE), the Center for Ocean-Land-Atmosphere Studies at George Mason University, the Australian Bureau of Meteorology, and NOAA's National Centers for Environmental Prediction. It is notable that GFDL's Modular Ocean Model (MOM) is a community model with hundreds of users worldwide.
- Use of GFDL model data to develop products: GFDL component models are used operationally by NOAA's National Centers for Environmental Prediction and the Australian Bureau of Meteorology, and model output is used by the International Research Institute for Climate and Society's seasonal predictions. GFDL's hurricane model is used operationally by the National Weather Service for U.S. hurricane forecasts, and by the U.S. Navy.
- Publication of GFDL model datasets for inter-comparison projects designed to evaluate models: GFDL contributes atmospheric and coupled climate model datasets to DOE's Program For Climate Model Diagnosis and Inter-comparison (PCMDI), an activity that collaborates with the World Climate Research Program (WCRP). Researchers worldwide use these datasets for Earth System science, and for national and international assessments of climate processes and simulations. In an analogous way, GFDL also contributes ocean model datasets to the WCRP's Coordinated Ocean-Ice Reference Experiments. Other evaluation activities include: Brookhaven National Laboratory Project of Continuous Evaluation of Fast Processes in Climate Models and DOE's Atmospheric Radiation Measurement (ARM) Program, NASA's clouds-related datasets, and NASA's and NOAA's temperature observations.
- Use of GFDL model data in national and international assessments: There are a variety of national and international assessments that use GFDL model data, including the United States Global Change Research Program's (USGCRP's) National Climate Assessment, the North American Regional Climate Change Assessment Program, reports issued by the U.S. Climate Change Science Program, the series of IPCC Assessment Reports, and the WMO's Ozone Assessment Report.

QUESTION: Do independent parties (parties not connected with GDFL, NOAA or IPCC) evaluate the models GDFL contributes to the assessments made by the Intergovernmental Panel on Climate Change (IPCC)?

ANSWER: Yes. Among the parties engaged in the activities listed in response to Question 4, the following are not connected to GFDL, NOAA or IPCC:

- Reviewers for peer-reviewed publications
- Non-GFDL users of GFDL data, including those from DOE, the university community, and other governments. GFDL model results have been used in hundreds of papers as part of utilization of several models' results assembled on the DOE/PCMDI site, as discussed above. These include outputs from models from all over the world. It is hard to be more specific since the data is in an open public archive and is accessible to anyone, but thus far DOIs have not been available in

association with the use of these datasets which would allow a better tracking estimate of investigations that used specific model data.

- World Climate Research Program, including the Climate Variability and Predictability (CLIVAR) project teams and Expert Teams like those for tropical cyclones and black carbon.
- The U.S. Climate Change Science Program.

TUESDAY, APRIL 5, 2011.

OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE

WITNESS

AMBASSADOR RON KIRK, U.S. TRADE REPRESENTATIVE

Mr. WOLF. The hearing will come to order. We welcome Ambassador Kirk here today, and I thank you for being here. We are here to discuss the Trade Rep's budget request for fiscal year 2012. Your budget request is $51.3 million, which is $3.4 million greater than fiscal year 2011.

We have a number of issues to discuss with you today, and particular issues with respect to China. If you compare U.S. and Chinese manufacturing output at current dollars China has surpassed the U.S. in manufacturing. Chinese manufacturing has—do you agree with that, that China has surpassed us? All the indications are that they have. Secretary Locke said that they had not. But where do you stand on that? Has China surpassed us?

Ambassador KIRK. Well output——

Mr. WOLF. We are going to put a lot of the information in the record so I just want, but where do you stand on that?

Ambassador KIRK. I am sort of one of those "whatever the numbers, the numbers are what they are."

Mr. WOLF. Oh, okay.

Ambassador KIRK. I think in raw numbers that they have surpassed us. On productivity we have still a huge competitive edge.

Mr. WOLF. But Chinese manufacturing has exploded and particularly since it was accepted into the WTO in 2001. Our trade deficit remains lopsided, totaling $252 billion in 2010, the largest trade deficit in the world between any two countries. The committee would like to get your assessments of the impact of this deficit and what can be done about it. We will have a number of questions on other issues on pending trade agreements, and things like that. But with that, I recognize Mr. Fattah for any opening statement. And then we will go directly to the questions.

Mr. FATTAH. Let me thank the Chairman and let me welcome the United States Trade Representative Ron Kirk, who has had an extraordinary career of public service, both as a mayor, and in a number of other capacities. But in this role, he has taken the lead in helping to increase in a positive way the exports of the United States around the world. I know you have done extensive traveling and a great deal of work and let me commend you for the work you are doing to help create American jobs and also the secure American jobs that exist now based on our trade with the rest of the world. And I look forward to your testimony.

Mr. WOLF. Your full statement will carry in the record. You can proceed as you see appropriate, but welcome.

OPENING STATEMENT OF AMBASSADOR KIRK

Ambassador KIRK. Mr. Chairman, thank you again for the invitation to come and discuss with you and members of the committee our proposed budget for fiscal year 2012; to Ranking Member Fattah, thank you for your kind words; other members of the committee. With over 95 percent of the world's consumers now living outside of the United States increasing exports is critical to putting Americans back to work and the United States back on a path of sustainable long term economic growth. With just over 230 employees and a couple of dozen detailees, USTR plays a critical role in meeting these goals.

Over the past two years our small agency has enforced America's trading rights, held our partners accountable, negotiated agreements that will expand opportunities for American exporters and their workers. And we have accomplished these goals while maintaining strong fiscal discipline that saved or voided cost of more than $2 million last year alone. Mind you, this is against a budget of less than $50 million.

We believe that the smart investment that the President's fiscal year 2012 budget proposes for USTR will have significant bang for the buck, even as our work continues to produce results. I would like to share with you three areas of our work and how it is related to our budget.

First, we are negotiating high standard job creating trade agreements. I hope you know that in December we successfully concluded negotiations with the proposed trade agreement with Korea that is much better for our auto and manufacturing industries, but more importantly, will support a minimum of 70,000 additional jobs and $10 billion to $11 billion in additional U.S. goods exports alone. We have made significant progress on negotiations in the nine country Trans Pacific Partnership, in which the U.S. has provided leadership in drafting what we hope will be one of the most dynamic regional trade negotiations in unlocking East Asia Pacific for U.S. businesses.

We have also intensified, Mr. Chairman, our engagement with Colombia and Panama so that we can resolve outstanding issues relevant to those trade agreements and then submit them to Congress this year. As you know, Colombia represents an over $1 billion market in new export opportunities, as does Panama. But we believe Panama is also critical to providing and increasing our access to growing markets in Latin America.

In the Doha talks, we continue to provide the leadership to seek a more ambitious outcome that will provide meaningful market access for all of the members of the WTO. And we look forward to working with Congress this year to grant Russia permanent normal trade status so that U.S. firms and workers can fully benefit when Russia accedes to the WTO.

Secondly, I would like to address your concerns about enforcement. At USTR we have made holding our partners accountable for their commitments through enforcement of our rights, one of the hallmarks of the Obama administration's trade policy. We have

taken steps to stop China's use of so-called indigenous innovation policies. We brought the first labor enforcement consultation ever under a U.S. trade agreement. And we have secured major wins at the World Trade Organization across the board for our farmers and ranchers. Just last week, for example, the WTO announced a second in a pair of decisions that constitutes the largest win ever of anybody at the WTO to the benefit of U.S. workers in the aerospace industry. This relates to our cases we have been prosecuting over Boeing.

Third, we are creating new opportunities to strengthen trade relationships and eliminate barriers to U.S. exports. This include unexpected barriers, and I give you again an example. Last year we worked with the Department of Agriculture, and Commerce, and others to successfully reopen markets from China and Russia and Indonesia and others to U.S. pork exports after the H1N1 scare. These countries collectively represented over $900 million worth of exports to our pork producers in 2008.

Through all of these efforts we are on pace to achieve the President's ambitious goal established in the National Export Initiative to double U.S. exports by the end of 2014 and to support the creation of two million additional jobs here at home.

Our budget provides us the necessary resources for USTR to implement a robust trade agenda that boosts American exports, and it does so in a fiscally responsible manner. The President's $3.4 million increase for this nimble agency in 2012 can have significant returns for our economy. As the President makes prudent investments at USTR we also ask Congress to join us in making smart investments in America's workers. Trade adjustment assistance helps us do that by putting Americans back to work and providing training to help prepare them for the challenges of the 21st Century. Likewise our preference programs, the General System of Preferences and the Andean Trade Preferences Act, also merit renewal we believe for as long as possible. Both of these critical programs not only help foster economic growth among some of the world's poorest countries but just as importantly they help create well paying jobs here in America.

In closing, opening new markets, enforcing our trade rights, and addressing trade barriers in existing markets supports businesses and workers and communities all across the United States. USTR will continue to use the resources you provide us as wisely as possible to support these important objectives. I look forward to our dialogue today, Mr. Chairman. At this time I am welcome to take your questions.

[The information follows:]

Testimony of United States Trade Representative Ron Kirk
Tuesday, April 5, 2011
House Appropriations Subcommittee on Commerce, Justice, Science, and Related Agencies

Washington, DC

Good morning, Chairman Wolf, Ranking Member Fattah, and Members of the Committee. Thank you for the opportunity to discuss the President's budget request for the Office of the U.S. Trade Representative.

The Office of the United States Trade Representative (USTR) is directly responsible to the President for the development and achievement of the Administration's trade policy agenda. USTR is also responsible for the appropriate coordination, collaboration and participation on trade policy initiatives within the Executive Office of the President (EOP) and with other government agencies, Congress, the private sector, and the public.

President Obama took office at a time of economic crisis. His Administration has recognized that putting America back on track for sustainable long-term economic growth would require a multifaceted approach, and in his 2010 State of the Union Address, President Obama stressed the need to create additional American jobs by exporting more American goods and services. He announced the National Export Initiative (NEI), setting the goal of doubling U.S. exports by the end of 2014 to support 2 million additional jobs at home.

The President's FY 2012 budget for USTR invests in critical efforts to provide jobs here at home by increasing American exports to other countries. It provides the resources necessary for USTR to achieve the President's trade goals and objectives, particularly those of the NEI. This $3.4 million increase follows two years of strong fiscal discipline at USTR, where office and essential travel expenses were pared back to ensure that the Administration is spending every dollar wisely. Now, this budget is making wise investments in a forward-leaning trade agenda—including the NEI and strong enforcement efforts—to get American businesses growing through exports and American workers back on the job.

Many of USTR's core activities directly support the NEI's objectives. With primary responsibility under the NEI Executive Order for reducing trade barriers, USTR efforts expand export opportunities for American workers, farmers, ranchers, and service providers by opening key foreign markets and keeping them open through robust enforcement of our trade agreements. As the President's NEI extends through the end of 2014, efforts to support it will be a major priority affecting nearly every facet of USTR's budget planning.

Beyond new trade agreements and robust enforcement, maintaining and strengthening relationships with key trade partners is also central to this Administration's trade agenda. For instance, the large emerging markets of China, India, Brazil, and Russia have an increasingly important role in the global trading system, presenting significant challenges as well as opportunities to increase American exports and thereby create American jobs. USTR's strategy for these markets spans all of our initiatives as well.

A well-prioritized trade policy focused on key opportunities for increasing American exports and jobs, opening markets, reducing barriers and boosting innovation, and based on the principles of a rules-based global trading system, can contribute powerfully to the President's economic agenda for America. Our goal is sustainable economic growth that brings home the benefits of trade—including well-paying jobs—while also advancing global recovery. This will be done consistently with our values, including the rights of workers, environmental sustainability, and political accountability.

Program Initiatives

Six major goals are accomplished through twenty (20) program initiatives that represent the key activities of USTR.

I. Negotiations: Supporting Well-Paying American Jobs by Securing New Markets Abroad

USTR's team of trade negotiators help to support well-paying jobs for American workers, farmers, ranchers, and service providers by securing high-standard, binding commitments from our trading partners to open their markets to U.S. goods and services exports. These market-opening efforts have been made increasingly important in light of the President's NEI, which aims to support two million additional American jobs through the doubling of American exports by the end of 2014.

USTR pursues this goal through the following four program initiatives:

- Free Trade Agreements (FTAs)
- Bilateral Investment Treaties (BITs)
- WTO Doha Development Agenda (DDA)
- Advancing WTO Accession Negotiations

USTR negotiators are simultaneously pursuing four kinds of market-opening trade agreements: negotiations with the 153 member countries in the WTO; bilateral and regional Free Trade Agreements (FTAs) such as those currently pending with Korea, Panama, Colombia, and the eight Trans-Pacific Partnership countries;pendin g completion of the Model Bilateral Investment Treaty Review (BIT) with China, Vietnam, India, and Mauritius; and WTO accession negotiations for prospective new WTO members.

Free Trade Agreements (FTAs)

USTR's bilateral and regional trade negotiations aim to enhance U.S. economic growth and employment and advance the Administration's goal of doubling U.S. exports in five years. Concluding a Trans-Pacific Partnership (TPP) agreement is a top Presidential trade priority. An eventual TPP agreement will also be critical to deepening U.S. relations with the dynamic Asia-Pacific region. USTR leadership in negotiating trade agreements is essential to developing and advancing U.S. negotiating positions, maintaining stakeholder support, addressing the public's

response to market-opening efforts, and building Congressional support for eventual market-opening, job-creating agreements.

USTR resources, both in terms of personnel and travel funding for them, are necessary to negotiate bilateral and regional trade agreements face-to-face with our trading partners and realize key job-creating opportunities for our economy. For example, successfully concluded Free Trade Agreements in the past have significantly increased goods exports – by 252 percent with Jordan, by 211 percent with Morocco, by 244 percent with Chile, and by 336 percent with Israel. FTAs also give the U.S. government a dispute settlement mechanism to address and resolve exporters' concerns. A successfully concluded TPP would create and lock in benefits for U.S. exporters in the world's fastest growing economies, a potential market representing 40 percent of the world's population and 56 percent of global GDP. Without a satisfactory agreement with its TPP partners, the U.S. leadership position in the Asia-Pacific region is likely to erode as other economic agreements move forward. More than 180 Asia-Pacific preferential trade agreements already exclude the United States, another 70 are under negotiation, and 20 await implementation. Many of these initiatives are with China, which is asserting a larger economic and strategic role in the region.

Bilateral Investment Treaties (BITs)

The removal of investment barriers, particularly in China, India and Vietnam, is key to promoting U.S. economic growth and creating U.S. jobs, a Presidential priority. This initiative levels the playing field for U.S. companies, creates new economic opportunities, and protects U.S. investors in foreign markets. To date, U.S. investors have brought more than 90 investor-State cases under U.S. BITs and the substantively similar investment chapters of U.S. FTAs, and have won or settled many of these cases, recovering millions of dollars.

Successfully completing the Administration's review of the Model BIT will permit the intensification of key BIT negotiations, will provide significant benefits for U.S. investors abroad, and, in turn, will benefit the U.S. economy and workers. For instance, a BIT with China would open many of China's strategically closed markets, improve competitiveness of U.S. firms, and likely increase exports to China. Ensuring a level playing field with respect to third country investors is even more important today given the European Union's newly assertive role in international investment negotiations. Under the Lisbon Treaty, the European Union now has authority to negotiate investment agreements on behalf of its member states; China, India, Russia, and Mercosur top the EU negotiating agenda.

WTO Doha Development Agenda (DDA)

The President has set as a trade priority the negotiation of an ambitious and balanced outcome to the DDA negotiations – one that helps to create and sustain American jobs in consultation with Congress and key U.S. constituencies. A Doha agreement that provides meaningful liberalization in the three core areas of agriculture, goods and services will substantially increase market access and address competitive disadvantages U.S. exporters face. A successful conclusion is also essential to achieving President's goal of supporting and strengthening a rules-based trading system and increasing economic growth in the United States and abroad.

An important Administration priority in the negotiations is opening new markets for key environmental technologies, particularly related to renewable energy and energy efficiency, which would open markets to exports, promote investment in innovative, climate-friendly technologies, and create new jobs.

A key impediment to progress remains the continued resistance of certain important trade partners to engage in sustained, meaningful negotiations. The United States has pressed certain advanced developing economies, including China, India and Brazil, to make contributions commensurate with their growing role in the global economy. Advancing negotiations will require direct bilateral engagement with key partners in order to achieve greater clarity and bridge gaps. This is a painstaking process, requiring intensive face-to-face discussions and substantial travel. Our ability to influence and successfully conclude the negotiations requires an appropriate level of resources to participate in these talks. The U.S. must avoid a sub-optimal Doha Round that would result in lost market access and fewer job-creating export opportunities for American workers, farmers and producers.

Advancing WTO Accession Negotiations

This initiative carries out the key Presidential objective of creating American jobs through increased export opportunities, as well as supporting and strengthening a rules-based global trading system by expanding membership in the WTO. The WTO is a key venue for multilateral trade liberalization through negotiation and also provides an institutional bulwark against protectionism, including, importantly, through the use of formal dispute settlement proceedings between members. The importance of WTO accession negotiations to the Administration has been demonstrated by the prominence of Russia's accession as a key objective between President Obama and President Medvedev; as the largest economy outside the WTO, Russia's accession would create significant opportunities for U.S. businesses.

Accession talks can be resource-intensive, requiring significant travel funding over time to conduct the requisite face-to-face negotiations and work through often complex implementation packages; talks with Russia have been particularly time-intensive. The U.S. plays a key leadership role in securing high-standard, market-access-creating accession packages with new WTO members.

II. Enforcement: Bringing Home the Job-Creating Promise of America's Trade Agreements

Once the United States has entered into a trade agreement, the permanent task of implementing that agreement and realizing its promised benefits – including new export opportunities, American job creation, increased wages, and economic growth – begins. USTR's vigilant and constant enforcement of trade agreements and of Americans' trading rights around the world is essential to securing and creating well-paying jobs for American workers, farmers, ranchers, and service providers.

This goal is pursued through the following four program initiatives:

- WTO Disputes and Improving the WTO Dispute Settlement System
- Administering, Monitoring, and Enforcing FTAs and Other Trade Agreements in Effect
- Implementing WTO Agreements and Participating in the Committee Process
- Monitoring and Addressing Trade Issues and Creating New Opportunities

In the first 18 months of this Administration, USTR has initiated disputes against China's export restraints on key raw materials, the Philippines' discriminatory taxes on alcoholic beverages, and Guatemala's failure to effectively enforce its labor laws; initiated a dispute settlement panel against the European Union's unjustified barriers to U.S. poultry exports; and pursued challenges to the EU's unfair subsidies to Airbus, deficiencies in China's intellectual property regime, China's barriers to U.S. copyright-intensive products, and Canada's failures to abide by its obligations under the Softwood Lumber Agreement. At the same time, USTR has defended the United States in such disputes as the European Union's challenge to alleged U.S. subsidies to Boeing, various challenges to important U.S. trade remedies, China's challenge to U.S. food safety measures regarding Chinese poultry, Canada and Mexico's challenges to U.S. country of origin labeling requirements, Mexico's challenge to U.S. dolphin safe labeling provisions on tuna fish, and China's challenge to U.S. remedies for market disruption due to imports of Chinese tires.

WTO Disputes and Improving the WTO Dispute Settlement System

The President's Trade Agenda sets as a priority for USTR to enhance economic growth, job creation, and innovation by vindicating and defending U.S. rights. Pursuing and defending WTO disputes specifically addresses a priority item of enforcing U.S. rights in the rules-based trading system. USTR's annual Report to Congress on China's WTO Compliance sets the enforcement of China's international trade obligations as a top priority for the Administration. USTR's trade rights monitoring and enforcement efforts demonstrate the Administration's commitment to negotiate and implement trade agreements that enhance U.S. commercial interests and fully secure U.S. trading rights.

Enforcing U.S. rights under the WTO Agreement and other U.S. trade agreements can forestall other governments, including those with large markets such as China and Brazil, from closing or restricting with impunity their markets to U.S. products, services and intellectual property. In the case of China, for example, the WTO dispute settlement process is a key lever for addressing trade-restrictive and protectionist industrial policies, which would have significant adverse commercial effects on U.S. businesses and workers.

USTR must defend the United States against all claims brought against us in the WTO to avoid exposing the United States to trade retaliation and consequent job losses. USTR officials often must engage with their foreign counterparts in efforts to resolve disputes both before and after litigation proceedings are instituted, or to forestall the imposition of trade restrictive measures negatively impacting U.S. exporters. These efforts can be prolonged and resource-intensive, often requiring significant travel expenditures. For example, in June 2010, after several months of negotiations, USTR successfully concluded a framework agreement regarding the longstanding Cotton dispute with Brazil, thereby averting the imposition of more than $800

million in retaliatory counter-measures against U.S. exports, including possible measures against U.S. intellectual property rights.

Administering, Monitoring, and Enforcing FTAs and Other Trade Agreements in Effect

USTR's efforts to ensure that the United States receives the full benefits of the trade agreements it negotiates serve to promote American job creation and retention, better wages, and overall economic growth. Implementing and enforcing high labor and environment standards and protecting U.S. intellectual property rights in foreign markets, in particular, are Presidential and Administration priorities. USTR's efforts through this initiative also support and strengthen a global rules-based trading system.

These resources are necessary to fully monitor and enforce U.S. rights under FTAs and other trade agreements, especially environmental, labor, and intellectual property rights. USTR requires an ability to pursue cases, and defend the United States against claims under these agreements, to avoid significant economic harm to key constituencies, and erode the ability of the President to advance his trade agenda, including pending FTAs and new and ongoing trade negotiations.

Implementing WTO Agreements and Participating in the Committee Process

USTR's work to strengthen rules and resolve trade compliance issues through WTO Committees and other bodies ensures the ability of WTO agreements to create and sustain American jobs in agriculture, trade in services, trade-related investment measures, pharmaceuticals, and intellectual property.

These resources are necessary for USTR to fully participate in WTO committee procedures and discussions, the principal avenue for resolving trade issues to the benefit of American workers and businesses. USTR plays a key role in this multilateral process, which helps ensure that WTO countries comply with existing trade rules. USTR's participation in committee proceedings is critical to the United States' ability to respond to questions about U.S compliance with WTO rules and avoid WTO findings or disputes that may adversely affect U.S. commercial interests. Overall savings may actually be achieved if compliance issues can be resolved at the technical level in WTO bodies before they become disputes.

Additionally, USTR's efforts to secure China's participation in the WTO's Government Procurement Agreement will support the Presidential initiative of rebalancing the U.S.-China trade relationship by expanding U.S. sales into China's large government procurement market. Sufficient resources are necessary to negotiate China's timely and comprehensive accession and ensure that China does not impose even greater barriers to its vast government procurement market worth hundreds of billions of dollars.

Monitoring and Addressing Trade Issues and Creating New Opportunities

USTR's activities under this initiative support the President's goal of doubling exports within five years by identifying and addressing unnecessary obstacles to U.S. exports. USTR's

monitoring of existing agreements and development of new ideas is critical to the ongoing effort to expand U.S. trade and investment, to support U.S. economic growth and job creation, and to ensure that international agreements on forest, marine and fishery issues are consistent with U.S. trade obligations.

USTR resources create opportunities to break down trade barriers and retain American jobs. New issues not covered under current initiatives must be addressed to avoid hindering U.S. companies from competing effectively in the global marketplace. USTR's monitoring of services and investment issues enables adapting negotiation objectives to address new trade barriers. USTR must fully assist exporters and address issues before they become problems.

III. Congress: Partnering to Pursue Legislative Priorities, Advising on Trade-Related Legislation, and Fulfilling Statutory Obligations

USTR's strong partnership with Congress is essential to pursuing the President's trade agenda.

USTR pursues this goal through the following three program initiatives:

- Pursuing Legislative Initiatives, Including Congressional Approval of Pending FTAs
- Advising on Trade Aspects of Proposed Legislation
- Identifying and Addressing Trade Barriers and Providing Congressionally Mandated Reports

Given Congress's constitutional role in matters of international trade, USTR coordinates closely with Congress to shape trade negotiating objectives, pursue legislative priorities, shape and advise on trade related legislation, and fulfill other statutory requirements. This robust Congressional partnership is important not only for developing new trade policies and negotiation strategies, but also for monitoring and implementing existing policies. Strong relationships with USTR's committees of jurisdiction—the Senate Finance Committee and the Ways and Means Committee—are essential to a successful Administration trade policy.

Pursuing Legislative Initiatives, Including Congressional Approval of Pending FTAs

USTR leads the Administration's efforts to consult with Congress on developing and moving job-creating trade legislation. This includes bilateral trade agreements such as the pending agreements with Korea, Panama, and Colombia and ongoing regional negotiations in the Trans-Pacific Partnership (TPP). USTR's participation in developing trade legislation is critical to ensuring that it pursues Administration trade and economic priorities in consultation with Congress, industry, and the public. It is critical that USTR have sufficient resources to work closely with Congress to implement trade agreements and other trade initiatives.

Advising on Trade Aspects of Proposed Legislation

USTR's monitoring and advice regarding trade-related aspects of domestic legislation ensure that legislation is consistent with Presidential goals for trade policy and, where possible, enhances the prospect of meeting these goals, such as American job creation and economic

growth through enhanced exports. USTR works in close partnership with Congress to review legislation for consistency with U.S. trade obligations and to ensure against provisions that would subject U.S. businesses and workers to harmful trade retaliation.

Identifying and Addressing Trade Barriers and Providing Congressionally Mandated Reports

This initiative fulfills statutory requirements placed on the Administration by Congress. It also advances the President's goals of winning Congressional support for activities to open markets and create American jobs through the reduction of trade barriers to U.S. goods and services. Over the past year USTR has strengthened its efforts to monitor markets and more vigorously enforce our rights and benefits under our trade agreements. Congressionally-mandate reports are an important component in discharging USTR's commitment to transparency and accountability to Congress and stakeholders. For example, the President's NEI recognized the role of the Report on Technical Barriers to Trade for identifying and reducing unnecessary obstacles to U.S. exports.

IV. Supporting National Priorities: Boosting Small Businesses, Defending Labor Rights, Fighting Climate Change, and Fostering Development

USTR's trade work directly supports many of the Administration's broader policy priorities, including encouraging job creation by small businesses. USTR is also working through trade preference and trade capacity building programs to support the President's prioritization of global development, climate change agenda through green goods and services negotiations, and vigorously encouraging strong labor rights world-wide.

This goal is pursued through the following three program initiatives:

- Encouraging America's Small and Medium Enterprises (SMEs) to Export
- Supporting Development, Climate Change, and Labor Rights Goals
- Advising and Supporting Other Administration Initiatives

Encouraging America's Small and Medium Enterprises (SMEs) to Export

This Administration promised a trade agenda that is more responsible and more responsive to the needs of American workers, farmers, ranchers, and service providers. American companies of all sizes must export their goods and services to get our economy growing again. Small- and medium-sized enterprises are at the heart of employment and job creation in the United States. USTR must provide a heightened focus on helping this sector compete globally by "leveling the playing field" and thereby creating more and better-paying jobs at home.

Supporting Development, Climate Change, and Labor Rights Goals

Trade preferences and trade capacity building strengthen partnerships with poor, developing nations, and they enhance U.S. economic growth and job-creation. Development is a top priority for President Obama, as was made clear in his 2009 Presidential Study Directive (PSD) calling for a government-wide review of U.S. global development policy. USTR is a part of that review,

as it leads all trade preference programs for developing countries in support of Administration goals. The President has made fighting climate change an Administration priority. Key international economic policy initiatives—like promoting trade in green goods and services—will be critical to a successful climate change agenda. The President has also made clear that his international trade policies will not only create jobs and growth in the United States, but must foster respect of internationally recognized workers' rights world-wide.

USTR resources are necessary to conduct preference program and development assistance work face-to-face with our developing country partners. Pursuing key labor and environmental objectives also require face-to-face negotiation and coordination with trading partners.

Advising and Supporting Other Administration Initiatives

USTR's advice and support ensures that trade-related aspects of Administration initiatives are fully analyzed and that sound options are developed and considered when appropriate. USTR has played an important role, for example, in supporting the Administration's Afghanistan-Pakistan national security strategy, advancing strategic objectives with major trading partners such as India and China, and promoting food security in the developing world. USTR also has been actively involved in formulating the Administration's Joint Strategic Plan for intellectual property enforcement. In addition, USTR plays a key role in developing and implementing high-level trade and economic initiatives in connection with Presidential summits, including those held recently with India and Mexico.

V. Supporting U.S. International Engagement: Enhancing and Building Relationships

USTR defends and advances the Administration's overall international policy goals through robust engagement in bilateral and regional economic fora. Work in these fora strengthen our overall relationships with China, Japan, India, the European Union, and other key countries by vigorous dialogue on strengthening trade and investment cooperation.

USTR pursues this goal through the following two program initiatives:

- Conducting Multilateral and Bilateral Fora and Initiatives
- Trade and Investment Framework Agreements (TIFAs)

Conducting Multilateral and Bilateral Fora and Initiatives

USTR engagement with trading partners under this initiative ultimately serves the Presidential goal of opening new markets and maintaining open markets to increase job-creating export opportunities. Key multilateral Presidential initiatives include our leadership in the Asia Pacific Economic Cooperation forum (APEC), a forum to advance trade and investment issues and strengthen regional economic integration. USTR is the lead for the U.S. Government on trade and investment-related issues in APEC. In 2012 USTR will be working to build on progress made during the United States host year in 2011 which will include a Leaders' meeting hosted by the President in November of that year. Similarly, USTR will be working in 2012 on key bilateral Presidential trade initiatives identified during the U.S.-China Joint Commission on

Commerce and Trade (JCCT) and U.S.-China Strategic and Economic Dialog (S&ED) with China, those being the key fora supporting the Presidential imperative to build a positive, cooperative, and comprehensive relationship with China. The reduction of Chinese market access barriers is critical to the success of the President's NEI.

Trade and Investment Framework Agreements (TIFAs)

USTR's engagement with TIFA partner countries advances the Presidential goal of promoting growth and sound policies in various world trading regions, and further develops the capacity of countries to negotiate more comprehensive trade agreements. For example, TIFAs are our primary channel for economic engagement with some of the largest economies in the Europe and Middle East region, including Turkey and Saudi Arabia (two priority export targets identified for the NEI) along with Ukraine.

TIFAs provide an important venue for discussions to resolve technical issues relating to foreign standards and regulations that negatively affect U.S. exports. USTR has resolved many specific trade concerns through these discussions, and they support the Administration's goal to increase respect for labor rights and provide a level playing field for American workers.

USTR resources provide the ability to eliminate key trade and investment barriers, opening markets to U.S. exports and creating export-driven jobs. For example, in 2009, USTR used its TIFA with the Philippines to prevent that country from disrupting $85 million in U.S. pork and poultry exports. In 2010, USTR worked through its Indonesia TIFA to avert imposition of import barriers to more than $500 million in U.S. exports of movies, pork, apples, processed food, dairy, and other products. Funding TIFAs provide for engaging key markets like the Mercosur countries (Brazil, Argentina, Paraguay, and Uruguay) and the Caribbean, and enable the TIFA as a means to prepare countries to engage in job-creating FTA negotiations. In the Middle East, the necessity of face to face contact in order to create and maintain critical relationships takes on particular relevance. Ongoing frameworks that TIFAs provide with many partner countries provide coordinated efforts to build sound economic relationships.

VI. Winning Support for Sound Trade Policies Through a More Open and Responsive Government

A key element of USTR's responsibility for developing and coordinating U.S. trade policy is outreach and communication to key stakeholders and the public, both for purposes of developing policy in an open and collaborative manner and of ensuring sufficient public support for Administration trade policy goals. USTR supports the Administration's goals for a more open and collaborative government through these activities as well as in its statutory role of interagency policy coordination. USTR also supports openness through timely responses to Freedom of Information Act (FOIA) requests and Government Accountability Office (GAO) investigations.

USTR pursues this goal through the following four program initiatives:

- Increasing Understanding, Participation, Collaboration and Openness

- Developing and Coordinating Trade Policy & Participating on Trade-Related Boards
- Managing and Responding to High-Priority Statutory and Administrative Requests
- Providing Administrative Support

Increasing Understanding, Participation, Collaboration and Openness

This initiative helps build and maintain support for the President's trade agenda, particularly through the Presidential objective of a more open and collaborative trade policy. In keeping with the Open Government Initiative, the President is committed to maximizing public input into policy formulation and implementation, especially that of international trade. This initiative ensures thoughtful policymaking that is informed by the private sector, Congress, and other stakeholders' priorities. It is critical to informing negotiators of support or opposition to USTR's proposed policies. It implements the Congressionally-mandated advisory committee system.

Sound, strategic, transparent media, in conjunction with public outreach and message management, helps to build support for the Administration's goals and efforts toward effective trade policy, including the NEI, the Administration's focus on small- and medium-sized businesses, and high-profile efforts to advance trade agreements such as TPP, the Anti-Counterfeiting Trade Agreement (ACTA) and other trade policy initiatives.

Developing and Coordinating Trade Policy & Participating on Trade-Related Boards

The President's Trade Policy Agenda mandates efforts to increase domestic support for U.S. trade policies. This requires a well-developed and coordinated trade policy. USTR participation in this initiative furthers the Administration goal of open and collaborative trade policy-making and implementation, as well as building public and Congressional understanding of and support for Administration trade initiatives. Trade Policy Staff Committee (TPSC)/Trade Policy Review Group (TPRG) and National Economic Council (NEC) process enables transparency and full participation by all agencies The process also supports robust interagency debate that frames positions to ensure the Administration represents a unified voice, and supports and strengthens a rules-based approach to trade.

Managing and Responding to High-Priority Statutory and Administrative Requests

The President's first Executive Order established policies to increase disclosure under the Freedom of Information Act (FOIA). This was later elaborated in a memo from Attorney General Eric Holder. The Administration has also prioritized developing U.S. trade policy through a meaningful partnership with the Congress. This includes improving the timeliness of responses to Congressional and GAO inquiries and investigations. This initiative not only ensures compliance with statutory and administrative requirements but also supports the broader goal of responsiveness to inquiries from the public and Congress.

Providing Administrative Support and Improving Administrative Efficiency

By ensuring the efficient and effective use of resources, this initiative directly supports every aspect of USTR's efforts to advance the President's Trade Policy Agenda. This program

supports Administration goals for management excellence, improved government operations, and a productive working environment. In particular, the information technology collaboration necessary to implement new media outreach efforts helps to fulfill the key Administration goal of transparency to the public regarding USTR activities and policy initiatives. Aggressive budget management fulfills the President's goal of fiscal responsibility at a time when resource expenditures must be minimized.

In developing its FY 2012 budget submission, USTR embarked on an aggressive review of all administrative expenses in Washington and Geneva. Administrative costs were saved through new travel policies, decreased contract security guard hours at Washington offices, elimination of Washington garage parking, reduction in color printing, zeroing the furniture account, reduction of periodical and trade-related subscriptions, and reduction in Geneva Deputy Chief of Mission (DCM) housing costs. Personnel costs were tightly controlled. Vacancies were managed, hiring was judiciously made to fill critical positions, and detailees/interns were used to the maximum extent possible. Staff performance awards were eliminated.

Conclusion

The United States Trade Representatives FY 2012 budget request is a roadmap to achieving the President's Trade Agenda to create jobs while ensuring the best use of resources. Starting in FY 2010, USTR proactively took steps to reduce costs to ensure that this Administration is spending every dollar wisely. These actions saved or avoided costs of more than $2 million in FY 2010 and continue to generate out-year savings. It has enabled us to shift resources to pursue our multi-pronged approach to opening markets: (1) produce high-standard trade agreements, (2) hold trading partners to their commitments through strong enforcement of our rights, and (3) create new opportunities to strengthen trade relationships and eliminate barriers to U.S. exports. These priorities will help create a level playing field for American businesses and workers and ensure we can create and support jobs and new opportunities for all Americans.

Thank you.

VACANCIES IN IP ENFORCEMENT ATTORNEYS

Mr. WOLF. Thank you very much. One such shortfall that we have heard about in the past was intellectual property enforcement attorneys. Are all the vacancies filled in that area?

Ambassador KIRK. I know that we have filled two of those, Mr. Chairman. I think we are at full capacity, but we may still be trying to fill one of those. Unfortunately, I think for me at least, one sign the economy is turning around is the speed at which the private sector is beginning to raid our very talented staff. And as you know, in IPR that is a critical area. But we have brought on board two very talented lawyers. I will, if I can check with my staff and maybe give you a more precise answer?

[The information follows:]

The Office of General Counsel has three GC attorneys assigned during FY 10 and 11 to cover IPR issues: one GC staff attorney full time, one GC staff attorney part time, one detailee full time.

The Office of Intellectual Property and Innovation has 7 policy staff, of whom 2 are designated Attorney-Advisors.

The overall staffing of 7 has been consistent for the past three years. The designation of 2 of the slots as attorney-advisors is a new development this year.

Mr. WOLF. Sure. Would you outline for us USTR's presence in China? How many positions are there? What are they doing? Does your budget seek to send any additional staff to the China office?

Ambassador KIRK. China, we have a very modest presence, if I can be honest. We share space in a mission provided by the State Department.

Mr. WOLF. How many?

Ambassador KIRK. We have I think at most three or four full-time employees in that office. But——

Mr. WOLF. Should that be beefed up?

Ambassador KIRK. You know, if I can couch this with the recognition that I think the events going on outside this committee room today magnify the challenge before this Congress and administration to make sure we have a budget that lives within our means. And the easy thing for me to come and say, "Do we need more people?" Is yes to everything. But all of the work we do with China is not just contained in that office. So I think you have to balance that against the staff that we have within our office here.

Mr. WOLF. But there is nothing like being on the ground at that time, seeing, feeling, listening, touching, speaking the language. And so we are not necessarily increasing. We are not talking about spending a lot. But would it be helpful to have more in China? Is this the high water, low water mark that USTR has had in China?

Ambassador KIRK. Well for us it would be the high water mark. You know we, as you noted in your introduction, we are a very small agency. You know, literally roughly forty, fifty years old, and really only been over 200 employees within the past decade or so. And so we have gone from having just one employee in China to now having two or three.

But I would say one of the things we do very well, we rely very heavily on the cooperation and resources we get with the State Department, with the Commerce Department, and with the U.S. Department of Agriculture as well. We often forget that the Department of Agriculture, I think, has over ninety offices around the

world. So we try to be smart and economical about leveraging all the resources the United States has on the ground.

HUMAN RIGHTS AND RELIGIOUS FREEDOM IN CHINA

Mr. WOLF. Earlier this month the USTR published its 2011 trade policy agenda and 2010 annual report. This report is 443 pages long, yet the committee did not find any references to human rights or religious freedom in China. Similarly, the USTR's 2010 report to Congress on China's WTO compliance does not reference human rights or religious freedom. Does USTR have any interest in promoting human rights in China?

Ambassador KIRK. Well let me say the Obama administration has very strong interests in the issue of human rights in China. But as head of this agency we are expressly tasked in terms of our relationship with China at looking at the commercial relationship. As I am sure you know, the State Department heads up our dialogue with China as it relates to human rights. We do follow that in an ancillary manner, particularly through our participation in our strategic and economic dialogue. But my responsibility that you have tasked me with as a Congress is to make sure that we almost singularly focus on how we can expand economic opportunities and address barriers to U.S. businesses and exports.

Mr. WOLF. But by comparison on the English language website of the Chinese Ministry of Commerce, their agency responsible for trade, there are over sixty references to human rights. If the Chinese can put up 13,000 pages mentioning human rights, should not the USTR at least have it as a factor? As I look through some of your testimony, you are very heavy into climate change. I read the testimony, looked through it last night, I have it marked up here. If you can get involved in climate change, could you not get involved in human rights and religious freedom, which has a major impact on trade and all these other issues?

I mean, you probably were at the White House, I would assume, when Hu Jintao came? Were you not?

Ambassador KIRK. Yes, sir. I was.

Mr. WOLF. At the very time Hu Jintao came to the White House the 2010 Nobel Prize winner was in jail in China. And his wife was under house arrest. So trade dominates and drives a lot of that. So if the Chinese could reference it, over sixty references to human rights, would it not be appropriate for the USTR to at least factor this in?

Ambassador KIRK. Mr. Chairman, first of all we very much share your concerns about human rights. And I know the President and Secretary of State have spoken not only to their concerns about the treatment of the Nobel Prize winner, but more recently the arrest of others. But I took an oath when I was given the privilege of being confirmed by the United States Senate to conduct myself in a manner consistent with the charge in the Constitution, and the mandates of this Congress.

Now if this Congress were to expand the responsibilities of our office to include human rights, then we would do that. They are addressed, I want to make it plain, they are addressed by the administration. Our relationship, as you know, with China is complex enough that it involves the work that we do on the trade front at

USTR, the work of Treasury on currency and macroeconomic matters, the work of our State Department, and Defense on security and others. And I mean, I can only state to you what I said. Within the overall construct——

Mr. WOLF. Did your oath deal with climate change?

Ambassador KIRK. No, but our oath does give me the responsibility to carry out——

Mr. WOLF. But that is in, that is in your materials, though.

Ambassador KIRK. But in our mandates and in the work that we do——

Mr. WOLF. I believe it is even in your testimony about climate change?

Ambassador KIRK. I do not think I mentioned anything about climate change——

Mr. WOLF. In your submission to the Congress?

Ambassador KIRK. I am not sure that we addressed climate change specifically as much as we addressed climate within the context of the work that we do to secure and address in our trade agreements to reflect those values we have on labor and the environment. It is contained within that context.

Mr. WOLF. The USTR budget request places a large emphasis on labor rights. The request notes that the administration brought a labor case against Guatemala, worked with the Panamanian government on labor rights issues, and made progress on a plan to address labor issues in Colombia. Your budget submission appears to omit labor rights in China. What have you done with respect to labor rights in China?

Ambassador KIRK. In every engagement that we have with China, whether it is through direct bilateral dialogue with, between President Obama and President Hu, or our participation in the strategic and economic dialogue, which is led by Secretary Geithner and Secretary Clinton, or our direct JCCT. When we have issues, labor issues as reflected in trade issues, we raise those with the Chinese in every one of those four occasions.

Mr. WOLF. But your budget submission, the report request notes the administration brought a labor case against Guatemala, worked with the Panamanian government on labor rights, made progress on a plan to address labor issues in regard to Colombia. But it is silent on China. Now China has one of the worst human rights and workers rights records in the world, bar none. Probably at the very, very top. You have done activity in Colombia, activity with the Panamanian government, activity in Guatemala, and nothing with regard to China.

That does not seem really appropriate. It seems almost—personally I believe, and if I, and I am not taking issue, we are not going to get into it, but I just want to, for the record, if anyone is listening or ever reads this record. This administration has a very poor record with regard to human rights and religious freedom in China. There are a number of Catholic bishops that are in jail today that no one speaks out for. There are hundreds of house church leaders that are in jail today that no one in the administration speaks out for. The person who designed the bird's nest stadium in China, which I have seen, was arrested the other day, taken away. And only when it was quizzed at the State Department did a spokes-

man say anything. And no one in a political position, and no one in the administration, has said anything. They have pretty much plundered Tibet. They have destroyed the Tibetan culture. Hu Jintao was the one who put together that policy. They have persecuted the Uighurs, the Muslims. And so in some respects, the human rights record of this administration with regard to China is one of the worst, I think, since I have ever seen us be engaged with regard to human rights in China.

But there was no, back to workers rights which I know is part of your effort, there was none with regard to China. Do workers in China have the right to organize independent labor unions?

Ambassador KIRK. I am not sure if they do, but it would not surprise me if they do not. Mr. Chairman, and I do not want to belabor the point. I think you made your point and want to move on. One difference in terms of our engagement with China and the other cases that you reference in our budget is that we have free trade agreements with Guatemala, and we have proposed free trade agreements, as you know, with Panama and Colombia. And that dramatically increases the tools and resources that we have to pursue them under those. The engagements that we are pursuing under those are for violations of not complying with the standards with those FTAs. We do not have a free trade agreement with China.

Mr. WOLF. Well we did not have one with the Soviet Union, and yet during the Reagan administration the Trade Rep spoke out on these issues of human rights. And every time someone from the cabinet would go to the Soviet Union they would attempt to meet with dissidents, they would raise these issues of workers rights. Lane Kirkland, who was head of the AFL–CIO, was one of the champions on this issue of workers rights. And so we did not, the Reagan administration did not have an agreement with the Soviet Union, yet advocated for human rights, religious freedom, and workers rights. And Lane Kirkland, with the AFL–CIO, was an advocate, one of the best we have ever had, on this issue. And yet we had no trade agreement.

So I do not think we can just say simply because we have no trade agreement that we will never advocate. You know, silence is almost an advocation if you refuse to raise something when people are being persecuted. And silence of your friend is terrible. And so the dissidents who were speaking out, those who want to work, and organize, and have labor reforms, are looking for the United States to advocate. And I think with all due respect the USTR ought to be somebody who is advocating on those issues. And if you could do it in Panama for workers rights then I think you could certainly do it in China.

I am going to leave this. I might come back to it. But a prominent human rights lawyer, and you do not have to answer this if you do not want to, who I personally know. His name is Jiang Tianyong, who appeared before a committee we had. He testified before the Human Rights Commission, which I cochair, has not been seen or heard from since he was grabbed by police in Beijing on February 19th. His wife and daughter do not know his fate, or if they will ever see him again. It appears to be part of a broader crackdown by Chinese authorities on human rights defenders and

pro-democracy advocates in the wake of the revolution in Egypt. I know the USTR has representatives in China. I would ask that you or your representative at least raise the Jiang case at the highest levels. Would you be willing to do that if I give you this here, and raise, have somebody in your office in China raise this?

Ambassador KIRK. I will certainly bring this to the attention of our representatives in——

INTERNET CENSORSHIP IN CHINA

Mr. WOLF. Thank you. I appreciate that. The great internet firewall of China is increasingly a favorite tool of repression and control. Limiting access to information has often been viewed as solely a human rights concern, delink them from any discussion of trade. But in November, 2010 a Google white paper pointed out, "The internet is the 21st Century trading route. And so when it is impeded the commerce that passes through it is impeded, too." Is the USTR doing anything to address this issue? And is there any serious consideration being given to bringing a WTO case against China?

Ambassador KIRK. Well let me first say that one, it is, just as a matter of policy, we do not publicly broadcast whether or not we are thinking of bringing a case with any of our trading partners, just because it, and particularly in cases with China, if I can be so candid. You telegraph that ahead of time, our ability to do the diligence we need to make that case is compromised. I can tell you we had extensive consultations with Google throughout their ordeal and worked with other partners in the WTO as well because of the very broad implications of the internet firewall, and have followed that closely. We did not get to the point where Google had asked us to pursue but we engaged them on that extensively and involved our partners from the European Union, Japan, and others in trying to get China to make sure that they kept that an open market.

Mr. WOLF. Well maybe that answers this question, and maybe you can tell me offline. A recent *Bloomberg Business Week* article reported, "The Office of the U.S. Trade Rep has been reviewing the idea of internet censorship as a trade barrier at least since 2007." Do you know what the status of that review is?

Ambassador KIRK. That might be one of those that it would be more helpful to engage the committee off the record.

Mr. WOLF. Okay. If you could, I would appreciate that. I have a number of others, but we will go to Mr. Fattah, and then back. So Mr. Fattah.

PRESIDENT'S EXPORT INITIATIVE

Mr. FATTAH. Thank you very much. Can you talk to us about the President's export initiative? And you indicated in your prepared testimony that we were moving towards meeting the goal that was set, to double exports. And can you talk about where we are on that and how that work is being done? And what more can be done? The committee has a number of entities under its jurisdiction, including the Commerce Department, for instance the Manufacturing Extension Partnership program, and a number of other entities that in certain ways are engaged in activities that could be

beneficial to the export initiative. So if you could talk about where we are, and where you see us going?

Ambassador KIRK. The good news is where we are. We are well on pace to meet that goal. Now I frame that, you know, with a bit, I may perhaps parentheses now just because of the extraordinary disruption of markets not just because of the horrific earthquake and tsunami in Japan, but if you combine that with the earthquake in New Zealand, and the floods in Australia, that creates a little bit of uncertainty there. But broad numbers, we are on pace. Last year was a very strong year for U.S. exports, up some 19 percent over the previous year. An incredible year in particular for our agricultural exports. We are on a pace, I think according to Secretary Vilsack if we can keep the pace this year we will have a record number, maybe $135 billion in agricultural exports.

We have been working, the President has tasked us as you know, to have more collaboration than we have ever had before within the administration, recognizing that we cannot have any duplicating of effort or services. So within that, and part of I think our budget reflects that increase, is making sure that we have the ability to continue to do what we do best which is negotiate new market access. But particularly, I think, our budget reflects that we have then, people are beginning to see the value of the emphasis that we have placed on enforcement equal to what we do in opening new markets and when we enforce our agreements. For example when I came into office I sat down with our general counsel, asked him to give me a synopsis and review of every case we had pending at the World Trade Organization. And I know we spend a lot of time talking about China, but I was frankly stunned that by a huge margin it was not close. The largest single number of disputes we had were with the European Union.

What troubled me more, particularly, and you were kind to mention my background as a mayor. In which, you know, I grew up in a world of retail politics. You do not have five years to solve something. We have cases pending seven, eight, nine years. We had a beef dispute that had locked us out of that market for twelve years. We got it resolved in three months. And since then our beef exports are back up almost 20,000 metric tons, which is about $200 million in value. I can give you more examples of those, whether it is——

PROPOSED REORGANIZATION OF TRADES AGENCIES

Mr. FATTAH. Let me drill down on this for a minute. Because both the administration, and I know that the Chairman has mentioned this a number of times, to think about how these agencies can be organized. There are a number of entities that are disconnected from your office or your department, like the Export/Import Bank and the Overseas Private Investment Corporation, that have a relationship to helping with exports. So for instance, in the Philadelphia area, you know, we took the Goldenbergs, they have a peanut chew, they make peanut chews. The world's best candy bar, anywhere in the world. And we brought in the Export/Import Bank, OPIC, now they sell them in forty-five different countries around the world. And we want to open up more opportunities. But some of these other entities.

So the question is, since the administration is looking at reorganizing Commerce, and there is some talk of your shop being moved into Commerce. I mean, there are all kinds of discussions that you may or may not be able to get into. But are there ways that we should be thinking about restructuring the federal effort to be more supportive? As I would understand it, less than one percent of our businesses export. And of that, 57 percent of that only export to one other country. So we need to build up the focus of American companies that, as you have said in your testimony, more than 90 percent of the world's customers are outside of the United States. So we have to have a view towards doing that. But share with me what your thinking is around this notion of reorganization.

Ambassador KIRK. Well as you know, in the State of the Union this year the President as part of his approach to making sure that we are as a federal government are going through the same exercises that American families are, of having to cut the cloth to fit the pattern, singled out an effort to make sure we are streamlining our efforts. And he singled out trade because it is touched by nine different agencies as a place we would start. He has appointed a task force headed up by Jeff Zients at OMB to look at how we might rationalize that.

I can tell you that as part of the export initiative we had begun doing some of this anyway. And you mentioned the Export/Import Bank. As a matter of course when we do export initiative road shows, which we have done, we always travel with Commerce, USTR, Export/Import Bank, and the Small Business Administration to try to bring a holistic approach to both educating businesses about opportunities and making them aware of the resources that are available. We have done that in New Orleans. We have done it in Illinois. We attempted to do it I know under Governor Rendell. He had a big export initiative. We are doing these all around the country and improving information access.

With respect to government reorg my belief, and again building on my bias as a mayor, but more importantly my bias having served on three corporate boards, that if every three, four, five years you are not stopping and examining how you are doing it to see if you cannot be more efficient you are probably losing ground with your competitors. Now I say that within the broad framework that I think, and one of the reasons I have enjoyed my work at USTR contrasted to my work as mayor, it is a lot easier to get things done with 230 employees than 15,000, 90,000. We can be nimble. We can be responsible. We engage businesses every day and can attack problems that they face, try to solve them sooner.

We welcome this review. If there are ways we can strengthen that by partnering more thoughtfully, whether it is with the International Trade Administration at Commerce or others, I think we should welcome that. But that is a judgment frankly——

TRADES BLOCS

Mr. FATTAH. Let me ask you my last question in this round, and it will be a more general question. So you see the world now in which the markets are kind of aggregated themselves together as trading blocs. You mentioned the EU, and they have gotten beyond language and other barriers to gather themselves together in a way

in which they could be a force economically in the world, these European countries. And you see now in, as we look at the world, particularly as we think about China and India and countries much larger than ours in terms of population. So as we see South America, and even the African continent, how do you see us as a long term matter? Not in the short term, but over the next ten, fifteen years, how do we go about approaching our interactions in the world related to trade? Right now we have been doing these trade agreements, right? Country specific. Do you see that at some point moving to a broader platform in which we might engage markets that are not bound by these kind of, these individual national boundaries?

Ambassador KIRK. Well as we say in Texas, my friend, that may not be a question as much as it is an answer. Let me, if I can do two things. One, part of our mission of the export initiative was to try to move away from a tactical approach, of just sort of obsessing on, "Are we going to do this FTA?" to taking that broad look. And one, just to be frank, is where are the markets? And the best example that I can give you is that is the rationale behind our efforts in this Trans-Pacific Partnership. Recognizing most economists tell us this is a region that is going to dominate and drive global economic growth for the next ten to twenty years. It is a region in which there have been almost 200 trade agreements done among other economies in the Pacific, none of which included the United States. We thought that was unacceptable. So our work in the Trans-Pacific Partnership is a part of that.

Secondly, when you ask about our competitiveness relative to the EU, we examined that. We do not often think about it, and I know among some, depending on where you live in the United States, we think of NAFTA as a dirty word. But the reality, NAFTA created an integrated manufacturing model in North America. And if you look at it in terms of continental competitiveness, what we gained, what we have learned from NAFTA has been helpful to us as we export to other markets around the world.

Third, when you talk about emerging markets, that is what we are focusing on as part of the export initiative as well. And maybe in the interest of time, we will be submitting a report to Congress both on our overall progress in some of these strategies. I think that will be coming to you in the next several weeks.

Mr. FATTAH. We will look forward to your submission. Thank you, Mr. Chairman. I yield back.

Mr. WOLF. Mr. Bonner.

EXPORTS TO CHINA

Mr. BONNER. Thank you, Mr. Chairman. Mr. Ambassador, welcome. Let me pick up on I think an answer that you gave to Mr. Fattah, but also the original line of questioning about our relationship with China that was started by the chairman. I want to make sure that I have the numbers right. You said that the President's goal of doubling our exports to China by 2014, that—I do not want to put words in your mouth. We are well on our way to that?

Ambassador KIRK. The question was about our goal of meeting, in the national export initiative. Which is our exports everywhere. That is not country specific. The goal is to increase our ability to

export and, you know, within the broad framework of the President's strategy about winning the future. What he said in both this year's State of the Union and last year's is America has to make more. We have to save more, and we need to invest in our education, invest in innovation, and use that to sell more of what we make in these markets around the world. But I want to make it, that was not limited, that is not a China specific goal.

Mr. BONNER. Well let us talk about China, though. Because China is certainly a big player in this conversation. Is it safe to say that we have a goal of increasing our exports to China?

Ambassador KIRK. Absolutely. Yes, sir.

Mr. BONNER. But how would that compare with the imports coming from China?

Ambassador KIRK. Well that is our challenge. You know, it is one of those good news, bad news conundrums. Our exports to China—and look, I want to make sure, we absolutely share every one of your concerns, frustrations about doing business in China. But the reality is, it is a market, it is an economy too big to ignore. The good news, our exports have exploded to China. They are now our second largest market. Our ag exports are going in every area. Now, the challenge is there is almost this inverse relationship. The better our economy does, the more we tend to buy from China. Some of it is because we are buying, you know, cheaper consumer goods that they tend to dominate the production of. But what President Obama said, what we focus on at every one of our engagements with China through the strategic economic dialogue and JCCT, is we think there needs to be a healthier balance in that. And we have advocated that in every case. And we believe, just by raw science, I mean, you see in our Census numbers. I think we are, what, 309 million now? China is one-point-whatever billion. With their goal of moving 600 million people from an agrarian society in which they make in most cases less than two dollars a day, we think we offer them enough in a complementary way because of where we are in the manufacturing process and our productivity and innovation, if they will open up their markets and see us as a partner, and as they begin to develop more of a consumptive base model rather than an export model, we think within that that is a great way to help them grow, help us sell, and we should see a healthier, you know, rebalancing of that trade deficit.

Mr. BONNER. Shifting gears but staying in the same area, you mentioned manufacturing. It is very important to every district in this country and to every state. Certainly to my district in South Alabama. But as a country we have lost thousands of manufacturing jobs in the last decade, tens of thousands, due in large part to unfair foreign trade practices. When we enter into trade agreements we expect our trading partners to live up to their obligations and to not dump their goods or provide government subsidies that distort trade or adversely affect American businesses. When these violations occur, and they do, we must stand up for our rates by aggressively enforcing our anti-dumping and countervailing duty laws.

KOREA FREE TRADE AGREEMENT

However, it has come to some of our attention that there are some provisions in the trade remedies chapter of the Korean FTA that may affect our existing trade laws. Will these provisions—three questions. Will these provisions change in any way how our trade laws are enforced? Secondly, if not how do you intend to inform the members of Congress of this? And then third, would you include language on this issue in the statement of administrative action that will accompany the Korean FTA when it is sent to Congress?

Ambassador KIRK. I have not revisited that language in a while, but broadly speaking we have not had any departure from our overriding policy on application of countervailing duties, and antidumping laws in course, or any other FTA. And if I find out differently, Congressman Bonner, I will get that to you.

Second, I would say on the issue of enforcement I do believe very strongly this is an area that the Obama administration has distinguished ours from previous administrations, Democrat or Republican. We felt very strongly that one of the legitimate concerns that we hear from Americans all over the country, and parenthetically if I might, Mr. Chairman, last year I made the deliberate decision that as much, as engaging as it is for me to go to Geneva and Paris and Africa that we were not going to be able to move America's trade agenda with me over there. And so last year I have spent for the most part traveling around the country. I think I have been to now sixteen states, and forty-five cities including in your state. And one of the biggest concerns I heard about trade policy, both from those of us who are more forward leaning, was people just felt like we were not enforcing the agreements and everybody else was gaming them. We have made enforcement a hallmark of our policy, just as we have negotiating new agreements. And I think we have a very strong record on that.

But our frustration on the countervailing duties laws frankly is not here, but it is in Geneva. As you know we have had nine cases that we have rules against us in the manner in which we apply those. And we are 0 for 9 in those. And so Secretary Locke and I have been meeting with industries and others to see if we cannot fashion a remedy that meets the concerns of manufacturers but at the same time does not put us in jeopardy of being hammered the way we have been in the WTO.

INCREASES IN PRODUCTIVITY

If I might also say, and I understand and I know there is the prevailing wisdom out there that most of the job losses in manufacturing have been from trade. I know there is an economist for everything but the reality. You have probably had five times as many job losses in the manufacturing sector due to the productivity than you have the trade, when you study all of the economic modeling. Trade has been a part of it, and that is one reason why we are so dogmatic about asking Congress to pass trade adjustment assistance. But the reality, one of our biggest challenges, we are very good at what we do. When manufacturing is up, and in the context of your question, Mr. Chairman, about China. Every American

worker is about eight times as productive as their Chinese counterpart. We can produce with 11 million workers what it takes China 100 million workers to do. And so part of our challenge is making sure we continue to innovate and invest so we create the next generation of industries that we can dominate and continue to sell to these new markets.

Mr. BONNER. We can produce them, but not at the same price.

Ambassador KIRK. Well but we are producing, if we are on the cutting edge and ahead of them, and at the same time doing as we are. Asking countries to improve their laws and respecting intellectual property rights, combating piracy, we can create a world in which we can own that. And again, that is one of the reasons the President is focusing I think wisely on making sure that even as we try to make very difficult budget decisions we do not want to do things that hinder our competitiveness in the future. We have to continue to invest and research in development and innovation. Because that is where we are going to win the future.

Mr. BONNER. And I would add just as an observation, we also have to look at the burdens we are putting on American manufacturers and American companies. When I got elected to Congress, I was not intending to give this aside, but when I got elected in 2002 I wanted to have some coffee mugs that had the seal of Congress and my name on it to give to our friends from Alabama who came up to see us. I had to pay $1.50 more to get a coffee mug made in America over one that I could have bought made in Mexico. I just did not think it looked good to put the Great Seal of the United States and made in Mexico at the bottom. But whether it is Mexico or China, therein lies part of the problem. Those companies have gone out of business because of added rules and regulations and burdens and mandates that we have put on them over the years. That is certainly not just during your tenure. Just finally, if you could share. You have been a mayor, so that is about as retail of politics as you can get in our country, and of an important city, obviously. How important, we talk a lot about exports and imports and trade imbalances. How important, though, in your current position is foreign investment? And I am going to go ahead and tee it up.

FOREIGN INVESTMENT IN THE U.S.

Ambassador KIRK. You know in Alabama better because of the strength, not just in Alabama, you look in Alabama, South Carolina, Texas. You know, the notion that we are not making cars in America is not true. We are making a lot of cars. We are having production move, Mercedes Benz, for example, is moving either the E or C class——

Mr. BONNER. C class.

Ambassador KIRK [continuing]. Entirely to Alabama. Now our friends at Ford call me every week and remind me BMW sort of fudges the numbers because they exclude non-FTA partners. But one of the larger American automotive exports is the BMW X series, all made here in the United States. And then they export over 100,000-something cars. So we like the idea, and welcome the idea. Whether it is Germany, China, Brazil, of our partners bringing money here and doing it. We talk a lot about China. One of the

issues we have engaged them on is this race for green energy. And our frustration, this Congress wisely has done a lot to try to incentivize the next generation of development of clean energy. But China sort of owned the wind turbine production. Well we fought with them, nudged them, and they have agreed one of the bigger investments they are going to make here, they are now going to move that plant here. I think in this case it is actually going to go in Texas, but that now means those 1,500, 2,000 jobs are going to be here. And so you can find examples.

We just came back from Latin America. The President had a very successful trip to Brazil, and Chile, and El Salvador. And the Brazilian businesses are very shrewd, but welcome the fact we do not have any constraints on their investments. And we probably, you know, in your state I would guess you have got 100,000 workers who are working for foreign-owned companies. That is good investment and we think that is a smart part of our trade policy as well.

Mr. BONNER. Thank you. Thank you, Mr. Chairman.

Ambassador KIRK. And you can correct me on whether it is the, I think, is it the Mercedes that is made in Alabama? Not the BMW——

Mr. BONNER. It is Mercedes, Honda, and Hyundai, and Toyota truck engines. And quite frankly, fifteen years ago we did not make any automobiles in Alabama. And so the conflict that many of us have is, probably everyone around this table is Buy American. And yet the Ford Explorer that I just traded a few years ago was actually made in Mexico. I am not knocking Ford. I believe it is a great company. But you do have to look at those foreign investments and put that in the equation when you are seeing those are jobs. 55,000 people in Alabama have jobs in the automotive industry today that did not have them fifteen years ago because of those foreign investments. So it is part of the balance. Thank you, Chairman.

Mr. WOLF. Thank you. Mr. Schiff.

TRADE BALANCE WITH KOREA

Mr. SCHIFF. Thank you, Mr. Chairman. Ambassador, I want to ask you about a couple of areas, Korea and Russia. On Korea, what is your expectation in terms of the Korean Free Trade Agreement and its impact on our trade balance with Korea? You know, questionably our exports would grow to Korea but our imports would as well. Do you anticipate that Korean imports would outpace any increase in American exports to Korea? If that is the case, would the increased number of imports from Korea be displacing imports from other countries? And to what degree would they be displacing goods that would be manufactured here? And can you give us a sense of what industries you think win, and what industries you think are going to be adversely impacted by the trade agreement?

Ambassador KIRK. Well if I can address Korea first. We believe, because the President was stubborn enough to not take the deal that we inherited on the table, that frankly a lot of people wanted us to just sign. And we went back and we got a better deal, in this case in the automotive sector. Because there was such an extraordinary imbalance in terms of the openness of our market and the access to theirs. But we think we have a much healthier agreement

that is going to allow us, I think, and forgive me but when I get into numbers is when I get into the most trouble, Congressman. But I think our balance trade deficit with Korea is now about $10 billion. But I will get you a more precise number. We think we have the ability to correct that and have a much healthier relationship because as the President expressed it, the United States is now supported in the unique position, because our economy is so open and our tariffs are so low. In just about every trade agreement that we are going to negotiate going forward, including Korea, they are going to be moving from a base where in agriculture, for example, their average agricultural tariff is in excess of 58 percent. Ours is at 6 percent. So that is going to be a huge win for farmers, ranchers, beef, soybean, across the board. We talk about——

Mr. SCHIFF. So Ambassador is it your expectation, or is it the analysis of your office, that with the trade agreement our deficit with Korea would go down?

Ambassador KIRK. It would certainly go——

Mr. SCHIFF. Our exports to Korea would go up faster than any new imports from Korea?

Ambassador KIRK. We believe they will, sir. And if I might say, the numbers that we have given you we do not produce. You know, the International Trade Commission does those independently. And in my opening I mentioned they estimate Korea is about an $11 billion opportunity. If you want a comparison, that is larger than the last nine free trade agreements we have done.

Now what it does not capture is the opportunity in the service market, since you asked about what sectors. And Korea has a half a trillion dollar service economy. And we are seeing a lot of interest from everything from our express companies, banking, finance, insurance, architecture. But manufacturing, to Congressman Bonner's point, still dominates, is about 80 percent of our exports to Korea. So we think there is a great opportunity for growth across all sectors.

Mr. SCHIFF. And you know, because every trade agreement has this, what industries do you anticipate are adversely impacted?

Ambassador KIRK. On the——

Mr. SCHIFF. On the American side.

Ambassador KIRK. On the, negatively?

Mr. SCHIFF. Yes.

Ambassador KIRK. Or positively? We did not revisit, to be honest. You will hear from some of your friends in Congress that they are still concerned about, they have grave concerns about the impact on the textile industry. But we did not reopen that particular provision. That is the one industry we have heard the most. You will hear from some discrete industries within ag. And just about every major agricultural association in the country has endorsed the Korean Free Trade Agreement. Some would have liked for us to get more in rice. There are some that wanted us to do more in fresh orange juice, I can go on. I mean, I can get to a level of detail that might numb you here. But we think on balance it is a very strong forward leaning agreement for the United States.

INTELLECTUAL PROPERTY IN RUSSIA

Mr. SCHIFF. Let me turn to Russia. I understand that the administration may ask Congress to lift Jackson-Vanik as it applies to Russia, paving the way for PNTR. And that process is hand in hand with Russia's WTO assession. When the Vice President visited Russia last month this was a major part of the conversation and I think many members of Congress, myself included, would like to support PNTR but still have many unanswered questions about Russia's commitment to uphold its end of the bargain. And from my point especially, coming from a district that is so completely dependent on intellectual property. A lot of the studios and production houses are in my district.

Russia has appeared on the priority watch list of special 301 reports every year since its inception. I wrote to him along with my co-chair of the Anti-Piracy Caucus urging him to raise this issue. And just as one illustration, our letter highlighted VKontakte, a notorious Russian website, that you mention in your notorious markets report, and I want to compliment you on those reports which I think have a great impact, as one of the five most visited sites in Russia. It is popular for social networking but also because it features copyrighted music and video without permission or compensation. And you know, for me there has to be a level playing field if this is going to happen. And where some of our dominant industries in the export business, i.e. the entertainment industry, cannot compete because you have these rogue websites it is not a level playing field.

Have you seen any progress from Russia on IP? Is there any reason to think when we have been basically trying to hold Russia's feet to the fire regarding WTO assession and PNTR that they need to improve their IP, and frankly I do not see much. Is there any reason why we should believe that if they do get PNTR they are going to change their behavior? Or frankly are they doing to feel that they got what they wanted, and did not have to change, and there is even less reason to do so after PNTR. Did any concrete steps come out of the meetings that the Vice President had with Prime Minister Medvedev?

Ambassador KIRK. Well first of all Congressman, let me thank you. I know you were, you have been a leading advocate for stronger intellectual property rights enforcement. And we actually hosted a very successful roundtable with a number of your businesses that I understand you were helpful in facilitating. On Russia——

Mr. SCHIFF. And I want to thank you and your staff for that, who were excellent.

Ambassador KIRK. I appreciate your support of that.

Mr. SCHIFF. And your deputy administrator was wonderful.

Ambassador KIRK. There is nothing I can say that will blunt any of your concerns about Russia and their behavior. Now I can tell you it may seem counterintuitive but one of the reasons we believe it is important to have the largest economy in the world not in a rules based system in is that all of the things you expressed your frustration about right now we are very limited in our ability to hold Russia accountable because they are outside of the WTO. And one of the factors that weighs in favor of us asking you to do this,

at least if we get them in a rules based system, as we have done with China and others, then we have the ability where the facts are appropriate to go and hold their feet to the fire and make that case.

Now I would tell you that not only did the Vice President raise this on that trip. More importantly, if you recall President Medvedev was here last June and met with President Obama. And President Medvedev has been, you know, perhaps the most vocal proponent of the need for Russia to join the global economic community. And President Obama directed our office to work over the next several months to resolve our bilateral issues with Russia. A number of them were around the IPR issue. I can tell you in that forum we were very successful in getting Russia to adopt the commitments we ask them to, to strengthen their intellectual property regime. Their Duma has in fact moved on many of those. And part of our reason for encouraging this conversation on granting them Permanent Normal Trade Status is because of the good work we have done it is now more likely than not that Russia will finally accede to the WTO. If not by the end of the year, next year. And if they do, not withstanding all of our concerns, we then would have the unique situation, the only businesses that would not have the full benefit of Russia being in that system would be ours. So yes, we have those concerns. We made very good progress with them in the bilateral fora. But if we want to really reap the benefits of them we need to get them into a rules based fora such as the World Trade Organization.

Mr. SCHIFF. Thank you, Mr. Ambassador.

CHINA PNTR

Mr. WOLF. I am going to go to Mr. Austria. But you know, and you are so persuasive when you say that. Except when you look at the reality our trade deficit with China until they got in, they got, in the old days they called it Most Favored National Trading Status.

Ambassador KIRK. Right.

Mr. WOLF. They changed it because they wanted to confuse everybody. But PNTR. But once they got PNTR it got worse. It is just, and the numbers, our trade deficit with China alone was $273.1 billion. Since 1999 our trade deficit with China has increased nearly four-fold. So what you say, and I know you believe it, and I know it is logical and makes sense, but the reality was that that is how China really took off. I mean, and we used to hold them every year. We would give them a one-year opportunity, and then we could open up the prisons, and have people released, and put pressure. Now there is no pressure.

And the other, and then I want to go to Mr. Austria, but the problem is, and I am not going to ask you if you will ever go out working for China. I am not going to ask you that. But a lot of your predecessors have gone out. And a lot of the American people have lost confidence in Republican administrations. R–E–P, I can spell it, Republican administrations. I mean, Bush made a terrible mistake when he went to China. There were Catholic priests and bishops being tortured in jail. And he was sitting in the stadium watching the venue for the Olympics.

Now the guy who just designed, I had a question for him. I am not going to ask you. Just designed the Olympic stadium is in jail. He is missing. And we don't know where he is. So as a Republican, let me say, you don't get too offensive and say this guy is a Republican. He is coming after us Democrats and both administrations.

But the American people have lost confidence, because they have seen prominent people in both administrations. Clark Randt who was our ambassador in China I believe is now working for the Chinese government.

So when an auto manufacturer, laborer, AFL–CIO guy, UAW guy in Ohio, in Pennsylvania says, "Hey, the powerful, the wealthy, they work in administrations and then they go out." I mean, you look at the number of law firms in the city and in New York City that are representing the Chinese. It is immoral. Now some will say immoral? It is immoral.

I mean, when you have Congressman Chris Smith took holy communion from Bishop Su, he has never been seen since, and you can represent that government? That government that are doing cyber attacks against us? And that government that has—we had a meeting in China. I went over there with Chris Smith a month before the Olympics. And we had a meeting one night, a dinner meeting, with a lot of religious leaders. Every one but one got arrested on their way there and before they got there. And the one who made it was arrested the next day.

Well the embassy never really spoke out on it. They were interested in it. They were sympathetic to it. But I don't think they wanted to sort of keep them from getting an economic opportunity later on. So the American people they see these numbers. And they say well I hear that same thing over and over and nothing ever changes.

Apple, you probably have an iPhone; you probably have an iPod; you probably have an iPad, or if you don't I am sure a lot of people. Why can't Apple make them in the United States if the productivity—and you have been a very impressive witness. You seem like an awfully nice person. Every time I hear something good about you, it is a good—no, I mean it.

Ambassador KIRK. I am going to try my best not to dissuade you of any of that for the remaining time I have—maybe I should—if you will give me permission not to speak for the rest of the hearing. Hopefully I won't—I won't do anything to dissuade you from that.

Mr. WOLF. Why couldn't Apple do those jobs here in America based on the statistics that you gave us? Why couldn't they have them here?

Ambassador KIRK. Mr. Chairman——

Mr. WOLF. And we see the administration, and I want to get to you, but I just got to get this off my chest to say this thing. President Obama appointed Jeff Immelt, the guy from GE, as his job's guy. One they pay no taxes. GE paid no taxes. That is not good. That is not good.

But secondly I saw an article in the paper three months ago, we will try to dig it out and put it in the record here, that GE signed an agreement with China to develop an avionics program that will really hurt Boeing. Now we want Boeing, and I appreciate the

numbers you told me, we want Boeing to be the number one manufacturer, because I want to create jobs at Boeing.

[The information follows:]

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Business
GE Nears Deal With Chinese Aviation Firm

By Andrew Dowell
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General Electric Co. is wrapping up a deal that ties the future of its global civilian avionics business to a joint venture with a Chinese company and could announce the agreement as early as this week, people familiar with the matter said.

The 50-50 deal involves an unusually high level of integration by GE with a Chinese company, a gamble GE hopes will make its avionics business around the world more competitive with major players like Honeywell International Inc. and Rockwell Collins Inc. News of the discussions had been reported previously.

The agreement is expected to be signed later this week when Chinese President Hu Jintao visits Chicago, people familiar with the matter said.

The Shanghai-based venture with Aviation Industries of China will handle the development and sale of all new integrated avionics systems for the two companies, people familiar with the matter said.

Its first job will be developing an integrated avionics system for China's planned C919 passenger jet. GE hopes that will give the Chinese venture the track record GE/AVIC will need to compete for bigger business around the world.

GE's military avionics business will remain outside the venture. Existing civilian business, including work on Co.'s 787 passenger jet, will be outside the venture as well, GE says.

Civilian products left out of the venture could eventually be folded in, however, and the venture could ultimately handle all sales of GE civilian avionics systems, people familiar with the matter said.

Avionics are the electronic and computer systems that control an airplane and determine its capabilities. The integrated systems that GE and AVIC will develop will tie together more specialized applications such as flight management and collision avoidance.

GE is a major player in the market for aircraft engines but hasn't made the same impact in avionics. GE bought Smiths Aerospace from Smiths Group PLC in 2007 to beef up its offerings.

GE is contributing key technology to the AVIC venture. The Chinese company is expected to contribute cash to match its value. The venture will be run by GE executive John Watkins, people familiar with the matter said. The complicated talks previously were expected to wrap up in mid-2010.

GE had about $778 million in aviation revenue in China in 2010 and is aiming for close to $1 billion this year, amid new engine sales and service revenue, a person familiar with the matter said.

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Mr. WOLF. And so the American people see this. And so they say well here is Immelt. He is creating jobs in China. He is not paying any taxes. Steve Jobs and Apple now they are doing the iPad, the iPhone, the iPod in China. And they are taking it away from American workers, Republicans, Democrats, independents, people who just want to raise their family, educate their kids.

And so I think there is a cynicism that really develops. And when they see high-level officials and people who came to town to do well, stay to do good, to make a lot of money, they get very discouraged.

We find former ambassadors that are now working for the countries that they were supposed to be advocates for us for. We find it in the trade rep's office. I bet your alumni, the number of people that are going out now working for—and I probably shouldn't mention the law firms. I am tempted to but I won't. And I think—I don't know how you live with yourself.

You know, I say when I leave here, and I have no intention of leaving soon, but when I leave here, I will never go lobby. And I am certainly not going to go on to lobby for a foreign power that arrests Catholic bishops, and puts house church leaders in jail, and has plundered Tibet.

In 1997, I snuck into Tibet with a young Buddhist monk in a trekking group. And what they have done to Tibet. Hu Jintao, the guy that President Obama had that state dinner for, what he has done to Tibet.

And there is the Simon and Garfunkel song, "The Boxer." You know, "man hears what he wants to hear but disregards the rest." And we can't disregard. So when somebody goes out and goes with a big law firm to represent the Chinese that are also spying against us and doing it.

The number one supporter, and then I am going to go to Mr. Austria, I promise, the number one supporter of the genocide in Darfur—I was the first member of the House to go to Darfur. Genocide. Congress says it is genocide. The Bush administration says it. The number one supporter of the genocidal government of the Bashir administration, who is under indictment by the war crimes, is China.

So you can leave, not you, a person could leave and go out and work for China. And so I think the American people are just saying wow. So, you know, hopefully, you know, you will do these things and make sure that we keep the jobs here and bring the jobs back.

Mr. Austria now.

Mr. AUSTRIA. And I thank you, Mr. Chairman, because I think you are hitting on some very, very important points.

Ambassador, thank you for being here.

Ambassador KIRK. Thank you, sir.

U.S. AND CHINA'S ECONOMIES

Mr. AUSTRIA. And I want to follow up a little bit on what the chairman has said from an economic standpoint, because I—let me ask you your opinion as to where China is economically compared to the United States. Have they passed us technology wise in your opinion? You know, they have now—I think most indicators show they have the second strongest economy.

When you look at the deficits that we are running, if you look at the President's budget. I think it reduces the federal deficit to a low I think roughly of $600 billion in 2015. But then it starts expanding after the years after that, which means more borrowing, more spending.

And China, you know, obviously controls a large amount of our debt. And how is that impacting us economically?

Ambassador KIRK. Well first of all, Mr. Austria, thank you for your questions. You asked a number of questions. Let me try to break them down.

One, in terms of where China is, I think we have been—to some degree we don't give ourselves enough credit for what we do. China's economy is growing. We think that is a good thing. I mean, look they have got 600 million people in China, another 600 million in India, another 600 million in Africa, all living on less than $2 a day. You can see that as a threat. You can see that as an opportunity for the United States to help them grow those economies, build the middle class. So it is nothing for us to fear.

But by a wide margin, I want to make this plain, we are still, by an extraordinary margin, the largest and most dominant economy in the world. Now the chairman had asked earlier about reports that China had surpassed us in production, manufacturing and production. In raw numbers, yes; technology, no.

The evidence of that, every American worker in a manufacturing facility is eight times more productive than their Chinese counterpart. I think the numbers that we showed that for what it takes 11 million American workers to do, the Chinese have to take 100 million. So, I mean, we have to be careful when we just look at a raw number. But what they have right now is the ability they can throw 100,000 people. And I don't mean to make light of it.

You know, I tell them in China you get promoted if you can take something that we do 10,000 workers in Mr. Fatah's district and you can do 100,000 workers in China. The only way you get promoted is if you can figure out how to do it with 125,000 workers, because they have a premium on putting people to work in mass manufacturing where we have the edge.

And where the President I think has wisely called for us, even as we make these tough decisions to continue our edge, is in innovation, in technology, in research and development in which China doesn't excel.

Now what we have to do and what we have done, and it addresses a little of your question and the chairman's as well, we have to make sure we have a multi-pronged, very disciplined response to China in which we fight them on their lack of enforcement, of their intellectual property rights. We encourage them, as we have done, to make sure they combat piracy. We have to watch what they are doing on indigenous innovation.

Our Treasury Secretary and the President engaged them on human rights, on currency, all of those things, because at the end of the day, with an economy with 309 million people versus a combined 3 billion people in India, Africa, and China, the United States is going to win by our ability to develop the products that services the technology that not only drive only growth but that are

going to help them meet their objective to move people from poverty into a middle income.

And we think our budget within the context of what I am here visiting with you about helps us drive our part of that.

Mr. AUSTRIA. Let me ask you this. With those types of disputes, you are talking about intellectual property concerns, government procurement of market, the fact that we are so reliant on China to help finance our debt, is that—how is that impacting our ability to enforce and our ability to deal with them on these particular disputes, you know, on a level playing field or is it impacting it?

Ambassador KIRK. Well it has not. And forgive me, I know I have a story for everything. The ranking member knows that I was a former mayor of Dallas. And most people——

Mr. AUSTRIA. I can tell by your voice.

Ambassador KIRK. Like our friends from Alabama, if you are from Dallas, Washington, you tend to be more forward leaning on trade. And I am proud of the record we built.

But I said to the President, and I say in every hearing, I think one of the greatest things I have brought to the job is I married an extraordinarily talented and good looking woman who got her degree from the Wharton School at Penn but grew up in Ohio. And all my in-laws, and I have been married 23 years, that means I have had 23 years of going to Detroit, and Columbus, and Cleveland, and honestly I think I can more honestly see the other side of trade and your frustration, Mr. Chairman, in which I hear people that don't think our trade policy works.

And when you ask China, our administration did something no other administration did with China, Democrat or Republican, we filed the first safeguard case last year over tires. And them dumping in this market. In seven previous cases, the International Trade Commission, separate us, had found similar circumstances, presented those to previous administrations. None had ever decided to pull the trigger. We did that. And the Chinese didn't like it.

And I will tell you we were pilloried in the press. We were going to start a trade war. But we thought it was the right thing to do to combat all the cynicism the chairman said. And we still believe.

That is why I talk so much about enforcement. For us to have a holistic balanced trade policy, which the United States has to. We can't grow our economy the way we want in the future if we think we can roll our self off from the 95 percent of the rest of the world who doesn't live here.

But we do have to honestly address that cynicism, that concern the chairman and you mentioned. We think that is one area the Obama Administration has distinguished our self. And I am happy to come back. I don't want to drag it out.

NAFTA

Mr. AUSTRIA. Well let me ask you about, you know, another important part of that, and I am sure you hear it in Ohio, is NAFTA. What is the administration's position on NAFTA, or are what are your thoughts on NAFTA?

Ambassador KIRK. We have worked under the directive of our three leaders to look at everything we can do in that to strengthen

it and make it work better, particularly as it relates to our labor and environment provisions.

I know in Ohio you are especially concerned about the labor——

Mr. AUSTRIA. Well excuse me, sir. Well you have the President. When he was campaigning there as a Senator he was opposed to—I believe in NAFTA. And that is where I want to make sure that—maybe if that is not correct, please, you know——

Ambassador KIRK. Well I will let you go back and speak for that. But I tell people I would like to believe his selection of me as U.S. Trade Representative, knowing the passion that I had for trade, was deliberate and not accidental.

But what we have done, and we have worked with our Secretary of Labor, Hilda Solis, and our counterparts in Mexico and Canada, is looking at how we can strengthen that model and make it better. Beyond that we are doing a number of other things in NAFTA to recognize. There are a lot of ways we can increase trade. And NAFTA is still our largest trading partners, including for Ohio.

For all of the criticism I know there is about trade in Ohio, and I have been there several times. I am going back with Senator Brown. I was there with the governor and others. A quarter of all our trade with Canada goes across that Ambassador Bridge in Detroit.

So what we have heard——

AGRICULTURAL EXPORTS

Mr. AUSTRIA. The theory I wanted to get to, and I apologize because of time, manufacturing as you know, you have been to Ohio, along with agriculture, is our number one industry in Ohio. So I want to also talk a little bit about agriculture, because that is very important.

I know some of the other members have talked about the manufacturing side. But in my district, you know, I have one of the strongest agriculture industries that are represented in Ohio and I think probably across the country. There is a lot of agriculture in my district and a lot of agriculture across the State of Ohio.

I believe that America has the best farmers in the world. And I have had an opportunity to see the production. And I think they can outgrow, and outproduce, and out compete any of our foreign competitors. But we have to give them, in my opinion, the legal framework in order to do that. In other words, level the playing field to give them an opportunity to do that.

What is your office doing to promote the passage of the free trade agreements with, for example, Columbia, Panama, South Korea? And what impact will the upcoming trade agreements between South Korea and the EU, Canada, and Columbia have on the U.S. agriculture or exports if our own FTAs are not implemented?

Ambassador KIRK. Well the good news is you are right. And our agricultural exports are very strong, Congressman. We are at the highest level this year, I mean for 2010, than we have been in almost 15 years.

Secretary of Agriculture Tom Vilsack is somewhat bullish that if we can continue on the path that we are going, opening new markets, being rigorous in our enforcement, we have the potential to hit $135 billion in agricultural exports this year, which is extraor-

dinary. That would be an almost, I think, a $17 billion increase. So we are doing well.

Part of it is because we have brought a holistic approach to what we are doing in trade. And we work with the Department of Agriculture and Commerce every day. I mentioned the work we did to reopen markets after the H1N1 scare. I gave an example earlier of our resolving a long-time dispute with the European Union that got us back into that market.

With respect to the three FTAs, as you know we have concluded our negotiations with the Koreans. That agreement is ready for this Congress to act on. And we have made that aware to our committees of jurisdiction.

But the agricultural community, just about every sector of the agricultural industry, has supported and asked Congress now to move forward on course. Korea, I think the number are right, their average tariff on agriculture products in Korea is 58 percent. Ours is less than 6 percent.

So I think you can see agricultural will be a big winner. About half of those will come to zero almost immediately. The rest are going to come down over the next several years. So with respect to Korea, the agriculture community is very, very happy. Not only beef, but grains, and seeds, and others.

We have intensified our work with Panama and Columbia. We believe those are great markets for agriculture. And we are very, very close to be in a position hopefully we can resolve those as well.

Mr. AUSTRIA. And, Ambassador, I thank you for that. And I do appreciate the hard work you are doing. And I agree with the chairman. I think you personally are working hard. I understand this. And I appreciate that very much and you being here to testify in this committee.

Mr. Chairman, I will yield back. Thank you for your time.

JOBS REPATRIATION BILL

Mr. WOLF. Thank you, Mr. Austria.

I want to follow up on one or two issues that the congressman raised. But, you know, I have a bill that I have asked the administration for over a year to get back to me. We have actually given a copy to Secretary Locke.

And now I know I am a Republican member. And so probably they don't want to deal with a Republican member. But I have asked. And it is a good bill. It creates jobs. And what it does is it sets up a program of repatriation. We will repatriate jobs back. Not using punishment, but using a stimulus, and using taxes, and things like this.

And so if you could take a look at it and see if it got lost behind a filing cabinet down there. Now the cosponsor in the Senate will be Senator Warner, Mark Warner. He is a good Democrat, good fellow. I can't get an answer out of the administration. It has been over a year.

So if you could take the bill back. We will give you the number. But we want to introduce it, reintroduce it again. And what we are doing is at three different levels, basically no punishment involved. At EDA they can have an opportunity for grants to a locality that

wants to bring a company and let us say from Mexico or whatever that water and sewer or something like that.

Secondly, we are asking governors to change their tax code to give incentives to a company that returns. They have to be an American company, and they have to return. It is the repatriation.

And lastly, we are working with Chairman Camp at the Ways and Means Committee to do the same thing. But if you could have someone look at that and give us some comments. We have been trying to get some thoughts, ideas. And a job is a job. A job coming back from Mexico, or China, or Bangladesh will be good for whatever political party you are in. So if you could do that for me.

Ambassador KIRK. We will pass on your concern. And I think since you mentioned Chairman Camp, I think he will tell you for me that I don't particularly care a whole lot for partisanship. I care about fighting for America's rights and creating jobs. We have worked with him, and we worked very well.

I am proud of the fact that it was because of the partnership we had with Chairman Camp and Ranking Member Levin that we were able to get a Korea agreement. That we had both strong support. And for the first time not only the manufacturers in the chamber but forward in the UAW.

NORTH KOREAN KAESONG INDUSTRIAL ZONE

Mr. WOLF. Okay. We will get that to you.

Now you set up the Korean issue. I want to get and ask you a question about that. And I support the Korean Trade Agreement. Let me just state again. I am a strong supporter.

But this information I was given, maybe you can clarify it, with regard to the U.S.-Korea Free Trade Agreement, which I continue to support, could you discuss the issue of the treatment of products from the North Korean Kaesong Industrial Zone, the duty free processing zone where South Korean companies pay the North Korean government to have their citizens produce products for export to South Korea? Keep in mind they are gathering nuclear weapons——

Ambassador KIRK. Right.

Mr. WOLF [continuing]. And they have gulags there that when that government falls and the people see what they have done to the people it will be brutal.

The employees in North Korea work under terrible conditions and are essentially used as slave labor. It is my understanding I have been told that the FTA currently would allow component products from Kaesong to be included in South Korean goods that would be eligible for export to the U.S. with preferential treatment.

While the U.S. can stop products from North Korea from entering the U.S., that appears to only cover final products and not South Korean products from Kaesong products. Could you tell us if that is accurate or not? Because if we are taking something that we can import into the United States that was made by slave labor or violating workers' rights, that would not be good. Are you aware of that?

Ambassador KIRK. I am aware of that. And this is a bit confusing, so if you will just give me a minute. First let me start here.

Nothing in the Korea FTA makes a provision for goods from Kaesong to come in.

More importantly, nothing in the Korea FTA changes U.S. policy and law relative to goods coming from North Korea to the U.S. Now there has been in place a long-standing policy that basically you cannot have goods, component goods, from North Korea come to the U.S. except for on a very limited exception.

And this is, as I understand it, it is language that is administered by the Department of Treasury. That provision expired I think in February of this year. Treasury and State are in the process of updating that.

But even within that, whatever exceptions there are are exceptions that Congress would have to approve. We didn't do anything. There is nothing I could do in an FTA that would override your congressional authority to say no goods from North Korea.

Now the confusion, well not the confusion, one of the challenges there is language in the FTA that allows us to have a commission that would look at the issue of bringing components in from Kaesong. The commission would have to make a determination. They would want to ask for that exception. But the commission would only exist, and it would be essentially U.S. governmental officials and South Korean officials, but they wouldn't have the ability to say the goods couldn't come in. That commission would only exist for the purpose of saying we are going to recommend that Treasury hears an exception. And then Treasury would still have to come to Congress.

The bottom line is unless Congress changes your mind and allows goods from North Korea to come in, nothing we do in the FTA changes that. The ultimate authority still resides in the U.S. Congress.

Mr. WOLF. So those goods could not come in.

Ambassador KIRK. Not unless this Congress was to make a determination. You would grant an exception under whatever this new standard that Treasury would present to you.

Mr. WOLF. Well if you could give me a letter to that effect. And what I will do is send it to the Ways and Means Committee, and making sure, and give it to Mr. Camp, because we want to make sure that we certainly don't import goods made.

[The information follows:]

EXECUTIVE OFFICE OF THE PRESIDENT
THE UNITED STATES TRADE REPRESENTATIVE
WASHINGTON, D.C. 20508

June 1, 2011

The Honorable Frank Wolf
Chairman
Subcommittee on Commerce, Justice, Science
And Related Agencies
Committee on Appropriations
U.S. House of Representatives
Washington, D.C. 20515

Dear Chairman Wolf:

In my April 5, 2011 hearing before the Appropriations Subcommittee on Commerce, Justice, Science, and Related Agencies, you requested additional information on the relationship between the U.S.-Korea trade agreement (KORUS) and treatment of North Korean goods, or goods containing parts made in North Korea. I am pleased to provide the following information on the relationship between KORUS and U.S. treatment of goods produced in the Kaesong Industrial Complex, the United States' current sanctions against North Korea, as well as the relationship between our sanctions regime and KORUS. I hope you will find this information useful.

First of all, I feel it is important to clarify that the KORUS only confers tariff benefits on goods from the United States or South Korea. North Korean goods, including goods made in the Kaesong Industrial Complex, do not receive tariff benefits as a result of the KORUS agreement. In fact, the Kaesong Industrial Complex is not mentioned in the agreement. Instead, KORUS contains an annex that provides for a process to discuss potential future treatment of special geographic zones called "Outward Processing Zones" (OPZs).

Under this annex, the United States and South Korea agreed to establish a Committee, comprised of government officials of both the United States and South Korea, to meet one year after the KORUS enters into force. This Committee would identify geographic areas that may be designated as OPZs. Kaesong is not identified as an OPZ, and therefore the Committee would need to designate it as such. The Committee would review whether conditions on the Korean peninsula would be appropriate for further economic development through the establishment and development of OPZs. If the Committee determined those conditions were appropriate, the Committee would establish the criteria that must be met before any good from an OPZ could be eligible for preferential tariff treatment under the KORUS, including, for example, minimum labor conditions. After this process and assessment, the Committee would make a recommendation to the South Korean and U.S. governments. Such a decision to issue a recommendation has to be reached by consensus – it could only occur if the U.S. government fully agrees.

Given the United States' longstanding and serious concerns with respect to North Korea, it would be unlikely that the U.S. government Committee members would agree to such a recommendation without fundamental changes in North Korea.

Moreover, even if the Committee took all of the above steps, and the U.S. and South Korean governments agreed with a recommendation to extend preferential tariff treatment to an OPZ, each government would then need to obtain legislative approval from its respective legislature in order to implement that recommendation. In other words, the U.S. Congress would need to pass a bill to implement the recommendation, and therefore Congress maintains final authority over this issue. To be absolutely clear, no U.S. Administration could change how Kaesong Industrial Complex products are treated under the KORUS without Congress passing a law to extend any KORUS tariff benefits to products made in Kaesong or any OPZ. The President would need to sign that bill into law.

To address a second matter of concern, the United States maintains sanctions against North Korea that include restrictions on direct or indirect imports. The KORUS has no effect whatsoever on U.S. sanctions against North Korea or any other country. Imports of North Korean goods, or of goods containing parts made in North Korea, are addressed by U.S. economic sanctions against North Korea based on our national security objectives and our international obligations.

Current U.S. restrictions on imports from North Korea into the United States are jointly administered by the Departments of State, Treasury, and Homeland Security. Imports from North Korea undergo a review process to ensure that they comply with U.S. and international law, including sanctions regimes, and in the interest of foreign policy and national security concerns. Persons seeking to import into the United States, directly or indirectly, any goods, services, or technology from North Korea should apply for a license to do so through the Department of the Treasury's Office of Foreign Assets Control (OFAC). OFAC will consider the license application and, in consultation with the State Department, determine whether the proposed importation is consistent with U.S. law and national security objectives, as well as our international obligations.

This process applies to goods from any country that contain parts made in North Korea. Therefore, to be clear, all goods containing parts manufactured in North Korea, including Kaesong, are prohibited from coming into the United States unless a specific license is applied for, and the Administration has reviewed that application and determined that granting the licenses is consistent with U.S. law and U.S. national security objectives.

On April 18, 2011, the President issued Executive Order 13570 to continue this process. This Executive Order neither strengthens nor weakens our previous restrictions on imports of North Korean products; it rationalizes the process. Executive Order 13570 prohibits the importation into the United States, directly or indirectly, of any goods, services, or technology from North Korea except those that are explicitly licensed. The new Executive Order further prohibits evasion or attempts to evade this prohibition on importation. Furthermore, the scope of this Executive Order covers all indirect imports from North Korea, including parts made in North Korea that are incorporated into products made in other countries.

The Honorable Frank Wolf
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Finally, to eliminate any confusion, the KORUS agreement clearly states that whether a good is entitled to tariff preferences is a separate question from whether a good may enter the country. The KORUS agreement contains clear provisions that separate eligibility for tariff preferences and admissibility into the United States. In other words, just because a product may have been eligible to receive tariff benefits were it allowed to be imported into the United States does not mean that the product may in fact be imported.

I hope this information provides you additional clarity on the relationship between the U.S.-Korea trade agreement (KORUS) and U.S. treatment of North Korean goods.

Sincerely,

Ambassador Ron Kirk

If you could just explain it. Okay. And just explain it, and say pursuant to the question and this is—these are the circumstances. And unless Congress did, they cannot. And then I will pass it on.

INTELLECTUAL PROPERTY PROTECTION

Intellectual property issue: In 2010 the three largest U.S. companies by market capitalization were Exxon, Microsoft, and Apple with a combined market capitalization of nearly a trillion dollars. When two of these three companies, the biggest companies in America, are in the IP business, protecting intellectual property rights is crucial.

Could you provide the committee your plans with regard to IP with regard to China enforcement? As Mr. Schiff, he is not here, with regard to Hollywood, with regard to some of the recording devices and others, is there—can you sort of flesh out what you are actually doing on IP?

Ambassador KIRK. Yes, we are. We are attacking this on a number of fronts, because it is so critical to us. And I know, and I appreciate your kind comments about me, but I appreciate your work. I know this has been a matter of concern for you. And you have studied this.

We raised this and confronted China with this in every form, both the strategic economic dialogue, the Joint Commission on Commerce and Trade, and President Hu's business. We had a number of we think positive steps forward. If I could give you three examples.

One, I know you in particular have highlighted the use of pirated software by the Chinese government themselves. Well we have been banging on them to reduce that number to a more acceptable level if not have them use legal software for years.

As a result of our advocacy on this, during President Hu's visit for the first time, they have agreed. They are going to have a campaign to encourage. And they are going to audit the use of legal software by their government. But more particularly at the sub-central level.

Now the important things we got this year, because they have made this commitment before but never done it because they never funded it. So this year we got a commitment they would agree that they are going to increase their use of legal software. They are going to extend it to sub-central governments. And they are going to give them money to purchase legal software.

And this is a huge, again, lost opportunity, since you mentioned Microsoft, for Microsoft. If we could just get that number from 92 percent down to 70 or 60, billions of dollars and thousands of jobs for us here in the U.S.

Secondly, I mentioned the issue of indigenous innovation. It is one area that most concerns our American businesses, because China basically tries to force you to say you can have work, but we want you to move your factory here.

Mr. WOLF. Right.

Ambassador KIRK. Not only do we want you to move your factory here. Then we won't allow you to sell anything in China unless you agree that it is made. It is a license transfer. We have gotten them to agree to do two things. One is to de-link their legitimate, you

know, efforts in government to try to foster innovation. But de-link that from government procurement, which is where most of their purchasing is done.

And secondly, one of the commitments that they made when we granted them most-favored-nation status, now PNTR, was that we wanted them to join the government procurement agreement within the WTO. And they have drug their feet on that. They have agreed. They will submit a revised offer and join, you know, make an effort to join the Government Procurement Act by the end of the year.

And we had a number of other areas I can—I feel like I am going on too long. We would be happy to go through them. We worked with them to make an agreement in their energy sector. They have an exploding investment in that. One of the requirements was non-Chinese businesses could only bid on that if they demonstrated that they had experience. But it had to be in China.

Well we thought that was ridiculous. We have American companies that are building projects all around the world. They have now agreed they would take that relevant experience from around the world. And we made other progress on issues that——

Mr. WOLF. When did that go into effect?

Ambassador KIRK. That one would go into effect immediately. That they will allow us to bid on that and demonstrate that.

Mr. Chairman, we share your frustration. We know we are going to have to continue to stay on top of China and monitor these. But the intellectual property rights area is one that we pay particular attention, not only software but copyrights and patents.

And they do have a campaign that is being run by Deputy Vice Minister Yang Xueshan who oversees both their strategic economic dialogue and ours in which they are really highlighting the importance of recognition of intellectual property rights. But they are going to enforce it and bring people to justice.

Now the challenge is what they always do. It is a six-month campaign. We are pushing them to try to make that longer. But slowly our best ally is the fact China is beginning to develop an indigenous innovation community that is putting as much pressure on their government to respect and protect intellectual property.

CYBERSECURITY

Mr. WOLF. Have your computers been hit with cyber attacks?

Ambassador KIRK. Not to my knowledge. I hope not.

Mr. WOLF. When, and I don't want to put you in the spot here, but I want to ask you. When your people go to China, do they take BlackBerrys and laptops with them?

Ambassador KIRK. We do not.

Mr. WOLF. Good. And had there been instructions from the FBI? Have you been personally briefed by the FBI as to the activity?

Ambassador KIRK. That might be a conversation perhaps we might more appropriately have in private.

Mr. WOLF. Okay.

Ambassador KIRK. But we are very, very careful.

Mr. WOLF. Well let us have it if we can.

Ambassador KIRK. Yes, sir.

Mr. WOLF. So this is not just an okay. But okay I would like to have that with you.

Let me go to Mr. Fattah.

EXPORT PROMOTION

Mr. FATTAH. Thank you, sir. I am going to ask one question. I have to step out and take a phone call in a second. But let me ask this one question. And you can supply it to the Chairman or to the committee.

But I was out a few weeks ago in a neighborhood that the chairman would be quite familiar with over around 70th and Elmwood. I was at a place called CoverSports. Now the last question actually was about this global aggregation, because this is——

Ambassador KIRK. You are not going to brief me in Cowboys and——

Mr. FATTAH. No, no, no.

Ambassador KIRK. We are not going to go that far.

Mr. FATTAH. We are not going into that. CoverSports has been in Philadelphia for 100 years. They make tarp out in southwest Philadelphia. And it is a great story of a family-owned business that has been out there. And they make the tarp for the Washington Nationals and for the Philadelphia Phillies.

They only have one competitor, and it is in China. They got some new equipment under the small business depreciation——

Ambassador KIRK. The tax credit?

Mr. FATTAH [continuing]. The deal that we did last year. And they bought some heavy equipment from Ohio that now allows them to make even larger pieces of tarp and do it more quickly. And they got some very significant innovation going on there. And they obviously are going to be here for another 100 years.

But the point now is to get to the export side. You know, before they were getting beat from China dumping cheap tarps into the U.S. market. Now they are fine. And they are making tarp for a lot of the college teams.

But this is the point, in terms of the President's export initiative, is that making the opportunities available for them now to start to compete around the world and not just here.

And what I want to know is, I know we have all these trade agreements, and we got all these things we can and we can't do. We, through the Commerce Department, helped manufacturers with creating the efficiencies that you talk about when you compared the 11 million to the 100 million.

But the question is, could you supply for the committee what it is that we can't do to help the manufacturing sector because of trade agreements? You know, where we get too close to the line, or what we can do, or a little bit of both, because I think that we are very interested in what we can do. We have some 1,300 manufacturers in Philadelphia. The Philadelphia area has 5,000.

Now we have lost—in 27 years, we have lost 200,000 manufacturing jobs. But we still have lots of manufacturing jobs. In fact, it was just reported last week that we had a 27-year high in Philadelphia of manufacturing jobs. In the last two years, the Philadelphia Fed has documented major increases in manufacturing. It has really led the recovery in our area.

But those manufacturers need to have markets that go beyond. So we don't have to get into the rhetorical jousting about it now. But it would be very interesting to me to know where the—where we can do more. And what, if any, legal restrictions we are under relative to these various trade agreements about how we can help our manufacturing sector continue to compete.

Ambassador KIRK. I can give just a couple of quick examples. And frankly in your question again you mentioned one. In the tax compromise that Congress wisely passed last year——

Mr. WOLF. I voted against it.

Ambassador KIRK [continuing]. But the extension of those depreciation, I have heard from small businesses all around the country that are using that ability to buy new equipment and depreciate, that is completely legal.

Within the WTO, what is usually prohibited is if you are doing something expressly for the purpose of having a business export and not any domestic component. If you just—which is principally what a lot of other countries do.

If you are giving a tax depreciation credit that is going to help you grow, and you are going to continue to expand your market like this company is here in the U.S., you happen to also export, that you can do.

Part of what we are doing through the export initiative is to go to companies like that and say let us make sure you are aware of the combined resources we have to help you find customers through Commerce, to finance it through Export, and——

Mr. FATTAH. Because as big as baseball is in South America and Latin America, they probably could use some tarp. You know, so we could sell it.

Ambassador KIRK. I was just in Austin. We did another one of these. I visited a company called Formaspace that you can read about. And they are a small company growing.

But 30 percent of their market now are markets around the world. And the guy said a big part of him being able to stay ahead of the curve was he bought a very advanced cutting-edge machine that helps him make—he basically makes these tables that other manufacturers put components on. But they are exploding. But that depreciation credit was hugely important to him. And he is being financed through the Export-Import Bank.

Mr. FATTAH. Thank you, Mr. Chairman.

Mr. WOLF. Thank you.

I think Mr. Fattah voted against it. And I think we both would have supported that provision. I thought the portion on the $112 billion loss to the government on giving a two percent payroll tax to Jimmy Buffett and Warren Buffett was a little too much. And I think, if you recall, that was part of that package. And that, I think, creates a problem.

TRADE PREFERENCES

On the trade preferences: the U.S. offers a program that is designed to encourage economic development in lower income countries by offering preferential duty-free income, U.S. duty-free, U.S. market access to imports from countries covered by these pro-

grams. The imports cannot be the same as any products manufactured in the United States.

An example would be coffee from Ethiopia. So if imports total $80 billion in 2010, up 33 percent. What are the benefits? But I guess equally important, how do you ensure these imports are not hurting U.S. businesses?

Ambassador KIRK. Because the program is reauthorized now by Congress every year, we go through a fairly exhaustive process with our committees of jurisdiction. And we are required to go through a notice and filing period in which we publish in the Federal Register that any industry for example that may say—that feels like they are being harmed because of these products has a right to petition us to say that product should be removed.

Broadly it is a very valuable tool that we use to help some of the truly poorest countries in the world create some economy and create some wealth. And then as they mature hopefully they become markets for our products.

One of the best examples is Colombia. Colombia is a preference country under the Andean Trade Preference Act. In that case not only are we helping them to send goods here we don't make, but we have the added benefit we are getting farmers that otherwise might have been involved in growing crops that were used in the drug trade to go to a more productive behavior.

In other cases, not only do we have the objective, I think the one legitimate one and humanitarian one, of helping these really desperately poor societies, but there is also a case that in many of these some of the inputs coming from these countries are used by American manufacturers. So it has a dual value and benefit.

But there is a fairly structured process, Mr. Chairman, by which we examine the impact on American businesses.

Mr. WOLF. Do you also look at their record on workers' rights, and human rights, and things like that?

Ambassador KIRK. We will remove that. We have three broad programs. The one, the generalized system of preferences, covers a number of poor countries. AGOA, which is the African Growth and Opportunity Act, covers I think 38 economies in sub-Saharan Africa. And then we have Andean.

Our administration has removed a couple of countries from AGOA and others and one in South America where their behavior just gets to a point where they are engaged in activities that I think you or I would find——

Mr. WOLF. Could you supply the committee with the list of the countries?

Ambassador KIRK. Yes, sir.

Again, these usually go to our committees of jurisdiction. But we are required by law when we make those determination we provide notice to the Ways and Means and Senate Finance committees.

And one of our concerns though in terms of the holistic strategy we are trying to bring to trade is just as much as we are being pressured. And we want to work with Congress to pass the pending free trade agreements with Korea, and Panama, and Colombia. We do think it is equally important that we pass these preference programs and fair trade.

You know, just so you get both sides of it, one of the big challenges we have in our preference programs is because they are only authorized every year, it is hard for a business to go out and get capital, make an investment when you are not sure of whether or not Congress is going to allow that program to continue but on an annual evaluation.

Mr. WOLF. It sounds good obviously. Gum arabic comes from Sudan. Is that part of this program?

Ambassador KIRK. If I might get a more, I don't recall that Sudan is a part of AGOA, but I'd like to get you a more precise answer.

[The information follows:]

GSP

The list of countries removed from GSP since 2005 appears below. In addition, as you know, we have several country practice petitions now before us seeking removal of different countries for different reasons, mostly worker rights and IPR shortcomings. No country has been removed from GSP for cause – i.e. for not meeting the eligibility criteria – since Ukraine in 2001, which was for IPR issues. Ukraine was reinstated to GSP in 2006.

Countries removed from GSP since 2005

Countries that "graduated" from GSP because of high income: Antigua (2006), Bahrain (2006), Barbados (2006), Croatia (2011), Equatorial Guinea (2011), Trinidad and Tobago (2010)

Countries removed from GSP after undertaking an FTA with the US: Costa Rica (2009), Dominican Republic (2007), El Salvador (2006), Honduras (2006), Guatemala (2006), Morocco (2006), Oman (2009), Peru (2009)

Countries removed from GSP after joining the European Union: Bulgaria (2006), Romania (2006)

Countries that are the subject of active GSP country practices petitions: Argentina (failure to pay arbitral awards), Bangladesh (worker rights), Lebanon (IPR), Niger (child labor/ worker rights), Philippines (worker rights), Russia (IPR), Sri Lanka (worker rights), Uzbekistan (child labor + IPR)

AGOA

To date, the following sub-Saharan African countries are not AGOA beneficiaries:

1. Central African Republic (terminated from AGOA in 2004)
2. Cote d'Ivoire (terminated 2005)
3. Equatorial Guinea (Never designated for AGOA)
4. Eritrea (terminated 2004)
5. Dem Rep. of Congo (terminated 2011)
6. Guinea (terminated 2010)
7. Madagascar (terminated 2010)
8. Niger (terminated 2010)
9. Somalia (never designated)
10. Sudan (never designated)
11. Zimbabwe (never designated)

MILLENNIUM CHALLENGE GRANTS

Mr. WOLF. The other issue on that is there was a program developed under the Bush Administration called the Millennium Challenge Grant. Are you familiar with the Millennium Challenge Grant?

Ambassador KIRK. Yes, sir. I served on that Board by a matter of Congressional authority.

Mr. WOLF. You served on the Board?

Ambassador KIRK. The Millennium Challenge? Yes, sir.

Mr. WOLF. Now we're getting reports, which we'll send you, when I say, I hope you're going to look at these and get back to us because these are all serious questions. So sometimes witnesses come and they go but, so I would like you to look at this and maybe if you can give me a call. We're giving about $600 million dollars to Morocco, in Millennium Challenge and Morocco just expelled about 50 Christian missionaries. We also have had reports from the American companies that some companies in Africa, and I want to be sure that I have the right countries so I'm not going to say. We'll share it with you. We have given them foreign aid through the Millennium Challenge grant and they then have turned around and these, the grants have gone to Chinese companies to do what they're anxious to do.

Ambassador KIRK. May I speak to that one?

Mr. WOLF. Yes, sir.

Ambassador KIRK. Because that one, that is one issue I raised directly and we got a report on it, and forgive the number, I want to, I think the numbers have less than three percent.

Mr. WOLF. I don't know that that's accurate. We have an——

Ambassador KIRK. It's a fairly, I was surprised. I was frankly surprised.

Mr. WOLF. When was that given? When did you get that?

Ambassador KIRK. This was within the last six months. I'll get the report. We have studied that and I specifically raised that.

Mr. WOLF. We have an idea, investigation now. They, the Millennium, I forget the director's name. You would know him well.

Ambassador KIRK. Daniel Yohannes.

Mr. WOLF. Yes.

Ambassador KIRK. Under our authorization, our statutes, we try to make sure, well first, we're trying to help those countries create an infrastructure that helps them do more than just build roads.

Mr. WOLF. But to give American taxpayer dollars to country X and then turn around and give those grants to China.

Ambassador KIRK. It is a huge concern of ours.

Mr. WOLF. Are you currently on the Board?

Ambassador KIRK. I am on the Board and our general policy is unless you have a case where there's no American company who bids on it, and there is no domestic capacity in that country, then there is a provision that they can go out and bid then those countries come in.

Mr. WOLF. Well——

Ambassador KIRK. The numbers on China are much less than what they have been.

Mr. WOLF. Well, I'm not, just not referencing China. I'm referencing all, I mean a country like China. We will send you a report. Maybe you can have someone from your office call Tom, Mr. Tom Culligan, and we'll give you the IG at the Millennium Challenge Corporation is doing an investigation, and a number of companies have come forward, and we believe it is deeper. Also, since you are a voting member, have you looked at the numerous letters that I've sent over there with regard to Morocco?

Ambassador KIRK. We get, usually we get a summary of those. But we do a fairly thoughtful review of all of our challenge grants, and part of what we're doing with the Millennium Challenge grants is now more broadly wrapped up in the initiative President Obama started last year to have a more rational approach to what we call all of our aid in trade work. But it is a, on balance, I think it is a good program. It is well run and we have a number of criteria that we examine before we issue them. But we do look at the impact of labor rights and of the concerns you raised, say in a case whether it's Morocco, or Philippines or others.

Mr. WOLF. Well, but do you think that the test that they have to meet is only for that one year in order to get in on the challenge.

Ambassador KIRK. No. We look at——

Mr. WOLF. Well, but we're seeing slippage and I think once the grants are given out, it almost seems like they begin to look other places, and so you're the person I should call.

Ambassador KIRK. I'll be happy to follow up with Tom and get him with our director on that.

COLUMBIA FREE TRADE AGREEMENT

Mr. WOLF. Okay, and if you could comment on these cases with regard to the country, specific? Very good. Columbia has free trade agreement. Do you believe that Columbia has sufficiently addressed the concerns regarding the anti-labor violence?

Ambassador KIRK. We are in the process. When I testified before Ways and Means Committee, I think it's been about a month ago, we, I informed them that the President has asked us to undertake the same diligence that we used to produce the agreement with Korea with respect to Columbia and Panama. Since then I can tell you we have had very productive engagement with Columbia. President Santos, frankly, has made addressing the issues of violence, assassinations against labor leaders and strengthening frankly their administrative capacity of their labor ministry and looking at enforcement, and our work, we have engaged with them every week over the last five weeks and we are making very strong progress, and there was a press report yesterday in which frankly President Santos outlined many of what we had asked him to do, but highlighted the fact that he thought this was important for Columbia. So what I've said, and in many cases we feel like we're pushing on an open door. But we are making very good progress.

TRADE STATISTICS

Mr. WOLF. Okay. We have a couple on the commerce reorganization, but I, you sort of covered that. We'll just submit that for the record. In December, the *Wall Street Journal* reported on a study that found that the U.S. and other countries do not accurately

track balanced trade. They found that trade statistic models are outdated and do not reflect many complex modern trade flows. According to a subsequent editorial in the *Journal* that, "The study ought to be required reading on Capitol Hill. Most importantly, they raised the question how much anyone really knows what a meritous trade with China is." Has your office studied this issue, and what were they conclusions, and do you believe we need to revisit how we collect and analyze those trade statistics?

Ambassador KIRK. Well, my office does not have the responsibility. I haven't seen this *Wall Street Journal* study, but as a general rule I try not to use the *Wall Street Journal* as my sort of guiding light on which direction because they usually whack us over the head. Particularly on, I love reminding them, they were the most critical of our efforts when we held China's feet to the fire on the 421 case.

Mr. WOLF. I'm glad, that I said the record, I'm glad that you did.

Ambassador KIRK. Yes, we did. But let me say we are, part of what we're doing through the National Export Initiative is reexamining every export of our trade. The ITC and Commerce do a pretty good job. We can track shipment of goods. Where we are deficient is in services, and we intuitively know that in the service sector, in which now over 80 percent of Americans work, we have a trade surplus with just about every country we have an FTA or strong trade relationship. But it's very difficult to track, to track those numbers, and we are, I know that Commerce and others are looking at different models on how to strengthen that and better track it.

TRADE DEFICIT

Mr. WOLF. Well, top ten countries for what's U.S. trades, where's the one that we have the negative? Top ten countries with U.S. has a trade deficit. China, wow. Off the charts. Off the charts. Japan, Mexico, Canada, Germany, Nigeria, Venezuela, Russia, Ireland, and Saudi Arabia, and that ought to be the target reach list. I mean, the Saudis want to help, friends help friends, if you will, and is this your target list——

Ambassador KIRK. Well, we, we're looking both at the markets, we aren't just looking at the deficits per se, but we're looking at markets where we have an opportunity and we have a strength and they have a need, and that's one reason, for example, we're so strongly focusing on the Trans-Pacific Partnership. That's one reason the President made the recent trip to Latin America. That is a huge opportunity for us that we haven't built. We think the relationship allows us to explore that and what's sounding with some of these countries, and you are right. China represents over half of our deficit. If you look at some of the rest of them, even Canada, Mexico, and Saudi, a big component of that, frankly, is oil, because we are so dependent on other countries for energy. But we are examining all of that and trying to take a more thoughtful approach, not just necessarily how do we reduce our deficit with those countries, that's what's component, but where are the best opportunities, where are the best markets?

SANITARY AND PHYTOSANITARY BARRIERS

Mr. WOLF. I just have two more and then go to Mr. Fattah and Mr. Austria. The Chinese have indicated that one of their trade priorities is U.S. market for fresh apples. I'm concerned that the Administration's decision to share a list of invasive pests and diseases associated with Chinese apples telegraphs the desire to quickly move an agreement, even though the Chinese have a terrible track record, even when approved sanitary import protocols are in place. For example in 2004, a researcher happened to discover quarantined pests on Chinese Ya pears while shopping at his local grocery store in Washington state. Sound scientific principles indicate that one should take a deliberate and cautious approach to allowing fresh apples into our nation. I strongly urge the Administration to be careful to make sure any fresh apple imports meet the SPS standards. In December you chaired a meeting of the U.S. China Joint Commission on Commerce and Trade. I understand that one issue on the agenda was our desire to import beef into, or export beef into China. Was it a Chinese request that that meeting, or have they talked to you about importing fresh apples into America?

Ambassador KIRK. Yes. You, Mr. Chairman, many of our trading partners, one of our frustrations frankly in this business is they almost feed us as tit for tat. You let our beef in, I mean you let our apples in, we'll let your beef. I will tell you, we do not yield on our basic principle in one. In order for a rules based system to work, everybody's got to rule by the rules and live by the rules, and nowhere is that more critical as it relates to sanitary and phytosanitary standards, and for us, we just ask that everyone comply with internationally accepted standards, and that means if we meet them, you let our goods in. If your goods meet them on the other hand and they meet the requirements of APHIS, which is I think you know, separate from us through the Department of Agriculture, we should let them in. But we do not trade off one for the other in that sense. But just as we ask China to do things, they, you know, will come to us and say, "Well, you won't let our apples in", and we usually direct them to APHIS and tell them if they meet their standards and meet the test.

Mr. WOLF. Well, in most cases most of the apple concentrate that you drink comes from China, and they planted millions of apple trees now and basically the workers that are working on them are paid almost nothing, and so I would like if you could look into this apple issue and have somebody come by my office and sort of just tell me where we are on the apple issue and maybe at the same time bring somebody from the USDA to come along.

Ambassador KIRK. I would, on that one, I mean I will be happy to take that to Secretary, but APHIS, we keep them, I mean Congress wisely has kind of kept that separate from us so that, you know, whatever our trade imperatives are don't at all get factored into what should be purely an issue of science and health and good sanitary practices. So we stay out of APHIS's way in that process.

Mr. WOLF. Well, maybe this would be, let me cover this other issue too, then. For the last three years China has been rejecting poultry exports from the Commonwealth of Virginia in response to

a single isolated case of Subtype H5N1, a low pathogen Avian Influenza reported in a commercial Virginia turkey flock. The flock was depopulated, the premise was cleaned and disinfected under Federal and State supervision, and the farm has long since been raising turkeys with no further incidence of Avian Influenza. I'm concerned that the research is contrary to the WTO. Do you know much about that? Have you been in contact with the Chinese with regard to the ban?

Ambassador KIRK. We have been. We agree with you that we think that this is, that they are using their rules creatively to block our export. I'm not sure because I feel like I'm filibusting——

Mr. WOLF. No, I think you're——

Ambassador KIRK. Well, I will tell you, Mr. Chairman, we are concerned enough about this, and it may not be to your attention. We just transmitted to Congress, I was concerned enough about this. You wisely require us to make a report to you every year called the National Trade Estimate, in which we have to kind of tell you how our partners are meeting their requirements. It has been a very good tool, particularly to get partners that we identify as being not compliant within intellectual property rights. It's been a great tool, some say to name and shame them into doing with it. We made the decision last year to include two new reports, one on non-tarriff barriers in manufacturing, one on sanitary and phytosanitary issues, and so a lot of the questions you raise, I think if we can maybe get you an executive summary. We just submitted that report to you last week. But this is critically important. I would tell you we believe China moved to block our poultry, unfortunately based on two things. One when we did the 421 case, but second, we had a deal where Congress put a rider on the Appropriations bill in 2008 that blocked APHIS's ability to do the study on Chinese poultry, and when Congress did that then they, we think, acted in a manner that wasn't consistent with the WTO. We challenged them in the WTO, China challenged us, but we were able to show and demonstrate we worked with Congress to have that rider removed. So we're still pressing this. We're acutely aware of it.

Mr. WOLF. Could you have somebody, when they come up on the apples, tell us also on the turkey, because that is Virginia. It's not from my Congressional district but I, I am very, very interested. We have a number of questions we're just going to submit for the record. Okay, I go to Mr. Austria, do you have any?

Mr. AUSTRIA. I'm fine.

Mr. WOLF. Well, I want to thank you. I appreciate it. I think you've done a very good job. I hope, and I'm not going to embarrass you, but I hope you do not go and work as effective as you are and as persuasive as you are, I hope you do not ever, ever, ever even consider representing the Chinese government. I would be very, I would be very disappointed in you. I was very impressed in your testimony.

Ambassador KIRK. I would not want to disappoint you.

Mr. WOLF. I looked at your background and so I would not. What we're going to do is a letter to the CRS asking if they have the ability to go back and see where all our former trade reps are at this

moment, and who they're representing. But anyway, thank you very much for your testimony.

Ambassador KIRK. Thank you, Mr. Chairman. Thank you, Members.

Questions for the Record
Hearing on the FY 2012 Budget Request
of the Office of the United States Trade Representative

The Honorable Frank WOLF: Question 1
USTR is requesting an increase of $3.4 million, or 7.2% above FY 2010 to hire an additional 16 people. What are the most serious current staffing shortfalls?

Answer:

USTR's budget was constructed taking a zero-based approach to determine our resource requirements. We classified our budget into six strategic goals, which are outlined in our budget book submission. Of these goals, the most critical are:

- Negotiations: Free Trade Agreements (FTAs); World Trade Organization (WTO) Doha Development Round; Bilateral Investment Treaties; advancing WTO accessions) will account for four of the new hires.
- Enforcement (prosecuting, defending, settling trade complaints under the WTO and U.S. free trade agreement; monitoring and analyzing foreign government compliance with U.S. trade agreements) will account for three new positions; and
- National Priorities (small and medium enterprises; development; labor rights) will account for another three.

The others are also important but these reflect the most important trade priorities of the Administration.

The Honorable Frank WOLF: Question 2
USTR is requesting an increase of $3.4 million, or 7.2% above FY 2010 to hire an additional 16 people. One such shortfall we've heard about in the past was intellectual property enforcement attorneys. Are all vacancies filled in that area?

Answer:

Yes, all of the intellectual property enforcement attorney vacancies are filled.

The Honorable Frank WOLF: Question 3
USTR is requesting an increase of $3.4 million, or 7.2% above FY 2010 to hire an additional 16 people. What would the impact of a freeze or cut be in FY 2012?

Answer:

USTR's FY 2012 budget invests in critical efforts to support jobs here at home by increasing American exports to other countries, through market-opening initiatives and through monitoring and enforcement of America's rights in a rules-based trading system. The budget supports the President's goal of creating two million additional American jobs by doubling exports in five years. USTR's budget submission called for increases of $2 million for personnel, $0.9 million for additional travel, and $0.4 million for related priority mission requirements.

A freeze or reduction from USTR's FY 2011 budget levels will mean that none of the staffing goals discussed in Question 1 will be addressed. A freeze or reduction will make it more difficult for USTR to pursue export enhancing initiatives and to support the President's stated goal of creating two million additional American jobs.

USTR has a variety of major initiatives underway, such as the Doha Development Round and Trans-Pacific Partnership (TPP) negotiations, plus an increasing enforcement agenda (both offensive and defensive), that requires major commitments of personnel and travel funds. A freeze or budget reduction would make it difficult to sustain those initiatives and would likely require USTR to choose between reducing its commitment to those initiatives or reducing or abandoning other efforts to reduce trade barriers or open new markets for American companies.

The Honorable Frank WOLF: Question 4

Please outline for the Committee USTR's presence in China. How many positions are there and what are they doing? Does the USTR budget seek to send any additional staff to the China office? The Geneva office?

Answer:

USTR has three positions in Beijing. One person is a USTR employee and two people are Foreign Service Nationals. The USTR employee is a Minister Counselor and is responsible for working with USTR Headquarters in Washington, DC on China trade issues, as well as taking on the USTR coordinating role on trade policy at Post with the substantive experts at the Embassy in areas including economic issues, financial services, agriculture, and intellectual property. There are no plans to increase staffing in China in the FY 2012 budget. Likewise, there are no plans to increase staffing in Geneva in the FY 2012 budget.

The Honorable Frank WOLF: Question 5

When was the last time that the USTR reviewed its staffing mix and their locations? Does USTR have the correct mix of staff and are they deployed to the highest priority locations?

Answer:

USTR's FY 2012 budget was constructed through a business planning process taking a zero-based approach to determine our resource requirements by initiative and location. Specifically, we used an office-by-office "bottom up" approach to determine our staffing requirements.

Hence, this process resulted in a comprehensive review of our staffing mix and locations. Based on this analysis, we determined that 16 additional staff was necessary.

The Honorable Frank WOLF: Question 6
Earlier this month the USTR published its "2011 Trade Policy Agenda and 2010 Annual Report." This report is 443 pages long, yet the Committee did not find any references to human rights or religious freedom in China. Similarly, USTR's "2010 Report to Congress on China's WTO Compliance" does not reference human rights or religious freedom. Does the USTR have any interest in promoting human rights in China?

Answer:

The Obama Administration places a high priority on advancing human rights and religious freedom internationally. The Department of State has responsibility for the U.S. government's efforts to address human rights and religious freedom.

Labor rights issues, in some circumstances, may overlap with broader human rights issues (e.g., freedom of association and forced labor). The USTR has been, and will continue to, engaging China at the highest levels on labor rights and their relationship to trade. USTR together with other agencies raised labor rights as a key issue under the United States-China Strategic and Economic Dialogue, which resulted in the creation of a new Labor Dialogue with China. The first dialogue took place in May 2010 between the U.S. Department of Labor and the Chinese Ministry of Human Resources and Social Security. The next dialogue, with the participation of USTR, took place on May 9 and 10, 2011 in Washington. USTR officials participated in the State Department's Human Rights Dialogue in May 2010 where, along with the Department of State and the Department of Labor, we raised concerns with the Chinese about fundamental labor rights. The State Department continued to press the Chinese on labor rights concerns during the 2011 Human Rights Dialogue last week in Beijing. We continue to seek all appropriate venues to address labor rights concerns with the Chinese.

The Honorable Frank WOLF: Question 7
Earlier this month the USTR published its "2011 Trade Policy Agenda and 2010 Annual Report." This report is 443 pages long, yet the Committee did not find any references to human rights or religious freedom in China. Similarly, USTR's "2010 Report to Congress on China's WTO Compliance" does not reference human rights or religious freedom. By comparison, on the English language web site of the Chinese Ministry of Commerce (the agency responsible for trade), there are over 60 references to "human rights." If the Chinese can put up 13,000 pages mentioning human rights, why can't USTR do better?

Answer:

The State Department submits annual reports to the Congress on both human rights and on religious freedom, each of which contain individual country reports on China which contain detailed reporting on human rights and religious freedom issues in China.

The Honorable Frank WOLF: Question 8

The USTR budget request places a large emphasis on "labor rights." The request notes that the Administration brought a labor case against Guatemala, worked with the Panamanian government on labor rights issues, and made progress on a plan to address labor law issues in Columbia. The USTR budget submission appears to omit labor rights in China. What has the USTR done with respect to labor and workers' rights in China?

Answer:

USTR has been and will continue to be engaging with China at the highest levels on labor rights and their relationship to trade. USTR together with other agencies raised labor rights as a key issue under the United States-China Strategic and Economic Dialogue, which resulted in the creation of a new Labor Dialogue with China. The first dialogue took place in May 2010 between the U.S. Department of Labor and the Chinese Ministry of Human Resources and Social Security. The next dialogue, with the participation of USTR, took place on May 10 and 11, 2011 in Washington. USTR officials participated in the State Department's Human Rights Dialogue in May 2010 where, along with the Department of State and the Department of Labor, we raised concerns with the Chinese about fundamental labor rights. The State Department continued to press the Chinese on labor rights concerns during the 2011 Human Rights Dialogue last week in Beijing. We continue to seek all appropriate venues to address labor rights concerns with the Chinese.

The Honorable Frank WOLF: Question 9

How would USTR rank Guatemala, Panama, Columbia, Mexico, Costa Rica, Peru, and China in terms of workers' rights? Is there one country that consistently has the worst workers' rights abuses?

Answer:

The extent of workers' rights issues differs by country and region depending on current circumstances. We do not rank countries in terms of respect for workers' rights. We monitor and engage all of our trade agreement partners on workers' rights issues, as appropriate. In doing so, we utilize the formal mechanisms for consultation when they exist, as well as other means, including cooperation and technical assistance programs. In the case of Guatemala for example, the concerns were considered sufficiently severe to warrant invocation of the consultation mechanisms under the Dominican Republic-Central America-United States Free Trade Agreement.

The Honorable Frank WOLF: Question 10
Do workers in China have the right to organize independent labor unions?

Answer:

Chinese law provides for the right to associate and form a union, but does not allow workers to form or join a union independent of the All-China Federation of Trade Unions (ACFTU). The USG continues to raise this matter with the Chinese Government. There have been strikes in China consisting mainly of workers outside of the ACFTU structure, who were able to negotiate and obtain significant wage increases. The United States has engaged China to respect the right of workers to take such action.

The Honorable Frank WOLF: Question 11
In the USTR budget submission it noted that "USTR, together with the Departments of Labor and State and other agencies, engaged in extensive consultations with Guatemala to give the government of Guatemala the opportunity to make significant progress in its labor law enforcement." Has USTR taken similar actions regarding China? If not, why?

Answer:

The consultations with Guatemala have taken place under the Dominican Republic-Central America-United States Free Trade Agreement (CAFTA), which has specific mechanisms that can be invoked to address labor rights issues. The United States does not have a similar agreement with China that establishes such formal mechanisms. Nonetheless, USTR has used other mechanisms to engage with China on labor rights matters, as noted in the response to question 8 above.

The Honorable Frank WOLF: Question 12
USTR is requesting an additional 16 FTEs for FY 2012, including one for "supporting development, climate change and labor rights goals," and two for "advising and supporting other administration initiatives." How many employees does USTR have focusing on human rights abuses in China?

Answer:

USTR's Office of Labor Affairs is dedicated to addressing labor rights issues, which in some circumstances may overlap with broader human rights issues (e.g., freedom of association and forced labor). The Labor Office's three professional staff members are dedicated to addressing labor rights issues in U.S. trading partners, including China. The Labor Office works together with staff from USTR's China Office and officials from other U.S. agencies to engage China on those issues.

The Honorable Frank WOLF: Question 13
According to preliminary figures from the Commerce Department, in 2010, the U.S. had a trade deficit of $647.1 billion (4.4% of GDP). Our trade deficit with China alone was $273.1 billion (1.86% of GDP). Since 1999, our trade deficit with China has increased nearly fourfold. **What actions has USTR taken to address this trade deficit?**

Answer:

There is no one cause for the large imbalances in U.S.-China trade, and there is no one solution. Looking forward from the aftermath of the recent global crisis, we know it will be necessary to continue to reduce global imbalances. This will require higher savings rates in the United States, as we are already seeing. But it will also require a rebalancing of the Chinese economy to become more driven by domestic consumption. I will continue to work with other agencies to encourage China to take steps to increase domestic demand as well as to further open its market to U.S. goods and services. The Administration intends to use every forum -- including the JCCT and the Strategic and Economic Dialogue – to press China to take these necessary steps.

In addition, expanding U.S. exports to big emerging economies such as China is a priority under the Administration's National Export Strategy to double U.S. exports of goods and services by the end of 2014 – through seeking better compliance by our trading partners with their obligations under the WTO and other trade agreements, by reducing barriers to trade, by negotiating new market-opening agreements, and by more effectively encouraging exports by small and medium-sized U.S. companies. USTR is working closely with the Commerce Department and other agencies on this important Presidential initiative. U.S. goods exports to China increased by 32 percent in 2010, surpassing the growth of U.S. goods imports from China of 23. Since 2001, U.S. goods exports to China are up 379%. In comparison, U.S. goods exports to the rest of the world other than China rose only 67% between 2001 and 2010 (less than one-sixth the rate of exports to China).

The Honorable Frank WOLF: Question 14
According to the WTO, China is the number one country we import from, but the U.S. is not even in the top 5 importers to China. What can the U.S. do to make its trade with China more balanced?

Answer:

There is no one cause for the large imbalances in U.S.-China trade, and there is no one solution. Looking forward from the aftermath of the recent global crisis, we know it will be necessary to continue to reduce global imbalances. This will require higher savings rates in the United States, as we are already seeing. But it will also require a rebalancing of the Chinese economy to become more driven by domestic consumption. I will continue to work with other agencies to encourage China to take steps to increase domestic demand as well as to further open its market

to U.S. goods and services. The Administration intends to use every forum -- including the JCCT and the Strategic and Economic Dialogue – to press China to take these necessary steps.

In addition, expanding U.S. exports to big emerging economies such as China is a priority under the Administration's National Export Strategy to double U.S. exports of goods and services by the end of 2014 – through seeking better compliance by our trading partners with their obligations under the WTO and other trade agreements, by reducing barriers to trade, by negotiating new market-opening agreements, and by more effectively encouraging exports by small and medium-sized U.S. companies. USTR is working closely with the Commerce Department and other agencies on this important Presidential initiative. U.S. goods exports to China increased by 32 percent in 2010, surpassing the growth of U.S. goods imports from China of 23. Since 2001, U.S. goods exports to China are up 379%. In comparison, U.S. goods exports to the rest of the world other than China rose only 67% between 2001 and 2010 (less than one-sixth the rate of exports to China).

The Honorable Frank WOLF: Question 15

Computers and software are some of the U.S.'s most important industries. In 2010, the three largest U.S. companies by market capitalization were Exxon, Microsoft and Apple—with a combined capitalization of nearly a trillion dollars. When two of the three biggest companies in America are in the IP business, protecting intellectual property rights abroad is critical. **Please provide the Committee with further details on USTR plans to allocate resources to China-related IP enforcement?**

Answer:

USTR devotes considerable staff resources to China-related Intellectual Property issues. For USTR, the issue of IP enforcement in China rates as one of our top priorities. Two staff in USTR's Intellectual Property and Innovation office and two staff in USTR's China office devote a majority of their time to China IPR issues. Additionally, at any given time our legal team at the Office of General Counsel will have several attorneys spending considerable time working on the legal aspects of China IPR issues including WTO litigation. Further, the China and IPN AUSTRs both are heavily engaged on China IPR matters as we negotiate with China in the context of bilateral dialogues like the JCCT and the S&ED.

USTR also leverages the resources of a wide variety of US federal partners on China IP matters via its co-chairmanship of the U.S.-China JCCT IPR Working Group, a bilateral dialogue with China under the umbrella of the JCCT which meets at least twice yearly, along with intercessional meetings throughout the year. USTR co-leads this group, which includes agencies like the U.S. Patent and Trademark Office (our co-chair), the Copyright Office, The Justice Department, DOC's International Trade Administration, the State Department, and the Department of Homeland Security (Immigration and Customs Enforcement and Customs and Border Protection). We also work closely with the White House Intellectual Property

Enforcement Coordinator as they do their strong work coordinating the US agencies on IPR enforcement matters, including those in China.

Additionally, USTR's Minister Counselor for Trade at the US Embassy/Beijing provides support for our China IPR-related negotiations, and plays an active role in the Embassy team working on IPR matters, including diplomats from the PTO, Commercial Service Officers, and State Department Economic Officers.

The Honorable Frank WOLF: Question 16

In the USTR's *Special 301 Report,* a section on China notes, "Business software theft by enterprises is particularly troubling as it not only results in lost revenues to software companies but also lowers the business costs of offending enterprises, and may give these firms an unfair advantage against their law-abiding competitors." **Please expand on this—to what extent does intellectual property theft give Chinese companies an unfair advantage?**

Answer:

Chinese companies that engage in intellectual property theft may have an unfair advantage against those that don't in a number of ways. For example, those who steal trademarks and trade names are able to benefit from the significant investments in brand development and name recognition of rights holders. Those who engage in trade secret theft or patent infringement (including securing patent rights in China on others' innovations) similarly allow these companies to unfairly compete in the market by exploiting IPR that they neither paid for, nor took the effort to develop themselves. End-user copyright piracy also allows companies who decline to pay for, for example, generalized and specialized business software or other copyrighted works, to unfairly compete against Chinese and foreign firms who follow the law and spend limited resources on these purchases. While it may be difficult to precisely quantify the extent to which such behavior unfairly advantages firms that engage in it, such advantages clearly add to the overall economic consequences of IPR infringement in China, including lost revenues to rights holders, reduced value of brands associated with rampant counterfeiting, and the economic as well as human and environmental costs of dangerous counterfeit products.

The Honorable Frank WOLF: Question 17

The U.S.-China Economic and Security Review Commission's 2010 report to Congress included a recommendation that Congress urge the Administration to respond to China's currency undervaluation by working with U.S. trading partners to bring to bear on China the enforcement provisions of all relevant international institutions; and using the unilateral tools available to the U.S. government to encourage China to help correct global imbalances and to shift its economy to more consumption-driven growth. **What does the USTR think of this recommendation? Is the U.S. being forceful enough with respect to China's currency undervaluation, particularly as it relates to anti-dumping and countervailing duty activities?**

Answer:

As you know, the Treasury Department is responsible for exchange rate matters. The Treasury Department remains of the view that the Renminbi is substantially undervalued. President Obama reiterated these concerns directly to President Hu during his visit to Washington, stating clearly that we expect China to make greater progress toward a market-based exchange rate. The Administration will continue to engage China bilaterally through the Strategic and Economic Dialogue as well as multilaterally through the G20 process, APEC, and at the IMF, to pursue policies that result in greater flexibility of the exchange rate and contribute to a rebalancing of China's economy to become less reliant on exports and more on domestic demand. Secretary Geithner and Treasury Department are engaging actively with other countries to rally their support in efforts to encourage a rebalancing of the Chinese economy and greater exchange rate flexibility.

The Commerce Department is responsible for administering U.S. anti-dumping and countervailing duty laws so I would refer you to Secretary Locke on that issue.

The Honorable Frank WOLF: Question 18

The U.S.-China Economic and Security Review Commission's 2010 report to Congress included a recommendation that Congress urge the Administration to respond to China's currency undervaluation by working with U.S. trading partners to bring to bear on China the enforcement provisions of all relevant international institutions; and using the unilateral tools available to the U.S. government to encourage China to help correct global imbalances and to shift its economy to more consumption-driven growth. **Has the USTR reached out to any of its international partners with respect to getting China to stop propping up the yuan? It doesn't matter what type of trade agreements the U.S. if China is able to flood our market with subsidized goods.**

Answer:

As you know, the Treasury Department is responsible for exchange rate matters. The Treasury Department remains of the view that the Renminbi is substantially undervalued. President Obama reiterated these concerns directly to President Hu during his visit to Washington, stating clearly that we expect China to make greater progress toward a market-based exchange rate. The Administration will continue to engage China bilaterally through the Strategic and Economic Dialogue as well as multilaterally through the G20 process, APEC, and at the IMF, to pursue policies that result in greater flexibility of the exchange rate and contribute to a rebalancing of China's economy to become less reliant on exports and more on domestic demand. Secretary Geithner and the Treasury Department are engaging actively with other countries to rally their support in efforts to encourage a rebalancing of the Chinese economy and greater exchange rate flexibility.

The Honorable Frank WOLF: Question 19

According to the *U.S.-China Economic and Security Review Commission's* 2010 annual report, China's consumption as a share of GDP has fallen from 46 percent in 2000 to below 36 percent in 2009. In contrast, personal consumption in the United States has hovered around 70 percent of GDP for the last decade. China's government consistently favors policies that promote its exporting industries to the detriment of its trading partners. The party and the government are reluctant to risk China's historically high growth rate with policies meant to encourage consumption instead of the export and investment growth model that has proven so successful over time. **What aggressive steps will the USTR propose in order to seek changes in the Chinese market that will encourage greater openness to U.S. exports?**

Answer:

The Administration has been engaging China bilaterally through the Strategic and Economic Dialogue as well as multilaterally through the G20 process, APEC, and at the IMF, to pursue policies that result in a rebalancing of China's economy to become less reliant on exports and more on domestic demand. Secretary Geithner and the Treasury Department are engaging actively with other countries to rally their support in efforts to encourage a rebalancing of the Chinese economy. I will continue to work with other agencies to encourage China to take steps to increase domestic demand. We are also pressing China to further open its market to U.S. goods and services, and I will be working with my colleagues in other agencies to utilize every forum -- including the JCCT and the Strategic and Economic Dialogue – to urge China to take these necessary steps.

The Honorable Frank WOLF: Question 20

The U.S. Trade Representative offers a program, initially authorized under the *Trade Act of 1974* that is designed to encourage economic development in lower income countries by offering preferential duty-free U.S. market access to imports from countries covered by these programs. The imports cannot be the same as any products manufactured in the United States. An example would be coffee from Ethiopia. Such imports totaled about $80 billion in 2010, up 33% from $60 billion in 2009. **What are the benefits of this program?**

Answer:

Congress has established several trade preference programs, such as the Generalized System of Preferences (GSP) and the African Growth and Opportunity Act (AGOA), designed to encourage economic development in lower income countries by offering duty-free U.S market access to imports from countries covered by these programs. For developing countries, including many of the poorest countries in the world, U.S. preference programs create new trade opportunities and are an effective way to encourage broad-based economic development. Since beneficiary countries must also meet certain statutory eligibility criteria with respect to opening markets, implementing economic reforms, and strengthening labor and human rights, U.S. preference programs also help to promote good governance and economic liberalization. Preference programs also support U.S. jobs and help keep U.S. companies competitive. Many imports under these programs are used as inputs by U.S. companies to manufacture goods here in the

United States. The programs also help American families on a budget by lowering prices on consumer goods.

Unfortunately, congressional authorization for two U.S. preference programs – GSP and the Andean Trade Preference Act (ATPA) – ended on December 31, 2010 and February 12, 2011, respectively. The lapse in GSP and ATPA authorization has already cost U.S. businesses millions of dollars in additional import duties, increased costs to American manufacturers and consumers, and undercut efforts by poor countries to grow their economies and fight poverty. If the programs are not reauthorized soon, many U.S. importers may be forced to find other sources for their GSP and ATPA imports, raising costs for all and undermining the development objectives of the programs.

The Honorable Frank WOLF: Question 21

The U.S. Trade Representative offers a program, initially authorized under the *Trade Act of 1974* that is designed to encourage economic development in lower income countries by offering preferential duty-free U.S. market access to imports from countries covered by these programs. The imports cannot be the same as any products manufactured in the United States. An example would be coffee from Ethiopia. Such imports totaled about $80 billion in 2010, up 33% from $60 billion in 2009. **How does the USTR ensure that these imports are not hurting U.S. businesses?**

Answer:

The statutes governing U.S. preference programs include provisions designed to minimize the negative impact of trade preferences on the U.S. economy. For example, the statute governing GSP excludes from the program import-sensitive articles such as certain textiles and apparel and certain steel products. GSP imports are also subject to a "competitive need limitation" which takes into account whether any industry in the United States is likely to be adversely affected by imports of GSP products from specific countries, once those imports have surpassed a certain, statutorily-defined limit. U.S. businesses that believe they are being harmed by imports under U.S. preference programs may petition USTR to remove specific products from the program. USTR reviews such petitions, in consultation with other agencies and consistent with the guidelines provided in the GSP statute and regulations, and makes recommendations to the President on whether the subject products should be removed from GSP coverage.

Please note that the introduction to the question above contains two mistaken assertions: 1) It is not accurate to say that "imports [covered by preference programs] cannot be the same as any products manufactured in the United States." As described above, the GSP statute excludes certain import-sensitive products, but it does not exclude *all* products manufactured or produced in the United States. 2) Coffee is not an example of a product covered by preference programs. There is no import duty on coffee, no matter its country of origin.

The Honorable Frank WOLF: Question 22

The WTO Doha Round of multilateral trade negotiations, begun in November 2001, has entered its 10th year. The negotiations have been characterized by persistent differences among the United States, the European Union, and developing countries on agriculture, industrial tariffs and non-tariff barriers, services, and trade remedies. **What are the USTR's main concerns with respect to the Doha Round?**

Answer:

USTR is concerned that the Doha Round has not yet produced ambitious market-opening outcomes that would advance the interests of U.S. exporters of agricultural and industrial goods and services. The fundamental imbalance in the current state-of-play is that while the scope of U.S. contributions are clear (in tariff reductions or reductions in farm subsidies, for example), there is no similar clarity in the degree to which large developing country WTO Members would be opening their own markets. Extensive engagement with key players in recent months has confirmed that the size of the gaps in market access ambition is unacceptably large. The United States will continue working with any willing partners to explore solutions to this negotiating challenge and, if necessary, to explore next steps that could lead in a more productive direction.

The Honorable Frank WOLF: Question 23

The WTO Doha Round of multilateral trade negotiations, begun in November 2001, has entered its 10th year. The negotiations have been characterized by persistent differences among the United States, the European Union, and developing countries on agriculture, industrial tariffs and non-tariff barriers, services, and trade remedies. **Will the U.S. be able to get concessions from emerging economies if we lower our import duties?**

Answer:

By virtue of the current negotiating state-of-play, the United States has made clear its willingness to substantially liberalize import duties as part of an overall acceptable balance in a final Doha outcome. The current negotiating texts make clear that, at the end of the negotiation, the United States would maintain no industrial tariff rates higher than 7 percent, and the trade-weighted industrial tariff average for the United States would be 0.7 percent. Despite this, key trading partners are not yet showing a willingness to liberalize their own tariffs in a meaningful manner. For example, under the current negotiating outlines, China would be able to maintain tariffs as high as 50 percent on some industrial products. India would be able to avoid real cuts into the tariffs currently applied on 97 percent of industrial goods. And Brazil would be able to leave untouched almost half of its current applied tariffs. The United States will continue to defend the position that our willingness to cut U.S. tariffs must be matched by appropriate tariff-cutting ambition on the part of key partners, particularly those enjoying considerable success as exporters.

The Honorable Frank WOLF: Question 24

An opinion piece Ambassador Kirk wrote on March 11 of this year states that "China will be an enormous winner from a Doha agreement." Following their entry into the WTO, China's manufacturing output soared. **How does the U.S. balance the playing field? What is the USTR pushing for in the negotiations that will ensure that the U.S. gets as much as it gives with respect to China?**

Answer:

We have made clear to China and other key trading partners that the Doha Round requires additional work to provide our producers with not only greater certainty regarding the new market access already on the table, but also greater certainty that our key partners, including China, will be making market access contributions commensurate with their role in the global economy. We have had vigorous bilateral engagement with China in recent months on issues related to Doha's market access pillars of industrial goods, services, and agriculture. While we have appreciated China's engagement, it is clear that China is currently not prepared to make contributions in market access that would constitute a viable overall package. We will continue working with China and other partners to explore ways and means of narrowing the substantial current gaps in ambition.

The Honorable Frank WOLF: Question 25

The U.S/Colombia Free Trade Agreement was signed in 2006, but has not yet been sent to the Congress. **Does the USTR believe that Colombia has sufficiently addressed concerns regarding anti-labor violence?**

Answer:

The Administration has engaged intensively with the Colombian government to address our outstanding concerns related to the United States-Colombia Trade Promotion Agreement. As a result of this engagement, President Obama and President Santos announced on April 7 an ambitious and comprehensive Action Plan Related to Labor Rights. The plan includes major, swift and concrete steps Colombia will take to address the protection of internationally recognized labor rights, the prevention of violence against labor leaders, and the prosecution of perpetrators of such violence. On May 4 Ambassador Kirk notified Congress that we have determined that Colombia has taken the steps necessary under the Action Plan to move to the next stage in the process for consideration of the Agreement – beginning technical discussions with Members of Congress on the draft implementing bill and daft Statement of Administrative Action.

The Honorable Frank WOLF: Question 26

The U.S/Colombia Free Trade Agreement was signed in 2006, but has not yet been sent to the Congress. **Why hasn't the Administration sent this agreement to the Congress?**

Answer:

Colombia still has important work to accomplish to address the objectives of the Action Plan before the President will formally submit the Agreement to Congress for consideration, but we are working intensively with the Colombian government toward that end.

The Honorable Frank WOLF: Question 27

The U.S./Panama Free Trade Agreement was agreed to in 2007, with subsequent changes to labor, environment, and intellectual property rights issues following congressional input. Some 88% of U.S. commercial and industrial exports would become duty-free upon implementation, with remaining tariffs phased out over a 10-year period. Over 60% of U.S. farm exports to Panama also would achieve immediate duty-free status. The Congress has not yet taken up the Agreement. **Why is the Panama Free Trade Agreement so important?**

Answer:

Panama is one of the fastest growing economies in Latin America, expanding 7.5 percent in 2010, with similar annual growth forecast through 2015. This comprehensive Agreement will eliminate tariffs and other barriers to U.S. exports, promote economic growth, and expand trade between our two countries. As you note, 87 percent of U.S. exports of consumer and industrial products to Panama will become duty-free immediately, with remaining tariffs phased out over ten years. U.S. agricultural exports will also benefit. Over half of current trade will receive immediate duty-free treatment, with most of the remaining tariffs to be eliminated within 15 years. The Agreement guarantees access to Panama's $20.6 billion services market, including in priority areas such as financial, telecommunications, computer, distribution, express delivery, energy, environmental, and professional services. Since construction of the Panama Canal in 1914, the United States and Panama have built a strong friendship and strategic partnership and the Agreement provides us with the opportunity to reinforce our historic ties with Panama as equal partners.

The Honorable Frank WOLF: Question 28

The U.S./Panama Free Trade Agreement was agreed to in 2007, with subsequent changes to labor, environment, and intellectual property rights issues following congressional input. Some 88% of U.S. commercial and industrial exports would become duty-free upon implementation, with remaining tariffs phased out over a 10-year period. Over 60% of U.S. farm exports to Panama also would achieve immediate duty-free status. The Congress has not yet taken up the Agreement. **Why didn't the President stop there on his recent visit?**

Answer:

President Obama met with President Martinelli of Panama at the White House on April 28. At that meeting, the President commended President Martinelli for recent reforms that will encourage economic growth and create a more level playing field for U.S. companies and reaffirmed our readiness to move forward with the U.S.-Panama Trade Promotion Agreement.

The Honorable Frank WOLF: Question 29

The U.S./Panama Free Trade Agreement was agreed to in 2007, with subsequent changes to labor, environment, and intellectual property rights issues following congressional input. Some 88% of U.S. commercial and industrial exports would become duty-free upon implementation, with remaining tariffs phased out over a 10-year period. Over 60% of U.S. farm exports to Panama also would achieve immediate duty-free status. The Congress has not yet taken up the Agreement. **Has Panama addressed U.S. concerns with respect to its "tax haven" status?**

Answer:

In February, USTR officials met with Panamanian officials and agreed on a set of actions related to labor and tax transparency that, when completed, would ready the Agreement for Congressional consideration. In April, Panama fulfilled its commitments regarding those actions. On April 18, I sent a letter to the Chairmen and Ranking Members of the Senate Committee on Finance and the House Committee on Ways and Means reporting that we have completed our preparatory work on the Agreement and am ready to begin technical discussions with Members of Congress on the draft implementing bill and draft Statement of Administrative Action. The first technical discussions were held on May 5. Panama signed the Tax Information Exchange Agreement (TIEA) with our Treasury Department on November 30, 2010. It was ratified on April 13, 2011 and entered into force on April 18, 2011.

The Honorable Frank WOLF: Question 30

What is the status of the Trans-Pacific Partnership agreement and why is it important?

Answer:

The sixth negotiating round of the Trans-Pacific Partnership took place in Singapore during the week of March 20th. During this round, the United States and other TPP countries made substantial headway toward a key goal of developing the legal texts of the agreement, which include commitments covering almost all aspects of their trade and investment relationship. We also continued negotiations on market access for goods and agriculture, rules of origin, and government procurement. Preparations are underway for the next round, to be held in Vietnam the week of June 20th.

The TPP is important for economic and broader reasons. Through this agreement, we are seeking to support the creation and retention of high-quality jobs at home by increasing American exports to a region that includes some of the world's most robust economies and that represents more than 40 percent of global trade. Starting with eight other like-minded countries, we are seeking an agreement that reflects new ways of addressing the types of trade and investment problems U.S. companies and workers face in the 21st century and that can expand to include countries across the Asia Pacific.

The Honorable Frank WOLF: Question 31
What new Free Trade Agreements does USTR anticipate will be next on the horizon?

Answer:

The United States is currently negotiating the Trans-Pacific Partnership (TPP) regional trade agreement. The TPP is a cutting edge, 21st century trade agreement that will serve as a platform for trade and economic integration in the world's most dynamic region. Over the past year, the TPP has grown to include nine countries – Australia, Brunei, Chile, Peru, Malaysia, New Zealand, Singapore, Vietnam, and the United States. The TPP will welcome additional Asia-Pacific member countries as they become ready to meet the high standards that the current nine countries are negotiating.

The Honorable Frank WOLF: Question 32
The President announced a plan last month to review the various trade agencies.
What are the USTR's thoughts on such reorganization particularly with respect to putting the U.S. Trade Representative in this new department as has been theorized?

Answer:

The President is working with Jeff Zients, the first federal Chief Performance Officer, to take a hard look at how we can better organize federal programs and functions, focusing first on the federal agencies and programs involved in Trade, Exports and Competitiveness. We are working closely with them as they analyze their scope and effectiveness, areas of overlap and duplication, unmet needs, and possible cost savings. The President asked for recommendations for potential Congressional action to restructure and streamline government programs focused on trade and competitiveness within 90 days of the date of the memorandum.

The Honorable Tom GRAVES: Question 1
On April 5, 2011, I wrote the attached letter asking you to represent in detail how your Agency would operate with a 25 percent reduction in funds, a 20 percent reduction in funds and a 10 percent reduction in funds. **Will you provide the Committee with a copy of the reply for the record? (LETTER ATTACHED)**

Answer:

We want to assure you that USTR continues to make the tough choices necessary to help reduce the deficit and reform the government so that it's leaner and smarter for the 21st century. The President's FY 2012 Budget request for USTR reflects policy priorities critical to continuing our mission of expanding export opportunities for American workers, farmers, ranchers, and service providers. It also reflects the difficult choices USTR has and will continue to make in allocating scarce resources across competing demands.

In response to how USTR would operate under the funding scenarios of a 10, 20, and 25 percent reduction in funds, any of these reductions would critically impact USTR's ability to assist the President and the Congress in the effort to create and maintain jobs at home by increasing exports of American goods and services. Reductions of this nature would result in insufficient resources to produce high-standard, job-creating trade agreements; hold trading partners to their commitments as we have promised the American people we will do; eliminate trade barriers that keep American products and services out of foreign markets; and open new markets for those U.S goods and services.

USTR will continue to scrutinize our spending plans to ensure that they support our mutual goal of economic growth. We look forward to working with you on this issue in the coming months.

The Honorable Tom GRAVES: Question 2

In the 2011 Trade Policy Agenda, you and your staff highlighted several initiatives meant to boost United States exports. Like the Chairman and others on this committee, I have concerns about our large trade deficit. Increased exports are necessary to help the American economy, and the manufacturing industry in particular that is so important to my District. That is why I am concerned at the impact of the federal budget deficit on United States exports. As you know, foreign buyers spend billions on Treasury securities -- $750 billion in 2010. And the more they loan to us, the less they are able to spend on American exports. **Has your office evaluated the contribution that our foreign deficit borrowing makes to our trade differential?**

Answer:

Trade policy is important for opening foreign markets and expanding labor productivity and higher wage job opportunities. The trade deficit, however, is influenced more by macroeconomic factors such as differences in national rates of economic growth and patterns of saving and investment. These issues generally fall within the domain of the Treasury Department, which could provide a more comprehensive response to your question.

The Honorable Tom GRAVES: Question 3

Is it reasonable to assume that a significant portion of that $750 billion would have been used to invest in American exports and the American private sector?

Answer:

The Treasury Department is responsible for issues pertaining to foreign portfolio investment in the United States and could answer this question more fully.

The Honorable Chaka FATTAH: Question 1

The USTR budget request includes an initiative to encourage small and medium enterprises to export. **Please explain the types of outreach efforts the USTR staff will be undertaking in this regard.**

Answer:

USTR is focused on making trade work to benefit small and medium businesses, helping them increase their sales to customers abroad and thus create jobs at home. We do this by negotiating with foreign governments to open their markets, reducing trade barriers, and enforcing our existing trade agreements to ensure a level playing field for American workers and businesses of all sizes. Agency-wide, we are working to better integrate small business issues and priorities into our trade policy, and increase our outreach to small businesses.
As part of our Small Business Initiative, I designated an Assistant USTR to help coordinate small business interests within the agency. I requested the U.S. International Trade Commission to prepare a series of reports on SMEs and trade to help guide our activities, and increased small business representation on our industry advisory committees.
Under the SME initiative, USTR's small business office, working closely with USTR's geographic and functional offices, is developing ideas and advancing efforts to enhance activities that could benefit SMEs.

To better reflect small business interests in our interagency trade policy process, USTR formally invited the Small Business Administration to participate in the USTR-led Trade Policy Staff Committee process for developing U.S. trade policy across issue areas, and SBA is now a fully participating member of the TPSC. Additionally, USTR actively participates in the Trade Promotion Coordinating Committee (TPCC) SME Working Group chaired by SBA under the National Export Initiative, which is tasked with marshaling government resources in identifying and assisting small and medium-sized business to begin or expand their exports.
I and my staff have been actively participating in events around the country to hear directly from local small businesses, workers and other stakeholders about the trade opportunities and challenges they face. The updated Small Business section of the USTR website (www.ustr.gov) also includes helpful links, fact sheets and resources for small business.

On an interagency basis, USTR is working with the TPCC to improve trade information relevant for small business on the government's one-stop platform, www.export.gov. In April, USTR, Commerce and SBA unveiled a new free online tool to help our small businesses take better advantage of export opportunities with our 17 Free Trade Agreement partners and prospective partners. The FTA Tariff Tool – available at www.export.gov -- empowers small businesses and members of the public to perform searches for tariff treatment for specific industrial products under each trade agreement instantly without having to interpret complicated texts.

The Honorable Chaka FATTAH: Question 2

In March 2011, USTR issued the 2011 National Trade Estimates report which catalogs the unfair trade practices of U.S. trading partners that limit or exclude U.S. goods and services from

entering their markets. The report spans nearly 400 pages. **As we seek ways to promote economic growth and create jobs, what is USTR's vision as to how, going forward, we can aggressively reduce the size of this catalog, and ensure that overseas trade barriers are removed? Is the USTR's budget request truly sufficient to undertake this task?**

Answer:

USTR is committed to leveraging its resources, the resources of other agencies, and the cooperation of other countries in as efficient and effective a manner as possible to address a variety of trade practices that limit or exclude U.S. goods and services from entering foreign markets. We seek to address these issues through discussion, negotiation, and, where necessary, dispute settlement proceedings. Negotiating new agreements also resolve enforcement concerns as they provide new tools and fora with which to address them. Recognizing that circumstances are constantly evolving, the National Trade Estimate is a useful tool to indicate areas of concern and focus for USTR's efforts. Although it is likely that we will always be faced with the prospect that the number of practices to be addressed exceeds the agency's budgetary capacity, USTR will continue to set priorities and work to resolve important trade issues with the resources available to it. USTR's budget request balances mission priorities with the reality of the fiscal challenges facing the federal government.

The Honorable Chaka FATTAH: Question 3

The President has outlined his National Export Initiative, including an ambitious goal of doubling U.S. exports. **Are enough resources being devoted to enforcing our trade laws to open foreign markets to our products and to tear down existing barriers rather than putting a priority on simply negotiating new Free Trade Agreements which require us to further open our own market to more imports? Does USTR view the National Trade Estimates report as providing a roadmap toward protecting and creating jobs in the U.S. by eliminating unfair trade practices overseas?**

Answer:

USTR is committed to leveraging its resources, the resources of other agencies, and the cooperation of other countries in as efficient and effective a manner as possible to address a variety of trade practices that limit or exclude U.S. goods and services from entering foreign markets. We seek to address these issues through discussion, negotiation, and, where necessary, dispute settlement proceedings. Negotiating new agreements also resolves enforcement concerns as they provide new tools and fora with which to address them. Recognizing that circumstances are constantly evolving, the National Trade Estimate (NTE) is a useful tool to indicate areas of concern and focus for USTR's efforts. The NTE also serves to illuminate the changes that have occurred over time regarding a specific barrier or problem. Utilizing the NTE will allow USTR

to continue to set priorities in addressing unfair trade practices and work to resolve the most important trade issues with the resources available to it.

The Honorable Chaka FATTAH: Question 4

A recent economic report tracked America's export performance and indicated that US exports to non-FTA partners were growing at a faster rate than exports to countries with which we have free trade agreements. **In looking at how we can best promote job creation, isn't there a case to be made for devoting more resources toward enforcing trade laws, rather than for negotiating new Free Trade Agreements?**

Answer:

Although it is not clear what recent economic report is referenced, in fact, the growth of goods exports to FTA partners, whether including our older agreements (NAFTA and Israel whose rate of growth is expected to be slower than the newer FTAs given the age of the agreements) or not, was greater than the growth to non-FTA partners. Based on official import statistics, goods exports to FTA partners grew 23 percent in 2010 compared to the 20 percent growth to our non-FTA partners. The United States market is largely open, and more open than the markets of a number of our trading partners. FTA negotiations encourage further market opening by our prospective FTA partners. In FTA negotiations, FTA partners grant additional concessions and undertake additional obligations beyond those specified in the various WTO agreements, commitments that are themselves typically enforceable through strong dispute settlement procedures. Increased US exports are aided both by removing barriers to trade through negotiation of free trade agreements as well as by vigilant enforcement of U.S. trading rights under existing agreements.

The Honorable Chaka FATTAH: Question 5

How much of USTR's budget and workforce are devoted to enforcement of trade laws, and how much are devoted to negotiation of new trade agreements?

Answer:

USTR's FY 2012 budget would use $12.5 million and 62 full time equivalents (FTE) for enforcement of trade laws, 24% of its proposed budget, and $11.6 million and 48 FTE, 23 % of its proposed budget, for negotiation of new trade agreements.

The Honorable Chaka FATTAH: Question 6

The fiscal year 2012 budget request includes funding for 16 new staff, but only 3 of these appear dedicated specifically to enforcement. Is this correct? I strongly support the President's National Export Initiative. **But don't we need more resources in the area of enforcement, in**

order to help increase U.S. exports? Insofar as Congress can use the appropriations process to help promote job creation, wouldn't it make sense to further beef up the USTR's enforcement staffing?

Answer:

Yes, three of the new staff resources will be dedicated specifically to enforcement. In recent years, USTR increased the number of attorneys assigned to the Offices of the General Counsel and Monitoring and Enforcement.

USTR was faced with many competing priorities in the process of formulating its zero-based budget. Enforcement is a high priority. USTR is also faced with legal, statutory, and Congressional requirements that require resources. In addition, USTR must provide staff to support Administration trade priorities, including efforts to promote the ability of small and medium enterprises to export their goods and services and to negotiate important new market-opening trade agreements, such as the proposed Trans-Pacific Partnership Agreement. In these challenging financial times, we balanced priorities and have identified the level needed to cover our anticipated enforcement needs.

The Honorable Chaka FATTAH: Question 7

Ambassador Kirk, since taking office, the Administration has brought just one labor rights case – against Guatemala. **How much of USTR's resources are being devoted to this important area? Is USTR making informal progress behind the scenes on labor rights issues, such that formally bringing labor rights cases is not necessary? Does USTR see labor rights as an important area of concern and, if so, how will USTR build confidence that the issue of labor rights remains a strong priority for the Administration?**

Answer:

Monitoring and enforcing the provisions of our trade agreements is a critical priority for USTR and we devote significant staff resources to this important area. USTR's Office of Labor Affairs has three professional staff exclusively dedicated to addressing labor rights, particularly with regard to obligations under trade agreements. USTR regional offices, the Office of the General Counsel, and others also devote significant time in this area. USTR works closely with the Department of Labor and the Department of State to ensure compliance, including by undertaking missions to monitor labor conditions in FTA partner countries and to engage governments, workers, employers, and other stakeholders to address concerns. Under the Obama Administration, USTR has sent teams to FTA partners Jordan, Oman, Bahrain, Morocco, Guatemala, and Peru. We will continue to monitor labor conditions in FTA partner countries and engage with FTA partners to ensure that they are complying with their labor commitments. As demonstrated by the Guatemala case, where we do not see sufficient progress, we are prepared to use all options available to us.

The Honorable Chaka FATTAH: Question 8
Does USTR have data as to how many labor rights concerns USTR has informally communicated, and how many of these have been resolved favorably? Does USTR plan to formally bring additional labor rights cases in the near future?

Answer:

USTR and other agencies regularly communicate with FTA partners and other countries about labor rights matters. These may be matters brought to our attention through the formal FTA public submission process, our own monitoring efforts, or less formal communications from the public. Such communications often result in progress on addressing labor rights concerns; however, we do not keep data on the results of informal communications. The results of our monitoring efforts and engagement will dictate whether we would bring other cases.

The Honorable Chaka FATTAH: Question 9
Overall, does USTR have data or information on USTR's informal enforcement activity, informal consultations to resolve trade disputes with other countries, and the numbers of jobs that were created or preserved as a result of these informal communications? What level of resources is USTR devoting toward this work?

Answer:

USTR does not have statistical information regarding the informal activities it undertakes to resolve trade disputes or jobs effects resulting from those activities. USTR uses a range of informal means, short of formal dispute settlement proceedings, to urge foreign governments to comply with agreements or otherwise to resolve trade disputes, including meetings of WTO and FTA committees and other bilateral and plurilateral fora.

The Honorable Chaka FATTAH: Question 10
Existing law provides for a variety of advisory committees to ensure the broadest amount of input from the private sector in developing and implementing trade policy. Currently, organized labor representatives serve on the Advisory Committee for Trade Policy and Negotiations as well as on the Labor Advisory Committee. Federal law also requires representation by organized labor on the Industry Trade Advisory Committees, or ITACs. However, at the present time, there are no labor representatives serving on any Industry Trade Advisory Committees. **Does USTR intend to appoint representatives of organized labor to the Industry Trade Advisory Committees? What is the status of USTR's efforts in this regard?**
Answer:

As you have noted, USTR has greatly expanded the representation of Labor representatives in the Advisory Committee system. We have added additional labor representatives to the ACTPN

and have expanded the number of representatives on the tier two Labor advisory committee. We are currently considering whether to add Labor representatives to some of the tier 3 advisory committees. USTR co-administers the ITAC's with the Department of Commerce and together we have consulted with a range of stakeholders on the issue of the makeup of our advisory committees. We issued a Federal Register notice for comments, and are currently in the process of getting the views from members of our oversight committees. We hope to resolve this matter in the near future.

The Honorable Chaka FATTAH: Question 11

It was reported in March 2011 that the President is directing the Administration to develop a plan to reshape the Federal Government that may include folding the U.S. Trade Representative's office into the Commerce Department. The former U.S. Trade Representative, Susan Schwab, has said that this would not be a good idea, and that if trade negotiators were to be moved into the Commerce Department, the function would need to be recreated in the White House to coordinate trade policy with other agencies with expertise and legitimate interests. What is USTR's view of this?

Answer:

The President is working with Jeff Zients, the first federal Chief Performance Officer, to take a hard look at how we can better organize federal programs and functions, focusing first on the federal agencies and programs involved in Trade, Exports and Competitiveness. We are working closely with them as they analyze their scope and effectiveness, areas of overlap and duplication, unmet needs, and possible cost savings. The President asked for recommendations for potential Congressional action to restructure and streamline government programs focused on trade and competitiveness within 90 days of the date of the memorandum.

The Honorable Chaka FATTAH: Question 12

With regard to Russia's negotiations for entry into the World Trade Organization, does USTR believe that any Cold War-era laws in the United States need to be changed to allow Russia's entry into the WTO?

Answer:

In order for the United States to realize the benefits of Russia's membership in the WTO, including access to WTO dispute settlement procedures to enforce our rights, Congress needs to enact legislation ending the application of the "Jackson-Vanik" amendment and authorizing the President to provide Russia's goods permanent normal trade relations treatment (PNTR). Enacting such a bill is an important trade priority for President Obama.
The Administration strongly supports Russia's efforts to join the World Trade Organization (WTO). We have been working with Russia's negotiators to bring Russia's trade regime into compliance with WTO requirements and to provide additional market opportunities for U.S. exports of goods and services. Under WTO rules, the United States and other WTO Members

have an obligation to provide Russia PNTR (known internationally as unconditional most-favored nation treatment). If the United States does not provide PNTR to Russia, the United States must invoke the "non-application" provisions of the WTO Agreement.
The Jackson-Vanik amendment was enacted in 1974, and has as its objective ensuring freedom of emigration for the Jewish population of what was then the Soviet Union. The amendment conditions receipt of normal trade relations status on meeting conditions that are set out in the trade act. Russia has been found in compliance with Jackson-Vanik every year since 1994 and the objective of ensuring freedom of emigration has been achieved.

The Honorable Chaka FATTAH: Question 13

China has now adopted its 12th five-year plan. In conjunction with that plan, China has announced that $1.5 trillion in government support will be devoted to achieving its goals. The Chinese are actively promoting development of their so-called "heavyweight" industries – telecommunications, steel, aerospace, autos and several others. I have several questions relating to this:
What is USTR doing to evaluate China's plans?

Answer:

USTR is following closely the development of China's 12th five-year plan. Many of the detailed policy measures that would contain the relevant specifics have not yet been announced, but we are watching closely for them. They will likely include numerous new rules and regulations to implement policies outlined so broadly in the plan that it is not possible to determine yet whether they raise problems or not. As information becomes available, we will be evaluating whether any of these policy measures are likely to negatively affect U.S. Companies and U.S. Investors in China, and will work actively to press China to address any of the concerns we identify.

We note that a key theme of China's five-year plan appears to be the development of seven "strategic emerging industries," which include high-end equipment manufacturing, energy saving and environmentally-friendly technologies, biotech, new generation information technology, alternative energy, advanced materials and alternative-fuel cars. We are closely monitoring China's implementation of this particular aspect of the five-year plan, and we are taking every opportunity to urge China to ensure that, in adopting and implementing policies, regulations and laws related to the development of these emerging industries, U.S. Companies and U.S. Investors will be provided with non-discriminatory treatment, and that china will adhere to all of its relevant WTO commitments.

The Honorable Chaka FATTAH: Question 14

China has now adopted its 12th five-year plan. In conjunction with that plan, China has announced that $1.5 trillion in government support will be devoted to achieving its goals. The Chinese are actively promoting development of their so-called "heavyweight" industries – telecommunications, steel, aerospace, autos and several others. **How should the U.S. respond to China's subsidies?**

Answer:

USTR continues to aggressively enforce our trade agreements to ensure an open and rules-based trading system. This includes defending U.S. WTO rights and holding China and our other trading partners to their WTO obligations, including in the area of subsidies. To date, we have successfully brought two WTO cases in which we challenged Chinese subsidies as prohibited under WTO rules, and a third WTO case addressing Chinese subsidies initiated in December 2010 is pending. Through these enforcement actions, we are leveling the playing field for U.S. stakeholders, and ensuring that China adheres to the commitments it made when it joined the WTO. Going forward, we are monitoring closely China's implementation of the recently adopted 12th five-year plan in an effort to ensure that China fully adheres to WTO subsidies disciplines.

The Honorable Chaka FATTAH: Question 15

China has now adopted its 12th five-year plan. In conjunction with that plan, China has announced that $1.5 trillion in government support will be devoted to achieving its goals. The Chinese are actively promoting development of their so-called "heavyweight" industries – telecommunications, steel, aerospace, autos and several others. **Approximately how many qualified speakers of Mandarin Chinese are employed by USTR?**

Answer:

While USTR is a small agency, we have do have at least 6 Chinese speakers on staff, in addition to a number of temporary workers with strong language skills, and we have access to Mandarin speakers, as well as expert translation services, through many other parts of the US government.

The Honorable Chaka FATTAH: Question 16

China has now adopted its 12th five-year plan. In conjunction with that plan, China has announced that $1.5 trillion in government support will be devoted to achieving its goals. The Chinese are actively promoting development of their so-called "heavyweight" industries – telecommunications, steel, aerospace, autos and several others. **Has USTR had sufficient funds in recent years for translation services generally? Didn't USTR encounter budget problems in this area in 2009?**

Answer:

Translation services are a highly unpredictable budget item. Our standard budget for language services is $400K per year. In any given year, circumstances may call for funding that is more or less than that amount; we reprioritize as needed during the year to ensure our high priority language services are covered.

USTR spent approximately $150K in December 2009 (Q1 FY 2010) on language services in support of the China Poultry investigation. This represented approximately 40% of our annual budget for language services. Because the investigation took such a significant percentage of our language services budget early in the fiscal year, it became imperative that our negotiators work with the other partner federal agencies to have them help cover future costs. This cross-agency collaboration was successful.

The Honorable Chaka FATTAH: Question 17

China has now adopted its 12th five-year plan. In conjunction with that plan, China has announced that $1.5 trillion in government support will be devoted to achieving its goals. The Chinese are actively promoting development of their so-called "heavyweight" industries – telecommunications, steel, aerospace, autos and several others. **In light of the recent WTO decision attacking U.S. countervailing duty law provisions, how can the U.S. respond to China's subsidies? What is the U.S. government going to do about the WTO's decision?**

Answer:

We consider that the Appellate Body report's reasoning is based on a number of problematic assertions and assumptions, especially with respect to the interpretation of the term "public body" and China's claims related to the concurrent application of countervailing duties and non-market economy anti-dumping duties. However, as a WTO Member, we intend to comply with our WTO obligations and are carefully considering how to do so. Importantly, the Appellate Body's report does not find any U.S. law or regulation to be inconsistent with our WTO obligations. This provides a degree of flexibility in implementing the recommendations of the Dispute Settlement Body and in addressing the issues of concern going forward. It should also be noted that the Appellate Body report did uphold many important aspects of the determinations made by the Department of Commerce, such as in the area of state-owned commercial banks.

The Honorable Norman DICKS: Questions 1- 4

On July 1, 2010 the European Union border was closed for imports of US shellfish. It is my understanding that the Food and Drug Administration has provided all relevant information to the EU to allow them to determine the safety of US shellfish exports, and the EU has been sitting on this data since last year.

The main point of contention appears to be the application of 7 EU countries to the FDA to be approved to export shellfish to the United States. I understand that the FDA is planning to send personnel to Europe this month to assess the sanitary conditions of the applicants, which should help move the process along. But it is still unclear as to when we can expect a resolution to this case.

Please provide an update on the status of the international discussions on this ban:

When does USTR anticipate that the EU will make a decision on the safety of US exports?

What is the USTR doing to reach a faster resolution to this case?

What would our options be if this were to happen?

Is the USTR laying any groundwork to prepare for a prolonged dispute?

Answer:

USTR continues to work with FDA and the relevant trade and regulatory authorities in Europe to resolve this important trade concern. FDA is reviewing EU sanitary conditions of applicants. While U.S. authorities believe the EU has sufficient information, we are awaiting confirmation from the EU that it has the relevant data to make a safety determination for U.S. shellfish so that U.S. exports can resume. USTR has continued to press the EU that its decision on the safety of U.S. shellfish is independent from FDA actions. Each decision must be made on the basis of the scientific evidence presented. These are not reciprocal determinations and do not need to progress on the same time line. USTR is committed to working to resolve this matter as a high priority.

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