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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR 2009

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT

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NOTE: Under Committee Rules, Mr. Obey, as Chairman of the Full Committee, and Mr. Lewis, as Ranking Minority Member of the Full Committee, are authorized to sit as Members of all Subcommittees.

DIXON BUTLER, TERRY TYBOROWSKI, TAUNJA BERQUAM, ROBERT SHERMAN, and LORI MAES, *Staff Assistants*

PART 7

DEPARTMENT OF ENERGY

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PART 7—ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR 2009

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ENERGY AND WATER DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR 2009

THURSDAY, FEBRUARY 14, 2008.

OVERVIEW HEARING—VEHICLE TECHNOLOGY AND GAS PRICES

WITNESSES

DAVID L. GREENE, CORPORATE FELLOW, OAK RIDGE NATIONAL LABORATORY, CENTER FOR TRANSPORTATION ANALYSIS

BOB DINNEEN, PRESIDENT AND CEO, RENEWABLE FUELS ASSOCIATION

MARY BETH STANEK, DIRECTOR OF ENVIRONMENT AND ENERGY POLICY AND COMMERCIALIZATION, GENERAL MOTORS CORPORATION

DON HILLEBRAND, DIRECTOR OF CENTER FOR TRANSPORTATION RESEARCH, ARGONNE NATIONAL LABORATORY

LYNDA L. ZIEGLER, SENIOR VICE PRESIDENT OF CUSTOMER SERVICE, SOUTHERN CALIFORNIA EDISON

TOM STRICKER, DIRECTOR, TECHNICAL AND REGULATORY AFFAIRS, TOYOTA MOTOR NORTH AMERICA

CHAIRMAN VISCLOSKY'S OPENING STATEMENT

Mr. VISCLOSKY. Bringing the hearing to order. Sorry about our tardy beginning, but there was at least a chance we were going to have a new vote, and we are not. So we should have at least an hour uninterrupted.

Before I do begin my opening statement, I want to welcome back home Mr. Rehberg to the subcommittee. And, Mr. Calvert, welcome to the subcommittee. I think you are going to enjoy it, and we will appreciate having your contribution as we proceed.

As we begin today's hearings, I, first of all, do want to thank Terry Tyborowski for all of her extraordinary effort. I think all of you have had some extended dealings and conversations with Terry for being the lead staff in today's hearing. Time was short, our needs great, and all of us do expect a very informative and productive hearing.

The Subcommittee on Energy and Water Development meets today to hear testimony on an energy issue, one that is impacting the wallets of every American, the rising price of gasoline. In January 2003, the average retail price of a gallon of gasoline in the United States was $1.50, roughly equal to the real inflation-adjusted price during much of the preceding half century. Since then, the price of gasoline has risen sharply. It was last below $2 in Feb-

ruary 2005, and for much of 2007, prices topped $3 a gallon. Dr. Greene, one of our witnesses today, includes in his testimony that households today are now spending $3,000 instead of $1,500 per year on fuel, a significant hit to the consumer's pocketbook.

The 100 percent increase in real U.S. Gasoline price since 2003 and a growing consciousness of global warming of CO_2 emissions has important implications for government policies that would reduce gasoline consumption. While there is no magic bullet in the government to immediately drop the price of gasoline, ongoing Federal research in vehicle technologies is starting to have a payoff through market introduction of automobiles utilizing technologies that will displace some portion of gasoline for power. Higher prices for gasoline have increased the market demand for vehicles that utilize biofuels and battery storage technology.

The purpose of the hearing is to explore what the best options are for reducing oil consumption and decreasing CO_2 emissions. What are the tradeoffs between these goals? If we are successful, can the technology involved drive down price, or can we expect the cost of a mile traveled in our private vehicle to continue to rise?

Before introducing the panel, I would recognize my good friend, Ranking Member Mr. Hobson, for his opening remarks.

MR. HOBSON'S OPENING STATEMENT

Mr. HOBSON. Thank you, Mr. Chairman. And I will try to keep my comments short today. As I drove in this morning, I put some gasoline in my car. It was $2.95 in Alexandria, so I became acutely aware of the hearing today.

I wanted to thank the witnesses today for accommodating the schedule change for today's hearing. As you know, we just attended a memorial service in the Capitol for our dear friend Tom Lantos. He was a good friend of all of us. I have traveled with Tom and his wife Annette, and I hope you understand the need to make that change.

I really want to commend the Chairman for holding this hearing before we start our series of hearings on the agency budget request for fiscal year 2009. We all hear from the constituents about the pain they feel at the gas pump, and unfortunately we have to tell them that the energy and water appropriations bill has very little, if any, impact on gas prices, at least in the near term.

The Department of Energy is primarily a research agency, and what we are talking about today are the new vehicle technologies that are on the horizon. I hope the horizon is closer than I think it is. Those alternative technologies may not drive down the cost of gasoline, but they are going to provide customers with more transportation choices and may ultimately reduce the cost that consumers have to pay for transportation.

This hearing will also give us a useful perspective on what private industry is already doing pursuing—for vehicle technologies to know whether or not an additional Federal investment is necessary.

Another thing I wanted to mention to you, that is not in my prepared remarks, is my wife was taking a golf lesson this week from a guy, a Brit. He said something that I had never heard before and I was astounded by. You know, the European prices are a lot high-

er than ours, but he said that the automobiles—the same foreign automobile that might be bought here—has a higher gas mileage rating in Europe than in the United States. I don't know whether that is because we make manufacturers and dealers put extra things on them. I don't want to single out any model. Well, I will. I guess I will have to today. A BMW. Let us say a 325 or whatever BMW, or the one that my staffer has, which is more expensive than mine. Something is wrong. But that same car in Europe will get a better gas mileage economy than it will here. I don't understand how that can happen.

So I am going to stop there, but I did want to thank the Chairman for doing this, and welcome all the Members to the committee. This is one of the finest committees to be on in this Congress whether in the Majority or the Minority. I liked it better in the Majority, but this is still a committee that is very bipartisan and will do its work in harmony.

Mr. Chairman, I yield back.

Mr. VISCLOSKY. Mr. Hobson, thank you very much.

And I would like now to introduce our panel. First, Dr. David L. Greene is a corporate fellow at Oak Ridge National Laboratory, the Center for Transportation Analysis, and will provide an overview of gasoline prices and CO_2 emissions and the impact that technologies such as biofuels and electric-powered vehicles can have in displacing gasoline.

Mr. Bob Dinneen is president and CEO of the Renewable Fuels Association and will discuss the displacement of gasoline through the use of biofuels and the impact to gasoline prices and CO_2 emissions.

Our car manufacturers typically have not been involved in fuel supply, yet General Motors has recently announced the purchase of a company specializing in cellulosic ethanol production. Dr. Mary Beth Stanek, Director, Environment and Energy Policy and Commercialization for General Motors, will discuss this recent acquisition, GM's vision for flex-fueled vehicles and other efforts to boost the availability of E85.

Advocates for plug-in hybrid vehicles claim that 100 miles per gallon would be reasonable; however, current nickel-metal hydride batteries for conventional hybrids are not optimal for this application. Dr. Don Hillebrand, who appears to be a very fine gentleman, however, had a telling omission on his resume that was submitted to the committee. I noted that he was from Detroit, Michigan, but he failed to put the universities he attended, perhaps knowing that I went to Notre Dame. But I would for the record note that Dr. Hillebrand is a Michigan grad, among others. He is Director—and, of course, Mr. Hobson is an Ohio State grad, and we will leave it at that—the Director for the Center for Transportation Research at Argonne National Laboratory and will present the status of battery vehicle technology, what the limitations are, the outlook for the future for plug-in hybrid vehicles, and the impact plug-in hybrid electric vehicles can have on gas prices and CO_2 emissions.

A key component to the success of plug-in hybrid technology for vehicles is the role utilities play in providing the power. Lynda L. Ziegler, Senior Vice President, Customer Service, for Southern California Edison, will present the efforts Southern California Edi-

son is making to encourage the use of plug-in hybrids and other efforts in the transportation sector to reduce CO_2 emissions.

The most popular hybrid vehicle on the road today is the Toyota Prius, and Toyota has announced it will build a plug-in hybrid in 2010. Mr. Tom Stricker, director of technical and regulatory affairs for Toyota Motors North America, will discuss Toyota's strategy for hybrid vehicles and the battery technology necessary to carry the vision forward.

If we could begin—and I would ask for a summary of your remarks. Your full written testimony will be entered into the record. If we could proceed in the order of introduction, that would be terrific. Dr. Greene.

MR. GREENE'S OPENING STATEMENT

Mr. GREENE. Thank you. Good afternoon, Mr. Chairman, and distinguished committee members, and our guests.

As you pointed out, since January 2003, the price of gasoline in the United States has doubled, and the principal driving force behind increasing gasoline prices has been the price of petroleum on world oil markets. The cost of the oil in a gallon of gasoline increased from 65 cents in 1998 to $2 today. The average American household is now spending $3,000 instead of $1,500 per year on fuel; $900 of that is a transfer of wealth from American consumers to oil-exporting countries. I estimate that in 2007 alone the economic costs of oil dependence to the U.S. exceeded $350 billion, and that cumulative costs over the past 5 years have exceeded $1 trillion.

Following the oil price shocks of 1973–1974 and 1979–1980, the combination of worldwide market responses to high oil prices, strong policy actions like fuel economy standards, and technological advances in energy efficiency and energy supply brought down oil and gasoline prices. From 1977 levels, U.S. net imports of petroleum were cut in half by 1985.

Unfortunately after oil prices collapsed in 1986, we stopped trying to control our oil dependence. With petroleum cheap and plentiful, it was easy to convince ourselves that the problem had been solved once and for all, or that there had never really been a problem.

Now, several things are different today. The most important difference is the urgency of addressing climate change. Stabilizing atmospheric concentrations of greenhouse gases at levels that may avoid dangerous climate change will require deep, economywide reductions in greenhouse gas emissions on the order of 60 to 80 percent by 2050.

Today our oil dependence problem is even more about transportation than it was three decades ago. Since 1973, transportation petroleum use has increased by more than 50 percent, while nontransportation oil use has decreased by more than 40 percent. Today oil markets are less sensitive to price increases than they were in the 1970s. The doubling of fuel prices we have just experienced had only half as much of an impact on vehicle travel as the doubling that occurred during oil crises of the 1970s and 1980s.

Today it appears to be much more difficult for oil producers outside of OPEC to increase the supply of oil. The peaking of U.S.

crude oil production in 1970, up to which point we were the world's largest producer of crude oil, was a key enabler of the ensuing oil price shocks. The International Energy Agency and ExxonMobil Corporation have both projected that world oil production outside of OPEC will reach a plateau around 2010.

The need for more energy-efficient technology is also greater today. Proven, cost-efficient fuel economy technology for conventional gasoline vehicles allows only a 40 to 50 percent increase in miles per gallon by 2020—this is reflected in the Energy Independence and Security Act—as opposed to the almost 100 percent increase required of new passenger cars in the Energy Policy and Conservation Act of 1975.

Advanced technologies will be needed to continue improving vehicle fuel economy. Researchers at MIT's Sloan Automotive Laboratory estimate that fuel economy increases of 80 to 85 percent for internal combustion engine vehicles may be obtainable with advanced technologies by 2030, and that future hybrid vehicles could obtain almost three times the miles per gallon of today's conventional vehicles. But even that will not be enough.

If you can see the graphs here, this is an analysis I have done of the impact of fuel economy improvements on greenhouse gas emissions. That is the red line, fuel and greenhouse gas emissions. This is a base case that does not include the fuel economy improvements of the EISA Act.

The next one shows that with those increases to 35 miles per gallon in 2020, we can almost hold fuel consumption and greenhouse gas emissions constant through 2025, but then they begin to increase afterwards. If we were able to double light-duty vehicle fuel economy by 2030, as the MIT studies suggest may be possible, we can hold those greenhouse gas emissions and fuel use constant through 2050. Then going beyond that and tripling fuel economy by 2050 only achieves a 15 percent reduction from current levels. So to reduce carbon emissions by 60 to 80 percent by 2050 will require alternative low-carbon sources of energy for transportation vehicles.

Biofuels can make an important contribution. It has become clear, however, that without breakthroughs in methods of producing biofuels, the levels of production envisioned by current policy will have serious impacts on food prices and may even increase net greenhouse gas emissions. However, this is not the time to give up on our biofuels goals; rather, this is the time to apply our best science and best policy analysis to ensure that we can use our biomass resources efficiently and with maximum environmental benefit.

Avoiding dangerous climate change will ultimately require integrating electricity and/or hydrogen into the transportation sector's energy mix in combination with policies to decarbonize electricity generation and hydrogen production.

This graph shows another MIT study showing the total emissions, life cycle emissions here, tank-to-wheel and, in the blue, well-to-tank—that is the upstream emissions—for a conventional baseline vehicle; increasing efficiency of conventional vehicles, internal combustion engine vehicles and advanced hybrid electric vehicles with almost three times the fuel economy; and then plug-in

hybrid electric vehicles. And you can see, as the all-electric range of these vehicles increases, most of the emissions become upstream emissions.

Now, this study assumed that electricity in 2030 would be produced in much the same way it is today, but with any kind of carbon-constraining policy, the emissions in 2030 will, in fact, be much lower, half or so of what they are today.

The energy challenges we face today appear to be greater than those of the 1970s. Today our solutions to the problem of oil dependence must also put us on a path to avoid dangerous climate change. Then we achieved a temporary solution; today the challenge of climate protection requires a sustainable solution. The same tools are available, market forces, government policies, science and technology, but today the challenge is greater.

Thank you very much.

[The information follows:]

Testimony to the U.S. House of Representatives Committee on Appropriations
Subcommittee on Energy and Water Development

FACING THE CHALLENGES OF OIL DEPENDENCE AND CLIMATE CHANGE: WHAT WILL IT TAKE?

10:00 am, Thursday, February 14, 2008
Rayburn House Office Building, Room 2362B

by

Dr. David L. Greene
Corporate Fellow
Engineering Science and Technology Division
Oak Ridge National Laboratory

February 14, 2008

Good morning Mr. Chairman, distinguished committee members and guests. Thank you for the opportunity to comment on what can be done in the near term to reduce oil consumption and decrease carbon dioxide emissions from motor vehicles.

WHY ARE GAS PRICES SO HIGH, AND WHAT IS IT COSTING US?

Since January 2003, the price of gasoline in the United States has doubled: from $1.50 to $3.00 per gallon (Figure 1). The principal driving force behind the increase in gasoline prices has been the price of petroleum on world markets. In 2003, the cost of crude oil purchased by U.S. refiners averaged $28.50 per barrel (U.S. DOE/EIA, 2007, table 5.21). Today, refiners have grown accustomed to oil prices in the range of $80 to $90 per barrel. A good rule of thumb is that the cost of the petroleum in a gallon of gasoline is equal to the price of a barrel of oil divided by 42 (the number of gallons in a barrel). By this method the cost of the oil in a gallon of gasoline increased from as little as $0.60 to $0.70 per gallon in 1998 to $2.00 per gallon today (Figure 1).

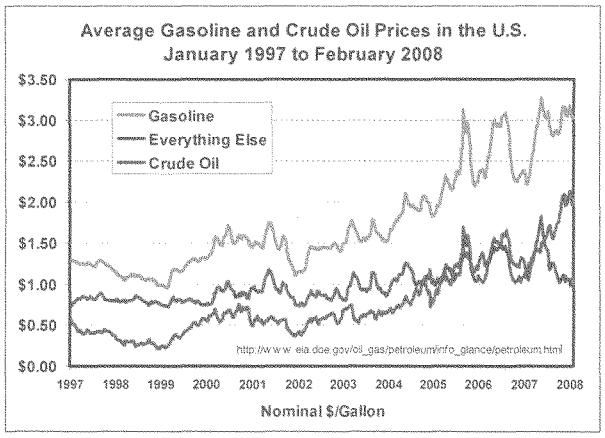

Figure 1. U.S. Gasoline and Crude Oil Prices: January, 1997 to February, 2008.

Higher prices for petroleum mean increased expenditures on motor fuel and a direct transfer of wealth from U.S. households, businesses and governments to oil exporting economies. The average U.S. household purchases approximately 1,000 gallons of gasoline each year to power its cars and light trucks for 21,000 miles (Davis and Diegel, 2007, table 8.7). Because vehicle use is relatively unresponsive to fuel prices (CBO, 2008), households are now spending $3,000 instead of $1,500 per year on fuel. Because almost 60% of the petroleum we consume is imported, roughly $900 of the increased cost of gasoline is a transfer of wealth from American consumers to oil exporting countries.

The economic cost of our dependence on oil is now at a historic high point (Figure 2). I estimate that in 2007 the economic costs of oil dependence exceeded $350 billion dollars, and that cumulative costs over the past five years have exceeded $1 trillion.[1] The economic cost of oil dependence has three components: (1) transfer of wealth equal to the quantity of oil we import times the monopoly profit per barrel; (2) dislocation losses arising from sudden and unexpected price shocks; and (3) potential GDP losses, which measure the effect of higher oil prices on our economy's ability to produce.

[1] For an explanation of the methods by which these costs were estimated, see Greene and Leiby, 2006.

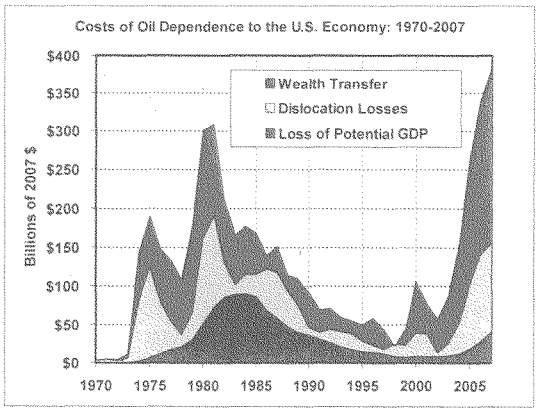

Figure 2. Estimated annual costs of oil dependence to the U.S. economy.

DÉJÀ VU?

The problem of high oil prices has been seen before, and solved, but only temporarily. Following the oil price shocks of 1973-74 and 1979-80, it took a combination of deregulated market responses to high oil prices, strong policy actions like fuel economy standards, and technological advances in energy efficiency and energy supply to bring down oil and gasoline prices. From 1977 to 1985, U.S. oil consumption decreased from 18.4 to 15.7 million barrels per day (mmbd) while U.S. supply increased from 9.9 to 10.6 mmbd. As a consequence, U.S. net imports of petroleum were cut in half, from 8.6 mmbd in 1977 to 4.3 mmbd in 1985 (U.S. DOE/EIA, 2007, tables 5.1 and 11.10). Other nations around the world took similar actions. Total world crude oil production shrank from 63 mmbd in 1979 to 54 mmbd in 1985, while oil supply outside of OPEC expanded from 29 mmbd in 1977 to 38 mmbd in 1985 (U.S. DOE/EIA, 2007, tables 11.5 and 11.10) (Figure 3).

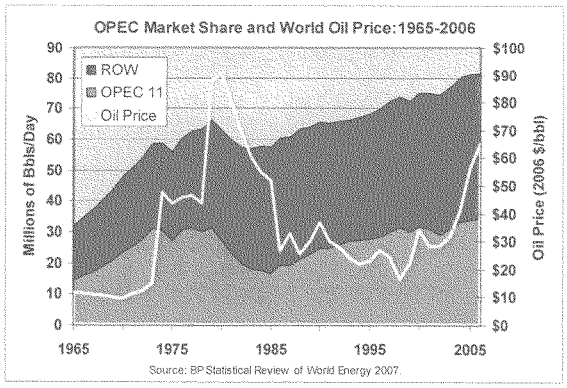

Figure 3. World Crude Oil Production, OPEC Share and the Price of Oil, 1965-2006.

During this period, OPEC members, led by Saudi Arabia, defended the high price of oil by cutting back on production year after year. Between 1980 and 1985, Saudi Arabia reduced its crude oil output from 9.9 million barrels per day (mmbd) to 3.4 mmbd (U.S. DOE/EIA, 2007, table 11.5). The production cutbacks eroded the cartel's market share to the point where it could no longer control the market, and in 1986 prices collapsed as OPEC members began to gradually increase the supply of oil to world markets (Figure 4).

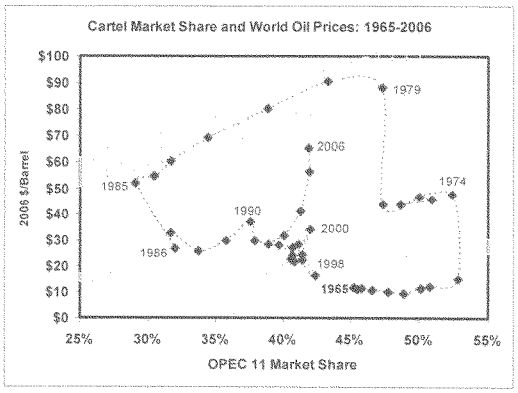

Figure 4. OPEC Market Share and World Oil Prices: 1965-2006[2].
Source: BP Statistical Review of World Energy, 2007.

[2] The grey bars in figure 3 are estimated long-run (lower) and short-run (upper) profit maximizing oil prices for the OPEC cartel, as a function of its market share (Greene, 1991).

Unfortunately, after oil prices collapsed in 1986, we stopped trying to control our oil dependence. We left fuel economy standards virtually unchanged for two decades and lost interest in alternative energy sources for transportation. With petroleum cheap and plentiful, it was easy to convince ourselves that the problem had been solved once and for all, or even that there never really had been a problem.

WHAT'S DIFFERENT TODAY?

Several things are different today. The most important difference is the urgency of addressing climate change. The Fourth Assessment Report of the Intergovernmental Panel on Climate Change concluded that the global climate is definitely warming and that anthropogenic emissions of greenhouse gases, predominantly carbon dioxide, are very likely the cause.

> "Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level (Figure SPM.1)."
>
> "Most of the observed increase in globally-averaged temperatures since the mid-20th century is *very likely* due to the observed increase in anthropogenic GHG concentrations. It is *likely* there has been significant anthropogenic warming over the past 50 years averaged over each continent (except Antarctica) (Figure SPM.4)."
> (IPCC, 2007, pp. 1-5)

Stabilizing atmospheric concentrations of greenhouse gases at levels that may avoid dangerous climate change will require strong measures like S.2192 (America's Climate Security Act) which requires deep, economy-wide reductions in greenhouse gas emissions by 2050. While solving the problem of oil dependence and curbing greenhouse gas emissions are mostly congruent goals, there are some areas in which they conflict.

Today, our oil dependence problem is even more about transportation than it was three decades ago. Much of the potential for sectors other than transportation to switch from petroleum to other energy sources has been accomplished. Before the first oil price shock in 1973, U.S. utilities consumed 3.1 quads of petroleum for generating electricity. In 2006, they consumed only 0.6 quads. Commercial sector petroleum use decreased from 1.6 quads in 1973 to 0.7 quads in 2006, while residential use declined from 2.8 quads to 1.4 quads over the same period. The industrial sector consumed 10.4 quads of petroleum in 1973 but used 7.9 quads in 2006. Meanwhile, transportation petroleum use increased from 17.8 quads to 27.2 quads (U.S. DOE/EIA, 2007, tables 2.1b to 2.1f). The 5 mmbd of petroleum used outside of the transportation sector is a large amount and should also be a target for energy efficiency and fuel substitution. Yet more than ever, our oil dependence problem is a consequence of transportation's dependence on oil.

Today, oil markets are less sensitive to price increases than they were in the 1970s. The doubling of fuel prices we have just experienced had only half as much impact on vehicle travel as the doubling that occurred during oil crises of the 1970s and 1980s (Small and Van Dender, 2007).

Rising incomes have made fuel costs less important relative to the value of travelers' time. At the same time the higher fuel economy of today's vehicle fleet has made gasoline a smaller factor in the overall cost per mile of travel. Motorists still change their behavior when fuel prices rise, but the changes are very small indeed (CBO, 2008).

It is very likely that oil producers outside of OPEC will be less able to increase the supply of conventional oil than they were thirty years ago. A key factor enabling the oil crises of 1973-74 and 1979-80 was the peaking of U.S. crude oil production in 1970. This important event is too often overlooked. Until 1970, the United States was the world's largest oil producer with considerable influence in the world oil market. Despite high oil prices, despite important new oil discoveries, despite impressive technological advances in oil exploration and development we have never since been able to achieve the level of production seen in 1970. Today, it appears that world oil production outside of OPEC is nearing a peak or perhaps a plateau as predicted by both the International Energy Agency (2006a, p. 95) and the ExxonMobil Corporation (2008). Increased conventional oil supply was a key contributor to bringing down oil prices in 1986 and supply from conventional and unconventional sources will also be in the future. But today it will be more difficult to increase conventional oil supply than it was thirty years ago (NPC, 2007, p. 94). If that proves to be the case, developing and implementing economically competitive, low carbon, alternative energy sources for transportation will be essential to simultaneously addressing the problems of oil dependence and climate change.

Finally, the need for more energy efficient technology is even greater today than it was thirty years ago. Today, proven, cost-efficient fuel economy technology for conventional gasoline vehicles allows only a 40-50% increase in miles per gallon by 2020, as opposed to the almost 100% increase required of new passenger cars in the Energy Policy and Conservation Act of 1975.[3] The Energy Independence and Security Act of 2007 set an appropriate, cost efficient target of 35 miles per gallon for light-duty vehicles by 2020. However, much more is needed to achieve oil independence and stabilize the global climate. To achieve the doubling or tripling of energy efficiency we need, and to transform the energy basis of our transportation system will require many new technologies.

WHAT CAN ADVANCED TECHNOLOGY DO?

Beyond 2020, advanced technologies will be needed to continue improving vehicle fuel economy without sacrificing customer satisfaction or safety. Researchers at MIT's Sloan Automotive Laboratory estimate that fuel economy increases of 80-85% for internal combustion engine vehicles may be attainable by 2030 (Figure 5). Achieving the potential improvement of 80-85% will require technological advances in several areas, including variable compression ratio engines, catalysts for reducing nitrogen oxide under lean air-fuel ratios, low rolling resistance tires and advanced materials to provide improved safety while reducing vehicle mass by 20% (Kasseris and Heywood, 2007). The MIT study concluded that future hybrid vehicles could attain almost three times the miles per gallon of today's conventional vehicles, given major

[3] The definition of cost-efficient used here is the same as that of the National Research Council (2002) report on the Corporate Average Fuel Economy Standards.

advances in power electronics and batteries (e.g., consistent with the Department of Energy's FreedomCar and Vehicle Technologies program goals).

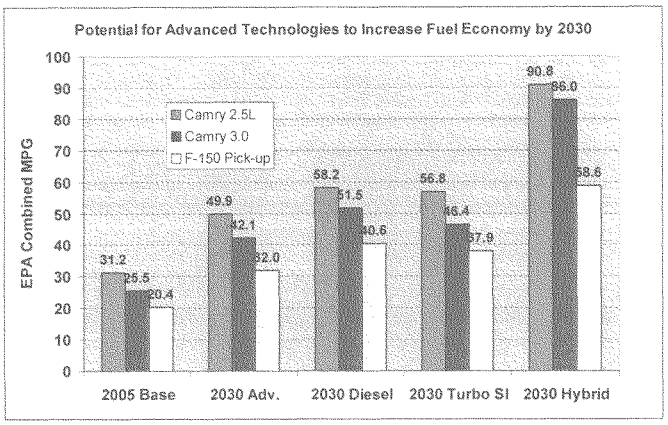

Figure 5. Potential for Advanced Conventional Vehicle Technologies to Increase Fuel Economy by 2030.

Doubling or even tripling light-duty vehicle fuel economy would save consumers tens of billions of dollars each year and make a major contribution to reducing greenhouse gas emissions. But even that will not be enough. Figures 6a-6d show my analysis of the impacts of increasingly higher fuel economy levels on fuel use and CO_2 emissions from passenger cars and light trucks by 2050 (Figure 6a). My projections are based on an extrapolation of the Energy Information Administration's 2007 Annual Energy Outlook Reference Case. In the Base Case, a doubling of vehicle travel causes about a two thirds increase in fuel use and CO_2 emissions by 2050. Complying with the EISA of 2007 restrains the growth of fuel use and emissions through 2025, but levels in 2050 are still almost 50% higher than in 2005. Doubling new vehicle fuel economy by 2030 is able to hold emissions in 2050 to current levels, offsetting all the increase in travel (Figure 6c). Tripling new vehicle fuel economy by 2050 produces about a 15% reduction over today's levels by 2050. To reduce CO_2 emissions by 60-80% by 2050 will require alternative, low carbon sources of energy for transportation vehicles.

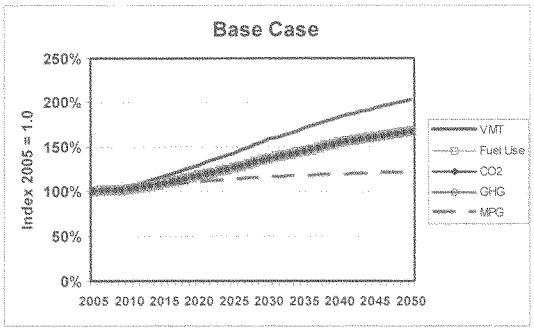

Figure 6a. Projected Fuel Use and CO_2 Emissions by Light-duty Vehicles Based on an Extrapolation of the AEO 2007 Reference Case from 2030 to 2050.

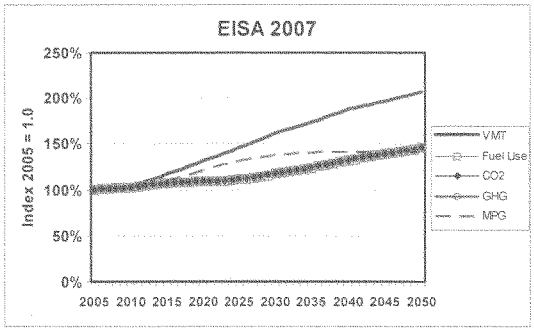

Figure 6b. Projected Fuel Use and CO_2 Emissions by Light-duty Vehicles Assuming the Energy Independence and Security Act of 2007's 35 MPG Requirement is Met.

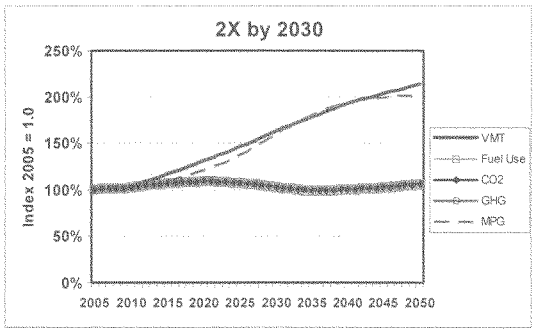

Figure 6c. Projected Fuel Use and CO_2 Emissions by Light-duty Vehicles Assuming the Average Fuel Economy of New Vehicles is Doubled by 2030.

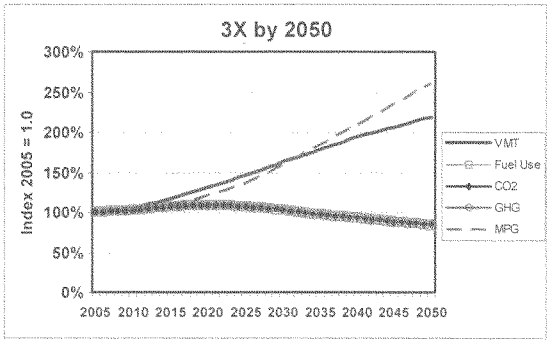

Figure 6d. Projected Fuel Use and CO_2 Emissions by Light-duty Vehicles Assuming the Average Fuel Economy of New Vehicles is Tripled by 2050.

Biofuels have the potential to make an important contribution. The United States possesses enormous agricultural resources. A joint study by the Departments of Energy and Agriculture concluded that the U.S. is capable of producing enough biomass (over 1.3 billion tons) to displace 30% of our present petroleum use (Perlack et al., 2005). The overwhelming majority of that resource potential is ligno-cellulosic biomass, not starch, sugar or oils. Significant advances in conversion technology and supply chain processes will be necessary if biofuels from ligno-cellulosic biomass are to compete with petroleum, even at prices of $50-$60 per barrel (IEA, 2006b, p. 283).

It has become clear, however, that without breakthroughs in methods of producing biofuels from ligno-cellulosic feedstocks, the levels of production envisioned by current policy will have serious impacts on food prices and may even increase net greenhouse gas emissions (Searchinger et al., 2008; Fargione et al., 2008). It is time for a comprehensive reassessment of our national

biofuels policy. The choice of feedstocks, production methods, types of fuels produced and induced land use changes are critical to determining global climate change impacts of biofuels. We urgently need to incorporate such considerations in our policies. However, this is not the time to give up on our biofuels goals. Rather, this is the time to apply our best science and best policy analysis to insure that we can use our biomass resources in the ways that are most efficient and environmentally beneficial.

Achieving the magnitude of greenhouse gas reductions that appear to be necessary for climate stabilization will ultimately require the integration of electricity and or hydrogen into the transportation sector's energy mix, in addition to policies to decarbonize electricity generation and hydrogen production (Edmonds et al., 2004). This will require significant advances in battery technology, as well as continued improvements in electric motors and power electronics. The potential for hydrogen powered transportation likewise depends on significant advances in fuel cells, on-board hydrogen storage and hydrogen production from renewable sources or nuclear energy. If these technologies can be made competitive, they can not only displace petroleum and increase the responsiveness of petroleum demand to its price, they can diversify the transportation sector's energy resource base.

Another study by MIT's Sloan Automotive Laboratory (Kromer and Heywood, 2007) concluded that advanced hybrid electric vehicles (HEV), plug-in hybrid vehicles (PHEV), fuel cell vehicles (FCV) and battery electric vehicles (BEV) had the potential to reduce CO_2 emissions from motor vehicles by two thirds (Figure 7).

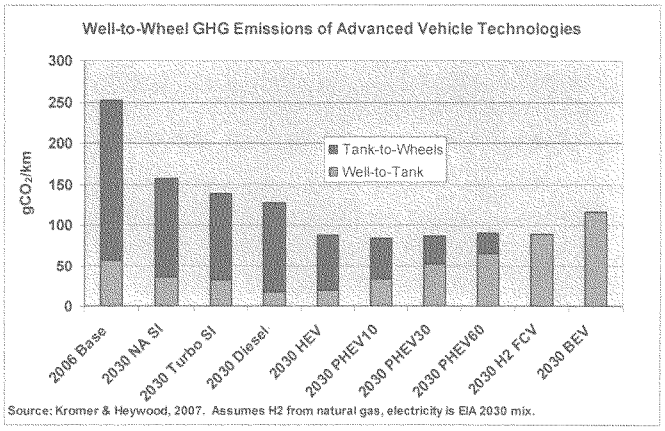

Figure 7. Projected Well-to-Wheel Greenhouse Gas Emissions of Advanced Vehicle Technologies.

But the MIT well-to-wheel emissions calculations assume that electricity and hydrogen will be produced in the future by much the same methods used today. With appropriate carbon policies the upstream emissions from electricity generation and hydrogen production can be drastically

reduced or nearly eliminated, eventually resulting in almost carbon-free vehicle travel. A carbon price of $30 per ton of CO_2 in 2010, increasing gradually to $50 per ton of CO_2 by 2030 would reduce emissions from the electric power sector in 2030 by more than 40% versus 2005 levels, according to an analysis by the Energy Information Administration (U.S. DOE/EIA, 2006). On the other hand, the same level of carbon price was estimated to have little impact on transportation emissions, in the absence of complementary policies such as tighter fuel economy standards or major breakthroughs in vehicle technologies (Figure 8).

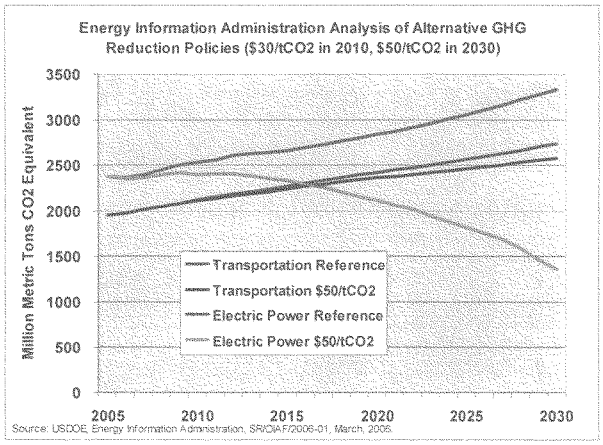

Figure 8. Energy Information Administration Analysis of the Impacts of the Price of Carbon on Emissions from the Electric Power and Transportation Sectors.

CONCLUDING OBSERVATIONS

The energy challenges we face today appear to be greater than those of the 1970s. Today, our solutions to the problems of oil dependence must also put us on a path to avoid dangerous climate change. In 1970 it was our own oil production that was peaking and gradually declining. Today, it appears that world production outside of OPEC is nearing a peak or plateau. Then, we achieved a temporary solution. Today, the challenge of climate protection requires a sustainable solution. The same tools are available: market forces, government policies, science and technology. But today the challenge is greater.

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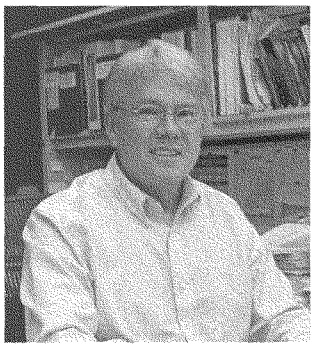

A Corporate Fellow in Oak Ridge National Laboratory's Engineering Science and Technology Division, David Greene has spent 30 years researching transportation energy and environmental policy issues for the federal government. Dr. Greene has been active in the Transportation Research Board and National Research Council for over 25 years, serving on more than a dozen standing and ad hoc committees dealing with transportation energy and environmental issues and research needs. In recognition of his service, Dr. Greene has been designated a lifetime National Associate of the U.S. National Academies.

Dr. Greene has published more than two hundred articles in professional journals, contributions to books and technical reports, and authored or edited three books (*Transportation and Energy*, *Transportation and Global Climate Change*, and *The Full Costs and Benefits of Transportation*). Dr. Greene served as the first Editor-in-Chief of the *Journal of Transportation and Statistics* and serves on the editorial boards of *Energy Policy* and *Transportation Research D*. He was a lead author for the second, third and fourth assessments of the Intergovernmental Panel on Climate Change and a lead author for the report on Aviation and the Global Atmosphere.

Dr. Greene earned a B.A. degree from Columbia University in 1971, an M.A. from the University of Oregon in 1973, and a Ph.D. in Geography and Environmental Engineering from The Johns Hopkins University in 1978.

MR. DINNEEN'S OPENING STATEMENT

Mr. DINNEEN. Thank you, Mr. Chairman. Thank you for the invitation to be here, Congressman Hobson and members of the committee. I do appreciate on behalf of the U.S. ethanol industry, the fastest-growing renewable industry in the world, for the opportunity to come and talk to you about the growth of our industry and how it can have a tremendously positive impact in adding alternative fuel supplies and reducing consumer costs of gasoline.

The ethanol industry, as many people know, is indeed growing extremely rapidly. We have 140 biorefineries in operation across the country today. This is not just your grandfather's ethanol industry anymore. It is not just about Iowa. We have got ethanol plants virtually from coast to coast and border to border, and we are growing.

Mr. Chairman, you know we have got six plants in operation today in Indiana. There are another five that are under construction.

Congressman Hobson, there is one plant in Ohio in operation today, three under construction. We have got a plant in operation in Tennessee and another one under construction. There are five in Missouri.

Mr. Simpson, there is one ethanol plant in operation in Idaho today, and the next generation of ethanol production from cellulose is likely to start in Ohio where a company, Iogen, is looking to build a facility.

Mr. Calvert, we have got four plants in California and three under construction.

Mr. Rehberg, you know, there are none in Montana today, but we are trying, and we will get there soon, I am sure.

On the other side of the dais, let us see, there is indeed a plant, surprisingly, in Arizona that is in operation today.

Mr. Berry, there is a great deal of biodiesel production in Arkansas; nothing on ethanol yet, but it is coming.

There is indeed an ethanol plant in operation in New York today, and another one that is going to be opening up very soon.

Mr. Olver, I am sorry. I can tell you, though, that the ethanol industry's trade association head is from Massachusetts, if that gives you any consolation. And there are a number of companies in Massachusetts that are on the cutting edge, providing technology for the next generation of ethanol production. So Massachusetts will indeed help to lead the way there as well.

The point is our industry is growing, and growing rapidly and evolving. There are 60 plants that are currently under construction. There is not a company that I represent that doesn't have a very aggressive cellulose-to-ethanol research program underway, because, as Dr. Greene just noted, the ethanol industry is going to grow, but there are limitations to how much ethanol we can get from grain. Most people believe that that is about 15 billion gallons. And indeed the energy bill that passed in December essentially caps ethanol production from grain at that 15 billion gallons.

The energy bill that passed, however, requires some 36 billion gallons of ethanol to be produced by 2022. Some would question whether or not that can be done. It can't be done by grain; it has

to be done by cellulose. That is why there are so many Massachusetts companies that are looking at cracking the code so that we can indeed produce ethanol from cellulose materials, whether it is woody biomass from upstate New York or municipal solid waste in California. There is a company in Los Angeles that is looking to build ethanol production capacity at a landfill right outside of Los Angeles.

So the industry is evolving and evolving quite rapidly. The potential benefits are enormous. Already our industry is responsible for 238,000 jobs. At a time when the rest of the economy is not as robust, the economy in agriculture, the economy in our industry is doing terrific. We have added $47 billion to GDP last year. We have replaced some 228 million barrels of oil. That is significant. That is money that is staying here at home and not being shipped overseas to countries that do not have our best interest at heart.

From a climate change perspective, just the ethanol that was produced last year reduced greenhouse gas emissions some 10 million tons, the equivalent of taking 1.2 million vehicles completely off the road. This year we will produce more than 9 billion gallons of ethanol, the equivalent of taking, from a greenhouse gas emissions standpoint, almost 2 million vehicles off the road. It is the single most important strategy that we have today of addressing the challenge of climate change. And as the industry evolves, and as we begin to produce ethanol from cellulosic materials, those benefits are just going to get even better.

I can't tell you whether or not enzymatic conversion of woody biomass is going to ultimately be more efficient than gasification of municipal solid waste. I can't tell you whether or not the feedstock of choice for cellulose will be switchgrass or wood chips or something else. But I can absolutely assure you that there will be cellulosic ethanol production in this country sooner than conventional wisdom believes now is possible.

The signals that this Congress sent to our industry, to the marketplace, to the finance industry have been very clear. We are going to be investing. We are going to be commercializing cellulosic ethanol very, very soon. The markets are also evolving. Today ethanol is largely a blend component in gasoline. All of you, virtually all of you, are driving on 10 percent ethanol blends. All of the gasoline blended in the Washington metropolitan area is 10 percent ethanol. You may not know it because there aren't big signs that say so, but it is there. Ethanol today is blended in 50 percent of the Nation's fuel.

But I drove over here today in a beautiful General Motors Avalanche that is fueled by E85. I was able to fill that vehicle up with E85 last week at an E85 refueling station across from the Pentagon. That infrastructure is developing. E85 will ultimately be a very important component of the U.S. motor fuel market. There are only 1,400 E85 refueling stations today out of 170,000 gasoline stations across the country. We need to grow that infrastructure, and we are doing so.

As the market grows with the commitment that GM and others have made to flexible-fueled vehicles that can burn that fuel, there are only 6½ million FFVs on the road today, but they committed that 50 percent of their production will be flexible fuels by 2012.

With that kind of a marketplace, the product will follow, and the opportunities to continue to grow this market to be a more ubiquitous component of the motor fuel market in this country will grow as well, and I look forward to working with this committee to make sure that that happens.

Thank you.

[The information follows:]

Appropriations Committee
Subcommittee on Energy and Water
United States House of Representatives

Hearing on

Gas Prices and Vehicle Technology

Testimony of

Bob Dinneen
President & CEO, Renewable Fuels Association

February 14, 2008

Good morning, Chairman Visclosky, Ranking Member Hobson, and Members of the Subcommittee. My name is Bob Dinneen and I am president and CEO of the Renewable Fuels Association (RFA), the national trade association representing the U.S. ethanol industry. I am pleased to be here this morning to discuss the impact of the increased use of biofuels in the U.S. and its impact on gasoline prices and greenhouse gas (GHG) emissions.

This is an important and timely hearing, and I am pleased to be here to discuss the growth of the U.S. biofuels industry, and the important role of infrastructure and technology. The continued expansion of the industry will require greater development of infrastructure in many areas around the country. The Appropriations Subcommittee on Energy and Water can play an important role in accelerating these efforts by promoting and targeting research and development funds and resources appropriately.

Today's U.S. Ethanol Industry

Today's ethanol industry consists of 140 ethanol biorefineries nationwide have a capacity to produce more than 7.8 billion gallons of ethanol and 14 million metric tons of animal feed annually. Additionally, 68 biorefineries are under construction or expanding that will add 5.4 billion gallons of new production capacity. It is a dynamic and growing industry that is revitalizing rural America, reducing emissions in our nation's cities, and lowering our dependence on imported petroleum. America's domestic ethanol producers are providing significant economic, environmental and energy security benefits today.

In an overall environment of slowing economic growth, the U.S. ethanol industry stands out in sharp contrast. According to a report soon to be released from economist John Urbanchuk of LECG, LLC, the American ethanol industry is a job creating engine. The increase in economic activity resulting from ongoing production and construction of new ethanol capacity supported the creation of 238,541 jobs in all sectors of the economy during 2007. These include more than 46,000 additional jobs in America's manufacturing sector -- American jobs making ethanol from grain produced by American farmers.

Ethanol is also helping to stem the tide of global warming, today. The use of low carbon fuels like ethanol is reducing greenhouse gas emissions from the more than 200 million cars on American roads. The 9 billion gallons of ethanol we will produce in 2008 will reduce greenhouse gas emissions by more than 14 million tons, or the equivalent of taking 2.5 million vehicles off the road.[1] These benefits will only increase as new technologies, new feedstocks and new markets for renewable fuels are created.

An Evolving Industry – the Promise of Cellulosic Ethanol

As the U.S. ethanol industry grows, new technologies, such as low heat fermentation and biomass gasification, are making the existing grain-to-ethanol industry even more efficient. But new feedstocks are on the horizon as well that will usher in a new era of sustainable energy production. This is particularly so because the Energy Independence and Security Act of 2007 (2007 Energy Act) enacted late last year requires that nearly 60 percent of the new Renewable Fuels Standard (RFS) be met by advanced biofuels, including cellulosic ethanol. As a result, the commercialization of these important next generation ethanol technologies will develop far sooner than conventional wisdom suggests.

For example, last November, Range Fuels, Inc. broke ground on a commercial cellulosic ethanol plant located in Treutlen County, Georgia. The facility will use wood and wood waste from Georgia's pine forests and mills as its feedstock. Verenium is operating a cellulosic ethanol pilot plant and research and development facility in Jennings, Louisiana, and expects to complete a demonstration-scale facility using plant matter and farm scraps like sugarcane bagasse and wood chips as feedstock to produce cellulosic ethanol in 2008 at the same site. Abengoa Bioenergy operates a cellulosic biomass-to-ethanol pilot plant in York, Nebraska that will research and test proprietary technology for use in commercial-scale conversion of biomass into ethanol. POET Energy with expand an existing corn-based ethanol facility in Emmetsburg, Iowa into a bio-refinery that will include production of cellulosic ethanol from corn cobs and stover. And Iogen plans to build a cellulosic ethanol facility utilizing wheat and barley straw in Shelley, Idaho.

A recent report by the U.S. Department of Commerce's Bureau of Manufacturing and Services, *Energy in 2020: Assessing the Economic Effects of Commercialization of Cellulosic Ethanol,* noted the commercial viability of cellulosic ethanol will strengthen the competitiveness of many domestic industries and have a positive effect on the U.S. economy. In fact, the report found that annual benefits for American consumers would total $12.6 billion if cellulosic ethanol production increased; U.S. crude oil imports would fall 4.1 percent if 20 billion gallons of

[1] Air Improvement Resources, Inc., February 2008.

cellulosic ethanol were produced in 2020, which is approximately 40 percent of current crude oil imports from Venezuela; and, the global price of oil and the domestic U.S. fuel price would be 1.2 percent and 2.0 percent, respectively, lower than projected.

Biofuels Infrastructure

As the demand for fuel ethanol grows, the infrastructure available to transport, store and blend ethanol into gasoline has expanded as well. The U.S. ethanol industry has been expanding a "Virtual Pipeline" through aggressive use of the rail system, barge and truck traffic. As a result, we can move product quickly to those areas where it is needed. Many ethanol plants have the capability to load unit trains of ethanol for shipment to ethanol terminals in key markets. Unit trains are quickly becoming the norm, not the exception, which was not the case just a few years ago. Railroad companies are working with our industry to develop infrastructure to meet future demand for ethanol. We are also working closely with terminal operators and refiners to identify ethanol storage facilities and install blending equipment. We will continue to grow the necessary infrastructure to make sure that in any market we need to ship ethanol there is rail access at gasoline terminals, and that those terminals are able to take unit trains.

A new ethanol trading and distribution center recently opened in Manley, Iowa, for example, that will help the industry distribute ethanol more efficiently. There will be more than 75 ethanol plants within 275 miles of the Manley terminal in operation by the end of 2009 – representing approximately 5.1 billion gallons. The Manley Terminal LLC will have storage capacity for 20 million gallons of renewable fuels. The facility will improve the efficiency of ethanol distribution by consolidating shipment in larger 70 to 95-car unit trains, and by improving utilization of ethanol suppliers' tank cars.

While there is only limited shipment of ethanol via dedicated pipelines in the U.S. today, shipping ethanol in pipelines is commonplace in Brazil. If the marketplace demands it, as it does in Brazil, and there is enough ethanol demand to warrant the investment in the infrastructure for dedicated pipelines, such a system will develop in the U.S. Several major pipeline owners are considering various ethanol pipeline shipment scenarios. And the U.S. Department of Transportation has initiated a project to work with the industry to overcome any technical barriers to pipeline shipments of renewable fuels.

A Growing Market for E85

Today there are more than 230 million cars on American roads today capable of running on 10 percent ethanol blended fuel. Only 6 million vehicles are flexible fuel vehicles (FFV), capable of using up to 85 percent ethanol. America's automakers have realized the benefits of ethanol, particularly E85, and have joined with the ethanol industry to aggressively develop the infrastructure and provide the vehicle fleet necessary to grow the E85 market. Ford, General Motors and DaimlerChrylser pledged to increase production of FFVs to half of all new vehicles by 2012, or about 4 million new FFVs a year.

A key to the expanded use of E85 will be a significant increase in E85 refueling infrastructure. Today, there are more than 1,400 E85 pumps at service stations across the country. However,

that number remains insignificant considering the 170,000 service stations nationwide. Recently, regional chains like Kroger and Meijer Inc. have taken the initiative to install E85 pumps at their stores in Ohio and Texas, and Michigan and Indiana, respectively. National chains, like Wal-Mart, have also shown an interest in installing E85 pumps at their 388 company-owned stations across the country.

The Potential of Higher Level Blends of Ethanol

Ethanol today is largely a blend component with gasoline, adding octane, displacing toxics and helping refiners meet Clean Air Act specifications. But the time when ethanol will saturate the blend market is on the horizon, and the industry is looking forward to new market opportunities. As rapidly as ethanol production is expanding, it is possible the industry will saturate the existing blend market before a meaningful E85 market develops. Higher blend levels would have a significant positive impact on the U.S. ethanol market, without needing to install new fuel pumps and wait for a vehicle fleet to turn over in the next few decades. It would also allow for a smoother transition to E85 by growing the infrastructure more steadily. The ethanol industry today is engaged in testing of higher blend levels of ethanol, beyond E10. There is evidence to suggest that today's vehicle fleet could use higher blends.

The State of Minnesota and the RFA recently completed a yearlong study on the effect and performance of gasoline blended fuels containing 20 percent volume fuel ethanol. The study was comprised of three main areas of investigation: drivability, materials compatibility, and emissions. The yearlong project resulted in four separate and distinct materials compatibility reports demonstrating that 20 percent ethanol blended fuels are not harmful to current automotive or fuel dispensing equipment. The drivability study proved the 20 percent blend not only performed as well as currently available fuels, but also operated effectively irrespective of outside air temperature. The emission evaluation report found no increase in emissions on the three distinct emission control system vehicles.

It is important to note, however, that this was a preliminary scoping study and more work needs to be done. The RFA is continuing to work with the U.S. Department of Energy and other stakeholders to resolve other issues, including durability and the impact of higher ethanol blends in small engines.

RFA believes there are potential performance and emissions benefits from higher ethanol blends, but this debate must be guided by sound science that all parties accept.

The Impact of Biofuels on Greenhouse Gas Emissions

The U.S. biofuels industry will greatly enhance the climate change benefits attributable to today's renewable fuels by encouraging more sustainable technologies and reducing the carbon footprint of future energy production. An analysis conducted for the RFA using the U.S. Department of Energy's existing GREET model shows that increasing the use of ethanol and other renewable fuels to 36 billion gallons annually by 2022 could reduce greenhouse gas

emissions by some 176 million metric tons, equal to removing the annual emissions of more than 27 million cars from the road.[2]

The Pew Center for Global Climate Change recently concluded that renewable fuels offer the greatest immediate term opportunity to reduce GHG emissions from the transportation sector. This is true because renewable fuels are readily available and can be used without significant infrastructural or technological advancement.

The U.S. Environmental Protection Agency (EPA) released a Regulatory Impact Analysis (RIA) with the Final Rule implementing the RFS on April 10, 2007. Chapter 6 of EPA's RIA, *Lifecycle Impacts on Fossil Energy and Greenhouse Gases*, included a displacement index showing the impact of replacing a BTU of gasoline or diesel with a BTU of renewable fuel. For every BTU of gasoline which is replaced by corn ethanol, the total lifecycle GHG emissions that would have been produced from that BTU of gasoline would be reduced by 21.8 percent. For every BTU of gasoline which is replaced by cellulosic ethanol, the total lifecycle GHG emissions that would have been produced from that BTU of gasoline would be reduced 90.9 percent.

Ethanol Reduces the Price of Gasoline at the Pump

While growing world demand for energy is pushing crude oil prices to unprecedented levels and chronically tight refining capacity in this country is keeping gasoline prices near record levels, ethanol is helping to mitigate those factors and giving consumers some relief.

Using ethanol in the U.S. transportation fuel market helps lower gasoline prices by expanding gasoline supplies and reducing the need for importing expensive, high-octane, petroleum-based gasoline components or more crude oil from unstable parts of the world. The Consumer Federation of America noted last fall in an analysis of the energy bill that at $3.00 per gallon of gasoline, the 36 billion gallon RFS would save consumers approximately $180 billion.[3]

Today, ethanol is blended in roughly 50 percent of all gasoline sold in the country. If ethanol were removed from the market, the shortfall in volume and octane would have to be made up from expensive imports.

In addition to the value of increased volume, today, ethanol is less expensive than gasoline. The net cost to refiners for ethanol today is <u>below</u> the wholesale price of gasoline. Therefore, blending ethanol reduces the cost of gasoline by displacing high-octane petroleum components that currently cost <u>more</u> than the wholesale price of gasoline. The current wholesale, or spot market, price of regular unleaded gasoline is about $2.19 per gallon while the net price of ethanol is $1.81 per gallon.[4] Assuming gasoline marketers and refiners pass those savings along to consumers, ethanol blended fuels should be almost 4¢ cheaper than non-ethanol blended fuels.

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[2] Air Improvement Resources, Inc., February, 2008.

[3] Consumer Federation of America, "No Time to Waste: America's Energy Situation is Dangerous, but Congress Can Adopt New Policies to Secure Our Future," October 2007.

[4] OPIS prices for ethanol net the tax incentive, New York Harbor, EIA prices for regular unleaded gasoline at New York. Week ending 2/08/08.

Impact of Biofuels on Food Supply

As the U.S. ethanol industry continues to expand, the amount of corn used for ethanol production is increasing dramatically. While ethanol has received an undue amount of criticism for driving up the price of corn and subsequently food prices, the evidence does not support that conclusion. In fact, oil prices have twice the impact on rising consumer food prices than does the price of corn.

A December 2007 report by Informa Economics, Inc., "*Marketing Costs and Surging Global Demand for Commodities are Key Drivers of Food Price Inflation*," found that "the so-called 'marketing bill' -- the portion of final food costs that excludes grains or other raw materials -- as a key driver of the consumer price index (CPI) for food, largely due to rising energy and transportation costs. Another significant factor in consumers' food bills is surging global demand for commodities... The report finds a comparatively 'weak correlation' between corn prices and overall food costs. In fact, just four percent of the change in the food CPI could be attributed to fluctuations in the price of corn. Simply put, the growing U.S. ethanol industry is not the cause of food price inflation."

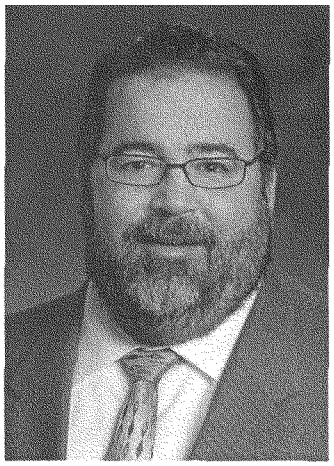
Conclusion

The 110th Congress has enacted polices that clearly put our nation on a new and sustainable path toward greater energy diversity and national security. Additional and more focused research and development programs for infrastructure and new technologies will be critical to the rapid deployment and commercialization of biofuels. The continued commitment of this Subcommittee will greatly contribute to ensuring America's future energy security.

Thank you.

Bob Dinneen

President and CEO
Renewable Fuels Association



Bob Dinneen is the President and CEO of the Renewable Fuels Association (RFA), the national trade association for the U.S. ethanol industry. As such, he is the ethanol industry's lead lobbyist before the Congress and Administration. Mr. Dinneen has presented testimony before the Congress and Federal agencies on numerous occasions, and represented the ethanol industry's interests at state, national and international forums.

Mr. HOBSON. Right on time.

MS. STANEK'S OPENING STATEMENT

Ms. STANEK. Good afternoon, Mr. Chairman and committee members. It is great to be here today.

As mentioned, I am involved in public policy, but also in R&D. Today I will focus on E85, and I am also going to talk about our other technologies just a little bit, our plug-in hybrid electrics and our fuel cell vehicles.

Mr. HOBSON. Are you going to talk about a hybrid Tahoe?

Ms. STANEK. We do. We have a two-mode hybrid, and I will be glad to talk——

Mr. HOBSON. I read the advertisement. You don't advertise how much it gets. You say it is 25 percent better, and I read the whole ad trying to figure it out.

Mr. EMERSON. On TV it said it was the same——

Mr. HOBSON. They don't use a number. It is very interesting.

Ms. STANEK. You know, I think one of the reasons why is in advertising if you put a hard number in, you know, people's driving habits actually alter from that number. So you have to be careful from the personal user experience. But really you see a 40 percent in the city fuel economy and know that within that class of vehicle, it is the highest-rated fuel economy vehicle. So it is a combined average originally, before the hybridization, of 21. So you would add 40 percent savings to that. And on the highway, where you also get hybrid savings, it is a different type of motor that is driving that. It is about 20 percent. So you would add 20 percent to—I wouldn't say 20, but about 19 MPG. But again, if you drive hard, if you are carrying a heavy load, it is very different for you if you are on and off the brake. But that is why you are going to see it in advertising in terms of percentages as opposed to actual numbers.

I will say that the EPA Web site has very good, reliable figures, although it is not easy to nest through Web Sites to find it, but they are posted and reliable.

Mr. HOBSON. I just looked at the——

Ms. STANEK. Well, I will go through this a little bit, and I really want to emphasize our partnership with Coskata. This has been a wonderful cooperation between General Motors and this biotech firm in Warrenville, Illinois. And just to highlight a little bit why we looked into this firm, we have been working with biomass groups all over the world, and this firm has the ability to take waste materials, old tires, plastics, landfill items and biomass, convert it very efficiently using a very efficient process. We are getting 7.7 times the energy out, getting CO_2 reductions up to about 84 percent at a production cost of what we anticipate to be about $1 a gallon. So you can see why this is very interesting for us.

In addition, I will talk a little bit about the readiness. The important thing is we learned a little bit more about enzymatic processes. There is more science, more work ahead. The Coskata process can start immediately. And, in fact, they just announced a partnership with ICM, which is the largest biorefinery builder.

So before we launch into all that, in the automotive industry, this is a great time for us. There are a number of opportunities and a number of challenges. We are addressing these with all of our ad-

vanced technologies. The important thing is that we have to develop alternative sources of energy and propulsion. We have this chance right now to mitigate many of the issues surrounding energy availability, and we hope we can continue to do this with the cooperation of business and government.

The first thing we have to do, and we are continuing to do, is really improving the internal combustion engine. You mentioned the Cobalt. That vehicle is a very affordable vehicle for about $10,000. It gets 34 miles per gallon. Now, this is important because General Motors is a full-line auto manufacturer. We provide vehicles to everyone. We have to ensure that we continue to have entry-level buyers being able to buy our new products. These are very emission-efficient and very energy-efficient. We can still work on that through aerodynamics, more nanotechnologies, better use of materials, lighter-weight materials. So we are still focused in that area. It is still a very rich area to get fuel economy from.

In addition, we are working on hybrids. We do have eight hybrids right now that are all being launched. We are going to double that to 16 in the next year or two. So in terms of General Motors' portfolio, we have very good fuel efficient vehicles at an entry-level price, we are moving into hybrids and now we are also very, very active in E85 and flex-fuel technology. No secret here, our leadership worked in Brazil early on, saw the benefits of alcohol fuels, began to steer the ship down there more towards the flex-fuel technology; 95 percent of our product portfolio in Brazil now is flex-fuel. Those learnings were brought back to Detroit, and we are beginning to assess the entire portfolio to make them flex-fuel, and that is a global opportunity for us. As Bob mentioned, there are 6.5 million flex-fuel vehicles in the U.S.; 2.5, actually approaching 3 million, are General Motors vehicles.

So again, we are expanding, and we are committing our product line to grow even more. Just last week in Chicago at the auto show, we announced our first four-cylinder flex-fuel vehicle. I think this has been something everybody has been waiting for not only on the larger engines, but on the smaller engines.

Again, we feel E85 is important because you can address a number of things at once. You can address the energy issue, the CO_2 issues, and you can certainly help with smog-forming emissions and help support job growth. So we think it attacks everything at once. We think it has a great opportunity to really address our energy issues in this country.

Now, as Bob mentioned, we have announced that we would begin to convert 50 percent of our portfolio to flex-fuel, but we also need the infrastructure to grow. We realized we couldn't make such statements unless we were doing something about that as well. My team and many others at General Motors have been working with many of you and others around the country to get E85 stations in States. Today we have over 300 stations that are in place, because we partnered with ethanol producers, with Governors, with agency heads, with Federal funding, with clean-city coordinators, and we haven't lost one station, which is important. That means the fuel is selling well. The retailers are holding. You know, they are not backing out of the business. So if we can do that from a little

small-operations team to get that created, we believe that it needs to now grow to a national level.

I would submit to you that it would be important, as you are considering different things, proposing more of a national target of stations. It is very, very easy to understand where these stations should go. It is certainly based on where fuel is consumed in population. We have done a lot of studies on that. And we absolutely have our flex-fuel vehicles, all the automakers, really following the same lines. So if you know where people live and where they consume fuel, it is pretty clear that you can put in these stations that will be successful.

A little case in point. We opened a station in Miami, clearly out of the Corn Belt, very far away from where the fuel was produced. The fuel was selling very competitively. We reached out to our flex-fuel owners within 5 miles of that station. We had 5,000 flex-fuel owners. We said, by the way, you have a flex-fuel product, and you now have fuel in your market. They literally were running out of fuel in days, and it made a lot of news, and it also led to the development of 25 new stations that will be going into the greater Miami area.

So one of the goals we have been doing at GM is to seed these important markets, to ensure this expansion happens. And just to restate, we do not think it is difficult. We think it is very, very achievable.

Continuing on just a little bit. I want to talk about Coskata. As I mentioned, the metrics are fantastic. Coskata is in Warrenville, Illinois. They have taken existing technology, and they have combined it with their microbes, which are patented microbes. And essentially the simplest way to think of this is they take the waste and they gasify it. The gas becomes hydrogen and carbon monoxide. Their microbes eat the gas, and they just gorge on it. In some of the technologies, the microbes are very sensitive, they don't live long, they get ill. But they have really made them hearty. So they are consuming the gas. And what is the byproduct? They actually sweat ethanol in water. So these microbes take in the gas, they consume it and sweat ethanol in water.

They then take that product and they put it through what they call membrane technology. It is used in dialysis right now. It is very mature. It is a very known process. And the membrane technology allows the separation of water and ethanol in a very, very energy-efficient method. Instead of having large spinning techniques and energy-demanding separation, it can be done very affordably. In fact, 50 percent less energy is consumed in the Coskata process in separating the fuel. The important thing, too, which I haven't mentioned up to point, is their process creates water. It means that their per-gallon use of water for every gallon of ethanol is under a gallon. If this proves to be true in a large-scale plant, this will be the most efficient use of water that we know of.

Again, we believe they are ready to start now. The reason why they are ready to start now is because the gasification step and the membrane technology step have been known for some time. They have been known, and they have been used in other processes in

other industries. And now that they have their microbes healthy, hearty and patented, they are ready to go and connect all the dots.

They announced that they will be putting up a demonstration plant. They haven't announced the site, but it will be relatively soon when they do announce. They are going to be producing 40,000 gallons of ethanol using this process. We will be the recipients of the first 40,000 gallons. We will take the ethanol back to our proving grounds and use our vehicles with that fuel out at Milford.

From that we will continue to partner with them all over the country and encourage in each and every State biorefineries that adopt this process. We think it is energy-efficient. We think it is a great local adaptation, and it is a great use of science and regular matured commercialization techniques.

Another thing we continue to do—I won't spend too much time—but we continue to promote E85 and our products. Our products are going from 11 to 15 this year, as I mentioned, one being a four-cylinder. It is really important that we include the consumer in these discussions. Up until now they have a notion of biofuels. They don't know if they are using them, where they are. So the more we can do locally to let people know that they have some choice in their markets, that they have vibrant competition, it will help get education up.

So we had an E85 fall tour and an "85 days of summer" where we went out and engaged consumers, retailers. We went to editorial boards. We went to football games. And it worked very successfully. In those markets fuel sales are up. And, in fact, in one market where we did a lot of postcarding and did a lot of media, sales of E85 went up 30 percent, and they have remained up 30 percent in those markets.

When people say it doesn't work, it does work, but it does take this coordinated effort. And we can never forget the communication of the marketing element because that is how consumers are made aware of this process.

So in conclusion, I think there are a few things that we can work together on. I think we still need a strong and sustained push from Congress and the administration to support biofuel production, sustainable biofuel production, and next-generation cellulosic ethanol.

In addition to supporting these efforts, we must include infrastructure, not just R&D. As I mentioned, we need a larger national goal. Probably it would be reasonable to be 6 percent of all stations or greater. That is where diesel started, and we have seen the diesel industry do very, very well. Biofuel infrastructure should be significantly expanded.

We need the national goals as I mentioned, and we need a market response that is encouraging the use of these fuels and talking to the benefits.

We should consider incentives for the manufacturer of biofuel-capable vehicles and increase support for broadbrand infrastructure conversion as well.

The government should continue to purchase vehicles that are flex-fuel. Government fleets actually do help this process. When they purchase the vehicles, whether they be E85–capable vehicles or hybrids or hydrogen, it does help grow the market because we

are able to work on putting in fuel and infrastructure around those large fleets.

Now, before I close, I wanted to talk about the other technologies. Right now we have 100 GMX vehicles. They are called GMX 101. They are actually Equinox vehicles that are being put in the hands of consumers right now. They are hydrogen vehicles. They are a demo fleet. They are not for sale. But we have hydrogen stations going up in California, New York and in D.C. And again, these folks will be able to experience hydrogen vehicles today.

In addition, we talked a little bit about our efforts with the two-mode and a little bit with some of our battery technology, but how we are very, very active in Detroit working on the Volt technology. This is a pure battery-operated vehicle with a range extender.

So I thank you for your time and listening to our story, and I hope you have more questions after we hear from everyone. Thank you.

[The information follows:]

Testimony of Mary Beth Stanek
Before the Energy and Water Development Subcommittee
Hearing on Gas Prices and Vehicle Technology
February 14, 2008

Good morning. My name is Mary Beth Stanek and I am Director of Environment and Energy Policy and Commercialization at General Motors. I am pleased to be able to speak to you today regarding GM's plans for expansion of vehicle offerings capable of using E85 ethanol fuel and the need for ramping up the availability of this fuel and the infrastructure needed to make it available to American consumers. I will also talk about General Motors investment into Coskata, a leading bio tech firm in Warrenville, Illinois.

Today's automotive industry provides more in the way of opportunities – and challenges – than we have seen in its entire history. On the challenge side, there are serious concerns about energy supply, energy availability, sustainable growth, the environment, and even national security issues that, collectively, have come to be called "energy security." For the global auto industry, this means that we must – as a business necessity – develop alternative sources of propulsion, based on alternative sources of energy in order to meet the world's growing demand for our products. This is a huge assignment. But it's also an extraordinary opportunity.

By developing alternative sources of energy and propulsion, we have the chance to mitigate many of the issues surrounding energy availability. We will be able to better cope with future increases in global energy demand. We will minimize the automobile's impact on the environment.

This means that we must continue to improve the efficiency of the internal combustion engine, as we have for decades. But, it also means we need to dramatically intensify our efforts to displace petroleum-based fuels by building more vehicles that run on alternatives, such as E85 ethanol, and, very importantly, by

significantly expanding and accelerating our commitment to the development of electrically driven vehicles and provide support for the full commercialization of hydrogen vehicle and infrastructure programs.

Today I want to focus on our activities to accelerate the availability and use of alternative fuels. We believe that the biofuel with the greatest potential to displace petroleum-based fuels and provide carbon dioxide emissions reductions in the U.S. is ethanol. As a result, we have made a major commitment to produce vehicles that can run on E85 ethanol.

We believe there are many benefits of using E85:

- Ethanol is a renewable fuel
- Using E85 helps reduce greenhouse gas emissions
- Using E85 helps to reduce smog forming emissions
- Using E85 can help to support the domestic agriculture industry in the U.S. and support new job growth

GM has produced more than over 2.5 million E85 capable vehicles that are on the road today in the U.S. For the 2008 model year, we have 11 flex fuel models and are growing to fifteen models in 2009. Just last week we announced a four cylinder flex fuel HHR at the Chicago Auto show.

Along with Chrysler and Ford, we announced that America's three domestic auto companies will double our production of vehicles capable of running on renewable fuels by 2010. That's more than two million E85 and biodiesel-capable vehicles a year by the end of the decade – the single largest commitment to renewable fuels in our nation's history. But we went even further. In a meeting with President Bush -- GM, Ford and Chrysler announced that America's domestic auto companies were prepared to make fully half of our annual vehicle production biofuel capable by 2012, provided there is ample availability and distribution, as part of an overall national energy strategy.

Let me put the significance of these announcements in perspective. If all of the E85 capable vehicles on the road today -- along with those that GM, Ford, and Chrysler have already committed to produce over the next

12 years -- were to run on E85, we could displace 29 billion gallons of gasoline annually by 2020. Furthermore, if all manufacturers made the same commitment, we could displace over 53 billion gallons of gasoline annually – or 32% of our projected petroleum usage.

So, the potential of biofuels like E85 to significantly displace petroleum is within our grasp today. The vehicles are on the road or in the works, but they are not being fully utilized because of constraints on E85 supply and distribution.

To help address these constraints, we're partnering with government, fuel providers, and fuel retailers across the U.S. to help grow the E85 ethanol fueling station infrastructure. In 2006, there were 600 E85 refueling stations, today the number of stations has more than doubled to over 1470. Since May of 2005, GM has helped add 300 E85 fueling stations in 15 states -- with more to come. Some highlights include:

- In 2005, GM co-marketed fuel coupons and owner awareness in Sioux Falls, South Dakota.
- GM has worked with Kroger in Texas and we've helped E85 outlets grow from 1 to 27 in the past year.
- Through our work with Kroger, pumps are in operation in Ohio with co-marketing events.
- GM is supporting the state of Colorado with the recently announced opening of 40 additional stations including "85 cent fuel days" promotions.
- We have worked with Meijer, CleanFuelUSA, the State of Michigan and the State of Indiana to introduce approximately 40 new retail outlets.
- We have similar arrangments in Illinois that launched 20 stations with VeraSun, Gas City and Shell; and in Minnesota with VeraSun and Erickson Oil accounting for 10 additional stations.
- GM and all of our partners had a very successful summer and fall tour where E85 availability was highlighted in 12 markets generating greater consumer awareness.

General Motors most exciting announcement is its investment in and work with Coskata, a bio tech start up firm in Warrenville, Illinois. Coskata appears to have a very sustainable approach to ethanol production. They are now

ready to start building demonstration facilities that will validate their patented process – which takes biomass and municipal waste and converts the material to ethanol. We were so impressed by the work they are doing that we decided to invest in the company. The Coskata process appears to be one of the most efficient at converting waste materials into ethanol. For each unit of energy that the Coskata process uses, it creates 7.7 units of usable energy output. Further, it requires less than a gallon of water for every gallon of ethanol and has a CO2 reduction benefit of up to 84 percent -- according to Argonne National Labs. General Motors and Coskata will work to rapidly commercialize their process around the globe.

Finally, to really achieve the success that we believe is possible in the alternative fuels arena, we will need everyone to help further these efforts and that includes government.

- First, we need a strong and sustained push from Congress and the Administration to support biofuel production, including next-generation cellulosic ethanol. The support must include appropriations for infrastructure, not just R&D.
- Second, the biofuels infrastructure should be significantly expanded. We need to establish national goals for E85 retail station deployment that is much larger in total than today's totals. The market response to renewable fuels is encouraging, but it needs to reach a self sustaining level that is not lessened when gasoline prices fall. Steps to increase the availability of biofuels should help increase its use. Government should continue incentives for: the manufacture of biofuel-capable flex fuel vehicles and increased support for broad-based infrastructure conversion.
- Third, government purchasing should set the example. Government fleets can help lead the way to bringing new automotive technology to market and bringing down the cost of new technologies. The

government should continue to purchase flex fuel vehicles, require maximum utilization of E85 in the government flex fuel fleets and use federal fueling to stimulate publicly accessible pumps.

In addition to biofuels, it is critical that government continue to support all advanced platforms including electrification, advanced battery commercialization and hydrogen programs. All efforts will collectively support our need to offset growing energy demand. In addition to advanced vehicle programs, emphasis must also be placed on infrastructure. We need these energy alternatives to reach the final consumer both on the vehicle and fueling side of the equation.

In summary, we believe tomorrow's automobiles must be flexible enough to accommodate many different energy sources. A key part of that flexibility will be enabled by the continued focus on getting E85 fuel and vehicles capable of using that fuel into the market quickly. We look forward to working with the Congress and the Administration to make this even more of a reality.

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Effective January 1, 2008, Dr. Mary Beth Stanek was appointed Director-Energy and Environment Policy and Commercialization. Dr. Stanek will be responsible for planning and execution of GM's global fuel cell technology/vehicle demonstration and commercial programs, business development for the Chevrolet Volt and E-Flex fuel cell vehicle programs and development of policy and infrastructure initiatives related to GM's electrically driven vehicles. She will continue her current responsibilities which include biofuels infrastructure development, relationship development and liaison with VSSM.

Dr. Stanek began her GM career in 1982 and has completed assignments in several staffs including Purchasing, R&D and Public Policy. Dr. Stanek is currently leading many of the co-marketing e85 partnership activities with fuel retailers and ethanol suppliers.

In addition to Dr. Stanek's position at General Motors, she is also a frequent contributor to MCB University Press. Her articles can be found in Management Decision, European Business Review, Journal of Workplace learning and Management Research News.

Dr. Stanek was a 2002 recipient of the Wall Street Journal Achievement Award and is a member of the Academy of International Business.

Dr. Stanek holds a Doctor of Business Administration from the University of Sarasota. Her concentration areas are international business and alliance management.

MR. HILLEBRAND'S OPENING STATEMENT

Mr. HILLEBRAND. Thanks for the chance to come here, Chairman, the committee, to talk about battery technology. It is a real honor for me.

In the last 25 months, there has been a dramatic development in automotive and vehicle technology in North America. That has been the development of hybrid technology and the rapid introduction of plug-in hybrid technology programs with most of the Nation's automakers. It has accrued for a variety of reasons; probably foremost is the growing dependence on imported oil and the cost of fuel. But it is also related to our clean air standards, what they do to diesels; improved battery chemistries; small businesses which are really kind of picking up the challenge; and the fact that the government has been funding a lot of this research for quite a long time.

The reasons for this sudden interest for plug-ins are many. It is clear we are in the midst of a revolution that is probably comparable to what happened about 100 years ago when the automobile was first developed at the start of the last century. The first modern hybrid vehicles were developed through U.S. Government research programs in the start of the 1990s. There was no commercialization because fuel prices were low, so there wasn't a whole lot of demand. Battery technology was not very well developed, and the power electronics were not very sophisticated. So it made the vehicles expensive and inefficient.

But in the late 1990s, Toyota produced the first successful hybrid using the new nickel-metal hydride batteries, and Toyota currently manufactures the hybrid vehicles in Japan and exports those to North America. The hybrid vehicle market is about 500,000 vehicles in 2007 worldwide, but that is less than 1 percent of the total vehicle market. Its share, though, is projected to grow 30 percent over the next 4 years, and it could reach as many as 2 million vehicles in 2015.

The growth is dramatic in automotive terms and the competition between the manufacturers is intense. Toyota produces more than 80 percent of the hybrids that are sold right now, but that is not likely to change soon. Ford and GM have both produced viable hybrids, but the production of these is slowly ramping up because of limitations in materials and the high costs. The GM two-mode hybrid, which we have been talking about today, is probably arguably the most advanced in the world right now, but the Toyota system is more mature, and it is more available. It is available in more models. Ford has——

Mr. HOBSON. Excuse me. Is the Toyota different than the Honda system?

Mr. HILLEBRAND. Yes. The Honda system is a very mild——

Mr. HOBSON. You mentioned Honda, and Honda is in Ohio. So I thought——

Mr. HILLEBRAND. Yes. There is a slight difference. Ford has a hybrid system similar to Toyota's, but they publicly stated that they are severely hampered by a lack of access to advanced battery technology and to high battery costs.

The potential for hybrid technology to reduce fuel usage is very high. Hybrids can improve fuel economy around 25 percent. And testing at this point indicates that plug-in hybrids can improve fuel economy substantially more. The fuel economy of a plug-in hybrid prototype, as we have measured it at our lab at Argonne, has exceeded 100 miles per gallon. That is without being optimized.

Now, this number sounds a bit sensational. And I am hesitant to use fuel economy when I am talking about plug-in hybrids because the concept of fuel economy doesn't really apply when you are talking about plug-ins. But we have to give it some sort of a metric. Suffice it to say that plug-in hybrid potential is very high, and right now we have programs in place to actually determine how to properly compare plug-in hybrid fuel economy with existing conventional fuel economy so that we have a good back-to-back measurement.

In all cases, whether it is hybrids or plug-ins, batteries are the key enabling technology. Lithium-ion battery chemistries are the leading candidate for solving automotive battery issues. The U.S. is dominant in the development of battery materials and chemistries, and although many of the fundamental breakthroughs in battery technology have occurred in the U.S., they have been subsequently licensed and commercialized overseas.

The DOE battery research program has sponsored small businesses, it has pushed applied development of promising battery chemistries to a very high level. But the U.S. is behind the rest of the world in the adoption of battery-manufacturing capability. Many small American companies are planning to build their factories in China right now. The nickel-metal hydride automotive technology was initially developed in the U.S. It has been commercialized by Panasonic and Sanyo, and it is mainly manufactured in Japan and Korea and is sold on the Toyota hybrids.

Several countries have advanced battery research capability. Japan—I was at a conference there about a year ago in Tokyo, and it was a very eye-opening experience. They recognize advanced battery technology as the key driving force behind competitiveness. And the actual quote I heard at that conference through the translator box was that battery technology manufacturing capability is a matter of national survival. Strong statement. The Japanese Government is very supportive in funding research programs. They have committed to a 20-year research program, about 50 million a year in U.S. dollars.

China is the planned location for many new American manufacturing facilities. Their battery-manufacturing methods are labor-intensive and are not really refined at this point. But China will develop capability quickly, and they will keep low costs. That is why most American companies are attracted to that location.

Korea has low-cost and aggressive companies, makes a lot of batteries, but they are more of a follower than a leader in chemistries.

And last month, 2 months ago, Germany announced the German Battery Alliance. They see the importance of getting battery-manufacturing capability on shore. They have the intent to develop a homegrown capability to increase the energy and performance of lithium-ion batteries. They are funding it at the tune of $600 mil-

lion, and it is mainly funded—it is coshared, but it is mainly funded by Federal Ministry of Education and Research.

Now, the U.S. is supreme in battery materials and chemistry development. It also leads start-up activities and innovation. But the major problem is that we don't have manufacturing or prototyping capability. Battery manufacturing and know-how and capability are developed over time. They require huge capital investments. Toyota invested a lot of this money in the past. It has developed this capability, and it can produce batteries. Estimates of costs vary, but studies indicate that Toyota probably pays one-third less for its batteries than do the American-owned companies.

Beyond manufacturing, the two biggest concerns with the lithium-ion technology are safety and cost. Now, safety is a concern, but looking at it from an engineer's perspective, most of those problems are solvable, meaning the limiting factor for plug-in hybrid introduction is likely to be cost.

The estimates for the battery pack for a plug-in hybrid, look at it being between 3,000 and $12,000 per car per pack. At these levels, the major hurdle to introducing the plug-in hybrid technology is that the projected fuel dollar savings are considerably lower than the cost of the battery. In other words, there is no payback on the technology right now.

Now, to get a payback, you either need to lower the battery cost, or you need a bigger difference between gasoline and electricity price. Battery costs can be lowered by looking at funding materials, research in batteries. You can do tax policies, R&D tax credits. You could look at incentives. There are ways to do it, because from the automaker's point of view, with batteries not really ready for commercial introduction, the business risk of introducing a plug-in hybrid is really tremendous, especially because automotive battery warranties have to be for the life of the vehicle. So the automaker takes all the risk, and it decides and commits to making these, it could commit to really losing an awful lot of money.

Specific-focus North American battery-manufacturing incentives could spur further progress. A SEMATECH-type program focused on battery manufacturing in North America might be a big help to help jump-start a homegrown battery industry.

The government should continue to support the hybrids the way they have. That has been very helpful with respect to pushing them into the market, and maybe we should look into expanding those into plug-in hybrids as well. Government funding for advanced vehicles should also better reflect a likelihood of success, which might be an important thing now that we have higher fuel prices. A sustained effort to develop a domestic battery-manufacturing capability will also be very important because ultimately we haven't accomplished much if we have transferred our dependence on imported oil for an addiction to foreign batteries.

Thank you.

[The information follows:]

House Appropriations Subcommittee on Energy and Water Development

Overview Hearing: Gas Prices and Vehicle Technology

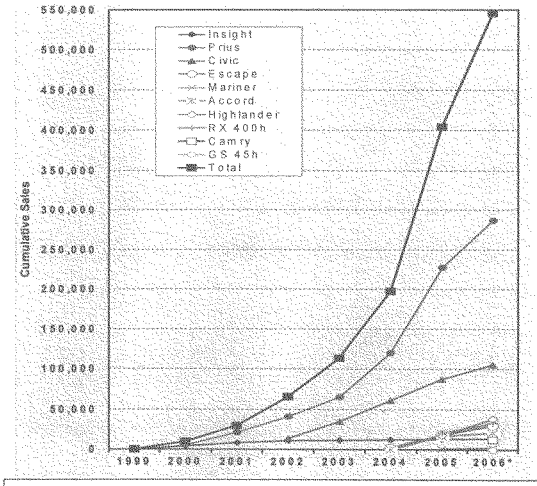
February 14, 2008

Testimony of Don Hillebrand, Ph.D.
Director, Center for Transportation Research
Argonne National Laboratory

In the last 25 months there has been a dramatic development in automotive and vehicle technology in North America. This development relates to the rapid adoption of hybrid and particularly plug-in hybrid electric vehicle (PHEV) technology programs by the Nation's automakers. There are plans for the introduction of dozens of versions of plug-in hybrid conversions based on an array of existing vehicle platforms. This is occurring for a variety of reasons, including sustained government funding of automotive technology development programs, tough clean-air standards that are challenging to wider deployment of diesels, the existence of the night time "trough" in electricity usage, the successful creation of improved battery chemistries, the creative and innovative spirit of small American businesses, and perhaps foremost, the rapid increase in U.S. fuel prices and growing and sustained dependence on imported oil.

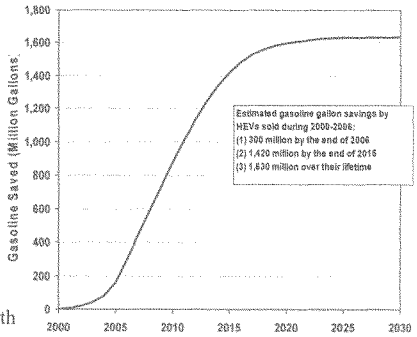
While the reasons for the sudden interest in plug-in hybrids are many, it is clear that we are in the midst of a revolution in automotive technology similar to the expansion of the auto industry during its infancy at the start of the last century.

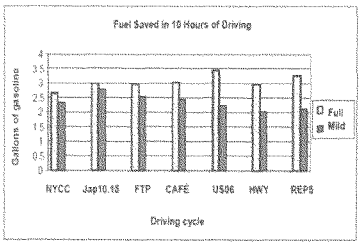
The first modern hybrid vehicles were developed through U.S. government research programs in the early 1990's. There was no commercialization because of low fuel prices, lack of battery technology, and immature power electronics



Cumulative U.S. hybrid sales – Source J.D. Power and Associates

development, all of which contributed to make the vehicles expensive and inefficient. In the late 1990's, Toyota produced the first successful hybrid using new nickel metal hydride batteries (NiMH). Toyota currently manufactures its hybrid vehicles in Japan and exports those vehicles to North America.





From Argonne Hybrid Electric Vehicle Technology Assessment, 2001

The world hybrid-vehicle market, estimated at 504,000 vehicle sales in 2007, is projected to grow at an average rate of 30% over the next four years and could reach 2 million units by 2015. This growth is dramatic in automotive terms and the competition between manufacturers is intense. Toyota produces more than 80% of the hybrids sold in the U.S., and this situation is not likely to change soon. Ford and GM have both produced viable hybrids, but the production of these is slowly ramping up because of limitations on materials and high costs. The GM 2-mode hybrid is arguably the world's most advanced, but the Toyota system is more mature and available. Ford has a hybrid system similar to Toyota's system, but they have publicly stated that they were severely hampered by a lack of access to battery technology and high battery costs.

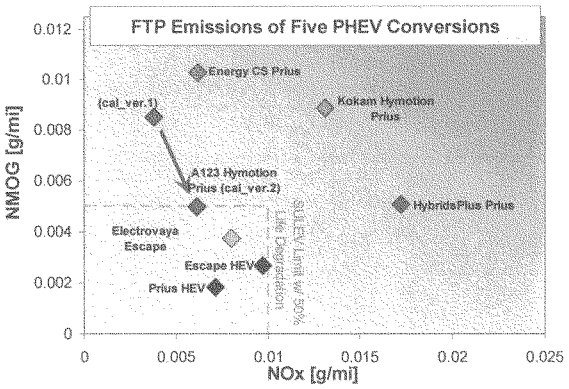
The potential for hybrid technology to reduce fuel usage is high. Hybrids can improve fuel economy up to 25%, and testing to this point indicates that plug-in hybrids can further improve fuel economy substantially. The measured fuel economy of plug-in hybrid prototypes at Argonne has exceeded 100 mpg, and there is potential for further improvement. This number sounds a bit sensational, and I am hesitant to use fuel economy when talking about plug-in hybrids, but suffice it to say that the plug-in hybrids have great potential.

UDDS Cycle Charge Depletion Operation	Average Depleting MPG	Average Battery Usage [Whr/mi]	CD range [miles]	Usable Energy [kWhrs]	Petroleum Displacement Factor [%]	Charge-Sustaining MPG
Valence Hymotion Prius	178	126	24	2.9	61.4%	66.4
A123 Hymotion Prius	160	129	25	3.1	59.9%	64.4
EnergyCS Prius	139	131	34	4.5	55.2%	62.2

HWY Cycle Charge Depletion Operation	Average Depleting MPG	Average Battery Usage [Whr/mi]	CD range [miles]	Usable Energy [kWhrs]	Petroleum Displacement Factor [%]	Charge-Sustaining MPG
Valence Hymotion Prius	122	98	33	3.2	47.5%	64.0
A123 Hymotion Prius	101	113	31	3.4	45.5%	55.0
EnergyCS Prius	103	103	50	4.9	43.6%	58.1

Argonne Advanced Powertrain Research facility testing results for PHEV conversion vehicles

Another issue of concern is the level of emissions from PHEV conversions. Testing of conversions has indicated that the PHEV vehicles can meet SULEV emissions. The chart at right shows test results from Argonne's Advanced Powertrain Test Facility. It indicates that development of PHEV control systems can lower emissions and bring PHEV conversion vehicles into compliance.



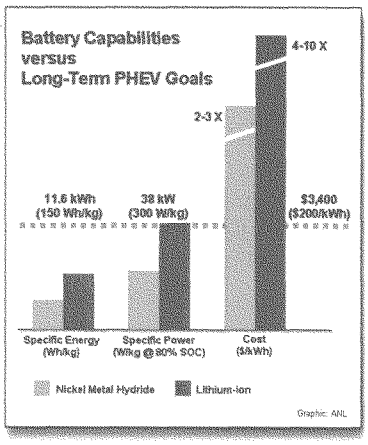
In all cases, whether hybrids or plug-in hybrids, the batteries are the key enabling technology, and lithium ion battery chemistries are the leading candidate for solving automotive battery issues. The U.S. is dominant in the development of battery materials and chemistries, although many of the fundamental breakthroughs in battery technology have been subsequently licensed overseas. The DOE battery research programs have spawned small businesses and pushed applied development of promising battery chemistries to a high level. A plethora of small companies have grown out of universities and research centers and these companies are pushing the edge of battery technology. National laboratory programs for battery development and testing continue to be successful, but the U.S. is behind the rest of the world in the adoption of battery manufacturing capability. Many small American battery companies build their factories in China. NiMH automotive technology was initially developed in the U.S., but has been commercialized by Panasonic and Sanyo and is mainly manufactured in Japan and Korea, and is available on most Toyota hybrids.

Lithium-ion advantages over NiMH and other battery chemistry:

Lithium-ion (Li-ion) batteries are considered the front-runner for PHEVs because of the higher specific energy and power compared to NiMH. Li-ion cells with cobalt cathodes hold twice the energy of a nickel-based battery and four-times that of lead acid. Li-ion is a low maintenance system, an advantage that most other chemistries cannot claim. There is no "memory" and the battery does not require scheduled cycling to prolong its life. Li-ion does not have the sulfation problem of lead acid that occurs when the battery is stored without periodic topping charge. Li-ion has a low self-discharge and is environmentally friendly, hence disposal is of minimal concern. Li-ion battery energy density is 1.8-times of NiMH and power density 2.5-times, thus vehicles can go further with Li-ion. For the last ten years, Li-ion battery technology and

applications have progressed significantly – the amount sold in 1995 was $3.389 billion and then in 2004 it reached $42.1 billion (a 12-fold increase).

The chart at right compares the capabilities of Li-ion and NiMH batteries to the long-term PHEV battery goals and illustrates the substantial improvements in energy and cost required. Although specific energy of Li-ion is roughly twice that of Ni-MH, it must double to provide energy to meet the PHEV 40-mile electric range goal. Specific power is not a limitation. Cost is the greatest concern for Li-ion; it is estimated to be 4 to 10-times that required to be competitive.



Cycle life using a PHEV duty cycle has not been evaluated for either battery, but NiMH performs sufficiently well in hybrid (power assist) applications to allow Toyota and GM to offer an 8-year, 100,000-mile warranty. Tests of Li-ion using a hybrid power assist cycle have demonstrated up to 300,000 shallow cycles; PHEVs could require up to 3,000 deep discharge cycles as well.

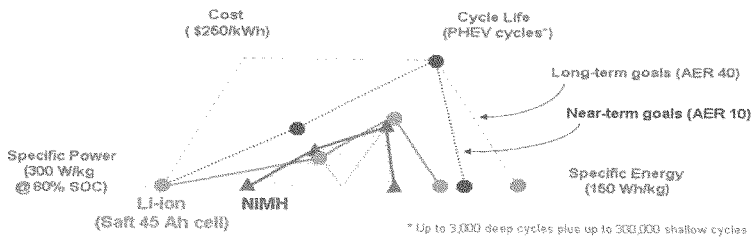
Cost – The lack of a high-volume manufacturing facility for high-energy automotive batteries is considered a major factor in the cost gap since Li-ion uses low-cost and abundant materials compared to NiMH. In addition, it should benefit from the material refinements and production maturation in the high-volume consumer electronics market.

Life – A combination of energy and power fade are anticipated challenges for Li-ion because a PHEV duty cycle includes high power assist at low state-of-charge (SOC) in addition to the high energy demand for electric range over the 15-year life of the vehicle. Li-ion batteries have demonstrated acceptable life for shallow cycle hybrid applications, but battery life typically falls off dramatically with deep discharge cycling.

Low-Temperature Performance – Li-ion exhibits significant discharge and regenerative power reduction at temperatures less than -20°C.

Tolerance of Abuse and Safety – Li-ion batteries used in consumer electronics are not intrinsically tolerant of abusive conditions such as short circuits, overcharge, over-discharge, crush, or exposure to fire and/or other high-temperature environments.

Availability of Lithium – The primary sources of lithium are located outside of the U.S. and the question has been posed whether or not this is a limiting factor for Li-ion battery production. This does not appear to be a matter of immediate concern, but it needs to be more fully explored.



Source – DOE PHEV Program Plan

Li-ion battery advantages for PHEVs:

- Higher power and energy
- Lower number of cells
- Lower heat generation
- Lower metal cost per kWh
- Higher usable state-of-charge (SOC) range
- Higher operating temperature range
- Lower long-term cost

Safety issues with Li ion:

Li-ion battery high energy density comes at a price. Manufacturing methods are more critical the denser the cells become. With a separator thickness of only 20-25μm, any small intrusion of metallic dust particles can cause great problems. Appropriate measures are needed to achieve the desired safety performance. Li-ion batteries are nearing their theoretical energy density limit and battery manufacturers are beginning to focus on improving manufacturing methods and increasing safety. Li ion battery safety concerns include:

- High energy and prone to shorting;
- The electrolyte is flammable;
- Electrodes need to be thin, increasing the chance of shorting;
- Short-circuiting a Li-ion battery can cause it to ignite or explode; and
- Inherent instabilities of lithium means the cell has the potential for thermal run-away (the temperature rises quickly to the melting point of lithium causing a violent reaction).

Because of the inherent instability of lithium metal, research has shifted to a non-metallic lithium battery using lithium ions. Although slightly lower in energy density, the lithium-ion system is safe, providing certain precautions are met when charging and discharging.

Li-ion battery manufacturing:

Many countries have recognized that battery manufacturing capability is the key to automotive manufacturing competitiveness, but the U.S. companies have generally not concentrated on the manufacture of batteries.

Japan: Japan recognizes advanced battery technology as the key driving force behind competitiveness and hence views it as an issue of "national survival." The Japanese government is very supportive in funding research programs and its program couples superior manufacturing with excellent materials and systems development. Japan is the world's leading battery manufacturer and want/needs to maintain leadership in this technology. Japan used to supply 50% of the nickel cadmium batteries in the world, and for NiMH batteries, it supplies more than 70 percent. For Li-ion batteries, Japan plans to supply about 60% and wants to maintain a market share of 60-70 percent. At the current time, for hybrid vehicles, Toyota uses about 94% of NiMH batteries. The other six percent is Ford in the U.S.; however, about two-thids of that is from Japan. Basically, Japan is the only supplier for the whole world. Therefore, it is planning to leverage its position to become the leading supplier of Li-ion batteries for vehicles.

China: China is the planned location for many new manufacturing facilities. Their battery manufacturing methods are labor intensive, and at this time not well refined; however, China will quickly develop capability and will maintain lower production costs. Naturally, the American companies are attracted to this location.

Korea: Korea has low-cost aggressive companies, but is more a follower than a leader on chemistry and materials. In Korea, there is a government directed national project from 2004 to 2009 funded at about $84.7 million, or about $16.95 million per year. The project is trying to develop a super high-capacity Li-ion secondary battery (a rechargeable battery), as well as developing super capacitors.

Germany: Germany has announced "The German Battery Alliance" with intent to develop a homegrown battery manufacturing capability. The program will look at all aspects of battery development and is funded by the German government. This was driven by requests from the German auto industry for access to battery technology for hybrids. The project's objective is to substantially increase the energy and performance density of Li-ion batteries and to accelerate the possible use in production. Around €420M (about $600 million) will be invested in the initiative by participating industrial partners and the Federal Ministry for Education and Research.

United States: The U.S. is a leader in battery materials and chemistry development and also leads battery start-up activities and innovation. The major problem with the U.S. is that it lacks manufacturing or prototyping capability. Manufacturing capability does not occur overnight. Battery manufacturing know-how and capability are developed over time and require huge capital investments. Toyota has invested substantial funding in developing the capability to

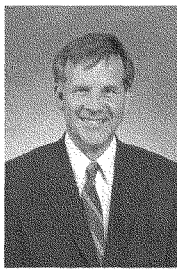
develop and design batteries. Estimates of costs vary, but studies indicate that Toyota pays one-third less for their batteries than do the American-owned companies. There are many reasons for this, but one is that Toyota has developed the requisite design and manufacturing infrastructure, and hence is a generation ahead in manufacturing technology and experience. Asian-based battery makers have marked advantages based on the large investments they have made in the manufacturing process. No matter how good the chemistry, one needs manufacturing skill to produce commercial batteries. Li-ion batteries are complicated devices that are prone to overheat, leak, and fail, no matter what chemistries they use. Superior design can minimize the chance of these faults occurring, but if you don't have advanced manufacturing methods you cannot make high-quality, durable, and safe commercial batteries.

Beyond manufacturing, the two biggest concerns with lithium ion are safety and cost. While lithium ion battery safety is a concern, the problems are solvable, meaning that the limiting factor to PHEV introduction will likely be cost. Estimates of battery cost range from roughly $3,000 to $12,000 for the expected 40-mile plug-in battery (PHEV-40). At these levels the major hurdle to introducing plug-in hybrid technology is that the projected fuel dollar savings are considerably lower than the cost of depreciating the battery over its useful life. In other words, there is no payback.

To make this cost/value shift positive, we either need to lower battery costs, to develop longer battery life, or we need larger differences between gasoline and electricity costs. This gap can be closed with the slow evolution of technology, or can be accelerated with government policies such as tax policies, R&D tax credits, or incentives. Additionally, government supported research focused on PHEVs and battery development should include scale-up technologies, systems development, battery recycling, and research on access to battery raw materials. From the automakers point of view, with batteries not ready for commercial introduction, the business risk of introducing a plug-in hybrid is tremendous. Especially because automotive battery warrantees are for the "life-of-the-car". Specific, focused North American battery manufacturing incentives could spur further advancement. Perhaps a SEMATECH-like program focused on developing a manufacturing capability might help jump-start a homegrown battery manufacturing industry in North America.

Summary Recommendations:

Government should continue support for research and development, provide incentives for conventional hybrids to accelerate growth of market share, and consider added incentives for plug-in hybrids. Government R&D funding for advanced vehicles should better reflect the likelihood of success and be configured by the need for short term results. A sustained effort to develop battery manufacturing capability will be equally important. In either case, as we develop new vehicle technologies to displace oil consumption, the battery will be the key enabling technology. Ultimately, we have not accomplished much if we transfer a dependence on imported oil, for an addiction for foreign batteries.



Dr. DONALD G. HILLEBRAND
Director of Transportation Research
Argonne National Laboratory

Don Hillebrand is the Director of Argonne's Center for Transportation Research. In this role Don is responsible for leading a team of engineers and physicists who are actively seeking to solve transportation problems related to the nation's reliance on imported energy by developing advanced tools for the analysis of the latest transportation technologies.

Don came to Argonne from DaimlerChrysler A.G. in Stuttgart, Germany where he worked as the manager of Research and Technology Policy in the DaimlerChrysler research labs. He was responsible for environment, energy and research policy with the European Commission on Research. Don worked two years in the White House Office of Science and Technology Policy as a Senior Policy Advisor for Transportation to the Executive Office of the President. Previously Don spent 20 years as a product engineer with Chrysler Motors working on a range of advanced technology programs.

Dr. Hillebrand was elected a member of the Board of Directors of the Society of Automotive Engineers; he is also a Fellow of ESD, The Engineering Society of Detroit. Dr. Hillebrand was named Michigan's Outstanding Young Engineer in 1993 and SAE's Outstanding Younger Engineer in 1999. He has two U.S. Patents, has published technical and policy papers, and has authored two books.

Dr. Hillebrand was born in Detroit, Michigan. He has been married 20 years to the former Mary Laurene Marson and has three sons, and three daughters.

Date Last Updated: 01/14/08

MS. ZIEGLER'S OPENING STATEMENT

MS. ZIEGLER. Thank you, Chairman Visclosky and Ranking Member Hobson. My name is Lynda Ziegler, and I am the senior vice president of customer services at Southern California Edison. I very much appreciate the opportunity to lend Edison's support today to your important efforts promoting sustainable alternative transportation technologies for this country.

My company has been committed to leading the way in responsible electricity generation for many years now. Today 17 percent of the energy that we provide our customers comes from renewable generation. We purchase on behalf of our customers one-sixth of this Nation's wind-generated energy and 90 percent of the solar. Over the last 5 years, our nationally recognized energy-efficiency programs have delivered enough energy savings to power 500,000 homes.

And finally, we are very proud of our 20 years of electric transportation leadership. Today we operate the Nation's largest fleet of electric vehicles that have traveled over 15 million miles on electric fuel. Our Electric Vehicle Technical Center, unique in the utility industry, evaluates all forms of electrodrive technology. We have ongoing evaluation and demonstration programs supporting airport and seaport electrification, truck stop electrification, battery electric vehicles, plug-in hybrid electric vehicles and fuel-cell electric vehicles.

A good example of our leadership, we just recently announced a Ford-FCE partnership to develop and deliver PHEV and grid solutions to help accelerate commercialization of PHEV so that breakthrough improvements in fuel economy and energy security can be realized. The partnership will demonstrate 20 plug-in hybrid electric vehicles, examine new business models, research customer needs, and work on development of open architecture standards and specifications.

We believe that with continued engineering advances and appropriate public policy support, the widespread use of plug-in transportation technologies will become one of this Nation's most effective strategies to address energy security, reduce greenhouse gas emissions and reduce air pollutants. In fact, a recent study by the Electric Power Research Institute and the Natural Resources Defense Council found that widespread adoption of plug-in hybrids versus today's gasoline hybrids could reduce annual emissions of greenhouse gas by more than 450 million metric tons by 2050, the equivalent of removing 82 million passenger cars off the road. These reductions are obviously a long way off, but it provides us all the more incentive to begin today.

Enhanced use of electric transportation has other important benefits as well. A recent DOE study estimated there was enough excess capacity in the U.S. Electricity grid to fuel a little over 70 percent of all the light-duty cars and trucks on the road today without building a single new power plant.

Using electricity to fuel transportation will also reduce our dependence on foreign oil. The study I just mentioned found that PHEVs by 2050 could reduce petroleum consumption by 3 to 4 million barrels of oil per day.

And finally, electricity cost is also cost-effective at about 25 to 50 percent the cost of a gallon of gasoline equivalent. And of all of the popular fuels today, from ethanol and biodiesel to hydrogen, electricity is the only one with a national infrastructure already in place.

So if we have this alternative fuel, what products and technologies can use it today and in the future? In the near term, we are seeing rapid development and deployment of port electrification, truck stop electrification, next-generation electric forklifts, and battery electric and plug-hybrid light and medium and heavy-duty vehicles.

Based on a number of major manufacturer announcements, we should be seeing plug-in vehicles and technology on our driveways and roads within the next 5 years; however, there are still significant challenges yet to be solved on the road to electrifying our transportation. I am primarily referring to the energy storage battery. Today there is impressive progress being made on the lithium battery; however, we still have not achieved a reliable, safe, durable and cost-effective advanced battery for automotive applications. In addition, as we heard from Dr. Hillebrand, there are no domestic battery material suppliers or domestic battery production capacity in place today.

The new energy bill authorizes a broad range of incentives and policy initiatives designed to encourage near-term and long-term solutions and address some of the challenges I have mentioned here. Specifically it authorizes 95 million in new grant deployment programs for qualified electric transportation projects, section 131, part 6, such as electric forklifts, shoreside electrification of ships, electric airport ground support, and truck stop electrification. In addition, H.R. 6 authorized a 90-million-per-year plug-in electric vehicle demonstration program and several programs encouraging manufacturing, sections 132 through 136, which are not currently in the administration's budget. H.R. 6 also authorizes six programs on battery RD&D at $295 million a year. But unfortunately, the administration's budget in fiscal year 2009 remains at just 50 million, about the same as the previous years. We respectfully ask that appropriations ramp up to the fully authorized levels as soon as possible in all of these critical areas.

Mr. Chairman and members of the committee, we stand committed to partnering with Congress, manufacturers, battery suppliers, utility and industry stakeholders to help realize the full potential of electrifying this Nation's transportation future. The first and critical step is to appropriate adequate and sustained funding of the near and midterm programs identified in H.R. 6 and to find the right balance between programs with near-term and long-term benefits.

Thank you for this opportunity.

[The information follows:]

FINAL
Page 1 of 3

Verbal Testimony
Lynda Ziegler
Edison International
February, 14, 2008

Energy and Water Development Subcommittee
Hearing, February 14, 2008

Thank you Chairman Visclosky and Ranking Member Hobson.

My name is Lynda Ziegler and I am senior vice president of customer service at Southern California Edison. I very much appreciate the opportunity to lend Edison's support today to your important efforts promoting sustainable alternative transportation technologies for this country.

Background
My company has been committed to "Leading the Way" in responsible electricity generation and use for many years now. Today, 17% of the energy we provide to our customers comes from renewables. We purchase, on behalf of our customers, 1/6 of this nation's wind generated energy and 90% of the solar. Over the last 5 years our nationally recognized energy efficiency programs have delivered enough energy savings to power 500,000 homes for a year.

And finally we are very proud of our 20 years of electric transportation leadership. Today, we operate the nation's largest fleet of electric vehicles that have traveled over 15 million miles on electric fuel. Our Electric Vehicle Technical Center, unique in the utility industry, evaluates all forms of electro-drive technology. We have ongoing evaluation and demonstration programs supporting airport and sea port electrification; truckstop electrification; battery electric vehicles; plug-in hybrid electric vehicles; and fuel cell electric vehicles.

We believe that with continued engineering advances and appropriate public policy support, the widespread use of plug-in transportation technologies will become one of this nation's most effective strategies to address energy security, reduce greenhouse gas emissions and reduce air pollutants.

In fact, a recent study by the Electric Power Research Institute and the Natural Resources Defense Council found that widespread adoption of plug-in hybrids versus today's gasoline

hybrids could reduce annual emissions of greenhouse gases by more than 450 million metric tons by 2050- the equivalent of removing 82 million passenger cars from the road. These reductions are obviously a long way off, but it provides us all the more incentive to begin today.

Enhanced use of electric transportation has other important benefits as well. A recent DOE study estimated that there was enough excess capacity in the U.S electricity grid to fuel a little over 70% of all of the light duty cars and trucks on the road today - without building a single new powerplant.

Using electricity to fuel transportation will also reduce our dependence on foreign oil. The EPRI- NRDC study I just mentioned found that PHEVs by 2050 could reduce petroleum consumption by 3 to 4 million barrels of oil per day.

And finally electricity fuel is also cost effective at about 25-50% the cost of a gallon of gasoline equivalent and of all of the popular alternative fuels today from ethanol and bio-diesel to hydrogen, electricity is the only one with a national infrastructure already in place.

So if we have this alternative fuel, what products and technologies can use it today and in the future?

In the near term we are seeing rapid development and deployment of port electrification, truckstop electrification, next generation electric forklifts, and battery electric and plug-in hybrid light, medium and heavy duty vehicles. Based on a number of major manufacturer announcements we should be seeing "plug-in" vehicles and technology in our driveways and on the roads in the next 5 years.

However there are still significant challenges yet to be solved on the road to electrifying our transportation. I am primarily referring to the energy storage battery. Today there is impressive progress being made on the Lithium battery, however we still have not achieved a reliable, safe, durable and cost effective advanced battery for automotive applications. In addition there are no domestic battery materials suppliers or domestic battery production capacity in place today.

The new energy bill "authorizes" a broad range of incentives and policy initiatives designed to encourage near term and

long term solutions and address some of the challenges I've mentioned here.

Specifically it authorizes $95 million in new grant deployment programs for qualified electric transportation projects (section 131 part 6) such as electric forklifts, shoreside electrification of ships, electric airport ground support equipment, and truck stop electrification.

In addition HR 6 authorized a $90 million per year plug-in electric vehicle demonstration program, and several programs encouraging domestic manufacturing (sections 132 – 136) which are not currently in the Administration's budget. HR6 also authorized six programs on battery RD&D at $230 million per year, but unfortunately the Administration's budget in Fiscal Year 2009 remains at just $50 million- about the same as previous years. We respectfully ask that appropriations ramp up to the fully authorized levels as soon as possible in all of these critical areas.

Mr. Chairman and members of the Committee, we stand committed to partnering with Congress, manufacturers, battery suppliers, utilities and industry stakeholders to help realize the full potential of electrifying this nation's transportation future. The first and critical step is to "appropriate" adequate and sustained funding of the near and mid-term programs identified in HR6, and to find the right balance between programs with near-term and long-term benefits.

Thank You.

For more information about SCE's leadership in electric transportation, visit http://www.sce.com/EV.

SOUTHERN CALIFORNIA
EDISON
An EDISON INTERNATIONAL® Company

Lynda L. Ziegler

Senior Vice President, Customer Service
Southern California Edison

Lynda Ziegler is senior vice president of the Customer Service business unit of Southern California Edison (SCE), one of the nation's largest investor-owned electric utilities. She is responsible for customer services to SCE's 4.7 million customers, including customer experience, industry-leading demand-side management programs and advanced metering, as well as customer-facing operations, phone center activities, field services, account management, and local public affairs. She was elected to the position on March 1, 2006.

Ziegler began her career at SCE in 1981 as a conservation planning consultant. She held a variety of positions including service planning and management of energy efficiency, customer service management, and major accounts. She was most recently the director of the Customer Programs and Services Division until she was elected as vice president of that organization on May 1, 2005.

Ziegler is a member of the EEI Customer and Energy Services Executives Advisory Committee, and is a member of the Marketing Executives Conference. Ziegler also serves on the board of directors of Leadership California, an organization dedicated to educating high-level women on the issues in California and encouraging women's leadership in policy and public office. She also serves as Secretary on the board of Partners in Care Foundation, an organization dedicated to improving health care policy through demonstrating success.

She received her M.B.A. at California State University, Fullerton, and her Bachelor of Science degree in marketing from California State University, Long Beach. In addition, she has participated in two special management development programs at Southern California Edison.

Updated: May 2007

Mr. VISCLOSKY. Mr. Stricker.

MR. STRICKER'S OPENING STATEMENT

Mr. STRICKER. Rearranging the cookies up here.

Good afternoon, Mr. Chairman and members of the committee. I thank you for inviting me here today to speak about Toyota's perspective on hybrid vehicles and our strategy.

Working and living in the Washington, D.C., area, as I guess most of us do, we are all well aware, too aware I would say, of the number of vehicles that are out on the road today. There are about 850 million vehicles globally right now, and we are adding as an industry about 20 million vehicles a year to the car park.

As a result, we are faced with three key challenges. One is the need to reduce greenhouse gas emissions; two, the need to reduce emissions that lead to local air pollution; and three is the need to reduce dependence on petroleum.

All auto companies, and you heard from GM today as well, are working on a variety of solutions to solve these challenges, but as much as we like to pick winners and losers, there is not going to be just one solution. The conventional gasoline and diesel vehicles, biofuels, hydrogen, hybrids are all going to play a role in the future vehicle makeup.

At the committee's request, I am going to focus my remarks primarily on hybrids and what Toyota is doing. And I would like to start by making two key points up front. One, build it, and they will come only works for Kevin Costner in the Field of Dreams. We have to be able to sell vehicles to customers, and not just 500 customers, not 5,000 customers, and not even 50,000 customers. We have to have widespread mass-market adoption of advanced technologies in order for there to be a substantial impact on either petroleum or on CO_2.

The second key point, and I even have to emphasize this within Toyota sometimes, is that hybrid is not a technology that necessarily competes with other technologies. Hybrid is a system that can be applied to any power train and utilizing virtually any fuel. It is a system of battery, electric propulsion, regenerative braking, capture of energy. And we can apply these kinds of technologies to any kind of fuel and engine system, not just what you see today in terms of a gasoline hybrid vehicle.

The most apparent benefits of hybrids certainly are increased fuel economy and low emissions. What is often overlooked is the flexibility to tailor the system to achieve different goals, both performance and fuel economy or a combination of both. For example, Prius maximizes fuel economy while achieving a class average acceleration performance. On the other hand, the Lexus LS600–H provides V–12 performance out of a V–8 hybrid engine with class-leading fuel economy. And as more hybrids enter the market, and as the market evolves, you are likely to see some different tradeoffs between these two attributes over time.

Currently Toyota offers six hybrid models for sale in the U.S., and I would point out that we do actually manufacture the Camry hybrid in the U.S. in our Georgetown, Kentucky, plant. Today we sold nearly 750,000 hybrids in the U.S. alone, and globally we sold

about 1.25 million. We estimate that these vehicles have saved about 3.3 million metric tons of CO_2.

Our goal is to sell a million vehicles a year globally within the next decade, with a longer-term vision of having a hybrid offering in each market segment where we compete. Our development goal is to reduce the power—sorry—to increase the power and capability of the hybrid system while at the same time reducing its size and cost.

This progress that we have made can be seen in the history of the Prius. With each new vehicle generation, we have increased the fuel economy, we have improved the 0-to-60 acceleration time, we have lowered the tailpipe emissions, and we actually made the vehicle larger. We have been able to do this largely by reducing the weight and size of the electrical components and steadily improving the battery technology. Our next goal is to reduce the cost of the hybrid system by another 50 percent by early next decade.

During the past year, any time I mention I work for Toyota on environmental issues, people want to ask me about plug-in hybrids. We believe the plug-ins are appealing technology for reducing petroleum, and, depending on how the electricity is produced, may also reduce greenhouse gas emissions. You have seen some data already, but I will present a little bit.

In the U.S., using the average U.S. grid mix, a plug-in Prius would actually achieve about the same CO_2 reduction as a conventional Prius nonplug-in. In China, where they have substantially higher coal use, a plug-in Prius would actually emit more CO_2 on a well-to-wheel basis than a conventional Prius. In France, where it is 80 percent nuclear, it is a much different story. There is substantial CO_2 benefits that can be achieved there. So this clearly speaks to the need for clean electricity production or other kind of technology to mitigate CO_2, such as carbon capture and sequestration.

On the vehicle side, as you heard, the key challenges of battery technology, we are extremely active in this area. The majority of the current plug-in conversions that you hear about use deep charging and discharging cycles to improve the all-electric range. But battery life is adversely impacted by large swings in the battery's state of charge. The primary reason we have been able to offer the long warranties we do on our current Prius battery is that the battery management system restricts the state of charge to a narrowly defined window in order to ensure the durability. It is clear, and you have heard today, that lightweight, higher-energy-density lithium-ion batteries will undoubtedly be needed if we want to increase the all-electric operating range of hybrids.

While we are actively developing lithium-ion batteries, we are also concurrently placing plug-in hybrid vehicles in test programs in order to gain real-world feedback on what the customers want and need.

We began road testing plug-in hybrids in the U.S., Europe and Japan in the fall of last year. First-generation prototypes are equipped with nickel-metal hydride batteries, two of the current Prius packs, we call them double nickels, which allows us to use a proven technology that is reliable and durable. In 2010, this was mentioned, I think, by the Chairman at the beginning of the hear-

ing, we will expand this demonstration phase by delivering a significant fleet of plug-in hybrids to a variety of global fleet customers, including many here in the U.S. These plug-ins will be powered by Toyota's first-generation lithium-ion batteries.

Looking to the future, some have characterized hybrid as an interim approach, a bridge to future technologies like fuel cells. But we see hybrids not as an interim step, but actually as an integral step to the future of fuel cells. In the case of our fuel-cell hybrid vehicle, which is a Highlander, the main difference between it and our hybrid Highlander is that you take out the gasoline combustion engine, and you replace it with a fuel-cell stack. All of the other battery, motor, power electronics, control systems, software is largely transferable to the fuel-cell vehicle.

So we think that all of the investments that we are making in that technology will not be for naught when it comes to a future that might have fuel cells. While more work is needed, one of the key challenges that we see is hydrogen supply and distribution and infrastructure. At this point, the vehicle development seems to be advancing a little bit faster than investments and infrastructure.

So in conclusion, the energy and environmental challenges that we face are going to require an array of solutions. Many of these alternatives face challenges in one form or another that must be overcome in order to provide consumers with vehicles that meet their needs and that they are actually going to be willing to buy. We believe hybrid is a key technology. It can provide significant benefits while maintaining key attributes that customers demand, and it can be applied to a wide variety of technologies.

Thank you once again, and I look forward to any questions you have.

[The information follows:]

Toyota Testimony

By Tom Stricker

Director, Technical & Regulatory Affairs

On

"Toyota's Hybrid Vehicle Strategy"

Before the

House Appropriations Committee
Subcommittee on Energy and Water

February 14, 2007

Mr. Chairman and members of the committee, my name is Tom Stricker and I am Director of Technical and Regulatory Affairs, Environment for Toyota. I want to thank you for inviting Toyota to participate in this hearing and to provide our perspective on hybrid electric powertrains.

The automobile has had a dramatic positive impact on society and our personal mobility over the last 100 years. But these benefits have also come at a price. There are 850 million vehicles on the road today, and we are adding 20 million more each year. As a result, we are faced with three key challenges - the need to reduce greenhouse gas emissions, the need to reduce emissions that negatively affect air quality, and the need to reduce oil consumption through the use diverse energy sources.

All automobile companies are working on a variety of solutions. But, as much as we like to pick winners and losers, there will not be just one solution. We will need a combination of conventional gasoline and diesel vehicles, as well as biofuels, electricity, hydrogen and a variety of other energy sources. **[See Figure 1]**

Today, I'd like to focus my remarks on Toyota's efforts on hybrid technology. And I'd like to start by making two key points. First, "Build it and They Will Come" only works for Kevin Costner and the Field of Dreams. We have to

develop vehicles that people will actually buy...and not just 500 people or 5,000 people or even 50,000 people. In order to have a meaningful impact advanced vehicles must be sold in large numbers. And second, it is important to recognize that hybrid technology does not necessarily compete with other options. Rather, it is an enabling technology for virtually every kind of powertrain system. We have a tendency to view hybrids through the lens of what we see today – which are gasoline fueled internal combustion hybrids like the Prius. But a hybrid is actually a system to capture wasted braking energy, provide electric propulsion and increase the overall efficiency of ANY powertrain system. And that's why hybrid is a core technology for Toyota moving forward.

The application of hybrid technology takes different forms and not all designs offer the same range of benefits. Toyota's designs are known as full or strong hybrids. This means the system is capable of engine stop at idle, motor assist, regenerative braking and electric-only propulsion. **[See Figure 2]**

The most apparent benefits of hybrid technology are increased fuel economy and low emissions. **[See Figure 3]** But often overlooked is the flexibility to tailor the system to achieve different goals - fuel economy, performance, or both. For example, the Prius maximizes fuel economy, while achieving class average performance, while the Lexus LS 600h provides 12-cylinder performance and class leading V-8 fuel economy. As market forces change and more hybrid products enter the market, the balance between fuel economy and performance

may shift and evolve over time. Again, this flexibility is critical in order to make the technology appealing to a wide range of potential customers with differing needs.

Toyota currently offers six different hybrid models for sale in the United States. To date, we have sold nearly 750,000 hybrids in the US alone and almost 1.25 million globally. **[See Figure 4]** Our goal is to sell a million hybrid vehicles per year globally within the next decade, with a longer-term vision of having a hybrid model in every vehicle segment.

Importantly, hybrids are saving fuel and reducing CO2 emissions today, using existing infrastructure. We estimate that Toyota hybrids in the U.S. have saved nearly 370 million gallons of gasoline, while reducing CO2 emissions by 3.3 million metric tons.

Our development goal is to increase the power and capability of our hybrid system, while at the same time reducing size and cost. This can be seen in the history of Prius development. **[See Figure 5]** With each vehicle generation, we have increased the fuel economy, improved the 0-60 mph acceleration, and reduced tailpipe emissions. These enhancements are primarily the result of reductions in weight and size of electrical components and steady improvement in battery technology. Our goal is to reduce the cost of our hybrid system by another 50% early next decade.

An extension of current hybrid technology that has gained significant attention recently is plug-in hybrids. **[See Figure 6]** Toyota believes that plug-in hybrids are an appealing technology for reducing petroleum consumption, and depending on how the grid electricity is produced, may also reduce greenhouse gas emissions. Due to differences in electric generating technology, the CO2 benefits of plug-ins can vary widely. **[See Figure 7]** For example, using the average US grid mix, CO2 from a Prius plug-in would be about the same as the standard Prius. In China, because of the high coal mix, the CO2 emissions from a plug-in would actually be higher than the conventional Prius. In France, where nuclear power dominates, the CO2 benefits of plug-ins could be substantial. This speaks to the need for development of clean electricity or other technologies to mitigate CO2, such as carbon capture and sequestration.

The key challenge on the vehicle side is battery technology, and Toyota is extremely active in this area. The majority of current PHEV conversions use deep charge/discharge cycles to improve the all-electric range. Battery life is adversely impacted by large swings in the battery state-of-charge (SOC). The primary reason that Toyota has been able to warrant such a long battery life in the Prius is that the battery management systems restrict state-of-charge swings to a carefully defined level within a relatively narrow range. It is clear that lighter-weight, higher-energy-density lithium-ion batteries will be needed to increase the capacity and electric-only driving range.

Because the battery is such a core component of our hybrid system, all of our battery development is done completely in-house. We believe this is the most efficient development strategy, ensures higher quality and reliability, and leads to better system integration.

While we are actively developing lithium-ion technology, we are also concurrently placing plug-in hybrid vehicles in test programs in order to gain important real-world feedback on customer wants and needs. From a customer standpoint, the key is to determine the optimal balance between desired electric operating range, battery size, charging time and vehicle cost.

Toyota began road testing plug-in hybrids in the U.S., Europe and Japan in 2007. **[See Figure 8]** These first-generation prototypes are equipped with nickel-metal hydride batteries, as this allows us to use proven technology that is reliable and durable. In 2010, we will expand this demonstration phase by delivering a significant fleet of plug-in hybrid vehicles to a variety of global fleet customers, including many in the U.S. These plug-in hybrids will be powered by Toyota's first-generation lithium-ion batteries. To prepare for this expansion, Toyota and its joint-venture battery partner, Panasonic, will add manufacturing capacity to build lithium batteries for automotive applications.

Toyota is applying lessons learned from marketing the RAV4 full-function electric vehicle (EV) to the development of plug-in hybrids. The major barriers to customer acceptance of the EV were limited range, high cost, long re-charge time, and the need for an external high-power charging unit. Successful plug-in hybrid designs must carefully balance the desire for longer all-electric ranges with cost and weight targets, the need to extend the lifetime of the battery system, and the ability to charge via standard household outlets.

Some have characterized hybrid technology as an interim approach, a bridge to future technologies such as fuel cells. But we see hybrids as an **integral** step to a fuel cell future. In the case of our Fuel Cell Hybrid Vehicle (FCHV), the hybrid components are identical to those in our gas-electric hybrid – the main difference between the Highlander hybrid and the Highlander fuel cell vehicle is that the internal combustion engine is removed and replaced by the fuel cell stack. **[See Figure 9]** While this is a slight oversimplification, the point is that all of our investment and progress in electric motors, power electronics, and control software are all transferable to fuel cells.

Our fuel cell development program is showing significant progress. Recent engineering success has been made in both the range of the vehicle and in cold-weather performance. **[See Figures 10 and 11]** This past September we completed a 2300-mile road test along the Alaska-Canada highway over rough terrain and in severe driving conditions. 2007 also marked the achievement of

350+ miles to a single fill of hydrogen, getting very close to the range experienced by most conventional vehicles. While technical challenges such as durability, dependability and cost remain, we are confident that we will overcome these challenges and that fuel cell technology development will continue.

A significant challenge that is outside our sphere, however, is that of hydrogen supply and distribution infrastructure. **[See Figure 12]** At this point in time, vehicle development has advanced more rapidly than investments in infrastructure.

In conclusion, the energy and environmental challenges we face will require an array of vehicle and fuel solutions. Many of these alternatives face challenges in one form or another that must be overcome in order to provide consumers with vehicles that meet their needs and that they will be willing to buy. We believe that hybridization is a key technology that can provide significant benefits while maintaining key vehicle attributes customers demand. Plug-in hybrids have the potential to reduce oil consumption, but progress is needed both in battery development and in clean electricity production to ensure low CO2 emissions.

Thank you once again for this opportunity, and I look forward to any questions.

Supplemental Figures to Testimony by Tom Stricker, Director of Technical & Regulatory Affairs, Toyota Motor North America, Inc. before the House Appropriations Committee, Subcommittee on Energy and Water, February 14, 2007

Figure 1 - Toyota's Mission

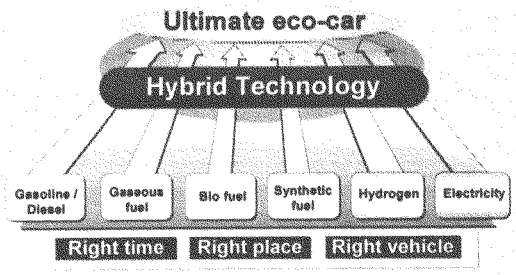


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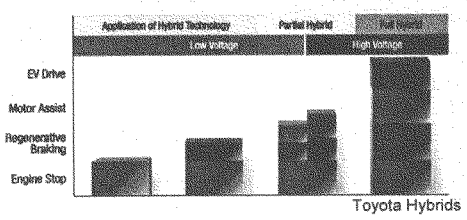
Figure 2 – Application of Hybrid Technology



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Supplemental Figures to Testimony by Tom Stricker, Director of Technical & Regulatory Affairs, Toyota Motor North America, Inc. before the House Appropriations Committee, Subcommittee on Energy and Water, February 14, 2007

Figure 3 - Hybrid Fuel Economy Improvement

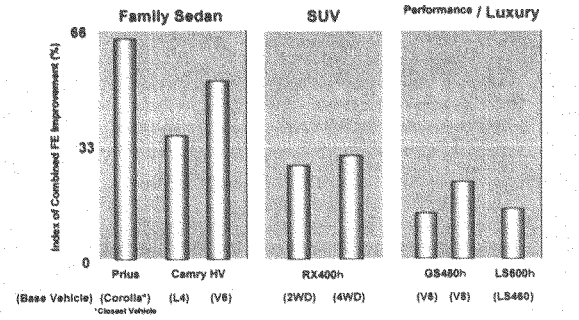

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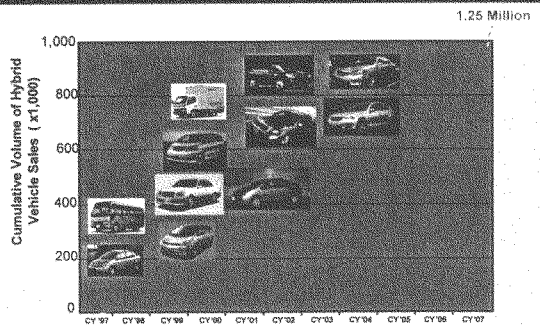
Figure 4 - Toyota Global HV Sales



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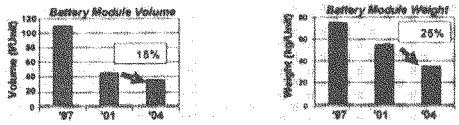
Supplemental Figures to Testimony by Tom Stricker, Director of Technical & Regulatory Affairs, Toyota Motor North America, Inc. before the House Appropriations Committee, Subcommittee on Energy and Water, February 14, 2007

Figure 5 – Hybrid Improvements (Prius Example)



Model Years	1998-2000 Japan Only	2001-2003	2004-
City Label FE*	43	52	60
Highway Label FE*	41	45	51
Combined Label FE*	42	48	55
0-60 Accel	14.5	12.6	10.1
Emissions	LEV	SULEV	AT-PZEV
Size Class	Subcompact	Compact	Midsize

*In order to provide a consistent basis for comparison, this data shows the label values using the "old" EPA label value calculation procedure. 2006 model Prius label values are 48 mpg City / 45 mpg highway / 46 mpg combined.

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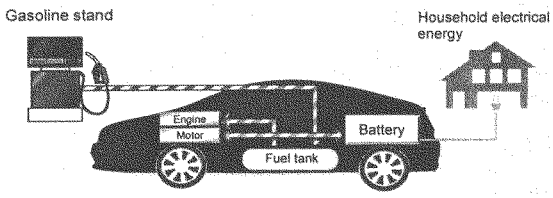
Figure 6 - Plug-In Hybrid Concept

Battery can be recharged from an external source to extend the electric motor-enabled EV (electric vehicle) driving range



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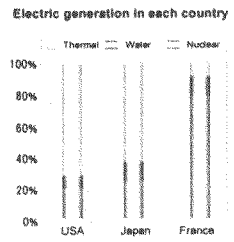
Supplemental Figures to Testimony by Tom Stricker, Director of Technical & Regulatory Affairs, Toyota Motor North America, Inc. before the House Appropriations Committee, Subcommittee on Energy and Water, February 14, 2007

Figure 7 - Potential Benefits of Plug-Ins



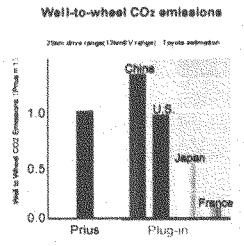


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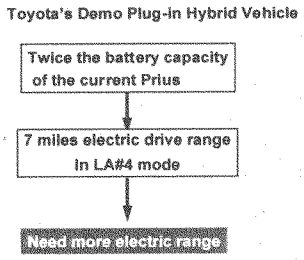
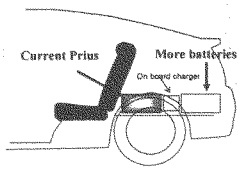
Figure 8 - Toyota Plug-In Hybrid Demo Vehicle





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Supplemental Figures to Testimony by Tom Stricker, Director of Technical & Regulatory Affairs, Toyota Motor North America, Inc. before the House Appropriations Committee, Subcommittee on Energy and Water, February 14, 2007

Figure 9 - Fuel Cell is an Evolution of Hybrid

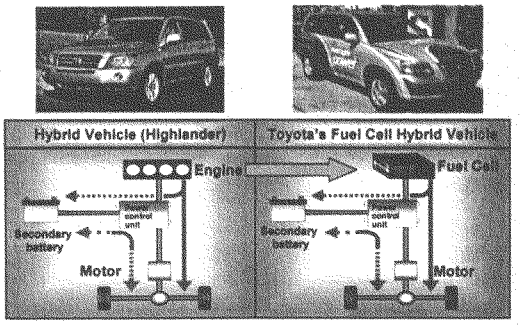

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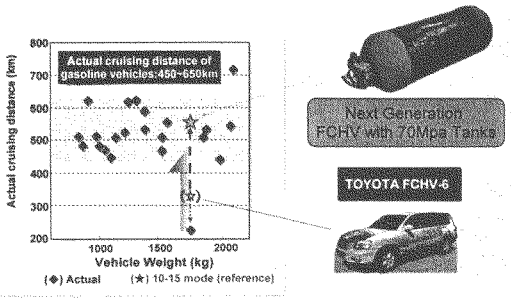
Figure 10 - Recent Progress: Vehicle Driving Range



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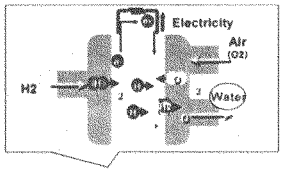
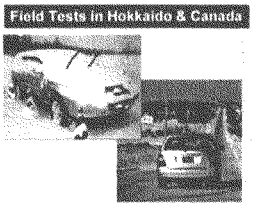
Supplemental Figures to Testimony by Tom Stricker, Director of Technical & Regulatory Affairs, Toyota Motor North America, Inc. before the House Appropriations Committee, Subcommittee on Energy and Water, February 14, 2007

Figure 11 - Recent Progress: Cold-Starting



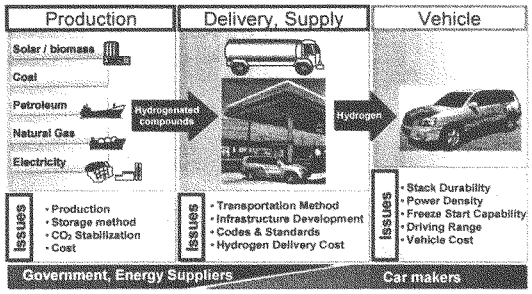


Generated water can freeze in FC stack and auxiliary components

Development FCHVs demonstrated 30 sec start-up at -30° C

11

Figure 12 - Cooperation Needed



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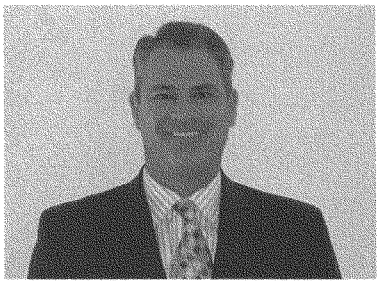
Tom Stricker, Jr.

Corporate Manager of
Technical and Regulatory Affairs
Toyota Motor North America, Inc.



Tom Stricker is Corporate Manager of Technical and Regulatory Affairs for Toyota Motor North America, Inc. His primary responsibilities include analyzing energy & climate policy and their impacts on future Toyota powertrain development, managing Toyota's response to federal fuel economy regulations, and providing technical support for Toyota's federal legislative affairs. As part of this work, Tom serves as Toyota's U.S. liaison for numerous research projects involving Toyota Motor Corporation in Japan and various US-based auto companies, oil companies and academic institutions. In addition, Tom leads a team of North American Toyota affiliate companies responsible for developing the company's 5-Year North American Environmental Action Plan and publishing it's Annual North American Environmental Report.

Prior to joining Toyota in 2001, Tom spent one year at the American Petroleum Institute managing the association's fuels regulatory responses, including diesel sulfur reductions and mobile source air toxics controls. From 1989–2000, Tom served in increasingly responsible positions within EPA's motor vehicle compliance program, developing expertise in emissions regulations and technology for light-duty vehicles, heavy-duty diesel engines, urban buses, and non-road engines and equipment - eventually managing EPA's Engine Programs and Complaince Group. Just prior to leaving EPA, Tom received the Agency's highest award, the Gold Medal for Exceptional Service, and a commendation from the U.S. Department of Justice, for his work in a landmark enforcement case against 7 major heavy-duty diesel engine maufacturers.

Tom received his Bachelor of Science degree in Electrical Engineering from the Univeristy of Maryland at College Park in December 1988. Tom, his wife Kelly, and their three children reside in Dayton, Md.

Mr. VISCLOSKY. I want to thank the panel. Mr. Hobson and I will defer our questions for the moment. I will recognize Mr. Pastor, and then we will alternate. There may be a vote or series of votes. What we'll try to do on the dais here is split our time, having some Members go right away and others—so we can be as efficient as possible. So kind of like being in school, as I think all of you appreciate.

Mr. Pastor.

Mr. PASTOR. Thank you, Mr. Chairman. And I welcome the panel members and thank you for your testimony.

ALGAE

I would only tell Mr. Dinneen that in Arizona, in cooperation with MIT, we think that the biofuel that is going to be probably the most rewarding is algae. We are currently in the deserts of Arizona working with a gas-powered company, APS, taking the algae—the carbon dioxide, growing the tanks of algae, and then taking the algae out and using it as biofuel. So we think there is a great honeymoon with corn, another strawgrass and whatever, but we think that algae is going to be the one we are going to do.

Mr. DINNEEN. Just quickly. There are synergies there as well. We produce CO_2. And, in fact, there are some ethanol companies that are looking at using the CO_2 from our production process to make algae for biodiesel production. So it is a brave new world we are all entering. Thank you.

LITHIUM-ION BATTERY

Mr. PASTOR. It is interesting because when we started with Dr. Hillebrand, Lynda Ziegler and Mr. Stricker, we either talk about the lithium-ion battery, if we make it sturdier, it produces double the power and energy of nickel and—that development is very important for the development of the hybrid. But Mr. Stricker says it is only an integral step because it is going to be where once you get to the hydrogen fuel cell, we will probably be storing the power. And all three of you say that one of the problems is that even though the chemistry is in this country and—the materials are in this country, that the lack of manufacturing processes are keeping us from going forward.

And we are investing as a policy—the subcommittee is investing a lot of money in the hydrogen fuel cell. I think the President himself several years ago said that is where the money was going to go.

But yet, if we don't solve the problem of storage—so what do you recommend to this subcommittee in terms of the lithium ion battery development and possibly to more R&D and eventually into the manufacturing?

Because your comment was, we may become less dependent on foreign oil but we will become dependent on foreign countries in terms of the manufacturer of batteries. So the three of you, if you would like to comment—what do we need to do in terms of DOE involving ourselves in the lithium ion batteries, either R&D or production?

Mr. HILLEBRAND. Very good points that you are making.

You talked a little bit about hydrogen research versus the battery research, kind of the balance between those two things. That is sort of a policy question in that it is longer term versus the shorter-term issue. The plug-in hybrid and the lithium ion technology are very short-term solutions in that we can see application very quickly. Within the next couple of years, we will probably see products out there, although the companies are a little nervous, whereas hydrogen is definitely more of a long-term sort of solution. And the trade-off between those, obviously that is a question of national interest.

Mr. PASTOR. But to the point that I was getting at, the short term and the long term require a battery storage capacity that maybe the lithium ion battery has, but yet we are not able to solve that problem, and yet it is a problem we need to solve.

BATTERY MANUFACTURING

Mr. HILLEBRAND. We do—I mean, we see chemistries. There are a lot of different chemistries on the table right now that solve portions of the problem, with respect to transportation, but no single chemistry does it all. We have 150 cycle. We do ones that will produce enough power, ones that are safe. But there is no chemistry that does them all. So they do need to continue to push forward material and chemistry research to come up with that, the one that will answer all those questions. So that is one piece of it.

Battery manufacturing, once again, as I said, manufacturing follows where there are products. And part of the reason there is no manufacturing capacity in North America is no American company right now wants to lay down a big order right now for a lot of these batteries. If they could do that or if they felt comfortable doing that, that would pull the industry more onshore to North America. But, at this point, nobody is at the point where they are ready to make that decision. So it stays in Japan and Korea, where they are making consumer electronics, which is really what caused that industry to go there in the first place.

So it is a combination. You have to keep pushing the chemistry forward, and then you have to encourage one of the automakers to make a big order to help bring the chemistry manufacturing capability to North America.

Mr. STRICKER. I would just add to that. Toyota has a joint venture with Panasonic—PEVE is the company name—and that is where we manufacture our battery, nickel metal hydride batteries. We have announced that we are exploring how we would expand that production to include a line for lithium ion batteries for the future.

And Dr. Hillebrand is correct. Basically, the manufacturing follows where the demand is. And when we first launched the hybrids as a company, we launched them in Japan. It made sense that manufacturing would start in Japan. And that was not an easy start-up, by the way. You know, there was a little back-and-forth about whether there was going to be enough demand for the vehicles to make the investment in the production of the batteries, or a large investment in the production, as opposed to hand-building, you know, a couple hundred a month, for example.

But we obviously now are at a point, at least for Toyota, where we are reaching some volume numbers. We have been able to meet that demand for battery production out of our current investment with Panasonic.

Who knows what the future holds in terms of if the hybrid market continues to grow? We certainly hope it will. If hybrid production moves to the U.S., whether through Toyota or through one of the other manufacturers, then that would signal the demand that may compel an investment in manufacturing in the U.S.

Mr. PASTOR. Can I ask one more question?

Ms. ZIEGLER. Could I add something to that?

Mr. PASTOR. Sure.

Ms. ZIEGLER. I think from a public policy perspective, you can help bridge the gap. We are talking about the economics for the manufacturers. And Government policy and supporting R&D, providing loan guarantees for start-up companies that are going to do battery, I think is very critical.

And I would also echo what Dr. Hillebrand said, in terms of short term and long term. Because, short term, the plug-in hybrid technology—and we talk about infrastructure, we talk about adding stations for ethanol. The electric infrastructure is there today, and it doesn't require anything other than a plug to plug in. So I think for short term, the plug-in hybrids, technology being available, being able to deploy shortly, while we continue to work on the fuel cells for the longer term.

CHEMISTRY RESEARCH

Mr. PASTOR. It is my opinion that what you are telling me is that it is worth the effort to have public monies invested in the R&D, in the chemistry, so that we can find as best we can the chemistry that will give us the ability to improve the plug-in hybrid because it will minimize the surges, it will have a longer life, and it will be able to drive a longer distance. And so, I guess the—and what?

Mr. HILLEBRAND. And cheaper.

Mr. PASTOR. And it would minimize the carbon dioxide emissions, et cetera.

So maybe I should frame the question, do you feel that through Department of Energy and other efforts, are we investing enough money into the R&D of the development of the chemistry to improve the lithium ion or whatever other element ion you want to include?

It is a short-term solution and a long-term solution, because eventually if we developed the hydrogen fuel cell where it is effective, you are going to have to store the power. And so I am still trying to find the answers for that.

Mr. HILLEBRAND. My answer would be self-serving about chemistry, because our lab does chemistry research. But I don't. So I won't answer that portion of it.

But I am still seeing—there is a massive move in battery chemistry in technology right now. I have been doing this for about 25 years. Unlike anything I have ever seen in the years that I have been on, we are actually, year by year, almost month by month, seeing the technology shift smaller, more powerful, cheaper, better. And that, in itself, it is impressive to see that. So you are actually

getting a return on what you are putting in. So I think it is worth putting more in.

Disclaimer, though: I mean, our lab does this type of research at the same time. But I would rather have them talk a little bit more about the chemistries. But if you poured into the start-up companies, like A123 or—I can't think of any of the companies right now, but there is some very interesting work on their part, as well. And encouragement on their part would also be very valuable.

Mr. STRICKER. I am actually not a battery chemistry expert, but, I guess, two points.

One, on the chemistry/science side, if you will, I mean, obviously, I can't speak to how many dollars DOE ought to spend or ought to be funded. But that is clearly a Government role, to assist with that kind of basic R&D.

There is also—and Dr. Hillebrand may be more familiar—the next-generation battery technologies beyond lithium ion, even, that are probably worth a look as well.

And the manufacturing side, at least from Toyota's perspective, what we think would probably compel manufacturing investment, as we see it, would be consumer incentives to spur demand. We wouldn't see necessarily basing an investment decision in manufacturing on the existence of a manufacturing incentive, for example, that is not a business plan. You know, you can't have a long-term strategy that you are going to get Government money so you go ahead and invest in manufacturing. You need a customer demand.

So, in terms of that kind of money, we think, you know, the consumer-side incentives might make a little bit more sense.

Mr. PASTOR. Thank you very much.

Mrs. Emerson.

Mrs. EMERSON. Thank you, Chairman.

Mr. Dinneen, I want to ask you something. You mentioned in your long testimony here—I found it kind of piqued my interest, about your E–20 utilization study. And after finding those kinds of positive results, what do you think the next step is? Do you all have further projects, pilot projects, planned that might broaden the scope of that a bit? Or where are you going from here?

Mr. DINNEEN. Well, certainly, more work needs to be done. The analysis that we have already done with the State of Minnesota to evaluate the efficacy of using a higher-level blend of ethanol in existing fleets, it was a scoping study. And we did look at materials compatibility, we looked at drivability, and we looked at emissions.

There is a lot more work that needs to be done, particularly with respect to durability and potentially some small engines. The Department of Energy is doing some of that work. We are working with DOE and we are working with other stakeholders to identify what additional research needs to be done to answer the questions whether or not a higher-level blend would indeed be appropriate for use in today's automotive fleet. There are some legitimate questions out there as to whether or not higher-level blends would be appropriate, but I think we are answering those.

We have not seen any show-stoppers thus far. But, again, I would stress that our analysis was a scoping study to identify whether or not there were really big issues out there. We hoped to work with General Motors and Ford and Toyota and others to de-

termine whether or not some level higher than 10 percent would be useful. The reason this is important is because while E85 is a market that is growing and growing rapidly, our industry is growing probably faster than the E85 infrastructure is coming online. And we will very soon be at the point where we will saturate the existing blend market for gasoline. And in order to maximize the amount of ethanol that is used in U.S. motor fuels, having some flexibility to increase that blend level would be helpful.

It needs to be done with all stakeholders agreeing to the science. EPA, ultimately, would have to approve a waiver from Clean Air Act levels. That is really the next step that you asked about. We would have to assemble all of the tests that had been done, go to the agency and file for a 211(f) waiver from existing limitations on the blend level. That will likely occur, and we hope that it occurs with the support of other stakeholders.

Mrs. EMERSON. How long would that take just to get through the EPA process?

Mr. DINNEEN. EPA is required, under the act it just passed, the energy bill that just passed, to respond to a waiver request within 270 days.

Mrs. EMERSON. Okay. It is not a short period of time. But all right, I appreciate that. Thanks. It is just another interesting piece of this very complex and multifaceted puzzle that we have to deal with.

Dr. Greene, let me ask you, in your testimony you really do mention several new and emerging technologies to not only help reduce our dependence on foreign oil but also our CO_2 emissions.

You may not want to answer this, but I would like you to try. Is there a most promising technology that could become a reality for the United States? In other words, what do you believe might be the most promising technology?

Mr. GREENE. Well, this depends on the time frame. If you are looking for the next few years, then I think energy efficiency, followed by biofuels. If you are looking for further out than that, then I think plug-in hybrids provide that. If we can get the cost of the batteries down mainly and solve some of the technical problems associated with deep discharges.

CO_2 EMISSIONS

Mrs. EMERSON. CO_2.

Mr. GREENE. I think we should not worry about CO_2 emissions upstream from electric vehicles and electricity use in transportation, because if we have a meaningful climate policy, then the quickest sector to decarbonize will be the electric utilities. There are any number of studies that indicate that is the case, including several by the Energy Information Administration.

I think, in the longer run, we may find that hydrogen vehicles are preferable. The biggest issue there is, I think, the storage onboard the vehicle, followed by developing the infrastructure. I think we will find that if we have a compelling fuel cell vehicle, that building the infrastructure is not anywhere near as hard as we seem to think it is.

Our analyses for the Department of Energy indicate that if you have a compelling fuel cell vehicle, that is, one that is as cheap or

cheaper than an internal combustion engine vehicle, that the cost of making a transition is on the order of tens of billions of dollars, which sounds like a lot of money, but for the whole U.S. transportation system it is not much at all.

Mrs. EMERSON. Okay. I appreciate it. Thank you very much. I just got told I have 3 minutes to go vote, so I will yield back for the moment anyway.

Mr. PASTOR. Probably the Chairman and other members are on their way back, so we are going to go head out and vote. So if you could just eat your cookies and enjoy.

[Recess.]

Mr. VISCLOSKY [presiding]. We will reconvene the hearing.

And if it is okay with Mrs. Emerson, I will recognize the gentleman from New York.

Mr. ISRAEL. Thank you very much, Mr. Chairman.

PLUG-IN-HYBRIDS READINESS

I would like to ask a question of the representatives from General Motors and Toyota.

Mr. Stricker, I think you had said "if you build it, they will come" only works for Kevin Costner. My question to you and to Ms. Stanek is, if the Federal Government—and let me back up, actually.

I am not sure that regulation will compel the research, development and investment and deployment of plug-in hybrids. I am not sure that legislation will do it. I am pretty sure that purchase orders will do it.

And so, if the Federal Government were, as a matter of policy, to say that as soon as the Secretary of Energy and the Secretary of Transportation certify that plug-in hybrids are commercially feasible and viable, that the Federal Government would swap out 100,000 of the gas-guzzlers in its huge Federal auto fleet for 100,000 plug-in hybrids, would that be at all an incentive for your company—or your company, Ms. Stanek—to, in fact, accelerate their research and development or their own investments in those technologies, or would it be completely irrelevant to you?

Mr. STRICKER. That is a good question. Thank you.

One point to keep in mind, particularly as far as lithium ion battery technology, from our viewpoint, we are selling 500,000 hybrids a year right now, 450,000, something like that. We are looking to sell a million a year next decade. We are looking for batteries, plug-in or no plug-in. Okay? So we are going to be putting the effort into looking at next-generation batteries with or without plug-in.

So, you know, the joke I wanted to make was, well, the Government can be a fickle customer, because it changes very frequently. But that was kind of why I mentioned in my testimony not 500, not 5,000, and not 50,000. I don't know what kind of numbers you would be talking about if the Federal Government wanted to belly up and buy these vehicles.

Mr. ISRAEL. Has anybody in the industry done an analysis of what kind of purchases it would take in order to accelerate the research and development and deployment of those vehicles? Dr. Stanek?

Ms. STANEK. I think everyone has researched it. It isn't so much a desire. We, too, see the volumetric issues. We are certain that even on the commercial side, customers, real customers, they would buy 100,000, 200,000, 300,000 of these vehicles if we had them ready today. When we announced our Volt, that was exactly the kind of stir and amplification we wanted. The question comes down to what Dr. Hillebrand says is the cost of the battery.

Our vehicles are on target; things are looking great. I also agree that the infrastructure is in place. There is some metering we can talk about and different applications, but I don't think that is going to be mainstream. But it will be interesting. I do agree all those things are working well. But if the price point continues to be $10,000 more, even from a purchase standpoint, you know, we have a show-stopper.

Mr. ISRAEL. Okay.

Ms. STANEK. So I would say focus on the loans—all the things necessary to commercialize battery development of the country, and then we are half-way home. That is where I see the focus. But volumetrically, interest, desire, we are there, because we see the end user very excited about it.

Mr. ISRAEL. Thank you.

COST FOR LITHIUM ION BATTERY RESEARCH & MANUFACTURING

Dr. Hillebrand, I want to follow up on a question that I think Mr. Pastor was developing. In your testimony, you say a sustained effort to develop battery manufacturing capability will be important. If the President of the United States called you and said, "I want to develop an Apollo project-magnitude effort to research, develop and manufacture lithium ion batteries and I need to know how much it is going to cost and how much it would take to get there," what would the figure be?

Mr. HILLEBRAND. As an engineer, it is difficult for me to come up with an answer for you as to what it really should be. I know there is substantial funding for battery research right now. We are talking about branching into areas that, at this point, we really don't do a lot of work on. I have been talking about manufacturing, which is a different type of technology and a different type of area than where we are right now. So it is a new area, it is a new program.

You would want to pull together the A123s, JCI, Johnson Controls, the U.S.-based battery manufacturers, and pull them together to get some coordination of their different activities. And I know I was talking about SEMITECH, which I am not that familiar with, but I know essentially what the approach was on that—pull those groups together, and then you would want to look and see the end user, which would probably be GM and Toyota and some of those companies, and find out what it would be from them that would specifically make them order the batteries, and in the volume necessary to make the manufacturing happening.

I am hesitant to put a number on what that is, because it is beyond what I have looked into. But, you know, the $50 million I think that is spent on battery research right now, certainly a large proportion of that would be necessary to look at battery manufacturing.

Mr. ISRAEL. $50 million per year?

Mr. HILLEBRAND. Per year in the U.S.

Mr. ISRAEL. In the U.S.

In two separate meetings, General Electric and General Motors both told me that it would take about $500 million a year, over 5 years, to get us exactly where we need to be.

Mr. HILLEBRAND. I wouldn't think that is that outrageous an estimate.

Mr. ISRAEL. My final question, Mr. Chairman, if I may, is to Mr. Dinneen.

Mr. VISCLOSKY. The gentleman has all the time he wants.

Mr. ISRAEL. Thank you.

Mr. Dinneen, I have tried to help designate the Long Island Expressway in Long Island as an alternative fuels corridor, and spoke to the Governor's office and brought my county executives together. And we talked about E85. There are only, I believe, four service stations in the entire State of New York where you can get E85, and nowhere near Long Island.

And as I delved into this, I learned that it is not a matter of profitability. In fact, my service station owner said that they could make a lot of money with the different tax incentives and rebates and NYSERDA grants; they could make a lot of money. There were two issues that were holding them up that I never expected to hear. One was it takes 2 years to get different State and county environmental and health permits to put an above-ground tank at a gas station that holds E85. The second was contracts with oil companies that specifically prohibit the service station from selling E85 because it competes with the oil that they are selling to the service station.

And I am not sure, you may not have experience with the first problem; maybe that is just unique to New York. But I am wondering if you can comment on the second issue, where oil companies actually write into their contracts, "You cannot sell a competing product with ours."

Mr. DINNEEN. They deny that, of course. But there was a provision included in the energy bill that just passed that amends the Petroleum Marketing Practices Act that specifically prohibits refiners from engaging in that kind of activity, if it ever did. And so I believe that we now have a mechanism to assure that that type of thing doesn't happen.

We ought to be maximizing E85 infrastructure. I can't comment on the permitting issue. I could look into it and get back, if you would like. But I do believe that we are on the threshold of seeing a tremendous expansion of E85 infrastructure.

Mr. ISRAEL. Thank you. And just so you know, we have brought in all of our local officials, and we have actually started an initiative where they are going to streamline the permitting process, so that if a service station wants to sell E85, they can get their health and environmental permits expeditiously.

Mr. DINNEEN. Fabulous.

Ms. STANEK. May I comment on the New York E85? Do you mind if I jump in here? Because we do work on E85 in New York, and the NYSERDA has done a wonderful job. By the way, Rochester

opened an E85 station this week, $2.55 a gallon versus $3.25 for gasoline. So the price is good right out of the gate.

In Long Island, you are right, there is more E85 coming onboard. Part of the problem is real estate. Most of the retailers have limited underground tank storage. They generally do blending, so they can't drop a tank underneath. So, in addition, some of it is physical.

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

Mr. VISCLOSKY. I have a number of questions.

And, again, for either Mr. Israel or Mrs. Emerson, if you want to jump in or have questions, please, at any time, just get my attention.

I have a question about Government research and the development of technology, because we are spending taxpayers' dollars to—as the bells go off again.

And, Dr. Greene, in your testimony, you mentioned that researchers at MIT Sloan Automotive Lab estimated that fuel economy increases of 80 to 85 percent for internal combustion engines may be obtainable by 2030. Not saying it could, but potentially.

MILEAGE PERFORMANCE

We had a witness last year, Mr. John DeCicco from Environmental Defense, on transportation technologies. And he mentioned that while technology may be the solution, lack of technology is not the problem, explaining that if current technologies are used in automobiles to enhance performance, as opposed to mileage, we are not solving that part of the problem.

Because we have and will continue to spend money on various technology developments, what assurance do we have that we are going to actually now be applying this to mileage performance? If anybody wants to comment.

From my perspective, at this point, now we are wasting people's money just to help auto companies increase their performance, as opposed to mileage, if that is what we are concerned about.

Mr. STRICKER. Well, we do now have a 35-mile-per-gallon-by-2020 requirement on the auto industry from the energy bill, which is a 40 percent increase in fuel economy over the next 10, 11 years.

Mr. GREENE. Yes. I think that kind of policy directs the auto companies to take technologies that they could otherwise use to increase vehicle performance or increase vehicle size and weight and, instead, apply it to fuel economy.

We believe that the market undervalues fuel economy improvement for a number of reasons. We know from studies that consumers don't act like the model of rational economic actors. They don't do calculations on how much fuel saving is worth to them and that sort of thing. And we think the reason for it is that they are uncertain about the value of fuel savings and they are loss-averse. So when someone says, "Pay some money up front to get a more fuel-efficient car, and in the future you will get fuel savings," they discount the uncertain value of the fuel savings.

So we think there is, in effect, a market failure there. And as a result, when technology advances come along in an unregulated market, they get applied for increasing the power of the vehicles or they get applied to increasing the size and weight of vehicles.

Now, the study by MIT assumes that to get this 80 to 85 percent improvement in fuel economy, material substitution would be used to reduce and design would be used to reduce the weight of vehicles by about 20 percent, and that engines would be converted to turbocharged direct-injected lean-burn engines; that technologies that we don't yet have, like variable compression ratio, would be implemented; and that we would have a superior lean-NO_x catalyst that would allow these engines to operate a lot of the time in lean air-fuel mixture which improves their fuel economy. So there are some technologies that are close but not there yet that are assumed in that MIT study.

CO_2 REDUCTION

Mr. VISCLOSKY. Could I ask, biofuels—I appreciate the value, as far as reducing dependency on foreign and domestic oil. Are we seeing an advantage as far as CO_2? Or is that a neutral or is that a negative effect, as far as CO_2?

Mr. Dinneen, I think you said it is a positive effect, as far as reducing CO_2.

Mr. DINNEEN. The models that are available today really were developed in Oregon, and maybe Dr. Hillebrand would like to comment as well.

But I will tell you that the Greek model, which is sort of the default thing everybody turns to today to evaluate greenhouse gas benefit, demonstrates that, overall, the ethanol industry will receive about a 22 percent reduction in greenhouse gases. Now, there are some that are better than that, depending on what their fuel source is, if they are natural gas or coal. There are some that are not as good as that. But, overall, the industry today demonstrates about a 22 percent reduction per gallon of ethanol.

Now, you look to the future with cellulosic ethanol as a feed stock and, again, with some assumptions about cogeneration and other things as the industry will develop. You could have as much as a 90 percent reduction in greenhouse gases.

Mr. HILLEBRAND. We have done a chunk of that analysis that he is referring to. And I just want to confirm what he is saying, that when you look at it, you play with your variables. You can get to the extreme bad case, which is using old assumptions and not doing things the ways that are intelligent, and then you don't see a lot of CO_2 reduction. However, if you do it intelligently, if you are looking at modern growing methods and yields and all sorts of things like that, then you do come out with substantial CO_2 reduction.

Mr. GREENE. So here is the other opinion.

Mr. VISCLOSKY. That is why we had——

Mr. GREENE. The GREET model, I think, is one of the international standards in this area. And it is a very good piece of work.

Mr. VISCLOSKY. So it does factor in, I assume, the CO_2 generated in the creation of the fuel too?

Mr. GREENE. Yes.

Mr. DINNEEN. Yes.

Mr. GREENE. What it doesn't try to do, and what the two recent articles in Science magazine bring out, is that there can be land-use changes induced by using land to grow corn for ethanol or soy-

beans for diesel or whatever. There can be induced land-use changes in the U.S. or somewhere else in the world. And these induced land-use changes can involve the clearing of land, forest land, grassland to make crops. And if that happens, then there is a carbon debt, if you will, released into the atmosphere from the biomass that was on that land and the carbon material in the soil. And that can take anywhere from 17 to 90 years to make back by the benefit from corn-based ethanol.

Now, this is a really complicated subject, and maybe you want to have a hearing just on this. But Mark Delucchi of UC-Davis, who has his own model, the Genius model, which is also used elsewhere in the world, indicates that there is no net benefit from corn-based ethanol, approximately. Alex Farrell at UC-Berkeley, who did a survey of GREET model, Genius model and other studies, came to the conclusion that there was about a 10 percent benefit from corn-based ethanol. And these recent studies, which take into account—and Delucchi's work takes into account induced land-use changes. So he is saying no benefit, if you take into account induced land-use change. The Science articles are saying it could be twice the greenhouse gas emissions of gasoline, if you take into account these changes. So there is a wide range of difference of opinion on the net benefits of corn-based ethanol if you take into account the induced land-use change.

Mr. DINNEEN. And, indeed, as Dr. Greene said, this is a very complicated issue. And a lot will depend upon the assumptions that go into these various analyses. Everybody is trying to wrap their arms around the life-cycle analysis and understand what some of these inputs would be. And there will be land-use effects, which I think people are trying to understand better as well.

The report that Dr. Greene had just referenced in Science was a situational analysis, and it looked, really, at the worst-case scenario. And some of the assumptions that they made were just not at all reasonable. It assumed, for example, that there would be 30 billion gallons of corn-derived ethanol in the United States, when the law doesn't allow for that; it allows for half of that. It assumes that the land coming into production would be in the most environmentally sensitive parts of the globe, and that is not a realistic assumption.

It does, sort of, set the benchmark and demonstrates, yeah, you can produce biofuels in a very unsustainable way. But you can also produce biofuels in a very sustainable way. And, so long as your agricultural processes or constraints are such that you are encouraging the most sustainable technologies, as I believe the United States does, you are not going to be clearing forests in the United States to make way for biofuels. And farmers today are more and more engaged in no-till/strip-till, you know, very environmentally sensitive technologies.

Mr. VISCLOSKY. And I don't mean to cut you off, but we are getting short, and Mrs. Emerson has an Ag meeting too. And it is unclear as to what is happening on the floor.

I don't know, do any of you have to leave? And I am not asking to you stay until 9:00. I am just wondering, if this sorts itself out in the next 10 minutes.

Mr. GREENE. I have to leave at 3:00.

Mrs. EMERSON. No Members at Ag. So I can just stay here. Our side walked out today.

Mr. HILLEBRAND. The Science article—I have here about three pages of our rebuttal, essentially, to the Science article, which will be posted tomorrow—I won't go all the way through it—but Delucchi's errors as he was going through and doing the analysis.

So this is something that is going to go back and forth for a very long time on land usage and such. But we don't see the same results, and I think we have some really good technical reasons for not seeing the same results.

Mr. VISCLOSKY. Not out of disrespect, but Dr. Stanek, British Petroleum, BP, University of California-Berkeley, I guess Lawrence Berkeley National Lab, University of Illinois, are looking at possible—so you don't have to make any change, as I understand it, in the infrastructure.

Do you want to comment on that approach, as well?

Ms. STANEK. So you are suggesting maybe, like, a butanol pathway and different things that can utilize the existing infrastructure.

Mr. VISCLOSKY. I assume that is the gist of your——

Ms. STANEK. It is one of the pathways they are looking at. They are looking at biomass, longer chemical strings that look more like petroleum. They are looking at butanol, which is an extender. We are very bullish on those, but we just have no production quantities of it. So we like the directions as it is going.

We do like the algae discussion. We are actually working with a university that is taking crops growing in the desert, applying salt water, to grow to fuels. There are a lot of approaches. We are for them all.

But keep in mind, for real, meaningful transportation integration and discussion and teamwork, we need billions of gallons of fuel. And that is ethanol.

Mr. VISCLOSKY. Lastly, because we had had a conversation before, and Mrs. Emerson and I do have to leave now, is on hybrids. Whoever had the best summary of the conversation we informally had. Because with the plug-in, as I understand it, you are getting additional mileage on the vehicle, but you also have a greater CO_2 problem, you want to go first?

Mr. STRICKER. Sure. I will try to be quick, to leave my colleagues some time.

Mr. VISCLOSKY. You know what—we are stuck. We have to go.

Mrs. EMERSON. You have to go. I am good.

Mr. VISCLOSKY. Go ahead. Keep going. You just have to vote on this one, and there will be two more maybe.

Mr. STRICKER. We were discussing a couple of items, and I am not exactly sure which one the Chairman was referring to. So I will weigh in, and my colleagues can also weigh in.

This was during the break. A point that I was making to the Chairman was that, in the future, whatever battery advances are made, whether they are made because we are trying to achieve a plug-in hybrid or whether they are being made because we are trying to just advance battery technology for use in hybrids or other vehicles, what needs to be looked at is not the delta in fuel savings or CO_2 savings between a plug-in hybrid and a conventional vehicle

but the delta in fuel savings and CO_2 emissions between a plug-in hybrid and a hybrid. Because hybrids are out there, and you can't have a plug-in hybrid without a hybrid to start.

So a consumer will be faced with a choice in the future, potentially, if we have plug-ins: Do I want to buy a hybrid that will be a very, very good hybrid if there is new battery technology, or do I want to make an additional investment for some incremental benefit to buy a plug-in hybrid?

And I think a lot of people don't think about that point. They just say, a plug-in hybrid compared to a 25-mile-a-gallon, average, mid-sized car and not a plug-in hybrid compared to the—the consumer is going to look at the marginal cost and marginal benefit between those two technologies.

Mr. HILLEBRAND. In terms of numbers, conventional car, it costs you $1,000 a year for your gasoline. A hybrid, it would be about $300 a year for your gasoline. A plug-in would take you to about $150 a year for gasoline.

So what you are really saying is, your real savings is not from $1,000 to $150. You are saving $150 a year. You have to pay for your battery and all your equipment out of that $150 a year. It takes you a lot of years to pay for a plug-in at only that kind of savings, because you are already starting from an efficient point.

Ms. ZIEGLER. Your comment was from around the CO_2 emissions. The chart that we saw there reflects current electricity generation, which I think we all believe and understand will change. And so, if you move to—you know, in California, where we have mostly gas, you see a much different picture in terms of CO_2 emissions. The plug-in hybrid is very beneficial.

So it really depends on the assumptions you make about the future generation mix of electricity, in terms of how much CO_2 benefit you get for plug-in hybrids.

Mrs. EMERSON. Of course, we don't know how long it is going to take for us to have all States, for example, adopt the same standards as California. And I dare say there are probably some States who don't want to, at least right now, because of cost and just having to make the transition, I think.

Mr. HILLEBRAND. If you are going to deal with climate change, you are going to need a Federal policy.

Mrs. EMERSON. I understand.

Mr. HILLEBRAND. I just want to re-emphasize that and point out that, from oil dependence as well, the plug-in hybrid gives you an ability to substitute electricity for oil. So that is beneficial also.

Mrs. EMERSON. Are there any other comments on this?

Ms. STANEK. Again, I just need to throw in for hydrogen. I know we talked about it earlier. It is important. We are really on the cusp of great things for all the companies. So, in addition to this debate on biofuels and plug-ins and hybrids, let's not forget that we really do have some strong hydrogen programs, with all the OEMs, and infrastructure, for that is important as well.

Mrs. EMERSON. Let me ask a follow-up question just on the strict hybrid, not a plug-in. And, you know, obviously, hybrid vehicles are always a more—or appear to be a more appealing economic option as long as gas prices stay high. And this country is notoriously bad for, kind of, bouncing around because, obviously, as gas prices di-

minish, then we don't feel that same urgency to go out and perhaps purchase a hybrid car.

CONSUMER INTEREST IN ALTERNATIVE VEHICLE TECHNOLOGIES

Let me ask you, Mr. Stricker and Dr. Stanek and any others who want to jump in, how do we maintain consumer interest in alternative vehicle technologies despite the inevitable variation in gas prices?

Mr. STRICKER. Great question. A couple of points, I guess.

First of all, as I said in my testimony, our goal is to reduce the cost of our hybrid system by another 50 percent moving into the next decade. So that is one hedge against variability in fuel prices, is higher volumes mean lower costs; technological advancement hopefully means lower costs. And so that is one method.

The other, it is kind of interesting, you know, when you—people sometimes ask about the economics of hybrids. And, you know, it is not a completely straightforward discussion, because there are different kinds of vehicles, there are different kinds of hybrids, there are different option packages that hybrids are sold with at the dealership level, and people drive differently. They drive different mileage; they recoup costs differently over time. And some of that has to do with what is the fuel price.

What I always tell people is the good thing about hybrids is they start—whatever you had to pay up front for them, they start paying you back the minute you drive it off the dealer's lot. You are saving fuel right then. You know, people go into dealerships and they will pay upwards of several thousand dollars to get a V–8 engine, so they are making an up-front payment, and the minute they drive it off the dealer's lot they are losing money compared to if they would have stuck with, let's just say, a standard V–6.

So there is an overall value proposition to any advanced technology. Is it clean? Does it save you fuel? Does it make you feel good? You know, there are people who—Bob can probably speak to it—are interested in ethanol because they think it is the right thing to do. It is a domestic resource; it doesn't come from the Middle East. So, you know, the value proposition for alternative fuel vehicles I think goes beyond just gasoline price, I guess is what I am trying to say.

Mrs. EMERSON. I appreciate that.

Dr. Stanek.

Ms. STANEK. I do think it is a basket of decisions, and no two people have the same basket. So the elements—maybe the same priorities—are different.

So I think, to keep consumers interested, which is really your discussion, I think when we see gas prices hovering at $3 and above, it keeps them interested. There is something about that number that drives different decision-making, especially to raise the fuel-economy metric to be a more important metric than the others. It is absolutely true, we see it over and over, that design, price, affordability, all these things are much more important cues. Now, I am not saying performance, but just the overall appeal of the vehicle and lifestyle needs. I mean, there are just certain things. You have a lot of kids, or you need it for business. So——

Mrs. EMERSON. Appreciate that.

Anybody else?

Mr. GREENE. Could I comment on that? This is the reason I brought up the history in my discussion, is that, in effect, the problem was solved in 1986 when OPEC collapsed and oil prices came down. But then when oil prices came down, we said, well, we don't need to do anything anymore. So the problem now is back.

And I think this is a very difficult problem to solve. Consumers always accepted fuel economy standards as a solution, and manufacturers obviously did not. But what I think solves the problem of oil dependence in the long run is dealing with climate change, because that problem is not going away any time soon.

Mrs. EMERSON [presiding]. Mr. Israel.

Mr. ISRAEL. Thank you.

We have a fairly fluid situation on the floor right now—not a fairly fluid—a very fluid situation on the floor right now. And the Chairman, I believe, will be returning. So we are going to keep the hearing going until he returns.

I have several questions. There are recent reports that in Israel there is a fascinating project developing. It is a consortium between Renault and some private investors that will give Israelis the capability—they are trying to transform their fleet to an all-electric fleet. Now, it is easier to do in Israel because you can drive from Jerusalem to Tel Aviv. I think it is just maybe 40 miles or so. But that is an example of a government that has made a very deep commitment to trying to transform the fleet, but it would not have happened without the investment community.

Again, I will go to Dr. Stanek and Mr. Stricker from the automotive industry. What should the Federal Government do in order to incentivize private capital or more private investment in the research of new alternative fuel technologies? Dr. Stanek.

Ms. STANEK. You know, I may be out of step here, but I think the R&D on the science aspect is going very well. And when I look at biofuels, in particular, there has been about a billion dollars that will be placed on advanced biotechnology for biofuels.

So we talked about the battery commercialization. I would say all these things apply the same. Matching funds, you know—and, again, with ceilings, not for eternities, but to encourage people to get in the business of, even retailers at fuel stations, more aggressive matching funds. Tax credits do work. So something that says, for instance, like a green retailer program, it could be a combination of biofuels, it could be hydrogen, it could be a union working on plug-in electrification.

GREEN RETAILER PROGRAM

Mr. ISRAEL. A green retailer program? Elaborate on that, if you would.

Ms. STANEK. A green retailer program essentially sends a signal to a retailer, "You can dispense the fuels as you wish. But moving forward, if you would like to actually get a tax incentive—maybe it is one, two, three cents off their gasoline sales, because the volumetric sales, correct. If you put in the following, a biofuel station, if you put in hydrogen, and you market—you have to market, you can't have an idle tank or a hydrogen dispensing—we will give you

one, two, three, four cents off for a period of time on your regular volumetric sales."

So what you are doing is you are causing the infrastructure and things to change, but it is not for an eternity. So in other words, the State and the Federal Government get their tax revenue back from that.

But it will require tax schemes similar to that and also matching funds for more conversion to get the larger investment community involved.

Mr. ISRAEL. Let me ask a related question.

I am sorry, Mr. Chairman.

Mr. VISCLOSKY [presiding]. Just because Mr. Olver has not had a chance to ask. This will be a series of eight votes.

Mr. OLVER. I will be happy to let my colleague go. I am willing to stay here for at least 15 minutes.

Mr. VISCLOSKY. Well, we have got about nine.

Mr. OLVER. All right. All right. Thank you very much. I don't mean to take somebody else's place here.

Dr. Hillebrand, you were the first person to start talking—if I start asking things that have already been covered, please tell me, and I will just take a look at the testimony.

You were talking about battery technology and lithium ion, particularly lithium ion and nickel hydride. Do you have a sense of how many dollars have been spent on research on lithium hydride? And conversely, nickel lithium ion? Does it involve hydride or not? Some of them do.

Mr. HILLEBRAND. Yes. But lithium ion, many different chemistries and many different——

Mr. OLVER. On the lithium hydride and nickel, both technologies, both governmental money and private money on those——

Mr. HILLEBRAND. I think the fundamental breakthroughs in both of those did come from Government Federal investment, both on nickel hydride, which was a combination of Federal funding and the ovanics company, Olshinski, up in Michigan.

Mr. OLVER. What is the dollar value of it, roughly? Your thinking? I know the wheels are grinding to try to come up to something close to that.

Mr. HILLEBRAND. Yes. Well, it has been an ongoing over 10 years, probably 11 years, of investment. It was fairly small when it started out. It was probably sub-$10 million, and now it is probably in the $40 million to $50 million range.

Mr. OLVER. In either or both cases?

Mr. HILLEBRAND. I am sorry. I am looking at the full battery development program. And those are partially commercialization, partially chemistry development. I am sorry, I don't know. I don't know the answer to that.

Mr. OLVER. Okay. Well, if you want to tell me, can you—there was a time when I was a young person that I was an electrochemist, and I am trying to remember from way back then. You mentioned that the lithium ion, that key issues were safety and cost.

Mr. HILLEBRAND. Yes.

NICKEL METAL HYDRIDE

Mr. OLVER. What are the key issues in the case of nickel hydride?

Mr. HILLEBRAND. First and foremost, the cost of nickel, which is going up. It has gone up drastically, and it will continue to go up. Nickel metal hydride batteries are limited in their energy storage capacity.

Mr. OLVER. How many hydrogens per nickel?

Mr. HILLEBRAND. I don't know. As to how the connection——

Mr. VISCLOSKY. He is serious.

Mr. HILLEBRAND. I know he is.

Mr. OLVER. You said that you are not one of the chemists at an earlier stage. While I was floating in and out, I do remember hearing you say that. So you don't know how many hydrogens per nickel.

One of the key limitations in any of these things relates to hydrogens, how many hydrogens can you—it is a density—the energy density you can get out.

Mr. HILLEBRAND. That is right.

Mr. OLVER. And I think in nickel hydride, it is not more than two or four. I think there are some materials that have been worked on that get to eight or a dozen. And maybe with metal ions that are not any heavier than the nickel. So it depends.

And what are the other limitations here? In the case of lithium hydride, you say cost and safety. Is there another major limitation, or is that it?

Mr. HILLEBRAND. No, there are many limitations with the lithium—low temperature, performance. It tends to have trouble when it is working below temperatures. The comparison directly between lithium ion and nickel metal hydride, nickel metal hydride has severe temperature limitations, which is why a lot of the money in the vehicles actually goes into keeping the batteries cool, whereas lithium ion can be—the temperature can actually go up another 15 degrees C, which lowers the whole system cost quite a bit.

Mr. OLVER. Aren't you substantially limited by the number of recharges that you can get out of one of these batteries? To be functional in the vehicles, you have to be able to recharge them again and again and again. And doesn't it also include the rate of the electrochemical reaction that is going on?

Mr. HILLEBRAND. You know, I mentioned earlier, some of the chemistries address some of the problems within lithium ion. I keep going back and forth with the different chemistries. With nickel metal hydride, you cannot deep discharge the battery the way you can with lithium ion. You work with a state of charge. You are very shallow.

Mr. OLVER. Is there a review article that a somewhat intelligent layperson could understand on this that you could direct me to about battery technologies?

Mr. HILLEBRAND. There is a report put out by the AABC, Menahem Anderman, that comes out every year, excellent report.

Mr. OLVER. How big a report is it? Does it have a big density——

Mr. HILLEBRAND. 70 pages long.

Mr. OLVER [continuing]. Or is it 10 or 20 pages?

Mr. HILLEBRAND. It is about 70 pages long. And it does walk through these chemistries. It is an excellent report, actually. It is what I used when I was putting together my presentation for this.

Mr. STRICKER. Lots of pictures too.

Mr. HILLEBRAND. It is just a very good overview.

Mr. OLVER. Let me just say as a comment from what I heard from several different people say from questions and a bit in the testimony, it seems to me that it is utterly critical that we do not close the door on the chemistries, either on the research and development and the different technologies and chemistries either in battery technology or in biofuels, because, I mean, there are multiple ways of doing it. I have heard of others, at least in the case of the battery technology, and each of them has its own set of limitations that one works on, and sometimes you make breakthroughs.

In the case of the biofuels, we start out with ethanol procedures that have come up that are now moving ethanol from corn ethanol to cellulosic. The cellulosic people talk about doing things that either are several steps of biological degradation to get to your ethanol or you get to your ethanol by a mixture of chemical and biological steps, and all the efficiency that go on with those become a problem, a possible problem.

And then there are those that think they have an almost holy grail of a one step from cellulosic, to which particular simple cellulosics you do that with, to suspect it would be easiest, say, from algae back to ethanol.

And then there are the butanol people.

Mr. HILLEBRAND. We are doing testing with butanol right now. It is a very exciting fuel.

Mr. OLVER. And the biodiesel people. And there are people who are out there doing research on taking the biomass and doing essentially a breakdown all the way to hydrocarbons and CO_2 or——

Mr. HILLEBRAND. Gas.

Mr. OLVER. Think about that a little bit. And then reconstituting—it is hard for me to think that that could possibly be energy-efficient in the system. But I suppose the energy efficiencies of some of the sequences of other steps in other places might be so extensive that it actually becomes easier to break them down all the way and then start putting them back to whichever ones you want, which has—if you don't—in the building up again, you don't make them into ethanol with oxygen, so the ethanol gets you 65 percent or, say, 67 percent as much energy as—and butanol is somewhat more. Then your hydrocarbon and the octane range or whatever happens.

Mr. HILLEBRAND. One of the most exciting things we are working on right now is a project we call the Omnivorous Engine. It is essentially a diesel cycle engine that runs on a range of different types of fuels. Essentially it sniffs what fuels it has and adjusts its engine parameters to run on that fuel, so combinations of butanol, diesel, Fischer-Tropsch, biodiesel, et cetera. It optimizes itself for all these different types of fuels. Because that way, you can have any fuel source you want. You combine them all together, and the engine optimizes itself for the various combinations—which, long

term, you don't want a single fuel. You want all sorts of different sources and all sorts of different fuels.

Mr. OLVER. That is why I am saying we must not close any of the research on any of these technologies, because there are so many possibilities. And if we just head one way, we may make a terrible dead-end, like dead-ends in evolution that just didn't go anywhere and didn't produce anything useful. We think we are fairly useful, but it was a fairly complicated process.

If I may, they were talking, so I will just go on for a while—I would love to hear——

Mr. VISCLOSKY. I am learning.

Mr. OLVER. I would love to hear the debate among you folks, particularly among the doctorates who maybe have some better understanding of the complexity of the chemistries involved in these new papers. I have both of them here in my file. They were given to me by a colleague, a very close friend who is a professor of chemistry. And quickly, those sort of things reach me. Whether I have time to read them and understand them I am never quite sure.

We have gone from an earlier stage when we are talking about ethanol from corn, and 4 or 5 years ago there were a bunch of papers that ranged over whether it was negative or positive there, and the different inputs that were put into the energy balance equation were not as complete, and some things weren't taken into account. But I think we have finally pretty well concluded that they were on the positive side.

But in those early papers, none of them looked into the land-use changes, which are quite extensive. If the land you take out in order to make cleared land to grow some other kind of biomass that is more easily cropped, then you are going to end up with a horrible carbon deficit.

And even if you use what these papers are suggesting, that even as you use old crop land, if you move from crop land, presently crop land, and force growing crops onto this less useful land—well, anyway, I think the discussion already came up between Greene and Hillebrand on this one. Clearly, these papers are making—and I think we will have to be answered. These are Minnesota and Princeton people, who are probably just as good as the Dartmouth and others.

Mr. VISCLOSKY. And I apologize, gentlemen——

Mr. OLVER. But there will be many more papers coming out on the stuff.

Mr. VISCLOSKY. I do want to thank all of the witnesses. I want to thank Mrs. Emerson for coming back and for her patience.

And I assume most of you have testified before congressional committees before, and I hope you appreciate that it is not lack of interest or attentiveness, and your testimony has been read. Your work and your time has been appreciated. And as I like to describe it, we know where you live, because obviously we have to make funding decisions this year, and we would like to make all deliberate haste in moving at the right pace in the right direction. And it has set the stage for the rest of our work this year, and I want you to know we appreciate it very much. Thank you very much.

WEDNESDAY, FEBRUARY 27, 2008.

BUREAU OF RECLAMATION

WITNESS

ROBERT W. JOHNSON, COMMISSIONER, U.S. BUREAU OF RECLAMATION

CHAIRMAN VISCLOSKY'S OPENING STATEMENT

Mr. VISCLOSKY [presiding]. Good morning. I would like to bring the hearing to order, and before I give my opening statement, just want to sincerely welcome back Mr. Rehberg to the committee—it is good to have you back—and also very good to have Ken Calvert on the subcommittee as well and the wealth of knowledge he brings to the water issues, in particular, that we face, as well as a new and fresh perspective with the Department of Energy.

So, Ken, also very good to have you on the subcommittee.

This morning, we are pleased to have the Honorable Robert Johnson, commissioner of the Bureau of Reclamation. We would also like to welcome the staff that are with you. I think most people understand Mr. Hobson and my loyalties. I will point out for Mr. Wolf's benefit that my 17-year-old son just returned from his visit to Ann Arbor this past weekend. We do not yet know what particular decision he may make but did want to point that out for the record, if I could.

Mr. WOLF. I have four family members with Notre Dame connections. [Laughter.]

Mr. VISCLOSKY. Give them the money. Give them the money. [Laughter.]

Okay. Now we will continue here.

Future growth in the West will continue to put significant pressure on available water and power supplies. The nation will face challenges as competition for these scarce resources increases and will need to ensure the effective management of its infrastructure in the public interest.

In light of these growing demands, the administration's proposal to reduce funding for the Bureau of Reclamation from fiscal year 2008 levels represents a failure to address the water infrastructure requirements of our nation, a failure to invest in America.

The request for the Bureau of Reclamation totals $926.8 million, more than $181 million below the fiscal year enacted level, notwithstanding the legislative proposal for the new San Joaquin River Restoration Fund.

The request also contains an appropriation for the Central Utah Project Completion Account of $42 million.

In total, the administration seeks approximately $969 million in discretionary appropriations for the Department of Interior from the subcommittee. The request is partially offset by $51.3 million

in discretionary receipts from the Central Valley Project Restoration Fund.

I would like to ask, Commissioner Johnson, for your assistance. The subcommittee may be asked to move quickly and mark up our fiscal year 2009 bill sometime in mid-May. In order for us to meet this aggressive schedule, I would need your assurances that the hearing record and any questions for the record and supporting information requested by the subcommittee are cleared through your department and the Office of Management and Budget not later than 4 weeks from today.

Members are to submit their questions for the record by 5 p.m. today, and we will submit all questions to the department by close of business today.

With those opening comments, Mr. Hobson, we would certainly turn to you for any opening comments you would like to make.

MR. HOBSON'S OPENING STATEMENT

Mr. HOBSON. Thank you, Mr. Chairman.

Welcome, gentlemen, and welcome, Ken. Mr. Rehberg is back. I am not sure if that is good or not.

But, anyway, I want to welcome Commissioner Johnson to the subcommittee again, and thank you for your work and, Mr. Wolf, Murray, for your work also. It is good to see you again.

With the difficulties that we sometimes face with other agencies under our jurisdiction, I usually look forward to our hearings with the Bureau of Reclamation. Today, though, I have got an issue on my mind that is disturbing to me.

We recently reviewed the bureau's first 5-year plan, and, frankly, that is a step in the right direction that you got one, but I am, frankly, disappointed with the lack of quality and depth in it. It really doesn't tell us anything more than your budget justifications. In fact, your disclaimer, "The out-year numbers represent place holders pending decisions in future years," makes the point very clearly.

We intend the 5-year—I think we do—we intend the 5-year plans to be much more than placeholders, and I hope, Commissioner, that you will be able to share with the committee today some progress on out-year planning.

If the Department of Interior or OMB prevented you from putting any useful content in the plan, we could have helped you out if you would come to us sooner on this. There has got to be a change. The Corps of Engineers has gotten it now, and they are going to try to do some planning. But if this committee in the future is going to do its job better with you, we have got to have better 5-year plans. I think it will help, not hinder, what we do in the future.

So thank you for appearing with the subcommittee today, and continue the good work within your agency, but I do have problems with the 5-year plan.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Thank you, Mr. Hobson.

Commissioner, if you care to have an opening statement, and your entire statement will certainly be entered into the record.

MR. JOHNSON'S OPENING STATEMENT

Mr. JOHNSON. Thank you, Mr. Chairman, Mr. Hobson and other members of the subcommittee. It is a pleasure to be here today in support of the president's 2009 budget request for the Bureau of Reclamation.

As you mentioned, Mr. Chairman, I have Bob Wolf, our director of program and budget, and also Reed Murray, who is the program manager of the Central Utah Protection Completion Act should you have questions about that program.

The overall fiscal year 2009 request for Reclamation totals $926.8 million, as you said, Mr. Chairman. This request provides funding for priorities of the reclamation program consistent with the president's objective of achieving a balanced budget by 2012.

I have submitted written testimony, as you mentioned, which presents the detailed summary of our appropriation request.

For my oral presentation, I would like to talk about three areas of activities that comprise the majority of the Reclamation budget: First, maintaining our existing federal infrastructure; second, our river restoration programs that are required for environmental compliance; and, three, funding for new water development.

In addition, I would like to talk about Secretary Kempthorne's Water for America initiative.

First, maintaining our existing infrastructure, Reclamation budget reflects the need to maintain our existing portfolio of projects. Reclamation has over 472 dams, 348 reservoirs, 58 power plants and many other water delivery facilities. Our infrastructure provides water to 31 million people, 10 million acres of irrigated farmland, generates 44 billion kilowatt hours of electricity annually.

Much of that infrastructure is now 50 years old or older, and its proper operation and maintenance is our top priority. Almost $400 million of the Reclamation budget is dedicated to making sure that our facilities are operated and maintained in a safe and reliable fashion.

Second, we frequently find ourselves having to manage our projects to meet changes in social and public values that are embodied in the Endangered Species Act and other federal and state environmental laws. In most cases, meeting these requirements has been manifested in the development of broader river basin management and/or restoration plans.

Implementation of these plans is becoming a significant element of the reclamation programs. Reclamation's involvement is almost always necessary to meet regulatory obligations associated with the operation of its water and power facilities and is, therefore, a critical part of our water and power mission.

Reclamation is currently involved in environmental restoration programs on the Colorado, the middle Rio Grande, the Platte, the Klamath, the Columbia, the San Joaquin, the Trinity and the Sacramento Rivers. We anticipate that our efforts on these and other river systems will continue to be a significant part of our program. Our 2009 request contains over $150 million for these activities.

Third, Reclamation continues to be actively involved in programs to develop new water supplies and infrastructure. In total, these programs represent over $150 million of our 2009 request. Exam-

ples of ongoing activities in the 2009 request include the Animas-La Plata project located in southwest Colorado. This project will provide water supplies for Indian tribes and Municipal and Industrial (M&I) use in the states of Colorado and New Mexico.

The Reclamation budget includes funding for water systems to deliver surface water to Indian and non-Indian communities in the rural Great Plains. These projects provide good quality water to areas where existing water supplies are either nonexistent or very poor quality.

Three water reuse projects under Title 16 of Public Law 102–575. Reclamation continues to provide modest funding for projects that allow the reuse of existing wastewater supplies. Located primarily in southern California, these projects provide drought-proof supplies that help reduce demand for new sources of water that would otherwise be developed with considerable expense and environmental controversy.

Four, Indian water distribution systems in Arizona. Under the authority of the Central Arizona Project, Reclamation is funding the construction of water delivery systems to serve Colorado River water to Indian tribes in Arizona. These systems provide new supplies to settle Indian water right claims and meet economic development needs on the reservations.

I would like to turn briefly to the secretary's Water for America initiative. Chronic drought, changing climate, rapid population growth and increased environmental and energy needs have created water conflicts leading to growing interstate and intrastate competition for water resources.

In fiscal year 2009, Reclamation will partner with the U.S. Geological Survey to implement the Water for America initiative aimed at addressing 21st century water challenges and ensuring security for future generations.

The fiscal year 2009 budget request for Water for America is $31.9 million. Of this amount, $19 million appears as the Water for America initiative line item. The remaining $12.9 million is included in specific projects for enhanced endangered species recovery activities and investigations programs.

The goal of the Water for America initiative is to address the impending confluence of three factors threatening to overwhelm our current ability to provide water to the arid West: Increased water demands, aging infrastructure and decreased or altered availability of water supplies.

Reclamation's part of the Water for America initiative will focus on two of three strategies: One, planning for our nation's water future, and, two, to expand, protect and conserve our nation's water resources.

Reclamation will conduct comprehensive basin-wide water supply and demand studies in conjunction with willing partners in areas where high levels of anticipated water supply-demand imbalances exist.

Each study will include three elements: State-of-the-art projections of future water supply and demand by river basin; analysis of the basin's existing water and power infrastructure performance in light of changing water realities; and recommendations for adaptations and optimizing current operations and activities or by

changing or supplementing existing infrastructure and operations and adopting new technologies.

These activities will be carried out in concert with Reclamation's existing planning efforts in more narrowly defined geographic areas.

Under the expand, protect and conserve our nation's water resources element of the Water for America initiative, we will use a broad-based Challenge Grant Program, building upon the existing Water 2025 Challenge Grant Program, to accelerate the implementation of cost effective actions that will conserve water by improving efficiency, establishing challenge grants to advance technology of water treatment and support proactive efforts to avoid the decline of sensitive species.

This concludes my oral statement. I would be happy to answer questions.

[The written statement of Mr. Johnson follows:]

Statement of Robert W. Johnson
Commissioner
U.S. Bureau of Reclamation
before the
House Appropriations Committee
Subcommittee on Energy and Water Development
February 27, 2008

Thank you, Mr. Chairman, Mr. Hobson and members of the subcommittee, for the opportunity to appear before you in support of the President's Fiscal Year 2009 budget request for the Bureau of Reclamation. With me today is Robert W. Wolf, Director of Program and Budget.

I appreciate the time and consideration this Subcommittee gives to reviewing and understanding Reclamation's budget and its support for the program. Reclamation works hard to prioritize and define our program in a manner that serves the best interest of the public and those who rely on Reclamation for their water and power.

Our FY 2009 request has been designed to support Reclamation's core activities to deliver water and generate hydropower, consistent with applicable State and Federal law, in an environmentally responsible and cost-efficient manner while meeting the President's goal of balancing the budget by 2012.

The proposed funding will allocate funds to projects and programs based on objective and performance-based criteria to most effectively implement Reclamation's programs and its management responsibilities for the water and power infrastructure in the West. The President's budget request emphasizes the following principle: enhancing management of our water infrastructure and programs in the West by eliminating program redundancies, leveraging partnerships with our western stakeholders and maximizing opportunities for competitive processes.

The FY 2009 request for Reclamation totals $919.3 million in gross budget authority. This takes into consideration the effects of the proposed legislation for FY 2009 that will redirect $7.5 million for Friant surcharges from the Central Valley Project Restoration fund to the San Joaquin River Restoration Fund. The request also is partially offset by discretionary receipts in the Central Valley Project Restoration Fund of $48.3 million.

Water and Related Resources

The FY 2009 request for Water and Related Resources is $779.3 million. The request for Water and Related Resources includes a total of $383.0 million for water and energy, land, and fish and wildlife resource management activities (which provides for construction and management of Reclamation lands, and actions to address the impacts of Reclamation projects on fish and wildlife). The request also includes $396.3 million for facility operations, maintenance, and rehabilitation activities which is used to ensure sound and safe ongoing operations.

Adequate funding for facility operations, maintenance, and rehabilitation continues to be one of Reclamation's highest priorities. Reclamation continues to work closely with water users and other stakeholders to ensure that available funds are used effectively. These funds are used to allow the timely and effective delivery of project benefits; ensure the reliability and operational readiness of Reclamation's dams, reservoirs, power plants, and distribution systems; and identify, plan, and implement dam safety corrective actions and site security improvements.

Highlights of the FY 2009 Request for Water and Related Resources

I would like to share with the Committee several highlights of the Reclamation budget, including one of the most significant and exciting elements of our 2009 request, the Water for America Initiative. In FY 2009, Reclamation will partner with the U.S. Geological Survey to implement the Water for America initiative aimed at addressing 21st century water challenges and ensuring secure water supplies for future generations.

Water for America ($31.9 million). Of this amount, $19.0 million appears as the Water for America Initiative line item. While the remaining $12.9 million is funded in specific projects for enhanced endangered species recovery activities ($8.9 million) and displayed as individual investigation programs ($4.0 million) in the budget request, collectively the $31.9 million supports the cohesive Water for America initiative. Reclamation's efforts focus on two of the Initiative's three strategies: Plan for Our Nation's Water Future; and Expand, Protect, and Conserve Our Nation's Water Resources. The third component, Enhance our nation's Water Knowledge is funded with the U.S.G.S.

As part of the Plan for Our Nation's Water Future component of the Initiative, Reclamation will incorporate the existing investigations programs with a new basinwide studies program, thus initiating comprehensive water supply and demand studies to assess the impact of increased water demands on finite water sources. The Expand, Protect, and Conserve Our Nation's Water Resources component merges the most successful elements of two existing water conservation programs, Water 2025 and the Water Conservation Field Services Program. Competitive grants will be awarded based upon West-wide criteria to address emerging challenges and prevent future conflicts.

Plan for Our Nation's Water Future ($8.0 million)

In planning for our Nation's water future, Reclamation will conduct comprehensive water supply and demand studies. The studies, to be done in conjunction with willing partners, will occur in areas where high levels of anticipated water supply/demand imbalances exist. Each study will include three main elements: state-of-the-art projections of future supply and demand by river basin; analyses of how the basin's existing water and power infrastructure will perform in the face of changing water realities; and recommendations for satisfying future water needs through adapting and optimizing current operations and activities, or by changing or supplementing existing infrastructure and operations and adopting new technologies. Additionally, Reclamation's investigation programs will complement the comprehensive basin studies and will place an additional emphasis on resolving 21st century challenges.

Expand, Protect, and Conserve Our Nation's Water Resources ($23.9 million)

The Expand, Protect, and Conserve Our Nation's Water Resources effort will use a broad-based challenge grant program (building upon and recasting the existing Water 2025 Challenge Grant program and the Water Conservation Field Services Program) to accelerate the implementation of cost-effective actions that will conserve water by improving efficiency; recycle and desalt water to create new supplies; and support proactive efforts to avoid the decline of sensitive species.

Another component of this strategy is accelerating endangered species activities in order to maintain and improve existing resident populations and/or localized critical habitat for various species impacted by Reclamation projects, thereby safeguarding the water supplies associated with these projects. Activities will include acquiring land for habitat development and improvement projects, recovery activities for listed species, improvements to stream flow, removal of barriers to spawning grounds, restoration of critical habitat and other related actions.

Other significant programs and highlights include:

Klamath Project in Oregon and California ($25.0 million). The FY 2009 President's budget request will continue funding for Reclamation to collaborate with other Federal and State agencies, tribes and the public to develop a basin-wide recovery plan that addresses water supply, water quality, fish habitat, and fish populations.

Lower Colorado River Operations Program in California, Arizona and Nevada ($16.4 million). The FY 2009 President's budget request will provide funds for the work necessary to carry out the Secretary's responsibilities as water master of the lower Colorado River. The FY 2009 request funds measures under the multi-species conservation program to provide long-term Endangered Species Act compliance for lower Colorado River operations for both Federal and non-Federal purposes.

Middle Rio Grande in New Mexico ($22.7 million). The FY 2009 President's budget request will continue funding for endangered species activities and Reclamation's participation in the Middle Rio Grande Endangered Species Act Collaborative Program as well as repair of priority river maintenance sites.

Animas-La Plata in Colorado and New Mexico ($50.0 million). The FY 2009 President's budget request will continue construction of the project's major features, Ridges Basin Dam and Durango Pumping Plant and the Ridges Basin Inlet Conduit. It will allow for initiation of testing on the Durango Pumping Plant and Ridges Basin Inlet Conduit, thereby enabling the initial filling of Lake Nighthorse. With this level of funding Reclamation will start constructing components of the Navajo Nation Municipal Pipeline. In addition to construction funding, this request includes funding for continued operation and maintenance of improvements for wetland and wildlife mitigation lands associated with the project.

Savage Rapids in Oregon ($3.0 million). The FY 2009 President's budget request will provide funds for continuing construction of the pumping facilities. Removal of this irrigation diversion dam and the installation of pumping facilities will allow the local farming community to

continue irrigated agriculture and remove a migration barrier for the threatened Southern Oregon and Northern California coho salmon.

Columbia/Snake River Salmon Recovery in Idaho, Oregon, Montana, and Washington ($18.0 million). The FY 2009 President's budget request will address the requirements in the biological opinions issues in December 2000 by the U.S. Fish and Wildlife Service and in November 2004 by the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries). The 2004 biological opinion has been remanded to NOAA Fisheries and a new biological opinion is due in May 2008. During the remand, the 2004 biological opinion remains in place as Reclamation continues to implement actions identified in the 2004 updated proposed action.

Platte River Endangered Species Recovery Program ($11.5 million). The President's FY 2009 budget request for the Platte River Recovery Implementation Program is $11.5 million. The agreement for the program was signed by Secretary Kempthorne and the Governors of Nebraska, Colorado and Wyoming in late 2006. Platte River habitat is essential to the recovery of the whooping crane, interior least tern, piping plover, and pallid sturgeon (all threatened or endangered species). Legislation was introduced in the 110th Congress to authorize the Secretary of the Interior, through the Bureau of Reclamation, and in partnership with the States of Wyoming, Nebraska, and Colorado, other Federal agencies, and other non-Federal entities to participate in the implementation the Platte River Recovery Implementation Program for Endangered Species in the central and lower Platte River Basin and to modify the Pathfinder Dam and Reservoir.

Site Security ($29.0 million). The President's 2009 budget request for site security helps to ensure the safety and security of the public, Reclamation's employees and key facilities. The funds will support ongoing security activities, including physical security, personnel security, information security, law enforcement and research activities to maintain an effective and reliable security program and allow Reclamation to conduct security-related studies and reviews. The request also includes appropriated funds for guards, patrols, and law enforcement, including coordination, execution, and maintenance of law enforcement agreements with agencies outside Reclamation. In FY 2008, 2009, and in future years, Reclamation plans to collect all reimbursable costs, including guards and patrols, as well as operation and maintenance of facility fortifications. Reclamation will continue to treat facility fortification, studies, and anti-terrorism management-related expenditures as non-reimbursable.

Safety of Dams ($91.3 million). The President's budget allows Reclamation to ensure that safety and reliability of Reclamation dams is one of the Bureau's highest priorities. The Dam Safety Program is critical to effectively manage risks to the downstream public, property, project, and natural resources. Of the budget request of $91.3 million, $71.5 million is for modifications at several facilities including Folsom Dam.

Rural Water Program Development ($1.0 million). The FY 2009 President's budget request of $1.0 million will allow Reclamation to begin implementation of the program on a pilot basis. Reclamation is currently working on meeting the requirements of Title I of the Rural Water Act in order to implement the program. First, Reclamation is undertaking a rulemaking process, to develop programmatic criteria. Second, as required by the Act, Reclamation will complete an

assessment of the status of authorized rural water supply projects and of other Federal programs that address rural water supply issues. This study will enable Federal agencies to maximize coordination in order to promote efficiency in those Federal activities targeting rural water supply needs in the West.

Science and Technology (S&T) ($9.0 million). The FY 2009 President's budget request includes funding for the development of new solutions and technologies which respond to Reclamation's mission-related needs. Reclamation's S&T work will contribute to the innovative management, development, and protection of water and related resources. This does not include the $2.0 million for the Desalination and Water Purification Research program.

Ongoing Rural Water Projects

This request includes $39.0 million for two ongoing authorized rural water projects: The first priority for funding rural water projects is the required operations and maintenance component, which is $15.0 million for 2009. The budget includes $24 million to support the Administration's commitment to complete construction of ongoing rural water projects including ongoing municipal, rural and industrial systems for the Pick Sloan-Missouri Basin Program – Garrison Diversion Unit in North Dakota and the Mni Wiconi Project in South Dakota. For the construction component, Reclamation allocated funding based on objective criteria that gave priority to projects nearest to completion and projects that serve tribal needs.

Title XVI

The request includes $7.0 million to support ongoing Title XVI construction projects, Title XVI research activities, and the Title XVI feasibility study review process developed in 2007. The Title XVI projects develop and supplement urban and irrigation water supplies. Reclamation will continue to place priority on funding projects that: (1) are economically justified and environmentally acceptable in a watershed context; (2) are not eligible for funding under another Federal program; and (3) directly address Administration priorities for the Reclamation program such as providing instream flows for Federally endangered or threatened species, meeting the needs of Native American communities, and meeting international commitments.

Policy and Administration

The $59.4 million request in FY 2009 funds the development, evaluation, and implementation of Reclamation-wide policy, rules, and regulations, including actions under the Government Performance and Results Act, and implement the President's Management Agenda. These funds are also used for management and performance functions that are not chargeable to specific projects and required for ongoing Commissioner's activities.

Central Valley Project Restoration Fund

This fund was established by the Central Valley Project Improvement Act, Title XXXIV of P.L. 102-575, October 30, 1992. The request of $48.6 million is expected to be offset by discretionary receipts totaling $48.3 million, which is the maximum amount that can be collected

from project beneficiaries under provisions of Section 3407(d) of the Act. The discretionary receipts are adjusted on an annual basis to maintain payments totaling $30.0 million (October 1992 price levels) on a three-year rolling average basis.

The CVPRF request is a net of $48.6 million. This includes a redirection of $7.5 million collected from the Central Valley Project Friant Division water users to the new San Joaquin River Restoration Fund for FY 2009. Previously, these funds went into the CVPRF as outlined in the Reclamation Projects Authorization and Adjustments Act of 1992, Title XXXIV of P.L. 102-575, section 3406(c)(1). Under the Settlement, the legislation proposes to redirect approximately $17.3 million per year of payments from the Central Valley Project, Friant Division water users into the Fund which would be available without further appropriations to implement the provisions of the settlement. These funds will be used for habitat restoration, improvement and acquisition, and other fish and wildlife restoration activities in the Central Valley Project area of California.

San Joaquin River Restoration Fund Proposed Legislation

Funding in FY 2009 will be used to continue planning, engineering, environmental compliance, fisheries management, water operations, and public involvement activities related to the Restoration and Water Management goals in the Settlement. The Administration will again support passage of authorizing legislation, the San Joaquin River Restoration Settlement Act, which includes a provision to establish the San Joaquin River Restoration Fund.

California Bay-Delta Restoration Fund (CALFED)

Title I of P.L. 108-361, titled the Calfed Bay-Delta Authorization Act, was signed by the President on October 25, 2004. The Act authorized $389 million in Federal appropriations over the period of FY 2005 through FY 2010. For FY 2009, $32.0 million is requested to enable Reclamation to continue to advance its commitments under the CALFED Record of Decision and with a focus toward implementation of priority activities included in the Calfed Bay-Delta Authorization Act that will contribute to resolving water resource conflicts in the CALFED solution area. Funds will specifically be used for the environmental water account, feasibility studies of projects to increase surface storage and improve water conveyance in the Delta, conduct critical science activities, implementation of projects to improve Delta water quality, ecosystem enhancements, and program planning and management activities.

FY 2009 Planned Activities

Reclamation's FY 2009 priority goals are directly related to fulfilling contractual requests to deliver water and power, while balancing a range of competing water demands. Reclamation will continue to deliver water consistent with applicable State and Federal law, in an environmentally responsible and cost-efficient manner. Reclamation will deliver 28 million acre-feet of water to meet contractual obligations while addressing other resource needs (for example, fish and wildlife habitat, environmental enhancement, recreation, and Native American trust responsibilities).

Reclamation will maintain dams and associated facilities in good condition to ensure the reliable delivery of water. Reclamation will continue to meet or beat the industry forced outage average to ensure reliable delivery of power. Reclamation will reduce salinity by preventing an additional 13,500 tons of salt from entering the water ways.

Moreover, the FY 2009 budget request demonstrates Reclamation's commitment in meeting the water and power needs of the West in a fiscally responsible manner. This budget continues Reclamation's emphasis on managing those valuable public resources. Reclamation is committed to working with its customers, States, Tribes, and other stakeholders to find ways to balance and provide for the mix of water resource needs in 2009 and beyond.

Managing For Excellence

Reclamation continues to make significant advancements in its quest for management excellence. Reclamation's Managing for Excellence Action Plan reflects specific actions to realize the underlying principles of the President's Management Agenda. The National Academy of Sciences, at Reclamation's request, completed and published its study in 2006 to assist Reclamation in determining the appropriate organizational, management, and resource configurations to meet its construction and related infrastructure management responsibilities associated with fulfilling its core mission of delivering water and power for the 21st century.

The Managing for Excellence action plan, developed in response to the Academy's report, outlines a process and timeframe for identifying and addressing the specific actions that can be taken to increase transparency, efficiency, and accountability within Reclamation. To date, Reclamation has completed 38 out of 41 activities. The balance will be completed by the end of February 2008.

Conclusion

Mr. Chairman, please allow me to express my sincere appreciation for the continued support that this Subcommittee has provided Reclamation. This completes my statement. I would be happy to answer any questions that you may have at this time.

RESTORING WETLANDS ON QUECHAN RESERVATION

Mr. VISCLOSKY. Commissioner, thank you very much. Mr. Hobson and I will defer for the time being and would recognize Mr. Pastor.

Mr. PASTOR. Thank you, Mr. Chairman.

Good morning, gentlemen.

Good morning to my colleagues.

I think it has been over 15 years that you have had a working relationship, contractual relationship with Arizona State University Law School, and in the past 15 years, with your assistance, we have developed probably one of the premier Native American law programs that deal with water rights and water law, which with water settlements that expertise is needed. So last year we encouraged you to continue the program and to find ways of continuing it and there is a probability, high probability you will see it again.

So we continue to encourage you to do it, and if there is anything we can do to help, please let us know.

Mr. JOHNSON. I appreciate that.

Mr. PASTOR. With great delight, I found out from the state director of the Bureau of Land Management that now they are working with the Bureau of Reclamation in Yuma with the east wetlands and also the west wetlands. Last year, I think we appropriated about $1.4 million plus monies for the restoration, and we had the Quechan, who are involved in this project.

So with the Bureau of Land Management, with the Bureau of Reclamation, the local community, Yuma County and with the Quechan, we want to restore that part of the Colorado River. So we are going to continue working with you, so if you would like to comment, I would——

Mr. JOHNSON. It is a good program. We continue to implement consistent with the direction and the funding that we get. This next year, with the money that we have, we plan on developing an additional 500 acres of wetlands on the Quechan Reservation. And I am not sure that I know what has been developed previously, but it has been a very successful wetland development program. We will continue to work with the local community, and I am glad that we have got BLM as a partner in that. I think that is going to work very well.

Mr. PASTOR. I think it is. I think in restoring—as you well know, you are very familiar with it—the Colorado River was treated in that part of the country, and restoring it has not only brought life to the river but people are enjoying it again.

You mentioned the CAP and relationship of the development of the infrastructure for the various tribes. Recently, I met with the leadership of Gila River, and they were concerned that additional money would be needed because I think the end of this year is the water settlement kick-in and agreement.

What are you funding it at in this budget, and what is the request?

GILA RIVER

Mr. JOHNSON. For the Gila River piece, it is $11.7 million. Our total request for the Central Arizona Project, I believe, is around

$26 million, so we do have some money for working with some of the other tribes as well, and we also have some environmental commitments that are included in that total CAP budget.

I think that is pretty consistent with what we have been requesting in past years. You are absolutely correct, in 2010, the funding mechanism created by the Arizona Settlement Act kicks in, and I think that will be able to enhance our effort with the tribes.

Mr. PASTOR. I don't know, I think that we are requesting probably an additional $4 million. I am going to put it in that ballpark because they felt that this year they needed to get ahead of the curve. But they are very grateful for the $11 million, but they are really going to try to see if they can augment it.

YUMA PLANT

How is my old desalting plant down in Yuma? I know you did—is it well? Are you going to run it? What were the tests? What were the final results of your test?

Mr. JOHNSON. The test was successful. We ran it at 10 percent capacity for 90 days, and we produced, I think, somewhere around 4,000 acre feet of new water by doing that. It actually ran a little more efficiently than we projected it to run. I think it achieved somewhere up around the 85 percent efficiency, meaning we only lost about 15 percent of the water in the reject stream, and we didn't expect it to do quite that well.

We affirmed the costs of operation and the estimates of our annual O&M costs we found are fairly accurate, although costs are going up. The chemical and the energy costs are going up significantly. That water in that drainage canal requires a significant amount of pretreatment, and so desalting that water is not just as easy as running it through the desalting plant. You have to do a lot of chemical treatment and filtering of the water before you can even run it through the reverse osmosis filter. So it is a little more expensive than maybe other forms of desalting because of the nature of the water that we have to treat.

One of the other things that we found is that we do have—I suppose it is something that we would call a design deficiency in the pipe that is included in the pipe that transports the water through the system. It is an aluminum bronze piping, and it deteriorates. The water chemistry causes that pipe to deteriorate faster than we expected. And so to get the plant in full operational mode, we will have to replace that aluminum bronze piping, and that is an additional $17 million in cost.

So the test run had both good and bad results. We can operate it more efficiently, and we know it works the way it was intended to work. We have some problems with our aluminum bronze piping, and some of our costs for chemicals and other things are going up.

Mr. PASTOR. What is your 5-year plan. Do we have a 5-year plan? You know, this has been going on for how many years, 30 some odd years, maybe?

Mr. JOHNSON. As part of our test run, we are doing a broader study. We have an obligation to replace that Welton-Mohawk drainage water, and the test run was part of a broader study to look at the best ways to replace that water supply.

We have also been doing demonstrations, we call them system conservation programs, which really amount to paying farmers to forbear in the use of water. We did that last year with the Palo Verde Irrigation District in California, and I think this year we are doing it with some of the water users—the Yuma Mesa Irrigation District is participating with the program there.

That is quite a bit less expensive means of replacing the bypass flow. We are buying water from farmers for somewhere around $160 to $170 an acre foot. The cost of operating the desalting plant, if it is operated at full capacity and all the best assumptions about chemical and efficiency and all those things, the desalting plant is well over $300 an acre foot. So it is quite a bit less expensive to do those system conservation plans.

So we are going to be submitting a report to Congress over the next year that is going to lay out what we think is the best approach to be moving forward in terms of replacing the bypass flow, and that will kind of have a plan in it for what we are going to do.

There are some other potential uses of the desalting plant. There is a significant amount of groundwater in the Yuma Valley that has fairly high levels of salt in it. It is not usable for domestic or irrigation, and that desalting plant could be used to desalt that water. And that water doesn't have the same problems that that drainage water from Welton Mohawk does. It doesn't require all the pretreatment, so it may actually be less expensive to treat that groundwater in the Yuma Valley and create new supplies than it would be to treat that drainage water.

The other advantage of that is you don't have the impact on the wetland down in Mexico, because you are not shutting off the flow to that wetland. So that is part of what we are looking at in this bigger study as well.

Mr. PASTOR. Thank you, Commissioner Johnson, and I will yield back my time.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Rehberg.

Mr. REHBERG. Thank you, Mr. Chairman, and I want to thank you for your kind welcome back to the committee. It is a pleasure. There have been certainly some difficulties and irritations with the changing of the majority, but you are not one of them. [Laughter.]

And the food is better than under the last chairman, so thank you for making me feel welcome and for your continuing interest. You talked to me after I was off the committee about my projects, and it meant a lot to me, and I intend to be an active participant on this committee.

Obviously, we are going to spend a whole lot of time on Arizona in the next 4 years with the next president being from Arizona. [Laughter.]

We will probably have more than we can stand in Arizona projects.

Mr. Wolf, I have no connection to Michigan, but I am an advocate of Milton Erickson, so if you will look in my eyes and repeat after me, "Montana's water projects deserve to be in the president's budget." Got it? [Laughter.]

That wasn't exactly an indirect suggestion, but he was the master of that.

MONTANA'S WATER PROJECTS

Mr. Johnson, maybe you can explain to me, I just don't get it, and you know I don't get it, and I continue to ask you about why I don't get it, how Montana's three water projects, which all have a major impact on not only water availability and clean water availability to Montanans, but each of them were part of an Indian compact, a reserved water rights settlement that the federal courts required us to complete.

All three of these projects have been authorized by Congress. Everybody agrees that these projects need to be done, and one of them is actually kind of exciting, because it meets more than the thresholds you talked about, and that is St. Mary's. It impacts, one, Glacier National Park, it impacts the Blackfeet and the Fort Belknap Indian Reservations, it impacts Canada because the water goes into Canada and comes back into the United States, and it impacts virtually an eighth of our population, and yet it never makes it into the President's budget.

And maybe then you can explain further to me how in fiscal year 2007 the Dry Prairie Water Project, which is in northeast Montana, which affects the Fort Peck Reservation, was included in the president's budget, and then since that time has been dropped back out, requiring me to go in and get an earmark for these water projects.

So we meet the tribal threshold, we meet the clean drinking water, we meet the river restoration. And if one project blows out at St. Mary's, you have got a disaster on your hands. Unfathomable. The nation is going to go nuts when they find out the damage that you will have done up around the Glacier National Park area and into Canada, so you will have created an international crisis as well.

Unfortunately, I had the opportunity to talk to your predecessor, and in much the same way, he sat here and he nodded his head, and he said, "Yes, I entirely agree. We are going to have a disaster, it is going to blow out, the federal government will take the responsibility," and then he resigned from his position the next day. [Laughter.]

So I don't anticipate that you are quitting your job tomorrow, but would you give me some confidence that there is some kind of rationale as to our projects being in the president's budget and then dropped back out? And based upon the criteria you brought up in your testimony, how do we qualify to be in the president's budget? Why do we have to continue to earmark the funding?

Mr. JOHNSON. I would be glad to start——

Mr. REHBERG. You have got 30 seconds. [Laughter.]

Mr. JOHNSON. Congressman Pastor didn't limit me to 30 seconds.

Mr. REHBERG. He is in the majority. [Laughter.]

Mr. JOHNSON. The St. Mary's project, I want you to know that the St. Mary's project was the very first project that I visited as Commissioner. I became Commissioner in October of 2006, and in November, early November of 2006, I went up to Montana and drove through the Blackfeet Reservation, saw the dam, the diver-

sion structure, the siphons, the canal and did a tour of the facility, so I appreciate what you are saying.

We do include money in our budget for the operation and maintenance of that project. I think we have somewhere in the neighborhood of $3 million for St. Mary's.

That does not address the issues that you bring up. Aging infrastructure is an issue. That is probably one of the best examples of aging infrastructure in the Bureau of Reclamation. That project is 100 years old. The canal still works, it still delivers water, but there is a lot of deterioration of the diversion dam. The canal is not constructed to today's standards. It is not an efficient canal. It doesn't have a lot of bank on it, so you can regulate and control deliveries. And, certainly, the siphons are in need of replacement. So I appreciate very much what you are saying.

As you know, one of the problems we have, if we appropriate more money for that project, it is an O&M expense, and we have to charge it to the irrigators in that area, and they have a limited ability to pay. So as part of the Reclamation appropriation, it is difficult for us to include a significant amount of money to do that kind of rehab.

But as you are aware, Congress did include authorization for the Corps of Engineers to——

Mr. REHBERG. But how do you intend to work with the Corps?

Mr. JOHNSON. We have met with the Corps, we have met with the local water users. We are prepared to cooperate with the Corps on moving forward and doing those repairs. I am not sure where the Corps is on their request for funding. I doubt if they have funding requested in their 2009 budget for that.

Mr. REHBERG. They did not.

Mr. JOHNSON. But we are certainly prepared to roll up our sleeves and work with them in any way we can. I think they are probably scratching their head a little bit over why are we authorized to rehab a Reclamation project. But, look, we are more than happy to work with them, and we will roll up our sleeves and of whatever we can to cooperate in moving forward.

Mr. REHBERG. How about Dry Prairie, why was it in the Fiscal Year 2007 Budget and now out?

Mr. JOHNSON. The funding for the Rural Water Program, and I go back, is a struggle to balance the objectives of getting a budget that meets the budget objectives of getting a balanced budget by 2012 with also trying to find the proper balance of funding our programs. And that is a real challenge.

We used some criteria on the Rural Water Program that focused on a couple of things. One, it said priority goes to Indian tribes, and priority would also go to trying to fund those projects that are closest to completion. And the other part of that is we fund O&M first. We have to fund our O&M activities first; that is absolutely the first thing that we have to take care of.

When we look at the projects that we have, we put our funding on the two projects that are farthest along: The Mni Wiconi project and the Garrison project. Both of those have a much higher percentage of completion. We would like to move those toward completion so that we can then focus money back on the other projects.

Mr. REHBERG. Do you have a list that shows the ranking of the various projects, so that we have some confidence that as Garrison gets done, following your theory, that ours moves up or is next? Because it is the old scenario where you are driving down the road in Los Angeles and you look over the side and there is this bridge that just stops, and you go, "What idiot in the federal government was thinking of that when they started the project and didn't appropriate the money to finish the project."

And we have a project that was started and into this budget and now it is back out of the budget, and we never get enough earmarks to cover the ongoing expenses. And so when you build a pipeline and you have got pipes sitting there and then it ends, it makes us all look stupid.

And so how do we know there is this list that exists within the Bureau of Reclamation that is going to actually be next in line, because it has been authorized by Congress and recognized by the president in the past?

Mr. JOHNSON. We would be glad to provide that. We do have a list of projects and how far they are along with completion and what the completion dates are. We can provide that.

Mr. REHBERG. And there is nothing that can ever be jumped ahead of that list. And so if Dry Prairie is number 11 and you are funding the top 10, when one is done in the top 10, we move up, guaranteed.

Mr. JOHNSON. There is certainly a large backlog on rural water, no question about it.

Mr. REHBERG. That wasn't my question.

[Laughter.]

Mr. JOHNSON. Look, right now, we are——

Mr. REHBERG. Take your time.

Mr. JOHNSON [continuing]. We are funding the two that are closest to completion at this point in time, and we would be glad to—we can provide you the data on how far they are along and what their projected completion dates are.

Mr. REHBERG. Thank you, Mr. Chairman.

Mr. PASTOR. Mr. Chairman, I just want to remind my colleague and friend from Montana that he mentioned the dreaded "E" word at least four times, and I think the probable presidential nominee from Arizona doesn't like to hear that "E" word. So don't ask——

Mr. REHBERG. And I noticed that your projects are not considered earmarks. They are in the president's budget in anticipation of the next guy not having the "E."

Mr. PASTOR. Well, we will work with you on it. [Laughter.]

Mr. VISCLOSKY. Well, we have one vote, and, Mr. Calvert, I don't want to rush you and it is your choice if you want to do this tranche or if you want to wait and come back. I have a couple of follow ups on Mr. Rehberg's line of questioning, so we are coming back. Whatever works best for you.

Mr. CALVERT. I will be——

Mr. VISCLOSKY. You are recognized then.

DESALINIZATION

Mr. CALVERT. I have known Commissioner Johnson for a number of years, and we have worked on a number of projects together.

As you know, in the state of California, we have a federal judge who just ruled in the California Delta to curtail water exportation to the south. We have got problems on the Colorado River. There are reports that Lake Mead and Lake Powell are drying up. I know this year we have had a pretty good snow melt, but it has been a difficult number of years.

And I was looking through your budget proposal and one of the things that I think that we are going to have to do to meet the water requirements in the state of California is to look toward desalinization, and I see where you have zeroed out the Long Beach experimental facility, which is a concern of mine, along with a number of others. Can you explain why you did that or do you believe that desalinization is not part of the long-term answer for the water in the Southwest?

Mr. JOHNSON. No, not at all. I think desal has a lot of promise. We have participated in the funding of that project. In fact, I think we have put quite a bit of money into that demonstration project, and we are very proud of it, and we are very proud of our interaction.

In the context of our overall priorities, however, and trying to find the right balance, that one just didn't get to the higher level that we felt like we had the ability to fund it. We do have money for desal in our budget for desal research, trying to advance technology. We have a research facility in Yuma in association with our Yuma desalting plant. We are also doing research at the Tularosa desal research facility, which came on, just completed this last year. So we are putting some efforts into research and trying to advance the technology of desalinization.

Mr. CALVERT. Well, as you know, this technology is different than the technology you are referring to.

Mr. JOHNSON. It is.

Mr. CALVERT. And it has a lower energy threshold to develop substantial water supply. And we have talked in the past about potentially working with states like Nevada who are up to their limit, 300,000 acre feet, they are just out of water, possibly doing maybe some water transfers along the river if we can agree to that under the Quantification Agreement.

But that type of activity is going to have to take place if the Southwest is going to be able to have adequate water supplies in the future, because if we believe these reports, the Colorado River is going to have substantial problems in the future.

ALL-AMERICAN CANAL

One other question, the All-American Canal is under construction at the present time. I understand the Mexican government has an individual meeting with Interior, I think, today, or they met yesterday, maybe, with the secretary. I would hope that there is no problem and the construction is going to move forward and be completed on time. Is everything going all right with that?

Mr. JOHNSON. Everything is going great.

Mr. CALVERT. Great.

Mr. JOHNSON. Full guns. There is no intent to slow down anything on the All-American Canal. There are discussions with Mex-

ico in the broader context but not anything related to the All-American Canal. That is moving forward.

VOLUNTARY WATER TRANSFERS

Mr. CALVERT. On the subject of water in the future, some of these water transfer agreements that are voluntary—I believe in voluntary water transfer agreements—with agencies like Imperial Irrigation District and others, Palo Verde and others, I would hope that we work on a long-term effort to work with these farming communities in a mutually positive way in which we can work out these water transfer agreements that I think can work and be positive for farmers and positive for the urban community.

Mr. JOHNSON. We have had a policy for many, many years that supports voluntary water transfers, willing buyer-willing seller transfers, and that is probably one of the very viable tools for meeting future urban growth that is going on in the West. There are lots of opportunities for that.

And, so, yes, that is something—there are sensitive issues there. Rural communities have a lot of concern about water transfers—"If our water goes to the city, we are going to dry up and go away"—so you have got to be careful to structure them in a way that protects that. But there are lots of ways to structure transfers where rural communities actually thrive and don't lose.

In the Imperial transfer, I think the Imperial Valley is going to be a lot better off with that transfer. It is all going to come through conservation.

Mr. CALVERT. Well, I think so too. The board doesn't think that way, but——

Mr. JOHNSON. Not always, but I think as that gets developed and they see how it works, there will be a lot of support.

The Palo Verde, another example of one.

So we keep trying to tell that story in these rural areas about the benefits of transfers and how to structure them in ways that it doesn't have a negative impact on the rural areas, and I think that is the key point that we need to make when we are talking to those folks.

Mr. CALVERT. Right. Right.

Well, I guess we have got to go to a vote, Mr. Chairman, so if you go another round, I may ask a couple of questions.

Mr. PASTOR [presiding]. I am going to go ahead and wait till the chairman comes back or one of the other members.

GLEN CANYON DAM RELEASE

Is the water being released on the Glen Canyon Dam to restore the banks and some of the habitat? Has that happened yet?

Mr. JOHNSON. We are completing the environmental assessment and the Endangered Species Act compliance to allow that to occur.

Mr. PASTOR. Okay.

Mr. JOHNSON. So it is not a final decision, but assuming that got completed, that could happen as early as March 5, yes.

Mr. PASTOR. Because I think Monday a big article in the Arizona Republic that this was the third one that was coming down. And the thrust of the article that I read said this will be the third one, and I guess there has been mixed reviews on the other two. And

I am trying to remember if there was a woman who either works for Fish and Wildlife or she is a scientist.

Mr. JOHNSON. Park Service.

Mr. PASTOR. Park Service, that was saying that, what we ought to do is make a decision how often and what really works. The science has been shown. We just need to make a decision.

Would you like to comment on that since obviously it affects Arizona and the Colorado River?

Mr. JOHNSON. Well, certainly, more surge releases—I don't know if that is the right word or not——

Mr. PASTOR. I think that is what they used, surge, yes.

Mr. JOHNSON [continuing]. Through the Grand Canyon could help enhance the habitat in the Grand Canyon for fish and also for recreation.

Right now, the scientists think that the canyon is primed for a successful release, and the reason for that is that we have had some very large tributary inflows that have deposited a lot of silt in the bottom of the river, and these high flows really help when you have a lot of silt in the river, because those high flows pick up that silt and sand and they deposit it up on the banks of the river, they create warmer water areas for fish and they also provide really nice places for the recreationists that are enjoying the Grand Canyon.

So scientists are advising us that doing that kind of a test right now could really be productive, and so that is the basis of the EA.

I think that our sense is that we use an adaptive management science-based approach to doing those sorts of things, and we have got to look at the data and make our decisions on a case-by-case basis as we move forward with that.

Will there be more of these in the future? My guess is probably, yes, but I think you have to wait for the right kinds of conditions. If your river doesn't have any sand and sediment in it, it probably doesn't make a lot of sense to do it. All you are going to do is scour out what is already there. But if you have a good build up of sand and silt, then it may make more sense to do those things.

Mr. PASTOR. Because people are saying, "Well, it is the third one. How many more?" The crux of the article was, I guess, that the Bureau of Reclamation get into a pattern that, based on scientific data, will be more successful. I guess that was the crux of the story.

Now, is it your agency that is dealing with the drought?

Mr. JOHNSON. Certainly, the trout fishery below Glen Canyon is something that we take into consideration as we do our operations at Glen Canyon. I think the Park Service and the Fish and Wildlife Service certainly have a big role in that as well.

Mr. PASTOR. Okay.

Mr. JOHNSON. Yes.

Mr. PASTOR. They told me that we better adjourn to go vote, and I guess the chairman will be here shortly, so we will see you the next round.

Mr. JOHNSON. Very good. Thank you.

[Recess.]

GLACIER PROJECT

Mr. VISCLOSKY [presiding]. I would like to reconvene.

If I could, what I would like to do is pick up on Mr. Rehberg's line of questioning relative to the project at Glacier, and staff provided me with a technical description of its current condition and that said, "falling apart," and would want to follow up because it was mentioned in the dialogue that the authorization now exists for the Corps to also work in consultation with the commissioner.

You had mentioned that you apparently have had some conversations with the Corps. They have no money in their budget request. You have O&M of $3 million, as I understand it, but no construction dollars.

Is there a proposal of how you would work with the Corps on this project or is that pending money to support discussions about what the scope of the work would be?

Mr. JOHNSON. Yes. I think it probably is pending. Our discussions at this point are pretty preliminary with the Corps. We have had a meeting with them and indicated our interest in sitting down with them and figuring out how they want to move ahead. They will have to get the appropriations and I don't think the Corps has a lot of background on the project or a lot of money to put a lot of effort in it at this point in time, in fiscal year 2008. Unless they have money, they are not going to be able to put a lot of resources in working on it.

Now, a lot of work has been done. We have done some studies, the state has done some studies. So we have a general sense of what is required out there. There have to be detailed designs done and then move into the construction. But there is a pretty good sense of what needs to be done from the studies that have already been carried out.

Mr. VISCLOSKY. For those studies, do you have an estimated cost as far as the various project elements, realizing you haven't gotten to the point of design?

Mr. JOHNSON. We do, and I am trying to remember. About $150 million, and that is just ballpark.

Mr. VISCLOSKY. And have you worked with the Corps on other projects similar to what may be envisioned with the authorization they now have on this matter?

Mr. JOHNSON. This is probably—we have worked with the Corps and let me just start by saying, we have a great relationship with the Corps. As a matter of fact, I met with their management team and our management team just last week to talk about it, and there is no competition, there is no duplication of effort between the two agencies.

We do have some areas where we are doing cooperative projects. Folsom Dam is probably the best example. They needed to do a flood control project for the Sacramento Valley, we needed to repair the dam for safety purposes. We put a joint project together where we are going to do the dam safety work, and they are going to do the raising of the dam to provide additional flood control. And by working together and coordinating our work with theirs, we are saving a significant amount of money over what would be spent if we did the project separately. It is in the hundreds of millions of

dollars that we are saving by doing the project in a cooperative way.

We are also doing a cooperative project with them on Yellowstone Dam. It is a dam in Intake, Montana. And it is actually a fish screen or a fish passage, and it is for the sturgeon in the Missouri River system. We are going to do a fish passage with the Corps on a bureau facility as part of their ESA requirements for the Missouri River system. So we have got a really good cooperative effort with them to move forward with that project on a joint basis as well.

Mr. VISCLOSKY. And I assume it would be premature to talk about what in this situation would be the appropriate roles for the Bureau of Reclamation and the Corps, pending which elements of the project you proceed with.

WRDA ACT

Mr. JOHNSON. Yes, I don't think we are that far along. I think the act says that the Corps will do it in consultation with us—I think that is the word that is used—and we have gone to the Corps and said, "We are flexible, we will work with you however—what makes the most sense. How can we do this in the most efficient way?" And I think the Corps is open to that, it is just that this is something fairly new, it is in the WRDA bill. I am sure there are a lot of things in the WRDA bill that they are lining up and getting organized around. I just don't think they are that far along on this one at this point in time.

Mr. REHBERG. Excuse me, Mr. Chairman? Did you ask the question, do they believe they have the legal authority to work together on this?

Mr. VISCLOSKY. I have not.

Mr. JOHNSON. I sure don't think we have any obstacles from an authority perspective. Clearly, the act says, "Work in consultation with the bureau." That is all the authority we need. In fact, it is a Reclamation project, and we have authority to do on a Reclamation project under the project's authorization.

Mr. REHBERG. Mr. Chairman, the only reason I bring that up is that question had been raised after it was authorized in the WRDA bill, and we are trying to come together from two different directions on the same answer, so we are asking the question in the Senate of the Corps, and it is important for us to get the same answer from the Bureau of Rec.

Mr. VISCLOSKY. And we will have the Corps in shortly before our subcommittee as well then, too.

Mr. REHBERG. Thank you.

Mr. VISCLOSKY. And two other questions on this issue: Because there will be a series of elements—and, again, I understand you don't have precise numbers and if you can't now, for the record—what is the first project, what is that first tangible step between yourselves and the Corps, do you have a reasoned ballpark figure? If nothing else, as we look at 2009, acknowledging that in neither of your budgets do you have a request, we would know what the dollar figure would be.

And coupled with that, because you had mentioned the irrigators, from a Reclamation point of view, they would have to reimburse

you, I assume. Again, Mr. Rehberg and you would know the situation on the ground out there, but they would not likely have the kind of money to invest themselves.

Mr. JOHNSON. No.

Mr. VISCLOSKY. Is there, again, an estimate as to how much they could reimburse so we would know at least proportionately for that first step, what potential responsibilities the bureau could assume and what the Corps could assume if we do decide to proceed?

Mr. JOHNSON. I think the WDRA Act is pretty clear on that. I think it provides that there has to be a 25 percent cost share, and I think the state of Montana is actually going to step up and help provide that funding. So that is kind of the way—my guess is the irrigators there, that is a far north area, their ability to make significant contributions is pretty limited, I think.

Mr. VISCLOSKY. Okay.

One other question along Mr. Rehberg's line and then I would recognize Mr. Simpson, he had a specific project in talking about rural water that was dropped. I would also have one, if I could, and that is in the budget submissions for 2006, 2007 and 2008, the Lewis and Clark Rural Water Project in South Dakota was included but it no longer is. What is the justification for leaving that out?

Mr. JOHNSON. It is the same explanation that I gave to Congressman Rehberg, and that one actually falls short on two of the criteria. One was, priority was given to projects that serve Indian tribes, and that project does not have an Indian component. And then the second part is, what projects are the farthest along, and that one is not as far along as the other two that we funded either, I don't believe.

Mr. VISCLOSKY. Okay.

Mr. Simpson.

Mr. SIMPSON. Thank you, Mr. Chairman.

I am tempted to ask how you are going to solve the Medicare and Medicaid problem, but that was the last hearing I was at, so I suspect you don't have an answer for that.

Mr. JOHNSON. I would have to pass on that one.

Mr. SIMPSON. If you come with any, let us know. [Laughter.]

INTERSTATE TRANSFERS OF WATER

The bureau has selected an option for the Garrison Diversion Project that includes an inter-basin transfer of water. This has not been a very popular choice and I am sure will continue to be debated over some time. Would you explain to the committee why you chose this option, especially since you are apparently not authorized to implement it without further action from Congress? And could you have chosen an in-basin solution, which you were authorized to implement?

Mr. JOHNSON. Yes. Those studies were done over a several-year period in concert with the state and also all of the surrounding areas. It is in the eastern-northeastern part of Red River Valley part of North Dakota.

The in-basin supplies are just not adequate to meet the future demands, so there are no local water supplies to meet the projected needs of the area. My understanding is there are some water sup-

plies that could be used that are in the basin but they are in the state of Minnesota, and the state of Minnesota has not been willing, I don't think, to allow that interstate kind of transaction, as you know, the sensitivity on interstate transfers of water.

But within North Dakota and the resources within North Dakota, they are just not adequate, and so that is why the inter-basin transfer piece was selected as the preferred alternative.

You are right, it does require additional authorization to move forward. That was provided for in the act. The act recognized that an out-of-basin transfer might be necessary and directed us that if that was selected, that we needed to send the report back to Congress for Congress' consideration.

Mr. SIMPSON. As I understand it, Minnesota offered access to their aquifers.

Mr. JOHNSON. Well, you know, that is not the same—I am not sure that it is quite that straightforward. I think if that were the case, that could be a solution, but my understanding is that was an offer that only applied—and I am not an expert on this at all—but that was an offer that only applied to emergencies. That if there were a dire emergency and they were literally out of water for a short period of time, that they would be willing to provide some assistance. That was the way that that has been explained to me.

Mr. SIMPSON. Did you follow your standard down-selection process in choosing this option, and can you satisfy us that this process is adequate to ensure that all options were fully considered?

Mr. JOHNSON. Certainly, that is documented in the EIS. We had a draft EIS that was controversial. We received a lot of comments. We went back and did a lot of work to try to respond to those comments, and that is certainly documented in the planning report and the environmental documents that we have completed. So, yes, there was very much a process that we went through to get to the alternative that was selected.

The report is currently undergoing a review in the Office of Management and Budget.

BOISE RIVER PROJECT

Mr. SIMPSON. Let me ask about the Boise River Project, just a general question. Recently, the legislature heard from the Army Corps of Engineers about the Dworshak Dam, that there is a potential problem. It was rated as a two—one being, I guess, the worst, five being the safest—that there is leaking around the dam and so forth. You are doing studies, I guess, on the safety of the four dams in the Boise River Project?

Mr. JOHNSON. We are always doing dam safety reviews. We have a regular periodic process where we look at dams and the risk and their structural integrity, the hydrology and whether or not the potential for design floods are still good. So we are constantly doing that.

Mr. SIMPSON. What is the safety standard on those four dams? Are they in good shape?

Mr. JOHNSON. As far as I know. I am not aware of any safety issues on those dams, but I would want to go back and check that for the record.

Mr. SIMPSON. Because you can imagine that some people downstream from the Dworshak are concerned.

Mr. JOHNSON. I am sure they are, yes. I am sure they are.

Mr. SIMPSON. I appreciate it, thank you.

Mr. JOHNSON. You are welcome.

Mr. VISCLOSKY. Mr. Calvert.

Mr. CALVERT. Thank you, Mr. Chairman.

CALFED PROGRAM

Commissioner, we didn't spend any time, really, on CALFED, and I just want to give you the opportunity to let the committee know how that is moving along, especially the storage studies that are taking place. Are they moving along fine and at what point in time do you think we will get to the point where we are actually ready to start construction on one of these projects?

Mr. JOHNSON. We are still doing the storage studies. Let me tell you what has happened to us. This litigation that we have had and the ruling from the judge in California has required us to do a new consultation with the Fish and Wildlife Service on how we operated the Central Valley Project. That means we are taking a fresh look at the operations and consulting with the Fish and Wildlife Service on those operations. We anticipate that those operations will change.

Mr. CALVERT. Does that mean we will be able to move more water through?

Mr. JOHNSON. Well, no. I think we will just have to see what the outcome is. My guess is we probably won't find that we can move more water with the changed operations. I think we will just have to see what the outcome of those are, but, obviously, we have got a problem with the endangered species there. There is concern that the water moving through our pumps has a tendency to move the Delta smelt in the wrong direction.

Mr. CALVERT. Are you aware the governor, apparently, is prepared to enter into an executive order to initiate a study of going ahead to build a peripheral canal?

Mr. JOHNSON. Yes, I am aware of that.

Mr. CALVERT. A bypass, or whatever you want to call it.

Mr. JOHNSON. Yes, I am aware of that.

Mr. CALVERT. Are they going to be working with you?

Mr. JOHNSON. We are working with the state and all the efforts in the Delta Vision process, and we are committed to continue to be a part of that.

Mr. CALVERT. If in fact that is built, does that resolve the issue with the smelt?

Mr. JOHNSON. Personally, I think it would help tremendously. You know, I think you have to look at the specific studies, but my understanding of the way that would work is it would stop that flow of the water in the Delta moving toward our pumps and allow that water to be moved around and a better control of the flow through the Delta, and that, in fact, it would help that situation. That is the feedback that I have gotten from folks over the years on the peripheral canal.

I know there are lots of other controversies associated with that, and I don't know where ultimately they will end up, but, in general, I think it could help deal with that situation.

Our storage studies—getting back to the storage studies—we have had to delay completion of the storage studies, because the project is likely to be operated differently. We won't know exactly how that operation will be different until next September. That is when the biological opinion has to be given back.

Mr. CALVERT. When you say delay the storage studies, is that all storage studies, including Shasta and Sites Reservoir?

Mr. JOHNSON. Right. Because how the storage interacts with the rest of the system is affected by our operations. So if we have a new operation of the facility, our hydrology changes, and the need for storage and the benefits of the storage change. And we feel like in order to do a good study, we need to have that operational pattern incorporated into those storage studies.

Mr. CALVERT. Temperance Flat, you have to delay that too?

Mr. JOHNSON. Well, that may be one that you don't have to, because that is on the other side, but the completion of the storage studies, we do have them funded, you know, and the completion studies have actually been pushed out till 2010.

Mr. CALVERT. Well, anything you can do to rush this thing along, we have been working on this, as you know, for a number of years, and with the quantification agreement now in effect, we are going to lose 1 million acre feet out of the Colorado River, we are losing a third of our exports out of the Delta, we are not building quick enough reclamation projects in the South, and we need help on that, and it seems to me we are having some delays here on desalinization. So all of that we could have a little motion car crash coming up here real quick.

Appreciate it, Mr. Chairman.

I asked him about, what, the All-American Canal that is under construction and—oh, you are talking about——

Mr. HOBSON. Folsom Dam? Yes, we did talk about Folsom Dam. Well, I don't know if we did or not. I think I just mentioned it in the context of——

Mr. JOHNSON. You are probably mentioning the dam below Folsom Dam.

Mr. CALVERT. I think he is thinking of Auburn Dam.

Mr. HOBSON. I am talking about Auburn Dam.

Mr. JOHNSON. Oh, Auburn.

Mr. HOBSON [continuing]. Where we spent $400 million and acquired all the ground, it is still sitting there, and California is crying for water but nobody wants to build.

Mr. JOHNSON. I don't think that is considered one of the optimum storage sites. I think most of the other storage sites that are being looked at are ranked higher than that in terms of——

Mr. CALVERT. I would guess that it will be built when Sacramento gets flooded. We are a reactive body here. It is almost as much flood control as it is water storage, because Sacramento is in a precarious situation.

I think it should be built.

Mr. HOBSON. It probably won't be built for a long time, but we have spent, what, $400 million acquiring land——

Mr. JOHNSON. Yes, back in the 1970s.

Mr. HOBSON [continuing]. Building the foundation.

Mr. JOHNSON. Yes, back in the 1970s.

Mr. HOBSON. And we have built other dams on equally difficult seismic areas in California. Namely, one that we just somewhat finished in the southern part of the state I looked at some years ago. It is easier to bring water, apparently, from other states and power from other states than it is for California to solve its own problems. The rest of the country is not really excited about that, to be frank with you.

But I know you can't do anything about it. People need to continue to talk—excuse me, Mr. Chairman, I jumped in here—but it is a frustrating thing to spend $400 million of taxpayers' dollars and having it sitting there doing nothing and not solving some of the problems that we know are going to happen in this region. I wish we would have invested that $400 million in something else that would solve these problems. Right now it is down the tube.

Mr. JOHNSON. As it relates to the state of California, in general, there is, I think, a fairly aggressive effort by the California water interests and the state to address their water issues. In fact, I think the legislature and the governor are working on an $11 billion bond to try to fund the water infrastructure in California, including significant amounts of storage. And I think they are focusing on Temperance and one up on Sacramento.

Mr. CALVERT. Well, we have got to have sites, because you have got to be able to——

Mr. JOHNSON. Right.

Mr. CALVERT [continuing]. Flow into the peripheral——

Mr. JOHNSON. And then Los Vaqueros is being pushed pretty hard too in the Delta region there that will actually help store and move more water through the Delta in the wintertime and serve that Delta area.

Mr. CALVERT. But I bet you they come back and ask for federal help also in that.

Mr. JOHNSON. I don't know to what extent. Certainly, we are doing studies and we are looking at how the federal project would fit into that. There has been some talk about them funding it and having us, kind of, rent the facility on an annual basis as part of our O&M, have our users pay a surcharge that would help repay the project as part of our O&M rather than having us fund. That has kind of been a concept that is being talked about.

But the details of how they would get built and who would pay what, I think is something that has not been worked out. I think they have still got to get their bond issue passed to move ahead with those.

Mr. HOBSON. Can I switch subjects on that? What about the levies along the Sacramento River, the tree-infested levies along the Sacramento River? Nobody knows who built this one, who built that one, who maintains this. I think the state is working heavily on that.

Mr. JOHNSON. I think that that has been something that the Corps has been more involved in than the bureau, the bureau has not had a lot of active involvement in dealing with the levies in the Delta. The Corps is the one that has been playing that role.

Mr. HOBSON. But you don't have any role in the zoning? For example, there are all these bowls out in that region that suddenly get developed. The next thing we know everybody is back at the feds, "You didn't provide flood control." Now, most of that is the Corps, but do you guys play any role in that or in the zoning or in what goes on in flood protection?

Mr. JOHNSON. Those are state and local issues, and we don't play any significant role as it relates to that. I think that is something that is being talked about in California as part of its Delta Vision where they are looking at the whole Delta and how it develops over time and what the best way is to manage it.

Bob points out to me that FEMA probably has a role as it relates to the levies as well.

Mr. HOBSON. The problem is, sir, that everybody tells me these are state and local things, but when there is a flood it becomes a federal issue, and we wind up paying for the mismanagement of the zoning regulations in that area, because they allow these people to go in and build all these subdivisions and they don't make the rules such that when they develop the subdivision that they handle the problems when they get excess water. When you get excess water in that area, there is no place for it to really go except it floods everything, and then we come back in.

And I don't know how the feds—you can't be inhumane when it happens, but better planning and intervention by somebody as this process goes through would certainly lessen the burden to all the taxpayers of this country for the lack of planning. And that is not just for California, it is true other places, but it is particularly apparent in this—after I looked at it—that the Sacramento River area is particularly prone to all this, and that Delta region are particularly prone to it.

And I won't be on this committee when it is addressed but it is certainly something that the state and the feds need to look at, in my opinion, and I don't know how you all fit into that.

Mr. JOHNSON. We are not playing a direct role as it relates to those kinds of issues. I don't know what kind of requirements the Corps or FEMA may have, as it relates to providing flood control and development and those sorts of things. They may have some things from a federal perspective that they bring to the table on those issues.

The Bureau of Reclamation doesn't.

Mr. CALVERT. If the gentleman would yield, just one quick comment on your statement. What could happen in the Delta, potentially, is, quite frankly, worse than what happened in Katrina, because the islands of subsidence that is happening there, if there was an earthquake in California, which we have a history of having, there could be a significant problem in that region, which would have, quite frankly, much denser population.

And not just new suburbs. Downtown Sacramento, quite frankly, is in trouble, and we have not maintained those levies. They need to be fixed and raised. And, quite frankly, Auburn Dam, even though it does have water benefit to it, it was also thought of as flood control for downstream. And so it has that benefit. Because the cost of Auburn Dam will be minor compared to the cost of Sacramento being flooded out down the road.

Mr. HOBSON. If the gentleman would yield, I am told that if one of those levies fails, it puts 20 feet of water in downtown Sacramento within an hour or 2. That will make Katrina and the loss of life look like a cake walk. Frankly, I think as a result of Katrina, the state of California, at least, has gotten more interested in trying to affect those levies in a positive way. However, you have houses and subdivisions that are almost in those levies. There is no protection other than the levy.

The integrity of those levies can be negatively impacted by the trees that grow on them. An earthquake or any sudden burst of water into the area, and it is really one of the most pressing needs in the entire country.—The potential loss of life and property that exists out there today.

I think the governor of California is trying, and I am hoping that the legislature is too. This is a catastrophe waiting to happen. It doesn't need to happen with the proper work on those levies. Also, the communities have got to be careful how they enhance—and when I say "enhance" I don't mean in a positive way—enhance the pressures on this area by the continued development without making the proper ways to handle the excess water that everybody knows floods into this area from time to time.

I know I am ranting, but I went out and looked at it. If you see what happens, you know what happens, what water can do and you know you can prevent it, it becomes very frustrating when it doesn't happen.

So, sorry, Mr. Chairman.

Mr. JOHNSON. I know it is a big issue, and I know it is part of the Delta Vision of trying to establish a new concept of how the Delta in California is going to be managed, and I know that is part of what is being talked about there. But it is beyond, certainly, the purview of the Bureau of Reclamation.

Mr. HOBSON. The Bonneville Dam, is that yours?

Mr. JOHNSON. That is Corps. That is right. That is Corps of Engineers' dam, yes, on the Columbia system.

Mr. HOBSON. You lucked out.

Mr. JOHNSON. We got Grand Cooley.

Mr. HOBSON. Okay.

Mr. VISCLOSKY. We are joined by Mr. Fattah. He does not have questions at this time, but, because I have a series of questions for the committee, I will begin. If any of the members who are here have additional questions, just jump in at any point.

Mr. Commissioner, I want to follow up on Mr. Hobson's opening statement and his discussion of the 5-year plan. I would add my thank you to his that it was submitted with the 2009 budget request but would point out that this was an initial initiative when Mr. Hobson chaired the committee in 2006, and so it has taken a number of years.

And the disappointment. He mentioned the placeholders, and that is the administration's term, not ours, that were used. I supported the Chairman's initiative, and do today, of the 5-year plan. The intent of the plan is to outline the expected and necessary expenses associated with the inventory of your existing and new investments necessary to meet Reclamation's mission. And it seems

that the administration has selected an arbitrary funding level and then force fed its programs into a number.

The thought was to take a clean view and picture the future and what does the future hold. And I would ask that you comment. And it does look like you just took a series of existing projects, plugged them in and that is the plan, as opposed to from foresight, if you would.

Mr. JOHNSON. I think what you described is accurate on what we have provided.

Let me just say this: That plan gets updated, I think, every year, and I think we would be more than happy to have our folks sit down with your staff and look at what the Corps has done—your view was that the Corps has done a pretty good job—and see if we can't——

Mr. HOBSON. It is better. It gets sanitized by OMB, and that is a problem. We all need to work with OMB better to make sure that they understand what we want and we understand what they want. We understand what they go through, but we don't totally appreciate it.

Mr. JOHNSON. Yes.

Mr. HOBSON. I think you do.

Mr. VISCLOSKY. And the intent is to not get you—boy, what are the needs so we can start anticipating as we look at the budget on an annual basis.

AGING DAM INFRASTRUCTURE

The committee has often made a point that the nation's infrastructure, not simply that under your jurisdiction, is aging. For example, 50 percent of the Reclamation dams were built between 1900 and 1950, 70 are over 90 years old, and it seems intuitively to point to the need for increasing investment to keep facilities that are past their design life operating. And, yet again, the base scenario, essentially, is flat funding looking ahead.

Is that a reasonable investment strategy, and when is the anticipated increased investment in this infrastructure going to take place from your perspective?

Mr. JOHNSON. Well, certainly, aging infrastructure is a concern. In my oral testimony, I talked about our first priority is the safe operation and maintenance of our facilities. And of our water and related resources budget, over 50 percent of that budget goes to maintaining infrastructure, including our Safety of Dams Program. We do have an increase in our request this year for the Safety of Dams Program. We have a $15 million increase in our request there.

Longer term, one of the things that we are doing is taking a hard look at our infrastructure——

Mr. VISCLOSKY. That was for dam safety?

Mr. JOHNSON. That was for dam safety, that is correct.

Mr. VISCLOSKY. Okay.

Mr. JOHNSON. But on a longer-term basis, we are taking a look at—because a lot of people are asking, "What is the total amount that is out there and what is your deferred maintenance, what is your aging infrastructure needs," and those sorts of things. So we

are trying to put some data together that would give us a better handle on that.

From a deferred maintenance standpoint, we don't think we have a lot of deferred maintenance. We think we do a pretty good job of maintaining the facilities that we do operation and maintenance on.

Now, we have a lot of facilities that we have transferred to water users, and they do the operation and maintenance on, and the extents to which they have deferred maintenance, quite frankly, we don't have a real detailed handle on. They pay those costs anyway. Very few of those costs are actually part of our budget request. Those are funds that they provide from their own resources. But we are working hard to get a better handle on what we think the total need is in terms of aging infrastructure.

Aging infrastructure is really a different issue than deferred maintenance. I mean, aging infrastructure, as a facility gets so many years old, there is nothing you can do, or very little you can do, in terms of operation and maintenance to stop concrete deterioration, and that is really the kinds of things that we are talking about or a dirt canal that has been there for 50 or 100 years and you have had rodent holes and a lot of other things. There is not a whole lot of maintenance on those kind of facilities that can prevent the gradual deterioration that occurs.

So it is an issue, it is an area of concern, it is something that we are looking at, no question.

Mr. VISCLOSKY. Last year, you testified that Reclamation would begin gathering data on transferred works, those operated and maintained by local beneficiaries but federally owned, that would characterize a potential need for major O&M work that could not be accomplished under routine programs, which you are suggesting as far as routine activities, you are in reasonably good shape.

Do you feel you have adequately defined the need for rehabilitation and replacement demands now for that major O&M?

Mr. JOHNSON. Not completely, no. I think that is something that we are still working on. We have asked all of our area offices and regional offices to put together a complete inventory of this aging infrastructure concern, and they are working on putting that together.

Mr. VISCLOSKY. When do you think that will be done?

Mr. JOHNSON. I hope over the next year we will be able to have a better handle on that.

Mr. VISCLOSKY. Do you think that will be included in the 2010 budget submission or with the 2010 budget submission?

Mr. JOHNSON. You know, I don't imagine that we would have a lot of—I mean, it is information. It wouldn't necessarily be part of the 2010 budget submission. It is certainly information that we can provide.

Mr. VISCLOSKY. Let me put it this way: If you think you will do it over the next year, will it be available to the committee before the 2010 budget submission, do you believe?

Mr. JOHNSON. You know, I wouldn't want to make an absolute commitment to that, but we can go back and see what our schedule is and try to give you an answer on that.

Mr. VISCLOSKY. Given the work to date and the scope of the program as you understand it, would we be talking about tens or hundreds of millions of dollars or would we be talking some factor of $1 billion or more? Do you have any sense of that?

Mr. JOHNSON. I would guess that it—you know, we have a $77 billion infrastructure, so my guess is we could easily have more than $1 billion in aging infrastructure.

Mr. VISCLOSKY. Commissioner—and I don't want to beat a dead horse, but I will do it one more time, just as far as the budget submission essentially being reduced—last year, you testified that facility and maintenance of an aging infrastructure increased needs to dam safety, and you did mention the $50 million increase.

Population growth in many areas within the western United States, increased Endangered Species Act requirements are all examples of trends that will impact Reclamation's budget for the future. And, again, I will simply emphasize that I assume those trends are referred to be up, not flat or not down.

Mr. JOHNSON. That is absolutely true.

Mr. VISCLOSKY. Okay.

Commissioner, if you had additional funding—and if you would, for the record, answer—to allocate among ongoing projects, on the theory that for the last several years, it is my sense, that in the end Congress increased the funding for the bureau, where could it most be usefully be spent, and where would a modest amount of additional funding have the biggest impact? If you could provide that to us, that would be terrific.

Mr. JOHNSON. Yes. I would just say that I support the President's budget.

Mr. VISCLOSKY. No, I know.

Mr. JOHNSON. Certainly, there is capability to spend money in other areas. I am sure Congressman Rehberg and Congressman Calvert, both rural water and Title 16, I am sure, would come high on their lists. Certainly, we could spend more money on our Dam Safety Program. Some of our research activities, I imagine, we could probably spend more money on. I am sure there would be a long list of activities.

Mr. VISCLOSKY. A recent article in the Journal of Water Resources Research predicted a 50 percent chance that live storage in Lakes Mead and Powell will be gone by the year 2013. Does Reclamation agree with the trends projected in the article?

Mr. JOHNSON. You know, I am not familiar with the details of that study. My guess is, from some limited conversations with people, that that study is probably based on some pretty extreme worst-case scenarios. I think that a number of things would happen before Lake Mead and Lake Powell would be allowed to decline to that kind of a level.

For instance, reduction in demand. I mean, we just put in place on the Colorado River system a new set of criteria for managing water deliveries under times of shortage. So, in fact, when Lake Mead begins to drop to lower levels, we begin to implement reduction and deliveries to water users.

And we actually just put guidelines in place. Secretary Kempthorne signed in September a final record of decision that defines how we will operate that system. I doubt very seriously that this

study considered reductions in demand that would be implemented as declines in reservoir conditions occur.

Mr. CALVERT. Mr. Chairman, can I add to that?

Mr. VISCLOSKY. Sure.

Mr. CALVERT. Did that study look at the unexpected snow pack we have had in the Rockies this year?

Mr. JOHNSON. I am sure it didn't.

Mr. CALVERT. And we are, what, about 125 percent of normal now?

Mr. JOHNSON. That is about the current projection.

Mr. CALVERT. And we are looking at at least a 50 percent rise on Lake Powell based upon the estimates for the melt?

Mr. JOHNSON. Fifty feet.

Mr. CALVERT. Fifty feet.

Mr. JOHNSON. I don't know if that would translate into 50 percent, but it is 50 feet.

Mr. CALVERT. Does that have any additional water flow-in from Mead from that?

Mr. JOHNSON. It depends on how much more we get in Powell under our new criteria that we put in place that defines how we do that. If we got 50 feet, we probably would see some new releases come down to Lake Mead as well. So there would be some rise at Lake Mead as well, yes.

Mr. CALVERT. Thank you.

Thank you, Mr. Chairman.

Mr. JOHNSON. I don't think that the situation is nearly as dire that has been portrayed in the press on that report.

Certainly, you know, there is concern about climate change and what impact it has on future water supplies, and we are not ignoring that. I mean, we are looking at that, and we have done on the Colorado River Basin studies of climate change. We have looked at tree rings. We have simulated a 500-year record now on the Colorado River to look at what has happened in the past.

We are doing a lot of work with a lot of universities on climate models to give us a better idea of what we think might happen. I am not aware of any of them that give us results. Of course, the jury is still out.

We are getting a lot of new data coming in. In general, the broad climate models tend to show that there will be some reduction in precipitation in most of the western states. Now, how that translates into specific basins and specific water supplies isn't clear, but I don't think that very many are expecting declines to be as great as was projected in that study.

I might also add that our Water for America initiative that I talked about earlier, one of the pieces of that is to look at this issue and doing river basin studies that try to take a broad look at the basin, how is climate change going to affect that basin, how should that affect how we operate our facilities? Does that mean we should change our operations? What are the future demands on the system, and what kinds of changes in management of the system and infrastructure would be needed to try to meet those needs?

So that is actually part of our Water for America initiative to start to take a look at those kinds of things.

COLORADO RIVER MEASURED FLOW

Mr. VISCLOSKY. If I could ask—and I would appreciate your comment, because, obviously, you take exception to the projections in the journal article—but there was an indication or at least an observation that under Reclamation's most recent operating plan, you would have a deficit of water in the plan realized under most optimistic estimates of the Colorado River flow. Do you want to comment on that?

Mr. JOHNSON. I think what they are probably talking about is that the Colorado River is over-allocated. If we look at the—we have a 100-year record of measured flow on the Colorado River, and that 100-year record shows that the average annual flow over that 100-year period has been about 15 million acre feet.

The Colorado River has allocated about 16.5 million acre feet. There are 15 million acre feet that is allocated for use in the United States, and there are 1.5 million acre feet that was allocated to the country of Mexico under the Mexican Water Treaty. So we have got more water allocated for use than we have average annual flow over the 100 years.

Now, the climate models and some of the projections, some of the points that have historically been made on the Colorado River is that that 100 years of record that we have may be high and that the flow may not be 15 million acre feet; maybe it is 13 million acre feet or maybe it is 12 million acre feet, which means that the flow is even less than the allocated resource.

So that certainly gives everybody cause for concern. So far, that full 16.5 million acre feet has not been developed. The actual use on the system today is closer to 14 to 15 million acre feet.

Mr. VISCLOSKY. Counting the water to Mexico?

Mr. JOHNSON. Counting the water to Mexico. The upper basin states have not developed their full entitlement. They have the right to do that, but it has not occurred. Now, over time, they will, and you could expect that they will develop more of their uses over time, and that will put more pressure on the system.

But I come back to the point that I made earlier. That is why we put new operational guidelines in place, so we have provisions for cutting back use. If we got 12 million acre feet of average annual flow, we have a set of operating criteria that will adjust how much water gets released and how shortages would be——

Mr. VISCLOSKY. And my observation about the implication of evaporation and infiltration of another 1.7 million, so what you are saying is, as you look ahead with the current plan, you would have, if you would, mechanisms in place to begin to reduce the flow if in fact it declined.

Mr. JOHNSON. Right, to reduce the demand, the releases, the releases, right.

That is not to say that if you are reducing releases, that there aren't water problems out there that people are going to have to deal with. Certainly, the folks that are having the impact of those releases, there will have to be things that are done to manage around those. But, quite frankly, what our guidelines——

Mr. VISCLOSKY. Could I ask you about that——

Mr. JOHNSON. Yes.

Mr. VISCLOSKY [continuing]. Because it will be one thing to reduce demand and then management, on some level, doesn't cost money; it calls for good judgment. But to have options as far as managing that supply and that flow, and I don't understand all the intricacies of storing water and what have you, but you would still need to make an investment in that infrastructure to give you those management options.

Mr. JOHNSON. Right. And that is happening.

Mr. VISCLOSKY. It still gives me concern as far as the level of funding you have in your budget.

Mr. JOHNSON. Yes. There is a lot of state and local funding that is being put in to developing options. In Arizona, they have a groundwater bank. They have a large groundwater system, and their plan for dealing with reductions, and they are a state that is impacted significantly if we cut back on flows on the Colorado system, but they have a groundwater storage system where they have put a tremendous amount of water in the groundwater basin, and they will be able to fall back on that groundwater basin during times of drought.

In California, the Metropolitan Water District is doing similar kinds of things. The other thing that Metropolitan is doing—it is part of this whole overall California plan that was put together 3 or 4 years ago—is most of the water use in California from the Colorado River is agriculture water use, and there are provisions between the Metropolitan area and the agricultural areas in California to allow the agricultural users to give up their supplies for use by the urban areas. So kind of a form of water sharing or water transfers, willing buyer, willing seller markets to help meet needs when those kinds of reductions occur.

Mr. CALVERT. In the state of Nevada, it seems to me Arizona, California, the upper basin states are in better shape than Nevada. It seems to me Nevada has an immediate problem. They are desperate for water supply, they are pulling out people's front yards and paying for it, subsidizing that and so forth.

How can they sustain the rate of growth that they have experienced here in the last number of years, and they can't expand their right within the Colorado River? What is the state of Nevada doing to address that problem?

Mr. JOHNSON. They are doing a lot of things, and some of it involves the Colorado River. They are looking at an in-state water project where they are going to tap groundwater basins in the central part of the state and transport that water down to——

Mr. CALVERT. How about the adjoining states? Obviously, they are going to take them to court on that, right?

Mr. JOHNSON. In some of those basins, not all of them, there are disputes between Nevada and Utah over the sharing of those groundwater basins, and that is something that the two states are going to have to work on.

Mr. CALVERT. Who is in charge of that water basin area? Is your department——

Mr. JOHNSON. No.

Mr. CALVERT. If they drain that basin, how is that going to affect the state of Utah?

Mr. JOHNSON. The groundwater management in both of those states is carried out and managed under state law.

Mr. CALVERT. Okay.

Mr. JOHNSON. The Bureau of Reclamation is not a part of any of those projects.

Mr. CALVERT. But it is a dispute between two states. Are they going to end up in federal court?

Mr. VISCLOSKY. Is the basin bi-state?

Mr. CALVERT. The basin extends both in Nevada and in Utah, yes.

Mr. JOHNSON. Not all of the basins do. There are some groundwater basins that are just in Nevada, and they are going to tap those. There is one groundwater basin that as you move farther north that is shared by both states, and there are studies that are on in that——

Mr. CALVERT. Isn't that the largest one, though?

Mr. JOHNSON [continuing]. And discussions. I couldn't say. I don't know if they are.

But Nevada is doing some other things. One of the things that Nevada is going to do is they are going to pay—and, in fact, the bureau is going to do the construction—they are going to pay for the drop-to reservoir. I don't know if you have heard of the drop-to reservoir. This is a storage facility, a regulatory facility, that we are going to build along the All-American Canal in California.

What it does, it is going to allow us to more efficiently regulate our flows on that lower end of that river. There are times when—the travel time from the last point of storage to the point of diversion at the southern end of the river is 3 days. There are times when we release water for use down at the lower end of the basin, and over that 3-day period, if you get a rain storm or something happens, the demand for that water diminishes, and we have all this water coming and no place to put it and it ends up being lost to the system.

And so we are going to build a small storage facility down on the lower end of the system and we will be able to capture those flows. We estimate that we can probably conserve about 60,000 acre feet of water a year by implementing that.

The state of Nevada is going to pay—it is about $170 million facility—they are going to pay for the facility. We are going to construct it, operate and maintain, conserve that water, and Nevada is going to get the use of it.

And so those are the kinds of creative things that we can do on the Colorado River.

One of the other things that we are talking about—you mentioned it earlier—the idea of desalinization on the Pacific Ocean and exchanges between California and Nevada to supplement, but we are also talking about that with the country of Mexico, and are there opportunities for Nevada or Los Angeles or Phoenix or Tucson or anybody that gets Colorado River water to pay for desal in Mexico and then do exchanges with Mexico?

Mr. CALVERT. Now, you have been the water master on the river for some time. Do you think you can get all the guys with the successive water rights to allow that transfer to take place without giving up their right within the river?

Mr. JOHNSON. I think that it is doable. I think that it is—nobody is harmed. You can measure the water, you can back it up in the system. Certainly, I am not saying that it is easy. It is complicated, and there are a lot of legal and institutional issues that you have got to work through, and when you deal with Mexico, you have another country, so it is complicated. But, certainly, I wouldn't think that it is impossible.

I mean, if we can do the quantification settlement in California, which took years to develop, and if we can do the shortage arrangement that we put in place in the Colorado River that helps us manage the system differently, this drop-to reservoir that I talked about can only be implemented because we put those new operation criteria in place.

We actually put provisions in there to allow those kinds of conservation projects to be paid for locally and developed and allow that water supply to be dedicated to the use in the area that paid for it.

And I guess my point is, that there are lots going on and lots of investment occurring that is outside of the federal funding. Nevada is spending a lot of money to develop new resources—their own money. The state of California is bringing a lot of money for infrastructure to develop facilities. There are probably some opportunities for federal but, quite frankly, most of that investment is being incurred at state and local levels.

Mr. VISCLOSKY. Just don't think about the Great Lakes.

Mr. JOHNSON. Nobody is thinking about—the Great Lakes are not on the list, I can assure you.

Mr. VISCLOSKY. Commissioner, there was a requirement to establish a formal rural water supply program for rural water major maintenance projects in the 17 western states. What is the current status of that program, and is there a target date for when it will be completed?

Mr. JOHNSON. Yes. I think we are developing—the legislation requires us to put regulations in place on how we would administer and carry that program out. Those regulations are being drafted, and we anticipate going through a public process over the next year to put those in place.

And I think we have got $1 million in our 2009 budget to begin the administration of that project.

Mr. VISCLOSKY. So that would be completed by this time next year.

Mr. JOHNSON. We should have the regulations in place by this time next year, yes.

WATER FOR AMERICA INITIATIVE

Mr. VISCLOSKY. Commissioner, you mentioned a couple of times the Water for America initiative, and with all due respect, in looking at the details, it does appear that the activities that Reclamation is already executing, specifically Water 2025, water conservation field services, investigations and Endangered Species Act are essentially, if you would, repackaged, essentially, for the same amount, if not a bit less, money.

What is the difference, because an initiative would imply there is something new going on?

Mr. JOHNSON. I think there are a couple of things that are new. One is the basin studies that I have talked about. That is not something that we have been doing, trying to take this broader look, given climate change, given population growth, those sorts of things. So the basin studies is a new piece of what we are doing.

The other part that is new or maybe different is we are expanding the concept of the Water 2025 Program. That has been focused more narrowly on just traditional water conservation type projects.

Under this proposal, that would be broadened to continue to have challenge grants for conservation project but to also have challenge grants for demonstration projects that would advance water treatment technology and then also projects that would focus on the environment, challenge grant programs that would focus on trying to advance species recovery and those sorts of things. So we broadened the concept of Water 2025 to cover a broader range of activities.

The USGS component actually has some new pieces as well. Their new piece focuses primarily on the water census and getting a better handle on what the surface and groundwater resources are on a nationwide basis, and that is not something that has been going on as part of the previous programs.

LOAN GUARANTEE PROGRAM

Mr. VISCLOSKY. Okay. Last year, you testified on loan guarantee programs, that it was anticipated draft rules for the program would be completed by the end of the calendar year 2007.

Was the schedule met, and if so, could you elaborate on the structure of the program, and given that there is no budget request for this activity for fiscal year 2009, where is the program?

Mr. JOHNSON. We have not been successful in getting the regulations in place. We have run into some issues related to providing loan guarantees on federally owned facilities in the process of developing the regulation. In the review of those, in the review of the legal framework, there has been an interpretation that the Credit Reform Act does not allow loan guarantees on federal facilities. So that is an issue that we are currently working through within the Administration. We still have hopes of getting the program in place, but we have run into some bumps in the road as we have tried to get our regulations in place.

Mr. VISCLOSKY. Did you anticipate on the theory that this bill will not be completed for some time and there may be an internal issue for us as well as far as whether or not there will be a score to our allocation that if something happens with that program and you are successful and you want to proceed in 2009, that you would let the committee know as soon as possible?

Mr. JOHNSON. We sure could.

Mr. VISCLOSKY. All right. And I would not make representation we would be in a position to help you, but we can't if we do not know.

Mr. JOHNSON. Sure.

Mr. VISCLOSKY. And right now we don't have a space there for that program.

Mr. JOHNSON. We will certainly let you know as we work through the issue.

REPROGRAMMING

Mr. VISCLOSKY. We have a number of questions, several of which will be submitted for the record, on reprogramming but would ask two now.

One is, are all movements of funds from the level specific in the reports of the committee treated as reprogrammings and, as such, submitted to the subcommittee for approval? If not, how many reprogrammings does the bureau do annually that are not submitted to the subcommittee for approval?

Mr. JOHNSON. We do what we call fund transfers, which are very limited from one category to another, and it is my understanding that we have provided detailed information on those programs to the committee. In fact, we are committed to report quarterly on those transfers. Those are limited to 15 percent, I think, of the line item amount. Anything beyond that we come to the committees for approval.

Mr. VISCLOSKY. If it is more than $2 million.

Mr. JOHNSON. Or if it is more than $2 million, right. No, that is not——

Mr. VISCLOSKY. No, it is 15 percent if it is more than $2 million, and if it is under $2 million——

Mr. JOHNSON. And then $300,000.

Mr. VISCLOSKY [continuing]. Then it is $300,000.

Mr. JOHNSON. That is correct. That is correct.

Mr. VISCLOSKY. Does the bureau—and, I guess, in a sense, you have answered it, but let me ask it—does the bureau consider the levels provided for individual projects in the reports advisory or does it treat the conference allocations contained in the statement of managers as definitive?

I wish Mr. Hobson was here to hear this.

[Laughter.]

This is my favorite question.

Mr. JOHNSON. You know, could I respond for the record on that, because there are some technicalities there that I am just not aware of or may not be, so I don't want to say the wrong thing. If I could respond for the record on that, I would appreciate it.

Mr. VISCLOSKY. You have answered the question.

Just one or two.

Mr. Fattah, yes.

Mr. FATTAH. You mentioned this Mexican Water Treaty.

Mr. JOHNSON. Yes.

Mr. FATTAH. And you said that our obligations under the treaty was 1 million?

Mr. JOHNSON. One million and a half acre feet.

Mr. FATTAH. A million and a half. And the longevity of the treaty is what, do we know?

Mr. JOHNSON. It is perpetuity.

Mr. FATTAH. In perpetuity. And you have $29 million allocated for security?

Mr. JOHNSON. Yes.

Mr. FATTAH. Is that across all of your facilities?

Mr. JOHNSON. Yes, it is.

Mr. FATTAH. And how is that basically handled? Do you contract with local governments for that? Do you reimburse?

Mr. JOHNSON. There are a number of components of that. A big part of it is guards and surveillance activities at our facilities. Exactly how we do that varies on a case-by-case basis. Our preference is to use local law enforcement to the extent we can. There are cases where they don't want to do that or for whatever reason it is just not practical. Sometimes we contract with security firms to do that. And in other cases——

Mr. FATTAH. Is $29 million sufficient, in your mind——

Mr. JOHNSON. Yes, it is.

Mr. FATTAH [continuing]. To meet all of your security obligations?

Mr. JOHNSON. Yes, it is. I believe so.

Mr. FATTAH. Could you supply some additional detail on the security efforts to the committee? Thank you.

Mr. JOHNSON. Be glad to.

Mr. VISCLOSKY. The National Research Council suggests, among other things, that the Reclamation's water program should implement stronger controls over project planning and development. Would you agree with the suggestion, and if so, what steps have the bureau taken in this regard?

Mr. JOHNSON. You know, I am trying to place that study and exactly—is that the national NRC report that we had related to our Managing for Excellence Program? And could you——

Mr. VISCLOSKY. All right, let me ask you—and if you want to answer for the record, just so we are talking apples and apples, that would be fine——

Mr. JOHNSON. Yes.

Mr. VISCLOSKY [continuing]. But the question again would be, the National Research Council suggests, among other things, that Reclamation's water program should implement stronger controls over project planning and development. And then, obviously, what specific steps is Reclamation taking in this situation?

Mr. JOHNSON. Okay.

Mr. VISCLOSKY. If you could, for the record.

Mr. JOHNSON. We are responding to—we have had a program called Managing for Excellence that we have been working on since that report was completed. We have identified 41 areas, 41—there was not 41 recommendations from the NRC report, but we actually identified 41 areas where we are evaluating how we carry out our business and how we can improve that.

On the planning, on this particular one, what I would like to do is respond in detail in the record, because I am just not remembering off the top of my head exactly how we have responded on that one.

CONTRACTORS

Mr. VISCLOSKY. And one last question—and it is going to be a question we are going to ask across the board on contracting—is how do you collect and use information on the performance of contractors? For example, a contractor performs poorly in Utah. How do you ensure that a contract review board in Arizona has access to that information and can take that into account? And is such in-

formation institutionalized throughout the bureau so people know in advance, here is someone who is simply not acting appropriately, is not a good contractor, is not going to do a good job, to save everybody a lot of time, heartburn and money?

Mr. JOHNSON. You know, I would like to respond for the record on that as well, if I can. I think we do, in general, share information within the bureau about our contractors and our procurement activities, but I would want to respond in more detail, if I could.

Mr. VISCLOSKY. If you could. I think it is an important principle, and, again, we are going to ask it across the board——

Mr. JOHNSON. Sure.

Mr. VISCLOSKY [continuing]. With the Department of Energy——

Mr. JOHNSON. It is a good question.

Mr. VISCLOSKY [continuing]. Too that it would be helpful to people intra-department and elsewhere to save a lot of time and heartburn. So if you could, that would be great.

Mr. JOHNSON. We would be happy to do that.

Mr. VISCLOSKY. Mr. Fattah?

If not, appreciate, gentlemen, your work and the bureau's. And, again, if you could make every effort to make sure that the questions for the record and other information are supplied within 4 weeks, that would be terrific.

And the hearing is adjourned.

[Questions and answers for the record follow:]

1. Commissioner, we received your five-year plan at the end of January this year, several years late, but I am encouraged that you now have one. I understand that the budget numbers used in the five year plan represent "placeholders," the Administration's word, not mine, and were based on mechanistic, computer generated account data. The intent of a five year plan, at least to my way of thinking, is to outline the expected and necessary expenses associated with the inventory of your existing inventory and new investments necessary to meet Reclamation's mission. It seems that the Administration has selected an arbitrary funding level and then force fit its program into that number.

Can you talk to the methods used in the generation of this report?

Mr. Commissioner. Reclamation prepared a Five-Year Development Plan that presents projections of discretionary budget authority (funding) for Fiscal Year (FY) 2008 through 2012. The plan reflects Reclamation's need to maintain our existing portfolio of projects with an emphasis on core mission activities to deliver water and generate power. In preparing the Five-Year Development Plan, Reclamation prepared two scenarios (a Base Plan Scenario and an Enhanced Plan Scenario) to display possible implications for Reclamation's program.

The Base Plan Scenario is based on the President's budget for FY 2008 and formula-driven funding levels for FY 2009 through FY 2012 (the out-years).

In developing the Enhanced Plan Scenario, the overall funding levels for FY 2008 through FY 2012 adjust the FY 2007 Spending Plan overall funding level of $1,024,996 for projected changes in the Gross Domestic Product (GDP) price index.

Reclamation considered the President's objective of achieving a balanced budget by 2012 in its deliberations. While the funding scenarios contained herein provide insights into possible accomplishments at different funding levels, Reclamation determines the details of its appropriations request one year at a time based on project and program needs through a bottom-up review process and based on identified needs throughout the organization.

2. This Committee has often made the point that the nation's infrastructure is aging. For example, approximately 50 percent of Reclamation's dams were built between 1900 and 1950, 70 are over 90 years old. This seems intuitively to point to the need for increasing investment to keep facilities that are past their design life operating, yet Reclamation's base scenario in the five-year plan includes flat funding for operation and maintenance.

Can you explain to me why the Administration believes this is a reasonable investment strategy given the age of the inventory of water resource projects in your program?

What level of risk is the Administration planning for in this level of funding and what is Reclamation doing to address this risk?

Mr. Commissioner. Aging infrastructure presents a complex challenge due to increased maintenance, replacement, and modification requirements. Similar to other agencies with aging public infrastructure challenges in the United States, Reclamation has a fiduciary duty to maintain services to its public customers in a cost-efficient manner and to meet other expectations, particularly environmental and endangered species management. Reclamation annually funds and accomplishes the highest priority rehabilitation and extraordinary maintenance activities on the facilities we operate. For facilities that are transferred to other entities, such as a water district, for operation and maintenance, the normal, rehabilitation and extraordinary maintenance on those facilities are the financial responsibility of the operating entity. Therefore, in balancing all these competitive requirements, Reclamation feels that we are exercising a prudent asset management strategy as it relates to our facilities.

3. In the area of Endangered Species Act compliance Reclamation acknowledges that costs are increasing for biological opinion activities and that these costs are expected to rise over the next 3-5 years, yet, once again, the five-year plan shows this funding as flat.

I will ask essentially the same question as on operation and maintenance – what is the use of this plan if you don't even incorporate costs that you know exist?

Mr. Commissioner. The Endangered Species Recovery Implementation line item is only a portion of the ESA activities budgeted by Reclamation. ESA activities are also funded through various projects.

Through the Water for America Initiative, Reclamation will address 21st century water challenges to ensure secure water supplies for future generations including addressing endangered species. The Initiative focuses on species recovery and not just the traditional avoiding jeopardy. At the time of development of the Five Year Plan, the Initiative was still under development. In future funding plans we expect to have more details on outyear funding levels for endangered species activities.

4. What investments and risk considerations should be incorporated into the budget process to ensure Reclamation can meet the water and energy requirements of the West? To what extent are you currently assessing the risk to water and energy supplies?

Mr. Commissioner. Reclamation routinely evaluates future scenarios and the potential water and hydropower vulnerabilities and opportunities associated with these scenarios when we conduct project-specific planning and operational studies. The ability to understand risks, uncertainties, and have the best available science and data to support these studies is critical, especially as climate change and competing demands for water escalate in complexity. Within our budget request, we continue to improve our ability in these areas as we pursue best available science and risk-based approaches through our project-specific studies, and through Research and Development approaches that forge collaborative research focused on the knowledge gaps most critical to Western water planning and management.

Within our budget request, the Water for America initiative will further our ability to conduct forward-thinking planning studies on selected watersheds.

5. How is Reclamation incorporating climate issues into its planning?

Mr. Commissioner. Reclamation's mission has always been about storing, managing, and delivering water resources in the West, an area that is noted for a variable climate and arid environment. So, we have experience to draw upon. We recognize that the effects of a warming climate on top of the West's historical cycles of dry and wet years introduces new complexities that will challenge how we approach water management in the 21st century. Before going into details about our efforts to integrate climate change information into our water management planning, it should be noted that there are many uncertainties and limitations in the current understanding of climate change and potential future influences on Western water. As such, Reclamation is pursuing the integration of climate change information into our water and power operations and planning on several fronts:

First Front: Reclamation has developed a general process that we are implementing that facilitates a sensible, practical approach to incorporating climate change on each decision and planning study on a case-by-case basis. The process considers project-specific factors such as:

- Sensitivity of proposed actions to climate factors,
- Life cycle of the decided actions versus climate change time scales,
- Flexibility to adjust decided actions as climate change science and impacts are better understood, and
- Use of best available climate change science with the acknowledgement of associated uncertainties and limitations.

Working closely with stakeholders affected by the decisions is an important cornerstone of the process.

Second Front: Reclamation is actively incorporating climate change information into project-specific studies using this process as a guide. Recent and ongoing project-specific studies that are incorporating consideration of climate change influences include:

- Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead,
- Flood control operations for Hungry Horse Dam,
- Yakima River Basin Water Storage Feasibility Study,
- Flood control operations on the Boise River,
- Central Valley Project Operations Criteria and Plan, and
- Red River Valley Water Supply Project.

These project-specific studies address our current understanding of how climate change might affect stream flows, water availability in our reservoirs, ground water, water demands, and aquatic species habitat and distribution. These project specific studies also provide key insights into the most pressing and relevant science and information gaps that we need to pursue on the research front.

Third Front: Climate change drivers have the potential to completely alter the natural hydrologic cycle that we have been accustomed to in the past and also alter how Western water supplies and water uses respond to those changes. The ability to effectively manage Western water supplies as our climate changes will be highly dependent on research efforts supporting the development of information on the combined impacts of shorter term climate variability and projected future climatic changes.

Our R&D Office has made this area of research their top priority and is sponsoring efforts to address these needs. They have also leveraged Reclamation's investment by establishing a Federal Climate Change and Western Water Research and Development Group (CCAWWG) dedicated to providing scientific and research collaborations in support of Western water management as climate changes. The collaboration is currently anchored by Reclamation, National Oceanic and Atmospheric Administration (NOAA), and the U.S. Geological Survey (USGS). Collectively, these agencies provide the best available scientific and research expertise at the Federal level to span the spectrum of climate and water management influences on the hydrologic cycle. NOAA also brings linkages to the university-based, NOAA Regional Integrated Science Assessment (RISA) Centers. The RISA Centers have focused programs to improve climate models, forecasts, and develop new climate products that better serve the needs of the public and decision-makers. NOAA also brings international linkages that stem from their participation on the Intergovernmental Panel on Climate Change (IPCC).

CCAWWG intends to facilitate efficient and coordinated Federal research investments, within existing appropriations, to better inform water management decisions, thereby Reclamation's projects to serve project beneficiaries and the broader Western water community. The CCAWWG has made recent strides in developing a collaborative research plan that is being vetted with Reclamation water operations and environmental compliance managers to ensure relevance. We are now moving toward implementation and incorporating consultation and collaboration from State and local water managers, stakeholders, and other federal agencies such as the U.S. Army Corps of Engineers, U.S. Department of Agriculture's Forest Service and Agricultural Research Service, and the National Science Foundation.

6. While there may be technical challenges in downscaling climate models to regional level, models are available. Is Reclamation working with NOAA and DOE to ensure climate model improvements meet your planning needs?

Mr. Commissioner. Yes. Since 2007, Reclamation's Research and Development Office has sponsored collaborative efforts with the Department of Energy's (DOE) Lawrence Livermore National Laboratory, DOE's National Energy Technology Laboratory, and Santa Clara University to develop and serve a public-access archive of downscaled climate projections. The archive website became functional in November 2007. The downscaling methodology used was developed by NOAA-RISA Climate Impacts Group at the University of Washington. This downscaling effort was motivated by a need among Reclamation planning analysts to have access to climate projection information at "basin-relevant" resolution. The new archive enhances the abilities of researchers and decision-makers to assess possible future climates at a regional scale, explore impacts, and approach responses from a risk-based perspective.

Reclamation also continues to pursue improvements in the ability to downscale climate projections and how such projections data can be evaluated and verified. This is currently an area of ongoing discussion with NOAA, USGS, and the National Center for Atmospheric Research (NCAR) via the interagency CCAWWG.

If you believe that climate models are too uncertain to be useful, would you care to comment on the fact that virtually all models predict the SW will get drier, and a recent Science article shows that at least 2 models can explain the last 50 years of climate change in the Southwest?

Mr. Commissioner. We are aware of the broad consensus among climate models that the Southwest could become drier, particularly in our demand service areas of Arizona, southern California, southern Nevada, and New Mexico. Although these lowland areas may become drier, we are also aware that those same projections indicate that the mountain headwaters in Utah, Colorado, and Wyoming, which are the major source of water supply for these regions, could actually become wetter. There are many uncertainties and limitations in the current understanding of climate change and potential future influences on Western water. We believe the most practical approach is to continue on a course in which we incorporate the best available climate change science in our planning efforts, consider uncertainties and limitations in our associated risk studies, evaluate actions that provide the most flexibility to adapt to a range of plausible scenarios, and continue to learn and adapt through observations and by pursuing a targeted, interagency research agenda.

JOURNAL OF WATER RESOURCES RESEARCH

7. A recent article in the *Journal of Water Resources Research* predicted a 50% chance that live storage in Lakes Mead and Powell will be gone by 2013. Does Reclamation agree with the trends projected in the article?

Mr. Commissioner. Reclamation does not agree with the trends projected in the recent Scripps Institute of Oceanography article, including their prediction of a 50 percent chance that live storage in Lakes Mead and Powell will be gone by 2021. Reclamation completed an Environmental Impact Statement (EIS) in November 2007 that analyzed the development of new operational procedures for Lake Powell and Lake Mead, particularly under low reservoir and drought conditions, which were subsequently adopted in December 2007. The EIS projects only a negligible chance that either lake will be dry in the foreseeable future. The differing projections are primarily due to the underlying assumptions used in each study. For example, the Scripps study overstates system losses and understates the lower basin water supply. Further, the Scripps study did not take into account the changes that have been implemented as a result of the new operational guidelines – changes that allow for the decrease of water releases from each lake during severe drought conditions to protect key lake elevations for water delivery and power generation.

8. I'm told that Reclamation's most recent operating plan results in a deficit of water; that the plan relies on the most optimistic estimates of Colorado River flow. Would you care to comment on this?

Mr. Commissioner. The Record of Decision (ROD) for Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead issued on December 13, 2007, implements operational guidelines for an interim period (2008 through 2026) that will be used to determine the annual releases from Lake Powell and Lake Mead, particularly under drought and low reservoir conditions. The guidelines do not result in a deficit of water. In fact, the guidelines include operational elements that respond if potential impacts of climate change and increased hydrologic variability are realized. In particular, the guidelines include provisions that: 1) allow for the adjustment of Lake Powell's release to respond to low reservoir storage conditions in Lake Powell or Lake Mead; 2) enhance conservation opportunities in the Lower Basin and the retention of water in Lake Mead; and 3) require that specified shortages to Lower Basin users occur when Lake Mead reaches specified levels, including a provision for additional shortages, after appropriate consultation, if Lake Mead's water in storage continues to decline.

Furthermore, the guidelines do not rely on the most optimistic estimates of Colorado River flow. In the development of the Environmental Impact Statement (EIS) leading up to the ROD, Reclamation employed several methodologies to estimate the uncertainty in future inflows, including methodologies that utilize the 100-year historical inflow record and a 1,244-year inflow record based on tree-ring data. These methodologies all include sustained periods of low flows.

Have you accounted for loss due to evaporation/infiltration?

Mr. Commissioner. Yes, Reclamation's hydrologic models include a complete accounting of inflows, outflows, and losses, including evaporation and infiltration.

If not, it seems that we run the risk of drawing down the reservoirs. Such a draw down in combination with predicted drying in the Southwest seems to at least point to a serious water supply issue and, if we lose the ability to generate power due to reduced pool levels, a power supply issue.

Mr. Commissioner. Reclamation fully recognizes the continued importance of water delivery and emission-free hydropower production for the Southwest. Using the analytical methodologies just described, Reclamation is able to quantify future uncertainties in inflows and assess the risk to all resources, including water supply and power generation and make appropriate operational adjustments. Reclamation is continuing its research and development efforts to improve its ability to estimate the uncertainties, particularly given the potential impacts of climate change and increased hydrologic variability.

FIVE – YEAR PLAN

9. Your five-year plan states that the funding included supports Reclamation's efforts to "optimize hydropower generation." How does your five year plan accomplish this given the limited investment levels and the climate related risk associated with the lake levels necessary for power generation?

Mr. Commissioner. Reclamation has agreements in place with non-Federal and Federal partners to share in the cost of water resource management and development. A few of the partners include: 1) the Bonneville Power Administration which provides up-front financing of power operation and maintenance and for major replacements and additions for the power plants at the Boise, Columbia Basin, Hungry Horse, Minidoka, Rogue River, and Yakima projects; 2) customers of the Hoover and Parker-Davis Projects which fund 100 percent of the maintenance costs; and 3) customers of the Central Valley Project which fund the power Operation and Maintenance Program. Further, Reclamation conducts frequent assessments of Power Operation & Maintenance (O&M) effectiveness at all of its 58 hydroelectric powerplants. These assessments are conducted under the Reclamation "Power Review of O&M Program" and include self assessment (an Annual Review) and Periodic and Comprehensive Reviews conducted by regional and corporate experts, respectively. Recently power customers and other stakeholders have started to participate in the reviews as part of the Managing for Excellence outreach. Recommendations made for correcting deficiencies or improving the local operations and maintenance program are tracked to completion. Any funding needs are identified as part of the annual appropriations request through a bottom-up review process. Finally, Reclamation has taken a number of steps to improve the useful life of our hydropower facilities. We are implementing asset management tools to document the condition of our plants and identify opportunities to extend their useful life through improvements in maintenance practices.

POWER PROGRAM SERVICES

10. What is the current level of power generation Reclamation projects contribute to the electricity grid? Is there any way to extend the useful life of our existing plants given projections of drastically reduced pool levels? If not, how will the power loss be made up once the reservoirs are below levels necessary to run the hydro electric plants?

Mr. Commissioner. The electricity grid that interconnects Reclamation facilities is exclusively within the Western Electric Coordinating Council's (WECC) area. Reclamation generates approximately 5 percent of the total energy consumed in the WECC area. While this percentage may initially appear small, it is important to emphasize that the flexibility and quick responsiveness of Reclamation's hydropower facilities provide not just energy but also ancillary services such as load following, spinning reserves, and voltage support that provide stability and reliability to the western bulk power grid. Reclamation's Hydro-Power Capacity is approximately 23 percent of the total available hydro-power capacity in the WECC area. In addition, some of our facilities provide the black start back-up support for some of the West's largest nuclear facilities such as Palo Verde.

Reclamation has taken a number of steps to improve the useful life of our hydropower facilities. We are implementing asset management tools to document the condition of our plants and identify opportunities to extend their useful life through improvements in maintenance practices.

If reservoirs reach a level at which hydroelectric generation is no longer possible, replacement power must be purchased by the power marketing administrations to meet firm power contracts. These purchases are generally at a higher cost than would be found with federal project power.

11. Given the projections of existing reservoirs running dry and not being able to meet existing requirements, much less new ones, how do you justify the minimal levels of investment in water reclamation and reuse projects proposed in the Administration's budget request?

Mr. Commissioner. Reclamation continues to support the Title XVI Water Recycling and Reuse Program when it is focused on leveraging federal funds to research and develop innovative ways to recycle or reuse water and to construct demonstration projects that will help alleviate water crises or shortages in the West. The FY 2009 budget request reflects Reclamation's attempt to balance the many competing priorities for funding within the Federal Government and within Reclamation.

12. How will the projections in the Southwest and other areas impact Reclamation's ability to meet Endangered Species Act requirements? What investments are we not making that will be necessary in the short term to meet both the requirements of existing water users and the environment?

Mr. Commissioner. Reclamation's mission has always been about storing, managing, and delivering water resources in the West, which is noted for a variable climate and arid environment, and to meet a variety of needs including endangered species protection and conservation. So, we have experience to draw upon in balancing competing needs.

Our budget reflects investments to meet both short and long-term needs. One example is the Water for America Initiative that will further our ability to conduct forward-thinking planning studies on selected watersheds. Through the Water for America Initiative, Reclamation will address 21st century water challenges and ensure secure water supplies for future generations. Additionally, the Initiative will accelerate Endangered Species Act activities. The funding request for Reclamation's portion is $31.9 million, of which $19 million appears as the Water for America Initiative line item. The remaining $12.9 million is included in specific projects for endangered species recovery activities ($8.9 million) and investigation programs ($4.0 million).

RURAL WATER

13. The Administration's fiscal year 2009 request of $39 million for rural water is 73 percent below the FY 2008 appropriation of $142 million and below the Administration's budget request of $55 million. This program is critically important to meet rural communities' water needs as well as meet Tribal trust obligations.

The Administration has made much of the fact that the budget request is produced in a manner that is politically neutral, that there are no earmarks contained therein and that the budget request our nation's "highest priorities" and promotes "sustained economic growth."

With that in mind, Commissioner, can you tell me how a project that has been budgeted for in fiscal years 2006-2008, the Lewis and Clark Rural Water project in South Dakota, suddenly drops out of the budget request, given the budget request in those years is the same range as the current budget request?

(in millions)

Fiscal Year	Reclamation Budget Request	Lewis and Clark Budget Request
2006	$917	$15
2007	$883	$21
2008	$966	$15
2009	$927	$0

*Exclusive of legislative proposal for San Joaquin Restoration Fund.

Mr. Commissioner. The FY 2009 President's budget balances several priorities including funding for ongoing construction projects such as rural water, while maintaining existing infrastructure and other ongoing priorities, all within the budget targets that have been established. The President's budget includes $39 million for rural water projects. Of those funds, $26.2 million is allocated to Mni Wiconi rural water system, and $12.8 million is allocated to Garrison rural water supply system. The Bureau of Reclamation allocates funding for its rural water projects based on criteria, which gave priority to projects based upon: 1) O&M of completed Tribal features of projects; 2) nearest to completion; and 3) that serve tribal needs. These projects also received funding based on amounts needed for ongoing work. The Lewis and Clark project, when assessed relative to these criteria, is a low priority for funding.

What are the criteria, precisely, and how have they changed since the fiscal year 2008 request?

Mr. Commissioner. Criteria used for funding rural water projects give first priority for operation and maintenance of rural water systems. This priority is consistent with previously enacted federal legislation and to protect the federal investment. Once operation and maintenance needs are met, funds are allocated for rural water construction. For rural water construction, the criteria and considerations consist of two factors: Percent of ongoing projects completed are one factor and projects serving Tribal communities are another factor. These evaluation factors will allow Reclamation to finish some of the ongoing rural water projects in the near future.

RURAL WATER

14. The Secretary is required to establish a formal rural water supply program for rural water and major maintenance projects in the 17 western states, what is the current status of this action?

Mr. Johnson. In December of 2006, Congress enacted P.L. 109-451, the "Rural Water Supply Act of 2006." Title I of P.L. 109-451 authorizes the Secretary of the Interior to create a rural water supply program to address rural water needs in the 17 Western States. The Act requires the establishment of programmatic criteria, including eligibility requirements and criteria to prioritize projects for assistance. Based on the language in the Act, Reclamation has determined that it is required to follow the rulemaking process in the Administrative Procedure Act in developing these criteria. Because of the time frames established in the Act, Reclamation is completing a comprehensive rulemaking process, which we believe is a more efficient approach than completing three separate rulemakings for each set of criteria. Reclamation has developed a draft of the comprehensive rule which is currently being reviewed internally. We expect to publish a comprehensive rule addressing all three sets of criteria as an Interim Final Rule in late 2008.

15. Please provide for the record the funding necessary, by rural water project, to complete all ongoing work and a cost estimate for any projects not currently in process.

Mr. Commissioner. Below is a table showing rural water projects. This table includes total estimated cost using indexing as of September 30, 2008, their total estimated cost as of September 30, 2007, and balance to complete. Indexing calculations are performed each year. Dollar amounts refer to federal funds only.

Dollars in $000's

Project Name Rural Water System (RWS)	**Total Estimated Cost 1/**	**Costs as of 9/30/07**	**Balance to Complete**
Mni Wiconi RWS	$452,144	$331,977	$120,167
Garrison – State/Indian RWS	771,982	256,888	515,094
Fort Peck Reservation/Dry Prairie RWS	262,918	38,350	224,568
Lewis & Clark RWS	362,073	74,869	287,204
North Central/Rocky Boys RWS	273,057	8,644	264,413
Perkins RWS	24,626	11,007	13,619
Jicarilla RWS (UC Region)	45,000	2,600	42,400
TOTALS	**$2,191,800**	**$724,335**	**$1,467,465**

1/ Estimated cost based on October 2008 indexing amounts

WATER FOR AMERICA INITIATIVE

16. The Administration has proposed a new initiative, Water for America in the budget request. In looking at the details, this just looks like a repackaging of activities Reclamation was already executing, specifically Water 2025, Water Conservation Field Services, Investigations and Endangered Species Act (ESA) measures.

What is different, other than budget presentation?

Mr. Johnson. The Initiative includes both new activities and modifications to existing programs to address such water supply issues as effectively as possible. One of the new activities consists of comprehensive water supply and demand studies that deal with the impacts of climate change, droughts, and increasing populations on a river-basin scale.

The existing *Water 2025* Challenge Grant Program will also be expanded to include desalination, water reuse, and proactive efforts to avoid declines of candidate species. In addition, both the Water Conservation Field Services Program and *Water 2025* Program are being recast to leverage the most successful aspects of both programs and to ensure that they effectively complement each other, and focus resources on the highest water resources priorities in the American West. Finally, the Initiative will accelerate Endangered Species Act activities that will help in the recovery of species. An additional $12.9 million has been requested to undertake the activities identified in this initiative.

Through the Water for America Initiative, Reclamation will partner with the USGS to address 21st century water challenges and ensure secure water supplies for future generations.

17. Excluding the ESA measures (since due to presentation it is difficult to compare these items), your budget request for the items under the initiative is actually lower than your budget request for fiscal year 2008 – Can you explain how a budget decrease is an initiative?

	FY 2008 request	FY 2009 request
Challenge Grants (Water 2025)	11,000,000	11,000,000
Water Conservation Field Services Program	6,232,000	4,000,000
Investigation Programs	4,835,000	4,000,000
River Basin Studies	0	4,000,000
TOTAL	**22,067,000**	**23,000,000**

Mr. Johnson. Excluding the ESA measures, the Initiative includes a FY 2009 budget request of $23,000,000. The FY 2009 budget request includes $4 million for the river basin planning studies, which is in addition to the $4 million for the existing investigations program. As set forth above, both the Water Conservation Field Services Program and *Water 2025* Program are being recast to leverage the most successful and cost-effective aspects of both programs as part of the Initiative, and to expand the Challenge Grant Program to include desalination, water reuse, and proactive efforts to avoid the decline of sensitive species.

LOAN GUARANTEE

18. Commissioner, last year you testified that Reclamation anticipated having Draft Rules for the "Loan Guarantee Program" by the end of calendar year 2007. Was this schedule met?

Mr. Johnson. This schedule has not been met. Reclamation has prepared a proposed rule establishing eligibility criteria and program requirements for a loan guarantee program. This rule is under consideration within the Administration.

19. Have the types of contract activities that utilize the loan guarantee program changed from your testimony of last year?

Mr. Johnson. The project types have not changed since my testimony of last year. They remain the same as identified in the statute which are: (A) rural water supply projects as defined in Title I; (B) an extraordinary operation and maintenance activity for, or the rehabilitation or replacement of a facility authorized by Federal Reclamation law and constructed by the United States, where there is an executed water service or repayment contract; or (C) an improvement to water infrastructure directly associated with a Reclamation project.

20. Last year you testified that Reclamation would begin gathering data on transferred works (those operated and maintained by local beneficiaries, but federally owned) that would characterize the potential need for major O&M work that could not be accomplished under routine O&M programs. Do you feel you have adequately defined the need for rehabilitation and replacement demands?

Mr. Johnson. Reclamation recently requested that its field offices obtain a comprehensive listing of all identifiable major rehabilitation and replacement needs on Reclamation project facilities that were considered to be above and beyond routine activities that could be accomplished with annual O&M funding. This request was for transferred (facilities operated by non-federal partners) and reserved (facilities operated and maintained directly by Reclamation) works, and irrespective of potential funding sources. Reclamation believes that the listing it is compiling, recognizing the cost estimates are very preliminary, will serve as a baseline reference point for continued analyses and evaluations to define future needs for rehabilitation and replacement of project facilities.

21. Given the work to date, what is the scope of this program, are we talking hundreds of millions of dollars, billions?

Mr. Johnson. Cost estimates are preliminary in nature and therefore will need to be refined once BOR obtains more concrete data from its field offices. As indicated previously, this request was not limited to certain types of Reclamation project facilities, nor to any particular type of potential funding source. Therefore, there will be continued efforts to analyze, refine, and improve the data to better articulate the rehabilitation and replacements needs and the O&M funding responsibilities. It should also be noted that O&M funding is also the responsibility of non-Federal stakeholders. Local entities should pay for their appropriate portion of project costs.

REPROGRAMMING

22. Each year, the Congress adds resources for congressionally-directed projects in the Water and Related Resources program. Can you tell me how the Bureau defines administrative transfers to or from the levels included in the reports?

Mr. Commissioner. Reclamation defines administrative transfers as the movement of funds within Water and Related Resources, from one project, or budget activity to another in keeping with limitations set by Congress based on the amounts available at the beginning of the fiscal year.

23. Are all movements of funds from the levels specified in the reports treated as reprogrammings, and as such, submitted to this Subcommittee for approval?

Mr. Commissioner. The movement of funds into Reclamation's projects less than or equal to 15% of the amount available at the beginning of the fiscal year are not considered a reprogramming, in keeping with Congressional direction in House Report 105-749. Reclamation h as traditionally interpreted the Report Language to allow the transfer of funds into a project or program, without prior notice to the subcommittee if the dollar amount of the program or project in question is less than 15 percentage of the amount available at the beginning of the fiscal year. Reclamation further conforms to Congressional direction which allows flexibilities to transfer funds within the Facility Operations, Maintenance and Rehabilitation category without prior Congressional approval and without regard to percentage or dollar limitation. This is consistent with the language contained in the Conference Report (H. Report 105-749) accompanying the FY 1999 Energy and Water Development Appropriations bill and repeated in FY 2008.

If not, how many reprogrammings does the Bureau do annually that are not submitted to the Subcommittee for approval?

Mr. Commissioner. In the normal course of budget execution, Reclamation processes a number of fund transfers that are for nearly 200 line items in pursuing efficient budget operations annually. Many of these involve transfer of funds of small amounts, sometimes between activities within the same project and do not require submission to the Subcommittee for approval consistent with the reprogramming principles that I have articulated in the previous answer. These movements are necessary for Reclamation to conduct day to day business and address issues of project shortage and slippage.

24. Does the Bureau consider the levels provided for individual projects in the reports merely as advisory, or does it treat the conference allocations contained in the Statement of the Managers as definitive?

Mr. Commissioner. Reclamation considers the levels provided as clearly the intent of Congress. The reprogramming guidelines provide for "amounts available at the beginning of the year" which is defined as the amounts approved by Congress for the current fiscal year, plus the actual carryover amount for that project.

25. Recognizing that fiscal year 2007 was something of an anomaly, how many reprogrammings, as defined by any movement of funds into or out of a project or activity after the initial allocations of funds, did the Bureau of Reclamation execute in FY 2007? Please answer with a specific list of all reprogrammings, by project and occurrence.

Mr. Commissioner. Reclamation did not execute any formal reprogrammings during Fiscal Year 2007. In accordance with the language contained in the Consolidated Appropriations Act (H. Report 2764), Reclamation will, however, provide quarterly reports detailing all transfer of funds between activities, projects or categories of funding.

26. For fiscal year 2009, provide for the record an accounting of all direct funding and receipts provided by customers, power marketing administrations and any other entities by project and activity including the agency or entity that provided the funds as well as the purpose for which they were provided.

Mr. Commissioner. The direct funding information for fiscal year 2009 is attached.

26. Please provide for the record an accounting of all direct funding and receipts provided by customers, power marketing administrations and any other entities by project and activity including the agency or entity that provided the funds as well as the purpose for which they were provided.

FY 2009 Reclamation Budget Summary
Water & Related Resources
($ in thousands)

		FY 2009 Non-Federal/Other Federal						Entity	Purpose
Project Name	FY 2009 Request	Water & Energy	Land Mgmt.	Fish & Wildlife	Facility Operations	Facility Maint.	FY 2009 Non-Fed/Other		
PN Region									
Boise Project					6,105	24	6,129	Bonneville Power Administration and Irrigation Districts	Power direct funding, operations and maintenance, and Replacements, Additions, and Extraordinary Maintenance activities
Columbia Basin, Grand Coulee					61,500	25,242	86,742	Bonneville Power Administration and Irrigation Districts	Power direct funding, operations and maintenance, power subagreements, and Replacements, Additions, and Extraordinary Maintenance activities
Columbia Basin, Ephrata					2,452		2,452	Irrigation Districts	O&M
Hungry Horse					3,748	5,095	8,843	Bonneville Power Administration	Power direct funding and power subagreements
Minidoka Project					8,332	715	9,047	Bonneville Power Administration and Irrigation Districts	Power direct funding, operations and maintenance, power subagreements, and Replacements, Additions, and Extraordinary Maintenance activities
Rogue River					1,205	1,645	2,850	Bonneville Power Administration	Power direct funding and power subagreements
Tualatin					196		196	Irrigation Districts	O&M
Umatilla					120		120	Irrigation Districts	O&M
Yakima					5,557	50	5,607	Bonneville Power Administration, Irrigation Districts, and Bureau of Indian Affairs	Power direct funding, operations and maintenance, power subagreements, and Replacements, Additions, and Extraordinary Maintenance activities
Yakima River Basin Water Enhancement		3,166					3,166	State of Washington	Water Conservation Implementation Grants
MP Region									
California Investigations	352	352					352	State of California, East San Joaquin County	Continues planning activities and Investigation feasibility studies.
CVP, American River Division	9,480				5,072		5,072	CVP Preference Power Customers	O&M of power facilities.
CVP, East Side Division	4,534				1,904		1,904	CVP Preference Power Customers	O&M of power facilities.
CVP, Shasta Division	7,914				6,875		6,875	CVP Preference Power Customers	O&M of power facilities.
CVP, Trinity River Division	10,317				3,113		3,113	CVP Preference Power Customers	O&M of power facilities.
CVP, Water and Power Division	9,451				2,945	615	3,560	CVP Preference Power Customers	Facility operation of the Central Valley Project.
Klamath Project	25,000				135		135	Irrigation Districts	Districts provide advancement of funds for water.
LC Region									
Colorado River Basin - Central Arizona Project	26,850				40		40	Water Districts, Developers and Municipalities	Land Management activities, such as crossings, relocation of laterals in areas under urbanization.

FY 2009 Reclamation Budget Summary
Water & Related Resources
($ in thousands)

		FY 2009 Non-Federal/Other Federal						Entity	Purpose
Project Name	FY 2009 Request	Water & Energy	Land Mgmt.	Fish & Wildlife	Facility Operations	Facility Maint.	FY 2009 Non-Fed/Other		
Colorado River Basin Salinity Control - Title I	9,444					100	100	Various Partners, Municipalities, Federal Agencies, State Water Groups, Indian Tribes	Improve efficiencies and lower the costs of long term operations and maintenance of the Yuma Desalting Plant, the technology advancements typically have broad applications across the desalination industry. As such, technologies developed are transferred
Colorado River Front Work & Levee System	2,350	74,460					74,460	Southern Nevada Water Authority (contract is being negotiated)	Construction of the Lower Colorado River Drop 2 Storage reservoir(s) to improve Reclamation's ability to manage water deliveries and save operational spill water.
Lower Colorado River Operations Program	16,400	94		8,850			8,944	USGS / Central Arizona Water Conservation Dist, Metropolitan Water District of So. Calif., San Diego County Water Authority, Bard, Water Dist. Coachella Valley Water District, City of Los Angeles - Dept of Water & Power, So. Calif. Public Power Authority, Colorado River Board of Calif., Imperial Irrigation Dist., City of Needles, Palo Verde Irrigation Dist., Southern Calif. Edison Co, Colorado River Commission of Nevada and Southern Nevada Water Authority (Some of the agencies collect from multiple agencies within their state)	Well Inventory Work / Multi Species Conservation Progam that is cost shared 50/50

FY 2009 Reclamation Budget Summary
Water & Related Resources
($ in thousands)

		FY 2009 Non-Federal/Other Federal						Entity	Purpose
Project Name	FY 2009 Request	Water & Energy	Land Mgmt.	Fish & Wildlife	Facility Operations	Facility Maint.	FY 2009 Non-Fed/Other		
Parker Davis Project	0				12,983		12,983	Metropolitan Water District; Arizona Electric Power Cooperative, Inc.; City of Mesa, AZ; BIA - Colorado River Agency; Colorado River Commission of the State of Nevada; DOI - BIA -San Carlos Irrigation Project; Electric District Number One, Pinal County, AZ; Electric District Number Three, Pinal County, AZ; Fort Mojave Indian Tribe; Town of Fredonia, AZ; Imperial Irrigation District; City of Needles, CA; Nevada Operations Office; Salt River Project; Tohono O'Odham Utility Authority; Town of Thatcher, AZ; Wellton-Mohawk Irrigation and Drainage District; DOD - Yuma Proving Ground; Town of	For the operation and maintenance of Parker Davis Project to ensure continued electrical power availability, reliability and cost effective management.
Southern Arizona Water Rights Settlement Act Proj	2,969				4,051		4,051	BIA	Schuk Toak and San Xavier Water Delivery
Yuma Area Projects	21,863					50	50	Yuma Cogeneration As	Right-of-way to discharge power plant water cooling effluent into Main Outlet Drain Extension.
UC Region									
Animas-La Plata	50,000	1,001					1,001	San Juan Water Distric	Construction of Water Projects
Carlbad Project	3,784				55	200	255	Carlsbad Irrigation Dis	O&M
Colorado River Basin Salinity Control - Title II	5,850	10,221				0	10,221	CRSP Power Users	Salinity Control
Colorado River Water Storage Project, Section 5									
Bonneville Unit, CUP	1,689		300				300	State of Utah	Recreation Rehabilitation
Dolores Project	782			667	133		133	CRSP Power Users	Salinity Control
Navajo Unit	50				172		172	States of CO and NM	Rec Rehab/Mgmt
Paonia Project	296				6		6	State of CO	REC O&M
San Juan-Chama Project	601				2,580		2,508	NM gov't entities	O&M
Silt Project	387				153		153	State of CO	REC O&M
Smith Fork Project	332				122		122	State of CO	REC O&M
Colorado River Storage Project, Section 8									
Wayne N. Aspinall Unit, CRSP, Section 8	610			879		879	879	CRSP Power Users	BiOp
Endangered Species Recovery Implementation Program			3,650			3,650	775	various states	Capital Construction
Grand Valley Unit, CRBSCP	1,445	3	17		434	11	465	CRSP Power Users	Salinity Control
Middle Rio Grande Project	22,700			799	222	1,000	2,021	MRG Conservancy Dis	O&M
Paradox Unit, CRBSCP Title II	2,416				739	50	789	CRSP Power Users	Salinity Control

FY 2009 Reclamation Budget Summary
Water & Related Resources
($ in thousands)

		FY 2009 Non-Federal/Other Federal						Entity	Purpose
Project Name	FY 2009 Request	Water & Energy	Land Mgmt.	Fish & Wildlife	Facility Operations	Facility Maint.	FY 2009 Non-Fed/Other		
Pecos River Basin Water Salvage Project	203					150	150	State of NM	River maintenance
Provo River Project	1,366			870			870	Utah gov't entities	June Sucker recovery
Rio Grande project	4,342				628	628	628	water districts	O&M
Weber Basin Project	1,748		400				400	State of Utah	Rec Rehab
GP Region									
Colorado-Big Thompson	13,292				3,102	495	3,597	No. Colorado Water Co	O&M
Fryingpan-Arkansas	8,295				706	1,000	1,706	SE Colorado Water Co	O&M
Kendrick	3,333		13		258	700	971	State of Wyoming, Nat	Recreation, O&M
Lewis and Clark Rural Water System	0	16,154					16,154	Lewis & Clark RWS	Construction
Lower Rio Grande Water Conservation Project	50	3,500					3,500	TX Water Dev. Board	Construction
McGee Project	676	3					3	McGee Creek Authorit	Water Conservation
Milk River Project	1,648				519		519	8 Irrigation Districts	O&M
North Platte Project	1,880	93			465		558	Irrigation Districts	Water Management, O&M
Pick-Sloan Missouri Basin Program									
Bostwick Unit	911				256		256	Army COE	O&M
Boysen Unit	2,300	43	63		15	1,250	1,371	3 Irrigation Districts, S	Water Management, Recreation, O&M
Buffalo Bill Unit	2,720		23		238		261	State of Wyoming, Pow	Recreation, O&M
Canyon Ferry Unit	4,443	5			477		482	3 Irrigation Districts, C	Water Management, O&M
Cedar Bluff Unit	555		16				16	KS Dept of Wildlife an	Recreation
Dickinson Unit	441				15	35	50	City of Dickinson and I	O&M
East Bench Unit	802				137		137	Irrigation District and C	O&M
Garrison Diversion Unit	22,106	3,065					3,065	State of ND, Natl Reso	Construction
Helena Valley Unit	183				35		35	Helena Valley ID	O&M
Keyhole Unit	818					25	25	State of Wyoming	O&M
North Platte Area	6,128	22	145		432	3,875	4,474	New Grattan Ditch Cor	Water Conservation, Recreation, O&M
Oahe Unit	144		42				42	SD Game, Fish and Par	Recreation
Riverton Unit	943	10					10	Midvale Irrigation Dist	Water Management
Shadehill Unit	633		62			2	64	SD Game, Fish and Par	Recreation, O&M
Yellowtail Unit	5,176				550	815	1,365	Power Customers	O&M
Rapid Valley /Deerfield	86				26		26	Rapid City, SD	Water Management, O&M
Shoshone	749	39			155		194	3 Irrigation Districts an	O&M
Witchita Project - Cheney Division	385	3					3	State of KS	Water Conservation
Water and Related Resources	**324,222**	**112,234**	**4,731**	**12,065**	**138,963**	**48,301**	**307,523**		

27. Commissioner Johnson, if you had additional funding to allocate among on-going projects, where would you spend it? Where would a modest amount of additional funding make a difference?

Mr. Commissioner. Facility and maintenance of an aging infrastructure has increased our need as related to dam safety. At this time, we do not believe that additional funding is needed above the President's FY 2009 request.

28. Commissioner, last year you testified that the challenges associated with aging infrastructure, increased dam safety needs, population growth and increased Endangered Species Act compliance would be the trends that would most impact your budget development.

How have these issues shaped your fiscal year 2009 budget?

Mr. Commissioner. Facility and maintenance of an aging infrastructure, increased needs related to dam safety needs, population growth in many areas within the Western United States, and increased Endangered Species Act requirements were all major areas of consideration in the development of Reclamation's FY 2009 budget and, I believe, will continue to be so into the future. The ability to more effectively target finite resources to meeting these challenges is at the heart of the former Water 2025 program, and the Administration's newly-proposed Water for America initiative.

MANAGING FOR EXCELLENCE

29. Under its *Managing for Excellence* initiative Reclamation was developing a comprehensive strategy for its aging infrastructure, is this strategy complete, how will it impact Reclamation's approach?

Mr. Johnson. The results of the analyses conducted for a number of the action items under the *Managing for Excellence* initiative can be utilized by Reclamation in continuing to address its aging infrastructure. These include action items addressed in support of major repair challenges, asset sustainment, and relationships with customers and other stakeholders. Reclamation envisions the development of a comprehensive strategy to be based largely on the recent completion of these action items and implementation of the resulting recommendations. Implementation of these recommended actions is currently being pursued by Reclamation.

MANAGING FOR EXCELLENCE

30. The National Research Council suggests among other things that Reclamation's Water program should implement stronger controls over project planning and development. What specific steps is Reclamation taking to correct this situation?

Mr. Johnson. Reclamation is currently taking steps to implement stronger controls in project planning and development by developing, approving and then implementing Reclamation-wide policies and requirements in the subject areas of project planning and project management. We have also established an office within Reclamation that provides independent review and oversight of major design, estimating and construction reports for which Reclamation has responsibility. Appropriate management and staff will now receive project management training, including formal certification where it is appropriate.

31. Commissioner, can you elaborate on other actions Reclamation has taken as a result of the *Managing for Excellence* initiative?

Mr. Johnson. All of the teams assigned to the various action items in the *Managing for Excellence* Action Plan have completed their work, and I have signed final decision documents regarding their recommendations. We have already turned to implementing these decisions, having accomplished about half of the associated implementation tasks. We have formal implementation plans for accomplishing the remainder of these tasks. A major focus of the actions taken to date is improving collaboration with our customers. We're taking the successful examples developed in individual offices and for specific projects and making them a part of the way we do business throughout our agency. All of these *Managing for Excellence* actions will help us to:

- Improve the efficiency with which we perform our work;
- Increase the transparency of our work processes, sources of costs, and decision-making processes; and
- Hold ourselves accountable to our customers and the American public.

ST. MARY PROJECT, MILK RIVER, GLACIER COUNTY, MONTANA

32. Commissioner Johnson, Section 5103 of the Fiscal Year 2007 Water Resources and Development Act authorizes the Corps of Engineers to work in consultation with the Bureau of Reclamation to rehabilitate and construct the St. Mary Diversion and Conveyance Project in Montana. This was originally a Bureau of Reclamation project, constructed nearly a century ago. Since then it has fallen in disrepair.

Given the importance of this project, why has it been allowed to fall apart?

Mr. Commissioner. The St. Mary Storage Unit is the primary diversion and conveyance component of Reclamation's Milk River Project. The project was authorized as a single-purpose irrigation project in 1905. Construction was undertaken in 1906, and was substantially complete by 1923. Repair work and maintenance of the St. Mary Storage Unit has been accomplished annually since completion of construction. The concrete and steel water control structures are nearing the end of their respective design lives due to aging.

Whose responsibility has it been to maintain it?

Mr. Commissioner. The local project sponsor is responsible for maintaining this project; for this type of project, Reclamation has performed the physical annual operation and maintenance work within the financial limitations of the irrigators who are responsible for the costs.

Since substantial completion of this project, what work has been accomplished with the appropriated dollars for this project?

Mr. Commissioner. The President's Budget requests for administration of the 1909 Boundary Waters Treaty with Canada which addresses apportionment of the St. Mary and Milk Rivers. In recent years, Reclamation has expended about $120,000 per year to accomplish this work. Reclamation's annual O&M costs are covered by non-appropriated water user funds which are provided by the water users each year in advance.

For the record, please provide, by year, the amount of funding received and the activities performed.

Mr. Commissioner. Milk River irrigation contractors advance funding to Reclamation for the annual operation and maintenance of the project, including salaries and benefits for Reclamation maintenance staff, travel, communications, utilities, materials and supplies, and equipment. Non-Federal funding provided to Reclamation for O&M of the St. Mary Storage Unit for the last 10 years is as follows:

Year	Water Users	Federal	Activities Performed

2007	$853,000	$300,000	$420,000 O&M $733,000 Major Improvements
2006	$324,000	$114,000	$326,000 O&M $112,000 Major Improvements
2005	$418,000	$0	$292,000 O&M $126,000 Major Improvements
2004	$369,000	$0	$369,000 O&M
2003	$320,000	$0	$320,000 O&M
2002	$397,000	$0	$335,000 O&M $ 62,000 Major Improvements
2001	$801,000	$0	$358,000 O&M $443,000 Major Improvements
2000	$311,000	$0	$311,000 O&M
1999	$333,000	$0	$333,000 O&M
1998	$366,000	$0	$366,000 O&M

If this was a Bureau project, why does the WRDA authorize its rehabilitation as a Corps of Engineers project?

Mr. Commissioner: The project sponsors worked with members of the Montana congressional delegation to prepare legislation to authorize the rehabilitation of the project through the Corps of Engineers under the authority of the Water Resources Development Act.

Can you provide specific examples where the Corps has been authorized to rehabilitate a Reclamation project?

Mr. Commissioner. An example would be the Joint Federal Project at Folsom Dam and Reservoir in the Mid-Pacific Region. The U.S. Army Corps of Engineers will provide funding for its portion of the project. Reclamation will provide funding for its portion through the Reclamation-wide Safety of Dams program. $40.8 million is the planned amount for Folsom Dam. However, this project is not directly comparable, as the Corps of Engineers in fact constructed Folsom Dam, which Reclamation operates. In contrast, Reclamation built the St. Mary's project.

How would Reclamation propose to work with the Corps under the new WRDA authorization, if an appropriation was provided?

Mr. Commissioner. Subsequent to passage of WRDA, Reclamation and the Corps of Engineers have held preliminary discussions regarding St. Mary rehabilitation. Reclamation is prepared to move forward jointly with the Corps of Engineers to execute the terms of the legislation.

What do you see as the appropriate roles of the Bureau and the Corps in rehabilitating this project?

Mr. Commissioner. While the respective roles of Reclamation and the Corps of Engineers remain to be clearly identified, both agencies are committed to upholding the intent of Congress, and we are confident that a workable arrangement will be reached.

Have the Corps and Bureau ever worked together like this on a project?

Mr. Commissioner. The Corps and the Bureau of Reclamation work on the Joint Federal Project at Folsom Dam and Reservoir in the Mid-Pacific Region. Reclamation and the Corps of Engineers are working jointly under the provisions of the WRDA to address fish passage and fish entrainment issues involving pallid sturgeon at Reclamation's Lower Yellowstone Project, Montana, which is being undertaken in part because this Reclamation facility provides the best opportunity for mitigating the impact of Corps of Engineers facilities on the Missouri River.

What was the result? Is this a model we should be considering elsewhere?

Mr. Commissioner. The Joint Federal Project (JFP) at Folsom Dam is a successful model. While it is a slightly different situation, in that each agency is performing the work under their respective authorities, the key to this successful partnership is a commitment by both agencies at all levels to make it successful. Phase 1 of the JFP is currently under construction by Reclamation. Phase 2 will be awarded by Reclamation in September 2008. Upon completion of Phase 2, the Corps of Engineers will award the final phase (Phase 3) in 2010. The work on the Lower Yellowstone Project is a unique and complicated situation, but one which offers significant benefits if successfully brought to fruition.

What are the estimated costs by project element for rehabilitation of this project?

Mr. Commissioner. Reclamation prepared a preliminary cost estimate for rehabilitation of the St. Mary Storage Unit of approximately $100 million (in 2002 dollars) as part of the North Central Montana Regional Feasibility Report. The project sponsors employed a consulting firm to independently evaluate the extent of rehabilitation needed, with a resulting cost estimate of approximately $140 million (in 2005 dollars). The project sponsors utilized this information in preparing the current legislation under WRDA. Funding for this rehabilitation project is not included the President's FY 2009 Budget. The level of analysis in the referenced Feasibility Report is insufficient for the Administration to use it as a basis for making budget recommendations.

YUMA DESALTING PLANT

33. Commissioner Johnson, the Bureau has recently completed a test run of the Yuma Desalting Plant, and congratulations on getting it started again after a 15 year hiatus. I'm told that the Plant was originally constructed to help the United States meet its water treaty requirements with Mexico, but that a flood in 1993 knocked it out of commission. Since then, we've been relying mostly on water taken out of Lake Mead, but drought has dropped that lake below acceptable levels.

How much would it cost to bring the plant fully on line?

Mr. Commissioner. For Reclamation to bring the plant fully on line, based on the information we have today would require as much as $50 million.

And how much would it cost to operate the plant annually?

Mr. Commissioner. Current estimates to operate the plant as originally envisioned range between $322 and $556 per acre foot depending on the level of operations and the actual plant yield. At full capacity, annual operating costs would range between $27 and $39 million. The costs of chemicals and power are highly variable and have been increasing much faster than the average inflation rate. As a result, the cost of operating this plant could increase significantly over the next few years. Funding for the operation of the Yuma desalting plant is not included the President's FY 2009 Budget.

Would running this plant be the most effective way to meet our treaty obligations? Are there other options available? What are they, and are they being actively considered as an option to running this plant

Mr. Commissioner. There are various methods to recover or replace the saline flows that currently reach the Cienega de Santa Clara in Mexico. Reclamation is actively analyzing each of these methods through a public process. Until this analysis is complete at the end of this year, it would be premature to judge which alternative is the most effective way to meet our treaty obligations. Methods being analyzed include utilization of the Yuma Desalting Plant, system conservation, vegetation management and other methods. System conservation is a pilot program where Reclamation is paying on a short term basis, to fallow farm lands to conserve water and allow this water to remain in Lake Mead. The demonstration run of the Yuma Desalting Plant in 2007 and demonstration of system conservation in 2007-2008 are all part of this analysis.

LAKE MEAD

34. Commissioner Johnson, a recent Scripps report has found that, if climate change continues as projected, Lake Mead has a 50 percent chance of running dry by 2021 – that is, in less than 15 years. This is not a distant possibility, but an immediate danger.

Mr. Commissioner. Reclamation does not agree with the conclusions in the recent Scripps Institute of Oceanography article and notes that our own study, an Environmental Impact Statement (EIS) published in November 2007, projects only a negligible chance that either lake will be dry in the foreseeable future. The new Interim Guidelines for Lake Powell and Lake Mead is a detailed, objective plan of operational elements that will allow Reclamation to respond appropriately if the potential impacts of climate change and increased hydrologic variability occur.

What effect would this have on western water supplies, and on our treaty obligations? What, if anything, should this Committee be doing to help prepare for this future?

Mr. Commissioner. I believe Reclamation is taking the necessary steps to be responsive to the possibility of climate change impacts in the United States and is working through the International Boundary and Water Commission to address any impacts on treaty obligations. The new operational guidelines for Lake Powell and Lake Mead which were adopted in December 2007 and are in effect through 2026 implement a "robust solution" to address continued or future low water conditions, including operational elements that would enable Reclamation to respond to the impacts of climate change and increased hydrologic variability.

The Governments of the United States and Mexico under the auspices of the International Boundary and Water Commission are actively engaged in cooperative and collaborative discussions on potential future water management efforts on the lower portion of the Colorado River, including water conservation, storage and supply augmentation efforts, environmental protection and enhancement, and hydrologic studies.

As a part of the development of the new interim operating guidelines, Reclamation commissioned a team of climate experts who concluded that in order to quantify the potential impacts of climate change, information from climate models needs to be more precise and on much smaller spatial scales. There is much research activity, including some that Reclamation is funding, pushing toward that goal. Reclamation will continue these research and development programs to further its ability to analyze the potential impacts of climate change and to use that information in its water projections and operational planning.

CONTRACTING

35. Commissioner Johnson, how does the Bureau collect and use information on the performance of contractors? For instance, if a contractor performs poorly in Utah, how do you ensure that a contract review board in Arizona has access to that information and can take it into account?

Is such information sharing institutionalized, and is the use of past performance a mandatory factor in contract competition.

Mr. Commissioner. Yes, the Bureau does collect and use information on the performance of contractors.

Past performance information is collected and reported on any contract that exceeds the simplified acquisition threshold ($100,000). Upon completion of a contract Reclamation reports contractor performance observed during contract administration and enters the findings into the Contractor Performance System (http://cps.od.nih.gov/) (FAR 42.15).

Past performance information is used prior to the award of a Reclamation contract. In order for any (FAR 9.102) prospective contractor to be awarded a contract, they must be determined to be responsible. Among other factors, responsibility includes that the prospective contractor have satisfactory past performance (FAR 9.104-1(c), 9.104-3(b), and 9.105-1(c)). In addition, the Bureau may evaluate past performance for awards below the simplified acquisition threshold (FAR 13.106(a)(2) and 13.106-2(b)(3)), and with rare exception, always evaluates past performance for those awards over the simplified acquisition threshold (15.304(c)(3)(i)) and 15.305(a)(2)). BOR obtains such past performance information from the offeror's proposal, the Past Performance Information Retrieval System (PPIRS) (http://www.ppirs.gov/) (DIAPR 2003-01), and other sources.

36. Please provide for the record a list of all BOR contracts with or grants to firms or individuals for public relations purposes, including the firm or individual, the dollar amount and the purpose of the contract or grant for the period of fiscal year 2007 and the first quarter of fiscal year 2008.

Mr. Commissioner. Grants and Cooperative Agreements: Reclamation has not issued any Financial Assistance agreements for "Public Relations". Please note that Reclamation does not have authority to fund Public Relations through Financial Assistance Agreements.

Contracts: See attached spreadsheet

36. Please provide for the record a list of all BOR contracts with or grants to firms or individuals for public relations purposes, including the firm or individual, the dollar amount and the purpose of the contract or grant for the period of fiscal year 2007 and the first quarter of fiscal year 2008.

Contract Number	Type of Sole Source	Contract Type	Contractor Name	Contract Value	Description of Requirement
INR07CS200202	8(A) SOLE SOURCE	COMBINATION	CHENEGA SECURITY AND PROTECTION SERVICES LIMITED LIABILITY COMPANY	$11,418,004	SECURITY GUARD SERVICE
INR07PG810179	8(A) SOLE SOURCE	COST NO FEE	ATA SERVICES INCORPORATED	$24,599	SENIOR ENGINEER SERVICES
INR07CC200033	8(A) SOLE SOURCE	FIXED PRICE	SD CARMACK DIRTMOVING	$60,555	PROSSER CREEK DAM SOD
INR07CC240898	8(A) SOLE SOURCE	FIXED PRICE	DIAMOND D GENERAL ENGINEERING INCORPORATED	$63,856	LB PARKING LOT ASPHALT
INR07CC241193	8(A) SOLE SOURCE	FIXED PRICE	BARA INFOWARE INCORPORATED	$81,330	ADA CAMPSITES
INR07CC241194	8(A) SOLE SOURCE	FIXED PRICE	DIAMOND D GENERAL ENGINEERING INCORPORATED	$83,017	ADA RAMP
INR07CC24117	8(A) SOLE SOURCE	FIXED PRICE	DIAMOND D GENERAL ENGINEERING INCORPORATED	$86,615	PARKING LOT
INR07CC603530	8(A) SOLE SOURCE	FIXED PRICE	MEZA CONSTRUCTION COMPANY	$130,661	REPAIR FLUME CONCRETE - BIG THOMPSON RIVER ABOVE LAKE ESTES, COLORADO-BIG THOMPSON PROJECT, COLORADO
INR07CC320230	8(A) SOLE SOURCE	FIXED PRICE	VARGAS GENERAL ENGINEERING LIMITED LIABILITY COMPANY	$144,377	CONSTRUCT 1850 FEET OF FENCE AT COOK'S LAKE
INR07CC408184	8(A) SOLE SOURCE	FIXED PRICE	GTS CONSTRUCTION INCORPORATED	$169,780	FURNISH AND INSTALL METAL EQUIPMENT STORAGE BUILDING
INR07CC308103	8(A) SOLE SOURCE	FIXED PRICE	JPE INCORPORATED (3649)	$252,000	HOOVER DAM POWER HOUSE ROOF REPAIR
INR07CC200153	8(A) SOLE SOURCE	FIXED PRICE	CW CROSSER CONSTRUCTION INCORPORATED	$273,691	INSTALLATION OF PUMP AND CONTROL SYSTEM IN WELL NO. 2
INR07CP408193	8(A) SOLE SOURCE	FIXED PRICE	DLM CONTRACTING ENTERPRISES INCORPORATED	$309,012	16" NOMINAL RIPRAP
INR07CC308059	8(A) SOLE SOURCE	FIXED PRICE	BARAJAS AND ASSOCIATES INCORPORATED	$364,392	WORK TO BE PERFORMED UNDER THIS CONTRACT INCLUDES PLACEMENT OF REINFORCED CONCRETE PAVING FOR ROADWAY, INSTALLATION OF CULVERTS AND DROP INLET BOXES/CATCH BASINS, PLACEMENT OF REINFORCED CONCRETE SIDEWALK, AND PLACEMENT OF REINFORCED CONCRETE STAIRWAY WIT
INR07CC200241	8(A) SOLE SOURCE	FIXED PRICE	BULLTRACK CONSTRUCTION COMPANY	$426,880	INSTALLATION OF COMMUNICATION AND FIBER-OPTIC CABLES AT FOLSOM DAM
INR07CC200066	8(A) SOLE SOURCE	FIXED PRICE	CW CROSSER CONSTRUCTION INCORPORATED	$429,770	CONDUIT DUCT BANK INSTALLATION, CENTRAL CALIFORNIA AREA OFFICE FOLSOM CA
INR07CC408199	8(A) SOLE SOURCE	FIXED PRICE	DLM CONTRACTING ENTERPRISES INCORPORATED	$442,017	SAW CUTTING, REMOVAL AND DISPOSING OF REINFORCED CONCRETE CANAL LININGS, EXCAVATING AND STOCKPILING GRAVEL FROM GRAVEL DRAIN BLANKET. PLACING 4 INCHES OF COMPACTED NATIVE CLAY IN DRAIN PIPE TRENCH AND RECONSTRUCTING GRAVEL BLANKETS AND PIPE DRAIN. PLACI
INR07CC603590	8(A) SOLE SOURCE	FIXED PRICE	AET ENVIRONMENTAL INCORPORATED	$473,464	SANDBLAST, CLEAN, REPAIR/REPLACE, AND SEAL CONCRETE IN PLANT PROCESSING AREA AT LEADVILLE PP, FLOOR CONTAMINATED BY CHEMICAL SPILLED.
INR07CS340173	8(A) SOLE SOURCE	FIXED PRICE	HAL HAYS CONSTRUCTION INCORPORATED	$483,722	DEMOLITION
INR07CC200217	8(A) SOLE SOURCE	FIXED PRICE	DIAMOND D GENERAL ENGINEERING INCORPORATED	$499,055	MARBLE BLUFF DAM DIKE CREST AND ROAD REPAIR
INR07CC408149	8(A) SOLE SOURCE	FIXED PRICE	DLM CONTRACTING ENTERPRISES INCORPORATED	$781,807	MAIN CANAL REHABILITATION STAGE 19A
INR07CC101667	8(A) SOLE SOURCE	FIXED PRICE	LARKOR CONSTRUCTION COMPANY INCORPORATED	$866,455	8(A) DIRECT AWARD FOR CONSTRUCTION OF ACCESS ROAD TO DEER FLAT NAT. WILDLIFE REFUGE, DEER FLAT EMBANKMENTS DAMS, BOISE PROJECT - ARROWROCK DIVISION - IDAHO
INR07CC408202	8(A) SOLE SOURCE	FIXED PRICE	DLM CONTRACTING ENTERPRISES INCORPORATED	$966,043	CONCRETE REPAIR
INR07CC200111	8(A) SOLE SOURCE	FIXED PRICE	MRCI	$1,084,875	OFFICE ADDITION AND REMODEL
INR07CC811353	8(A) SOLE SOURCE	FIXED PRICE	TINAA SERVICES INCORPORATED	$1,254,841	PHYSICAL SECURITY SYSTEM
INR07CS200055	8(A) SOLE SOURCE	FIXED PRICE	ACCORD ENGINEERING INCORPORATED	$1,371,788	CAMP NINE BRIDGE REMOVAL
INR07CC200142	8(A) SOLE SOURCE	FIXED PRICE	RMA LAND CONSTRUCTION INCORPORATED	$1,593,278	THE BUREAU OF RECLAMATION, CENTRAL CALIFORNIA AREA OFFICE (CCAO) REQUIRES CONSTRUCTION OF A PARKING LOT, CONCRETE BUILDING PADS, ROAD WIDENING, MODULAR OFFICE BUILDING AND ALL APPURTENANT UTILITIES AT THE CCAO COMPLEX. ADDITIONALLY, PROFESSIONAL ENGINEER
INR07CC200208	8(A) SOLE SOURCE	FIXED PRICE	D D M LEASING COMPANY INCORPORATED	$2,350,370	PROSPECT ISLAND LEVEE REPAIR
INR07PG810175	8(A) SOLE SOURCE	FIXED PRICE	ATA SERVICES INCORPORATED	$3,500,000	TEMPORARY HELP SERVICES

35. Please provide for the record a list of all BOR contracts with or grants to firms or individuals for public relations purposes, including the firm or individual, the dollar amount and the purpose of the contract or grant for the period of fiscal year 2007 and the first quarter of fiscal year 2008.

Contract Number	Type of Sole Source	Contract Type	Contractor Name	Contract Value	Description of Requirement
INR07PG810176	8(A) SOLE SOURCE	FIXED PRICE	COLORADO NETWORK STAFFING INCORPORATED	$3,500,000	CONTRACT SUPPORT SERVICES
INR05A6308043	8(A) SOLE SOURCE	FIXED PRICE	QUALITY INVESTIGATION INCORPORATED	$73	PROVIDE TWO UNARMED SECURITY GUARDS TO OPERATE A MAGNETOMETER AND X-RAY STATION AT THE PLAZA LEVEL AT THE HOOVER DAM VISITORS CENTER ON 09/28/07.
INR05A4308043	8(A) SOLE SOURCE	FIXED PRICE	QUALITY INVESTIGATION INCORPORATED	$97	PROVIDE TWO UNARMED SECURITY GUARDS ON 11/13/2006 AT THE PLAZA LEVEL OF THE HOOVER DAM VISITOR CENTER.
INR05A5308043	8(A) SOLE SOURCE	FIXED PRICE	QUALITY INVESTIGATION INCORPORATED	$653	PROVIDE ONE UNARMED SECURITY GUARD TO ASSIST WITH PEDESTRIAN TRAFFIC CONTROL IN AND AROUND THE HOOVER DAM VISITOR CENTER.
INR07PG810077	8(A) SOLE SOURCE	FIXED PRICE	RTL NETWORKS INCORPORATED	$1,189	HP SCANJET 8350
INR05A3308043	8(A) SOLE SOURCE	FIXED PRICE	QUALITY INVESTIGATION INCORPORATED	$1,740	PROVIDE THREE UNARMED SECURITY GUARDS FOR THE PERIOD 11/10/06 THROUGH 11/12/06.
INR07PG810030	8(A) SOLE SOURCE	FIXED PRICE	EYAK TECHNOLOGY LIMITED LIABILITY COMPANY	$3,278	MAINTENANCE FOR M2500 LIBRARY 5X9XND
INR07PG430083	8(A) SOLE SOURCE	FIXED PRICE	AIW INCORPORATED (5517)	$4,500	LEASE A VIBRATOR ROLLER
INR07PG810083	8(A) SOLE SOURCE	FIXED PRICE	ATA SERVICES INCORPORATED	$5,000	TEMP SERVICES
INR07PG340134	8(A) SOLE SOURCE	FIXED PRICE	SMARTNET INCORPORATED	$5,268	3COM SUPPORT AGREEMENT
INR07PG810164	8(A) SOLE SOURCE	FIXED PRICE	FUTURE SOLUTIONS INCORPORATED	$5,384	HP COLOR LASERJET 5550HDN PRINTER
INR07PG340151	8(A) SOLE SOURCE	FIXED PRICE	TRUE POWER INCORPORATED	$5,630	PURCHASE OF 12 INCH PRESSURE RELIEF VALVE FOR YM-3
INR07PC600164	8(A) SOLE SOURCE	FIXED PRICE	COAL CREEK CONSTRUCTION	$7,290	CABLE REPAIRS
INR07PG810229	8(A) SOLE SOURCE	FIXED PRICE	STERLING COMPUTERS CORPORATION	$8,600	RAID ARRAY
INR07BC303028	8(A) SOLE SOURCE	FIXED PRICE	DIMENSIONS MEDICAL SUPPLY GROUP INCORPORATED	$9,507	KITCHEN APPLIANCES FOR BREAKROOM AT HOOVER DAM.
INV07PG810143	8(A) SOLE SOURCE	FIXED PRICE	COLUMBUS TECHNOLOGIES AND SERVICES INCORPORATED	$10,880	ADMINISTRATIVE SUPPORT
INV07PG810113	8(A) SOLE SOURCE	FIXED PRICE	ATA SERVICES INCORPORATED	$13,500	GEOTECHNICAL ENGINEERING SERVICES
INR07PG810206	8(A) SOLE SOURCE	FIXED PRICE	ATA SERVICES INCORPORATED	$16,080	CONTRACT SUPPORT SERVICES
INR07PG810205	8(A) SOLE SOURCE	FIXED PRICE	ATA SERVICES INCORPORATED	$16,080	CONTRACT SUPPORT SERVICES
INR07PG230439	8(A) SOLE SOURCE	FIXED PRICE	DYNARAM CONSTRUCTION CORPORATION	$21,765	WIRE PULL AT SHASTA DAM SWITCH YARD
INR07PG240666	8(A) SOLE SOURCE	FIXED PRICE	KT CONSULTING INCORPORATED	$23,650	FOLSOM BOLLARD MAINTENANCE
INR07PG81237	8(A) SOLE SOURCE	FIXED PRICE	GLOBAL TECHNOLOGY RESOURCES INCORPORATED	$23,684	SUPPORT FOR CITRIX NETSCALER APPLICATION SWITCH
INR07PG340179	8(A) SOLE SOURCE	FIXED PRICE	AIW INCORPORATED (5517)	$26,500	RENTAL OF EXCAVATOR AND DOZER CRAWLER
INR07PG303084	8(A) SOLE SOURCE	FIXED PRICE	ALASKA NATIVE TECHNOLOGIES LIMITED LIABILITY COMPANY	$26,693	SMARTNET MAINTENANCE RENEWAL
INR07PG210004	8(A) SOLE SOURCE	FIXED PRICE	AMERICAN BUILDING SERVICE INCORPORATED	$26,964	JANITORIAL SERVICES
INR07PG210019	8(A) SOLE SOURCE	FIXED PRICE	CANHA RUI DONALDO TEIXEIRA	$26,964	JANITORIAL SERVICES
INR07PG240165	8(A) SOLE SOURCE	FIXED PRICE	DIAMOND D GENERAL ENGINEERING INCORPORATED	$27,075	SEPTIC TANK REMOVAL & CXT RESTROOM INSTALLATION
INR07PG430086	8(A) SOLE SOURCE	FIXED PRICE	AIW INCORPORATED (5517)	$27,400	LEASE OF EXCAVATOR
INR07PC200165	8(A) SOLE SOURCE	FIXED PRICE	ERICK AMMON INCORPORATED	$28,938	DIGGING OF TEST PITS
INR07PG810070	8(A) SOLE SOURCE	FIXED PRICE	ATA SERVICES INCORPORATED	$30,960	TEMP SERVICES
INR07PG340141	8(A) SOLE SOURCE	FIXED PRICE	TRUE POWER INCORPORATED	$34,165	MISC. PIPE MATERIALS
INR07PG340158	8(A) SOLE SOURCE	FIXED PRICE	AIW INCORPORATED (5517)	$34,200	RENTAL OF GRADALL 5100 XL
INR07PG240722	8(A) SOLE SOURCE	FIXED PRICE	DIAMOND D GENERAL ENGINEERING INCORPORATED	$34,818	LB WASH RACK/MAINTENANCE BLDG ASPHALTING
INR07PG400175	8(A) SOLE SOURCE	FIXED PRICE	GLOBAL TECHNOLOGY RESOURCES INCORPORATED	$35,622	SOFTWARE MAINTENANCE
INR07PG303156	8(A) SOLE SOURCE	FIXED PRICE	TECHNICAL INNOVATIVE CONCEPTS INCORPORATED	$36,150	FURNISH AND INSTALL FIBER OPTIC COMMUNICATION CABLE
INR07PG810103	8(A) SOLE SOURCE	FIXED PRICE	ATA SERVICES INCORPORATED	$38,770	TEMP SERVICES
INR07PG321017	8(A) SOLE SOURCE	FIXED PRICE	VARGAS GENERAL ENGINEERING LIMITED LIABILITY COMPANY	$40,466	REPAIR AND INSTALL ROAD AND FENCE
INR07PG210044	8(A) SOLE SOURCE	FIXED PRICE	DYNARAM CONSTRUCTION CORPORATION	$45,470	INSTALL FENCE GATES WITH OPERATING SYSTEMS
INR07PC107250	8(A) SOLE SOURCE	FIXED PRICE	EXTREME COATINGS INCORPORATED	$46,000	METAL STRUCTURES PAINTING AT COLUMBIA RIVER PUMPING PLANT, UMATILLA COUNTY, OR
INR07PG810260	8(A) SOLE SOURCE	FIXED PRICE	WESTWIND COMPUTER PRODUCTS INCORPORATED	$47,600	WEBSPHERE LICENSES
INR07PG240759	8(A) SOLE SOURCE	FIXED PRICE	DIAMOND D GENERAL ENGINEERING INCORPORATED	$54,212	LB WASH RACK/MAINTENANCE BLDG ASPHALTING
INR07PG430109	8(A) SOLE SOURCE	FIXED PRICE	AIW INCORPORATED (5517)	$55,000	LEASE OF DUMP TRUCK
INR07PG340163	8(A) SOLE SOURCE	FIXED PRICE	ARVISO ENGINEERING INCORPORATED	$55,065	LAGUNA RESTORATION PROJECT GEOTECHNICAL INVESTIGATION REPORT.

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Contract Number	Type of Sole Source	Contract Type	Contractor Name	Contract Value	Description of Requirement
INR07PG240898	8(A) SOLE SOURCE	FIXED PRICE	DIAMOND D GENERAL ENGINEERING INCORPORATED	$63,856	LB WASH RACK/MAINTENANCE BLDG ASPHALTING
INR07PG241192	8(A) SOLE SOURCE	FIXED PRICE	DIAMOND D GENERAL ENGINEERING INCORPORATED	$64,350	LB DEBRIS CLEANUP
INR07PG340098	8(A) SOLE SOURCE	FIXED PRICE	TRUE POWER INCORPORATED	$75,722	MISCELLANEOUS CONSTRUCTION/PIPE MATERIALS FOR IMPERIAL PONDS PROJECT
INR07PG170713	8(A) SOLE SOURCE	FIXED PRICE	J T SYSTEMS INCORPORATED	$77,207	DUST COLLECTOR
INR07PG600097	8(A) SOLE SOURCE	FIXED PRICE	DYNANET CORPORATION	$85,166	DAKOTA AREA AND FIELD OFFICES NEW PHONE SYSTEM
INR07PG241191	8(A) SOLE SOURCE	FIXED PRICE	BARA INFOWARE INCORPORATED	$87,771	INSTALLATION OF RESTROOM FIXTURES
INR07PG210038	8(A) SOLE SOURCE	FIXED PRICE	EXPLORE GENERAL INCORPORATED	$88,515	CONSTRUCT STEEL HARDENED DOORS
INV07PG810137	8(A) SOLE SOURCE	FIXED PRICE	ATA SERVICES INCORPORATED	$94,970	RESIDENT ENGINEER SERVICES
INR07PG210050	8(A) SOLE SOURCE	FIXED PRICE	DYNARAM CONSTRUCTION CORPORATION	$96,000	CONSTRUCTION OF SALINITY STATION
INR07PG810139	8(A) SOLE SOURCE	FIXED PRICE	DAKOTA CONSULTING INCORPORATED	$122,400	ACTIVE DIRECTORY MIGRATION
INR07PG810155	8(A) SOLE SOURCE	FIXED PRICE	BEACON ASSOCIATES INCORPORATED	$131,674	COMPETITIVE SOURCING STUDY AT TREASURE LAKE
INR07PG303147	8(A) SOLE SOURCE	FIXED PRICE	CNI ADMINISTRATION SERVICES LIMITED LIABILITY COMPANY	$133,395	FURNISH AND INSTALL FIBER OPTIC COMMUNICATION CABLE.
INR07PG810015	8(A) SOLE SOURCE	FIXED PRICE	GLOBAL TECHNOLOGY RESOURCES INCORPORATED	$133,397	NETSCALER EQUIPMENT AND GOLD SUPPORT.
INR07PG200167	8(A) SOLE SOURCE	FIXED PRICE	MODCOM	$150,000	CONSULTING
INR07PG303228	8(A) SOLE SOURCE	FIXED PRICE	ALASKA NATIVE TECHNOLOGIES LIMITED LIABILITY COMPANY	$154,947	SMARTNET MAINTENANCE
INR07CC603630	8(A) SOLE SOURCE	FIXED PRICE	COAL CREEK CONSTRUCTION	$174,427	LAKE AUDUBON WETLAND MITIGATION REPAIR OF BATTON MARSH, MARSH #1 AND MARSH #2, GARRISON DIVERSION UNIT - GARRISON DIVISION, PICK-SLOAN MISSOURI BASIN PROGRAM, NORTH DAKOTA
INR07PG810092	8(A) SOLE SOURCE	FIXED PRICE	ATA SERVICES INCORPORATED	$184,382	CONTRACT SPECIALIST SERVICES
INR06PG340170	8(A) SOLE SOURCE	FIXED PRICE	TRUE POWER INCORPORATED	$266,960	PURCHASE OF PUMP/MOTOR AND INTAKE HYDROBURST SYSTEM FOR IMPERIAL PONDS PROJECT.
INR07PG810065	8(A) SOLE SOURCE	FIXED PRICE	GLOBAL TECHNOLOGY RESOURCES INCORPORATED	$269,343	LAN EQUIPMENT
INR07PG810181	8(A) SOLE SOURCE	FIXED PRICE AWARD FEE	STERLING COMPUTERS CORPORATION	$4,700	60" FLAT PANEL TV
INR07CS8111329	8(A) SOLE SOURCE	LABOR HOURS	DAKOTA CONSULTING INCORPORATED	$41,480	IT CONFIGURATION MANAGER
INR07PG810314	8(A) SOLE SOURCE	LABOR HOURS	DOCONNECT SYSTEMS INCORPORATED	$6,000	PROFESSIONAL SERVICES
INR07PG810196	8(A) SOLE SOURCE	LABOR HOURS	DAKOTA CONSULTING INCORPORATED	$24,000	IT PROPERTY ASSESSMENT SURVEY
INR06CS811195	8(A) SOLE SOURCE	TO BE DETERMINED FOR EACH ORDER)	FUTURE SOLUTIONS INCORPORATED	$0	PAPER AND OFFICE SUPPLY
INR06CS811269	8(A) SOLE SOURCE	TO BE DETERMINED FOR EACH ORDER)	TKC INTEGRATION SERVICES LIMITED LIABILITY COMPANY	$511,115	DELIVERY ORDERS OR TASK ORDERS SUBJECT TO TERMS AND CONDITIONS OF CONTRACT.
INR07CS340107	8(A) SOLE SOURCE	OTHER	RAMCOR SERVICES GROUP INCORPORATED	$811,968	WAREHOUSE SERVICES
INR07PG140134	8(A) SOLE SOURCE	TIME AND MATERIALS	PERFORMANCE SYSTEMS INCORPORATED (4184)	$100,000	PER STATEMENT OF WORK CLEAN-UP DUMPSITES IN THE FOLLOWING PRIORITY ORDER: 1. SITE #3: T. 8 S., R. 25 E., SECTION 34 2. SITE #4: T. 9 S., R. 24 E., SECTION 19, AND T. 9 S., R. 25 E., SECTION 19, LOTS 7 & 8 3. SITE #5: T. 10 S., R. 24 E., SECTION 22, LO
INR07PG810018	AUTHORIZED BY STATUTE	FIXED PRICE	AMERICAN SOC FOR TSTG AND MTLS	$6,300	
INR07PB810142	AUTHORIZED BY STATUTE	FIXED PRICE	ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE INCORPORATED	$0	CONTRACT SERVICES
INR07CC603410	AUTHORIZED BY STATUTE	FIXED PRICE	LEI COMPANIES INCORPORATED	$363,459	AUTOMATIC SECURITY GATE INSTALLATION, ESTES POWERPLANT, MARYS LAKE POWERPLANT, EASTERN COLORADO AREA WAREHOUSE, COLORADO-BIG THOMPSON PROJECT, COLORADO.
INR07CC340161	AUTHORIZED BY STATUTE	FIXED PRICE	AAK DE LOS SANTOS CONSTRUCTION	$1,058,041	MODE III PROJECT, YUMA AZ.

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INR07CA810849	AUTHORIZED BY STATUTE	FIXED PRICE	GEOCAL, INC.	$0	A&E SERVICES - THE IDIQ CONTRACT NUMBER WAS MODIFIED DUE TO THE ORIGINAL IDIQ NO. 03CA810849 CONTAINED AN INCORRECT DUNS NUMBER. SEVERAL TASK ORDERS WERE ISSUED UNDER THE INCORRECT DUNS AND THE CONTRACTING OFFICER AT THAT TIME DID NOT CORRECT THE PROBLEM
INR07PE810127	AUTHORIZED BY STATUTE	FIXED PRICE	DIEBOLD ACTCOM SECURITY SYSTEMS INCORPORATED	$8,307	INTRUSION DETECTION SYSTEM
INR07PG240109	AUTHORIZED BY STATUTE	FIXED PRICE	HASLER INCORPORATED	$4,200	CCAO POSTAGE
INR07PG1U0160	AUTHORIZED BY STATUTE	FIXED PRICE	ROUNDTABLE ASSOCIATES	$4,950	FACILITATION FOR COURT ORDERED ACQUAVELLA CASE
INR07PG1U0530	AUTHORIZED BY STATUTE	FIXED PRICE	PACIFICORP	$5,032	FACILITY STUDY OF BURBANK PUMP SITE
INR07PG810022	AUTHORIZED BY STATUTE	FIXED PRICE	GE FANUC AUTOMATION CORPORATION	$8,322	GLOBALCARE-IFIX COMPLETE SOFTWARE MAINTENANCE RENEWAL.
INR07PG230406	AUTHORIZED BY STATUTE	FIXED PRICE	WASTE MANAGEMENT INCORPORATED (6154)	$18,500	TRASH/GARBAGE COLLECTION FOR NCAO
INR07PG4N0030	AUTHORIZED BY STATUTE	FIXED PRICE	STOVEN CONSTRUCTION INCORPORATED	$18,720	MODIFICATION - INSTALL TWO DOORS.
INR08PG340021	AUTHORIZED BY STATUTE	FIXED PRICE	DIONEX CORPORATION	$18,817	MAINTENANCE SERVICES FOR THE GOVERNMENT-OWNED ION CHROMATOGRAPH.
INR07PG340193	AUTHORIZED BY STATUTE	FIXED PRICE	MAX FUSION INCORPORATED	$27,403	PURCHASE OF HDPE 4" PIPE, RESERVED OR 8(A) PROGRAM.
INR07PG241395	AUTHORIZED BY STATUTE	FIXED PRICE	CALAVERAS COUNTY OF	$3,698	UNSECURED WASTE FEE
INR07PG240281	AUTHORIZED BY STATUTE	FIXED PRICE	STATE WATER RESOURCES CONTROL BOARD	$3,760	WASTE WATER DISCHARGES
INR07PG200106	AUTHORIZED BY STATUTE	FIXED PRICE	RENO NEWSPAPERS INCORPORATED	$4,400	LEGAL PUBLICATIONS FOR TROA
INR07BC200107	AUTHORIZED BY STATUTE	FIXED PRICE	HENLEY PUBLISHING CORPORATION	$5,514	LEGAL PUBLICATIONS FOR TROA
INR07PG340128	AUTHORIZED BY STATUTE	FIXED PRICE	AIW INCORPORATED (5517)	$8,400	TRACKHOE RENTAL
INR07PG240827	AUTHORIZED BY STATUTE	FIXED PRICE	TUOLUMNE COUNTY OF	$15,020	SECURITY PATROL
INR07PA340177	AUTHORIZED BY STATUTE	FIXED PRICE	DEFENSE LOGISTICS AGENCY	$277,846	PURCHASE OF CATERPILLAR BULLDOZER/CRAWLER.
INR07PG200262	AUTHORIZED BY STATUTE	TIME AND MATERIALS	SUSTAINABLE EARTH INITIATIVE	$43,973	ENVIRONMENTAL MANAGEMENT SYSTEM
INR06CS204162	DIRECTED TO JWOD	FIXED PRICE	COUNTY OF SHASTA	$402,576	GROUNDS SERVICES FOR SHASTA AREA OFFICE
INR07CS200149	DIRECTED TO JWOD	FIXED PRICE	COUNTY OF SHASTA	$2,092,804	JANITORIAL SERVICES FOR THE NORTHERN CALIFORNIA AREA OFFICE
INR07BC6C6046	DIRECTED TO JWOD	FIXED PRICE	JENKS INCORPORATED	$22,382	SCISSOR LIFT
INR07PE4N0027	DIRECTED TO JWOD	FIXED PRICE	PRESBYTERIAN MEDICAL SHIELD SERVICES	$12,200	JWOD CONTRACT FOR JANITORIAL SERVICES
INR07PG230418	DIRECTED TO JWOD	FIXED PRICE	COUNTY OF SHASTA	$64,848	JANITORIAL SERVICES
INR07PG230437	FOLLOW-ON CONTRACT	FIXED PRICE	HYDROSCIENTIFIC WEST	$19,630	SONTEK METERS
INR07PG230441	FOLLOW-ON CONTRACT	FIXED PRICE	TELEDYNE ISCO INCORPORATED	$17,055	METER PARTS FOR AN EXISTING METER SYSTEM
INR07PB240251	FOLLOW-ON CONTRACT	FIXED PRICE	SQUARE D COMPANY	$0	NEW BPA - SQUARE D
INR07PG603650	FOLLOW-ON CONTRACT	FIXED PRICE	LGS INNOVATIONS LIMITED LIABILITY COMPANY	$120,105	REPLACE THE BROKEN ARM ON THE ANTENNA LOCATED AT CASPER MOUNTAIN WEST TOWER.
INR07PG600069	FOLLOW-ON CONTRACT	FIXED PRICE	SCIPAR INCORPORATED	$414,862	SCADA REPLACEMENT AND UPGRADE AT MCCOOK CONTROL CENTER, NEBRASKA
INR07PD6C0003	FOLLOW-ON CONTRACT	FIXED PRICE	UNITED PARCEL SERVICE INCORPORATED (OH) (2075)	$2,500	COURIERS
INR07PD6C0004	FOLLOW-ON CONTRACT	FIXED PRICE	FEDERAL EXPRESS CORPORATION	$2,500	AIR FREIGHT TRANSPORTATION
INR07PE6C0031	FOLLOW-ON CONTRACT	FIXED PRICE	BEST BUY GOVERNMENT LIMITED LIABILITY COMPANY	$2,944	CONVERTER
INR07PG1U0060	FOLLOW-ON CONTRACT	FIXED PRICE	QUALITY BUSINESS SYSTEMS INCORPORATED	$3,560	COPIER MAINTENANCE
INR07PG107710	FOLLOW-ON CONTRACT	FIXED PRICE	ISS WONDERWARE	$4,465	TECHNICAL SOFTWARE SUPPORT FOR THE EXISTING SOFTWARE FOR SCADA.

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Contract Number	Type of Sole Source	Contract Type	Contractor Name	Contract Value	Description of Requirement
INR07868160016	FOLLOW-ON CONTRACT	FIXED PRICE	ATA SERVICES INCORPORATED	$5,068	
INR07PG340195	FOLLOW-ON CONTRACT	FIXED PRICE	ENERGY PRO OSC LIMITED LIABILITY COMPANY	$5,083	REPAIRS TO HEAVY EQUIPMENT RENTALS.
INR07BC6C0013	FOLLOW-ON CONTRACT	FIXED PRICE	ROCKWELL AUTOMATION INCORPORATED	$5,088	COMPUTER STORAGE
INR07PG6C6043	FOLLOW-ON CONTRACT	FIXED PRICE	KONE INCORPORATED (7423)	$5,128	
INR07PE6C0048	FOLLOW-ON CONTRACT	FIXED PRICE	HILL ELECTRIC SUPPLY COMPANY INCORPORATED	$5,460	BATTERIES
INR07PE6C0030	FOLLOW-ON CONTRACT	FIXED PRICE	MILLENNIUM SOLUTIONS INCORPORATED (8487)	$5,948	SWITCH, PVC, HUBS, PLUGS, ADAPTERS
INR07PG230430	FOLLOW-ON CONTRACT	FIXED PRICE	PERKINELMER LAS INCORPORATED	$7,368	MAINTENANCE AGREEMENT FOR GOVERNMENT OWNED PERKINELMER LAS AUTOSAMPLER
INR07PE6C0032	FOLLOW-ON CONTRACT	FIXED PRICE	LTI DATA COMM INCORPORATED	$9,173	DATA CARDS
INR06PG230419	FOLLOW-ON CONTRACT	FIXED PRICE	HASLER INCORPORATED	$9,500	POSTAGE FOR MAIL METERING MACHINES FOR THE NCAO OFFICES
INR07PE6C0046	FOLLOW-ON CONTRACT	FIXED PRICE	POLARIS SALES INCORPORATED	$11,724	UTILITY VEHICLE
INR07PE6C0029	FOLLOW-ON CONTRACT	FIXED PRICE	JOPPA MAINTENANCE COMPANY INCORPORATED	$12,884	VEGETATION CONTROL
INR07PE6C0038	FOLLOW-ON CONTRACT	FIXED PRICE	INGERSOLL RAND COMPANY	$14,594	COMPRESSOR
INR07PG6C0016	FOLLOW-ON CONTRACT	FIXED PRICE	EXPRESS PERSONEL	$25,000	TEMPORARY SERVICES
INR07PE6C0047	FOLLOW-ON CONTRACT	FIXED PRICE	SUTRON CORPORATION	$39,281	RECORDERS AND SPARE PARTS
INR07PG430114	FOLLOW-ON CONTRACT	FIXED PRICE	ASIR LIMITED LIABILITY COMPANY	$41,630	DATA COLLECTION ON RIO GRANDE SILVERY MINNOW MUSEUM SPECIMENS
INR07PG600012	FOLLOW-ON CONTRACT	FIXED PRICE	CONTEMPORARY CYBERNETICS GROUP INCORPORATED	$4,380	IT MAINTENANCE AGREEMENT FOR FY2007
INR07BC60AB89	FOLLOW-ON CONTRACT	FIXED PRICE	CONTEMPORARY CYBERNETICS GROUP INCORPORATED	$4,380	FY2007 IT MAINTENANCE SERVICES FOR CYBERNETICS SYSTEMS
INR07BC430049	FOLLOW-ON CONTRACT	FIXED PRICE	SPECTRA LOGIC CORPORATION	$4,667	SERVICE CONTRACT FOR TAPE BACKUP
INR07PG1U0280	FOLLOW-ON CONTRACT	FIXED PRICE	YAKIMA TIETON IRRIGATION DISTRICT	$5,400	ANNUAL MAINTENANCE OS IRRIGATION CANAL
INR07PG1U0290	FOLLOW-ON CONTRACT	FIXED PRICE	OLNEY DANIEL H JR	$5,852	MAINTENANCE OF FISH SCREENING DEVICE
INR07PG120020	FOLLOW-ON CONTRACT	FIXED PRICE	CENTURYTEL OF MONTANA INCORPORATED	$6,627	
INRBC464517	FOLLOW-ON CONTRACT	FIXED PRICE	MCI COMMUNICATIONS SERVICES INCORPORATED	$7,920	DATA COMMUNICATIONS LINE (T1)
INR07BC430105	FOLLOW-ON CONTRACT	FIXED PRICE	INTERNATIONAL BUSINESS MACHINES CORPORATION	$9,767	IBM SERVER ORDERED OF NBC CONTRACT NBC050006 THAT IS NOT IN THE FPDS SYSTEM FOR SOME REASON
INR07PG600109	FOLLOW-ON CONTRACT	FIXED PRICE	INFINITYOS INTERNATIONAL INCORPORATED	$14,267	PROFICIENT OPC DATA ACQUISITION DRIVER SOFTWARE FOR THE SCADA SYSTEM PROJECT IN WYOMING, INCLUDING ANNUAL MAINTENANCE
INR07PG107670	FOLLOW-ON CONTRACT	FIXED PRICE	RAVEN RESEARCH WEST	$18,200	PER STATEMENT OF WORK, PROVIDE LABOR AND MATERIALS TO CONTINUE TO MONITOR AND SURVEY SENSITIVE SPECIES AT PRINEVILLE RESERVOIR AND WICKUP RESERVOIR.
INR07PG600149	FOLLOW-ON CONTRACT	FIXED PRICE	SOUTH DAKOTA STATE UNIVERSITY	$76,866	SERVICE TO PROVIDE WATER QUALITY STUDY AT MNI WICONI WATER TREATMENT PLANT, PIERRE - SOUTH DAKOTA
INR07PG600139	FOLLOW-ON CONTRACT	FIXED PRICE	M S N COMMUNICATIONS INCORPORATED	$179,562	GE EQUIPMENT MULTIPLEXER AND OTHER MATERIALS FOR THE MICROWAVE SYSTEM IN LOVELAND, CO.
INR07PG140102	FOLLOW-ON CONTRACT	FIXED PRICE	TETON COMMUNICATIONS INCORPORATED	$435	LEASE OF SPACE- AREA OFFICE O&M COMMUNICATIONS EQUIPMENT IS LOCATED AT THE KELLY MOUNTAIN COMMUNICATION SITE FOR THE PERIOD OF 10/01/2006 - 9/30/2007. MAINTENANCE AND BATTERY SYSTEMS
INR07PG810062	FOLLOW-ON CONTRACT	FIXED PRICE	SCHROEDER T R	$960	DRAWINGS REVISIONS
INR07A6322011	FOLLOW-ON CONTRACT	FIXED PRICE	PAUL MARSH (8479)	$1,337	DELIVERY ORDER UNDER 07PG322011 CATTAIL CONTROL AT SAN PEDRO PONDS

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INR07BC60002	FOLLOW-ON CONTRACT	FIXED PRICE	LANDS END INCORPORATED	$2,112	2007 SAFETY AWARD GPRO CLOTHING (COATS)
INR07PG140100	FOLLOW-ON CONTRACT	FIXED PRICE	ADMINISTRATION IDAHO DEPARTMENT OF	$3,251	THIS CONFIRMATION ORDER IS SUBJECT THAT THE CERTAIN LEASE AGREEMENT DATED MAY 1,1997 AND RENEWED SEVERAL TIMES THEREAFTER, BETWEEN THE STATE OF IDAHO AND THE BUREAU OF RECLAMATION FOR MICROWAVE CIRCUITS TERMINATING AT SHAFER BUTTE, ALBION BUTTE, AND AT IO
INR07A5322011	FOLLOW-ON CONTRACT	FIXED PRICE	PAUL MARSH (8479)	$3,617	DELIVERY ORDER UNDER 07PG322011 VERDE RIVER ROUNDTAIL CHUB SAMPLING
INR07BC430027	FOLLOW-ON CONTRACT	FIXED PRICE	VERIZON FEDERAL INCORPORATED	$4,500	CELL SERVICE
INR07PG230433	FOLLOW-ON CONTRACT	FIXED PRICE	AMIRIX SYSTEMS INCORPORATED	$6,575	ACOUSTIC RECEIVER
INR07PG810271	FOLLOW-ON CONTRACT	FIXED PRICE	FLIR SYSTEMS INCORPORATED (8501)	$15,650	LENS, SOFTWARE FOR CAMERA
INR07PG200209	FOLLOW-ON CONTRACT	FIXED PRICE	CD DATA	$17,821	RENEWAL OF PARCELQUEST ANNUAL DATA SUBSCRIPTION SERVICE WHICH ALSO INCLUDES THE ON-LINE SUBSCRIPTION SERVICE. (COUNTIES IN CALIFORNIA).
INR07PG810318	FOLLOW-ON CONTRACT	FIXED PRICE	PINNACLE LEARNING LIMITED LIABILITY COMPANY	$22,500	CUSTOMER SERVICE
INR07PG170557	FOLLOW-ON CONTRACT	FIXED PRICE	PERFORMANCE CONSULTING INTERNATIONAL INCORPORATED	$29,580	TEAR DOWN, CLEAN UP AND REASSEMBLE GEAR BOX FOR 350 TON MORGAN CRANE
INR07SQ140145	FOLLOW-ON CONTRACT	FIXED PRICE	ALBERTSON COLLEGE OF IDAHO INCORPORATED	$31,635	AS A FOLLOW ON CONTRACT, PROVIDE LABOR AND MATERIALS TO SORT AND IDENTIFY ALL BENTHIC MACROINVERTEBRATES FROM 333 SAMPLES COLLECTED IN 2006 AND 2007 CURRENTLY DEPOSITED AT THE ORMA J. SMITH MUSEUM OF NATURAL HISTORY
INR07PK600105	FOLLOW-ON CONTRACT	FIXED PRICE	ROCKWELL AUTOMATION INCORPORATED	$40,641	TECHSUPPORT SERVICES FOR THE ALLEN BRADLEY SOFTWARE AND ROCKWELL COMPONENTS FOR THE SCADA SYSTEM - FOR THE PERIOD 9/28/2007 THROUGH 9/28/2008. ANNUAL MAINTENANCE
INR07A1328026	FOLLOW-ON CONTRACT	FIXED PRICE	AERO METRIC INCORPORATED	$40,942	AERIAL WORK
INR07PG810102	FOLLOW-ON CONTRACT	FIXED PRICE	QUEST STRUCTURES (0125)	$41,169	FOLSOM DAM CONSULTANT REVIEW BOARD
INR07PE810247	FOLLOW-ON CONTRACT	FIXED PRICE	MERLIN INTERNATIONAL INCORPORATED	$52,651	BRIGHTMAIL
INR07PG108000	FOLLOW-ON CONTRACT	FIXED PRICE	PLATO INCORPORATED (6390)	$87,675	WEB BASED PLATO LEARNING PROGRAM PACKAGE INCLUDE: 99609585NIWI - POST SEC SOL 2 GED 30 EA @ $ 626.67 99609252NIWI - US GED TESTS ONLY PH PWLN 1 EA @ $ 2,000.00 99600760 2 - PROF DEV TRAINING EXP 1 YR 2 EA @ $ 1500.00 80010152L - ROSETTA
INR07PE110066	FOLLOW-ON CONTRACT	FIXED PRICE	C X T INCORPORATED	$88,685	TWO ROCKY MT. TOILET BUILDINGS FOR DONNELLY CITY PARK CAMPGROUND AND CROWN POINT CAMPGROUND. ALSO, ONE TIOGA SPECIAL TOILET BUILDING FOR CURLEW CAMPGROUND, NW SIDE OF LAKE CASCADE.
INR07PG810134	FOLLOW-ON CONTRACT	FIXED PRICE	GEO SLOPE INTERNATIONAL LIMITED	$4,530	
INR07BC620032	FOLLOW-ON CONTRACT	FIXED PRICE	GENERAL ELECTRIC COMPANY (9340)	$5,000	MONITORING SOFTWARE FOR GE RELAYS
INR07PG108200	FOLLOW-ON CONTRACT	FIXED PRICE	KITSAP COUNTY OF	$14,447	ACQUISITION OF LIDAR TERRAIN DATA AND DIGITAL ORTHOIMAGERY FOR THE SUMPTER VALLEY REACH OF THE POWDER RIVER, APPROXIMATELY NINE MILES IN LENGTH, IMMEDIATELY ABOVE THE INLET TO PHILLIPS RESERVOIR, BAKER COUNTY, OR.
INR07PG810152	FOLLOW-ON CONTRACT	FIXED PRICE AWARD FEE	ATA SERVICES INCORPORATED	$23,876	
INR07PE810159	FOLLOW-ON CONTRACT	FIXED PRICE WITH ECONOMIC PRICE ADJUSTMENT	CATAPULT TECHNOLOGY LIMITED	$137,395	FTE SYSTEMS/NETWORK ADMINISTRATOR

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INR07A2322011	FOLLOW-ON CONTRACT	OTHER	PAUL MARSH (8479)	$1,941	FISHERY ASSISTANCE IDIQ 07PG322011 TASK ORDER 07A2322011 - SAMPLING O'DONNELL CREEK
INR07A1322011	FOLLOW-ON CONTRACT	OTHER	PAUL MARSH (8479)	$1,970	FISHERY ASSISTANCE IDIQ - 07PG322011 TASK ORDER 07A1322011 - SAMPLING LOWER VERDE RIVER
INR07PG230814	FOLLOW-ON CONTRACT	TIME AND MATERIALS	DATACORE TECHNOLOGY INCORPORATED	$6,750	SOFTWARE UPDATE
INR07PG104700	HUBZONE SOLE SOURCE	FIXED PRICE	K AND N ELECTRIC MOTORS INCORPORATED	$38,225	SERVICE AND REPAIR G-3 EXCITER FROM THE HUNGRY HORSE DAM, FLATHEAD COUNTY, MONTANA
INR07PG200054	MICRO PURCHASE THRESHOLD	FIXED PRICE	CALIFORNIA SURVEYING AND DRAFTING SUPPLY INCORPORATED	$675	PRINTER MAINTENANCE
INR07PG200069	MICRO PURCHASE THRESHOLD	FIXED PRICE	NEOPOST INCORPORATED	$100	POSTAGE METER RATE CHIP
INR07PG200151	MICRO PURCHASE THRESHOLD	FIXED PRICE	CONTECH CONSTRUCTION PRODUCTS INCORPORATED	$987	CAD DRAWINGS
INR07PG260010	MICRO PURCHASE THRESHOLD	FIXED PRICE	ALSCO INCORPORATED (2999)	$1,355	FLAME RESISTANT CLOTHING RENTAL.
INR07BC6A0117	MICRO PURCHASE THRESHOLD	FIXED PRICE	ENERGY EQUIPMENT AND SUPPLY INCORPORATED	$2,575	GL-PARTS & LABOR REPAIR AIR COMP #2
INR07PG400095	MICRO PURCHASE THRESHOLD	FIXED PRICE	CITRIX SYSTEMS INCORPORATED	$2,950	ADVANTAGE SUBSCRIPTION
INR07PG260018	MICRO PURCHASE THRESHOLD	FIXED PRICE	WASTE MANAGEMENT OF TEXAS INCORPORATED	$252	SOLID WASTE COLLECTION SERVICE.
INR07PG260013	MICRO PURCHASE THRESHOLD	FIXED PRICE	RED ROCK SPRING WATER INCORPORATED	$257	BOTTLED WATER
INR07PG260012	MICRO PURCHASE THRESHOLD	FIXED PRICE	COMMERCIAL TELEPHONE EXCHANGE INCORPORATED	$477	TELEPHONE ANSWERING SERVICE
INR07PG200093	MICRO PURCHASE THRESHOLD	FIXED PRICE	METROCALL INCORPORATED (9104)	$646	PAGER SERVICE FOR LBAO OFFICE
INR07PG260003	MICRO PURCHASE THRESHOLD	FIXED PRICE	JOHN N MCCOMBS	$752	NEWSPAPER CLIPPING SERVICE
INR07PG200019	MICRO PURCHASE THRESHOLD	FIXED PRICE	HASLER INCORPORATED	$888	POSTAGE METER RENTAL FOR 2007
INR08PG260003	MICRO PURCHASE THRESHOLD	FIXED PRICE	HIGH SIERRA BUSINESS SYSTEMS INCORPORATED	$1,085	COPIER MAINTENANCE AGREEMENT.
INR07PG200018	MICRO PURCHASE THRESHOLD	FIXED PRICE	INTERNATIONAL MAILING EQUIPMENT INCORPORATED	$1,485	ANNUAL MAINTENANCE FOR WHISPER JET MAILING MACHINE
INR07PG260001	MICRO PURCHASE THRESHOLD	FIXED PRICE	NEOPOST INCORPORATED	$1,500	NEOPOST POSTAGE METER RENTAL
INR07PG431019	MICRO PURCHASE THRESHOLD	FIXED PRICE	VALLEY LOCK AND SECURITY INCORPORATED	$1,812	FIRE & BURGLAR ALARM MONITORING
INR07PG260017	MICRO PURCHASE THRESHOLD	FIXED PRICE	DJS CLEANING	$1,900	YARD MAINTENANCE AND WEED CONTROL!
INR06BC200060	MICRO PURCHASE THRESHOLD	FIXED PRICE	COMMUNICATION EXCELLENCE	$1,917	MEDIATION SERVICES FOR KLAMATH BASIN AREA OFFICE
INR08PG260002	MICRO PURCHASE THRESHOLD	FIXED PRICE	DJS CLEANING	$2,880	JANITORIAL SERVICES FOR FALLON FILED OFFICE
INR07PG321021	MOBILIZATION, ESSENTIAL R&D	FIXED PRICE	PROFESSIONAL INVESTIGATIVE ENGINEERS INCORPORATED	$14,000	REVIEW FOR POTIENTAL CLAIM ON HVAC UNIT.
INR07BC200139	ONLY ONE SOURCE - OTHER	FIXED PRICE	GRANT SYSTEMS ENGINEERING INCORPORATED	$8,120	
INR07PE810074	ONLY ONE SOURCE - OTHER	FIXED PRICE	SPACESAVER STORAGE SYSTEMS INCORPORATED	$11,279	
INR07PG810160	ONLY ONE SOURCE - OTHER	FIXED PRICE	SEPARATION SYSTEMS TECHNOLOGY	$19,993	
INR07PG4N0045	ONLY ONE SOURCE - OTHER	FIXED PRICE	ANIXTER INCORPORATED	$23,169	FIBEROPTIC CABLE IN DUCT -A-LP
INR07CS101662	ONLY ONE SOURCE - OTHER	COST NO FEE	FISH AND GAME IDAHO DEPT OF (0952)	$925,000	MANAGEMENT OF THE TETON MITIGATION AREAS CONSISTING OF THE TEX CREEK AND CARTIER SLOUGH WILDLIFE MANAGEMENT AREAS IN EASTERN IDAHO.
INR07PB301000	ONLY ONE SOURCE - OTHER	FIXED PRICE	CITY OF BOULDER CITY (4978)	$0	BPA SET-UP
INR08PB301001	ONLY ONE SOURCE - OTHER	FIXED PRICE	PURITY LIMITED LIABILITY COMPANY	$0	DELIVERY OF BOTTLED WATER
INR07PB240027	ONLY ONE SOURCE - OTHER	FIXED PRICE	TIDY TECH (6209)	$0	JANITORIAL MATERIALS/SUPPLIES - NMPP
INR07PB240007	ONLY ONE SOURCE - OTHER	FIXED PRICE	TIDY TECH (6209)	$0	JANITORIAL MATERIALS/SUPPLIES - NMRC

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Contract Number	Type of Sole Source	Contract Type	Contractor Name	Contract Value	Description of Requirement
INR07PB240249	ONLY ONE SOURCE - OTHER	FIXED PRICE	CONSOLIDATED ELECTRICAL DISTRIBUTORS INCORPORATED (9191)	$0	ELECTRICAL MATERIALS/SUPPLIES
INR08PB301000	ONLY ONE SOURCE - OTHER	FIXED PRICE	PURITY LIMITED LIABILITY COMPANY	$0	DELIVERY OF BOTTLED WATER
INR07PB240017	ONLY ONE SOURCE - OTHER	FIXED PRICE	FOOTHILL SANITARY	$0	SEPTIC TANK CLEANING
INR07PG810173	ONLY ONE SOURCE - OTHER	FIXED PRICE	CRYSTALLIZATION TECHNOLOGY INCORPORATED	$19,500	VTE CONSULTING SERVICES FOR DESALINAZATION PROJECT
INR07CS200080	ONLY ONE SOURCE - OTHER	FIXED PRICE	WATER RESOURCES OREGON DEPARTMENT OF	$200,657	TECHNICAL ASSISTANCE IN ADMINISTERING THE KBOA PILOT WATER BANKING PROGRAM
INR07CA811324	ONLY ONE SOURCE - OTHER	FIXED PRICE	HKM ENGINEERING INCORPORATED	$0	BIA IRRIGATION CONDITION ASSESSMENTS
INR07CS101663	ONLY ONE SOURCE - OTHER	FIXED PRICE	UNIVERSITY OF COLORADO (0555) 13747	$0	SUPPORT OF RIVERWARE AND HDB DATABASE SOFTWARE FOR RIVER MODEL DEVELOPMENT, UPPER COLUMBIA AREA OFFICE, WASHINGTON (IDIQ CONTRACT, BASE YEAR 8/18/2007 - 7/31/2008 + 4 OPTION PERIODS)
INR07CK101627	ONLY ONE SOURCE - OTHER	FIXED PRICE	CASCADIA CONSERVATION DISTRICT	$740,000	ADVISORY AND ASSISTANCE SERVICES FOR THE ENTIAT SUBBASIN IN THE STATE OF WASHINGTON TO SUPPORT RECLAMATION'S COLUMBIA/ SNAKE SALMON RECOVERY OFFICE.
INR08PG464500	ONLY ONE SOURCE - OTHER	FIXED PRICE	DOP INCORPORATED DBA TNT OFFICE SOURCE	$1,195	MAINTENANCE CONTRACT FOR CANON COPIER. DOP IS A REGISTERED CONTRACTOR TO COMPLETE MAINTENANCE ON CANON COPIERS.
INR07BC230822	ONLY ONE SOURCE - OTHER	FIXED PRICE	HASLER INCORPORATED	$1,680	RENTAL OF POSTAGE METER
INR06BC230826	ONLY ONE SOURCE - OTHER	FIXED PRICE	GREENWASTE OF TEHEMA	$1,983	NONHAZARDOUS WASTE TREATMENT AND DISPOSAL
INR07PG210022	ONLY ONE SOURCE - OTHER	FIXED PRICE	STEAM CLEANERS INCORPORATED	$6,000	MAINTENANCE - PRESSURE WASHER
INR07BC120070	ONLY ONE SOURCE - OTHER	FIXED PRICE	ENERGY EQUIPMENT AND SUPPLY INCORPORATED	$6,449	
INR07PG810291	ONLY ONE SOURCE - OTHER	FIXED PRICE	HATCH ACRES CORPORATION	$20,272	SIMENOE DAM ASR EXPANSION RECOMMENDATIONS
INR07PG810089	ONLY ONE SOURCE - OTHER	FIXED PRICE	EXCEL GEOPHYSICAL SERVICES INCORPORATED	$24,850	SEISMIC REFLECTION PROCESSING
INR07PG810075	ONLY ONE SOURCE - OTHER	FIXED PRICE	FLOW SCIENCE INCORPORATED	$32,000	SOFTWARE LICENSES
INR07PG810267	ONLY ONE SOURCE - OTHER	FIXED PRICE	GLOBAL TECHNOLOGY RESOURCES INCORPORATED	$46,649	COMPUTER SYSTEM
INR07PG230435	ONLY ONE SOURCE - OTHER	FIXED PRICE	MACE USA LIMITED LIABILITY COMPANY	$53,975	WATER MEASUREMENT EQUIPMENT
INR07PG810006	ONLY ONE SOURCE - OTHER	FIXED PRICE	SBC GLOBAL SERVICES INCORPORATED (4367)	$97	TELEPHONE SERVICE FOR DATA
INR07A3322011	ONLY ONE SOURCE - OTHER	FIXED PRICE	PAUL MARSH (8479)	$999	FISHERY ASSISTANCE IDIQ - 07PG322011 07A3322011 - SURVEY OF CIENEGA CREEK PRESERVE
INR07PG110250	ONLY ONE SOURCE - OTHER	FIXED PRICE	ACCURATE LASER PRINTER SERVICES INCORPORATED	$999	HP9500 MFP MAINTENANCE SERVICE 2007 BASE YEAR OPTION YEAR CONTRACT 2007-2011
INR07PG270001	ONLY ONE SOURCE - OTHER	FIXED PRICE	TRIANGLE MICROWORKS INCORPORATED	$1,063	MAINTENANCE RENEWAL SOFTWARE AND SUPPORT
INR07PG110170	ONLY ONE SOURCE - OTHER	FIXED PRICE	IDAHO GARBOLOGIST	$1,173	IDAHO GARBOLOGIST - PROVIDE REFUSE COLLECTION SERVICE TO MANN CREEK RESERVOIR
INR07BC431011	ONLY ONE SOURCE - OTHER	FIXED PRICE	MCI COMMUNICATIONS SERVICES INCORPORATED	$1,200	FTS LONG DISTANCE SERVICE
INR07PG1L0210	ONLY ONE SOURCE - OTHER	FIXED PRICE	HERMISTON IRRIGATION DISTRICT	$1,435	DELIVERY OF IRRIGATION WATER TO OXBOW PROPERTY
INR07PG270040	ONLY ONE SOURCE - OTHER	FIXED PRICE	PHYSIO CONTROL INCORPORATED	$1,445	LIFEPAK AED/CPR TRAINING AND KIT
INR07PG200268	ONLY ONE SOURCE - OTHER	FIXED PRICE	CORAL SALES COMPANY	$2,045	GUARDRAIL FOR 50' BRIDGE BARNES
INR07PG810100	ONLY ONE SOURCE - OTHER	FIXED PRICE	COACHELLA VALLEY WATER DISTRICT	$2,051	SPEAKER AT WM WORKSHOP
INR07PG810098	ONLY ONE SOURCE - OTHER	FIXED PRICE	BUFFALO RAPIDS PROJECT BOARD OF CONTROL	$2,432	SPEAKER SERVICES FOR WORKSHOP
INR07A4322011	ONLY ONE SOURCE - OTHER	FIXED PRICE	PAUL MARSH (8479)	$2,435	FISHERY ASSISTANCE IDIQ DELIVERY ORDER NO. 07A4322011 FISH INVASION REPORT
INR07BC6C6050	ONLY ONE SOURCE - OTHER	FIXED PRICE	AKJ ENTERPRISES	$2,450	LV-TREE CLEANUP

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INR07PG110090	ONLY ONE SOURCE - OTHER	FIXED PRICE	AUTOMATED OFFICE SYSTEMS INCORPORATED	$2,462	COPIER/PRINTER MAINTENANCE AGREEMENT. ARM450N DIGITAL COPIER. SHARP SERIAL NO. NA003183767 TO INCLUDE PARTS AND LABOR FOR REPAIRS AND MAINTENANCE NECESSITATED BY NORMAL USAGE. AGREEMENT INCLUDES TONER, DEVELOPER, PM KITS AND DRUMS IN AN AMOUNT CONSI
INR07PG6A0003	ONLY ONE SOURCE - OTHER	FIXED PRICE	BLACKBURN KENNETH G	$2,496	RESTROOM CLEANING AT DEAVER AND RALSTON RESERVOIRS
INR07BC4N0019	ONLY ONE SOURCE - OTHER	FIXED PRICE	ALSCO INCORPORATED (2999)	$2,500	FLOOR MAT SERVICE
INR07BC4N0022	ONLY ONE SOURCE - OTHER	FIXED PRICE	L K SURVEY INSTRUMENTS INCORPORATED	$2,500	MAINTENANCE ON OCE 7055 ENGINEERING COPIERS
INR07BC4N0025	ONLY ONE SOURCE - OTHER	FIXED PRICE	UNITED PARCEL SERVICE INCORPORATED (OH) (2075)	$2,500	UPS SERVICE
INR07PG4N0034	ONLY ONE SOURCE - OTHER	FIXED PRICE	NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY	$2,500	DIG TEST PITS - NAVAJO RESERVATION - NAVAJO OWNED COMPANY
INR07PG4N0001	ONLY ONE SOURCE - OTHER	FIXED PRICE	FOUR CORNERS WEED CONTROL INCORPORATED	$2,500	SPRAY WEEDS - NIIP FEATURES
INR07PG4N0057	ONLY ONE SOURCE - OTHER	FIXED PRICE	LAKIN KRISTINE	$2,500	INSPECTION AND TESTING FOR ASBESTOS IN OLD BLDGS PRIOR TO DEMOLITION.
INR07PG290033	ONLY ONE SOURCE - OTHER	FIXED PRICE	DIAMOND D GENERAL ENGINEERING INCORPORATED	$2,640	
INR07PG170130	ONLY ONE SOURCE - OTHER	FIXED PRICE	VA TECH HYDRO USA CORPORATION	$2,641	RELAY VALVE STEM
INR07PE810266	ONLY ONE SOURCE - OTHER	FIXED PRICE	TRAINING TECHNOLOGIES INCORPORATED	$2,690	SOFTWARE UPGRADES
INR07PG670011	ONLY ONE SOURCE - OTHER	FIXED PRICE	MC TECHNOLOGIES LIMITED LIABILITY COMPANY	$2,700	MAXCOM ONLINE SUBSCRIPTION, HAZARDOUS MATERIAL CONTROL PROGRAM IS REQUIRED BY RSHS AND OSHA.
INR07BC4N0055	ONLY ONE SOURCE - OTHER	FIXED PRICE	REAL TIME NETWORKS	$2,702	PARTNER SUPPORT
INR07PG670015	ONLY ONE SOURCE - OTHER	FIXED PRICE	EAST BENCH IRRIGATION DISTRICT	$2,754	CLARK CANYON SUPPORT SERVICES.
INR07PG108060	ONLY ONE SOURCE - OTHER	FIXED PRICE	POULEY CHERYL	$2,770	PER STATEMENT OF WORK, PROVIDE LABOR AND MATERIALS TO PERFORM RADIOCARBON ANALYSIS OF FAUNAL REMAINS FROM SITE 45 ST 65 LAKE ROOSEVELT, WA
INR07PG6C6033	ONLY ONE SOURCE - OTHER	FIXED PRICE	HOLY CROSS ELECTRIC ASSOCIATION INCORPORATED	$2,774	
INR07PG6C6022	ONLY ONE SOURCE - OTHER	FIXED PRICE	KONE INCORPORATED (7423)	$2,796	
INR07BC6C5042	ONLY ONE SOURCE - OTHER	FIXED PRICE	BASLER ELECTRIC COMPANY	$2,900	
INR07BC4N0032	ONLY ONE SOURCE - OTHER	FIXED PRICE	MESA EQUIPMENT AND SUPPLY COMPANY	$2,928	SERVICE TO TROUBLESHOOT AIR DRYER AT GALLEGOS PUMPING PLANT
INR07PG200225	ONLY ONE SOURCE - OTHER	FIXED PRICE	CALIFORNIA WATER AWARENESS	$3,000	SUPPORT PAYMENT FOR WATER AWARENESS
INR07PG110215	ONLY ONE SOURCE - OTHER	FIXED PRICE	KELLY JOHNSON	$3,012	WALK IN DRINKERS FOR GUZZLERS
INR07BC6A0132	ONLY ONE SOURCE - OTHER	FIXED PRICE	HASLER INCORPORATED	$3,090	POSTAGE - KINGHORN
INR07BC6A0075	ONLY ONE SOURCE - OTHER	FIXED PRICE	HASLER INCORPORATED	$3,090	POSTAGE - KINGHORN
INR07BC6A0243	ONLY ONE SOURCE - OTHER	FIXED PRICE	HASLER INCORPORATED	$3,090	POSTAGE - KINGHORN
INR07BC6A0214	ONLY ONE SOURCE - OTHER	FIXED PRICE	HASLER INCORPORATED	$3,090	RUSH-POSTAGE-KINGHORN
INR07PG810227	ONLY ONE SOURCE - OTHER	FIXED PRICE	BENTLEY SYSTEMS INCORPORATED (6623)	$3,109	SOFTWARE & MAINTENANCE
INR07PG810085	ONLY ONE SOURCE - OTHER	FIXED PRICE	SCANNING SOLUTIONS LIMITED LIABILITY COMPANY	$3,203	ROTOR-MOUNTED SCANNER MONITORING SERVICES
INR07BC6C6004	ONLY ONE SOURCE - OTHER	FIXED PRICE	PUBLIC HEALTH AND ENVIRONMENT COLORADO DEPARTMENT OF	$3,260	COLORADO HAZARDOUS WASTE FEE
INR07PG270055	ONLY ONE SOURCE - OTHER	FIXED PRICE	E AND E ENTERPRISES GLOBAL INCORPORATED	$3,270	
INR07PE200057	ONLY ONE SOURCE - OTHER	FIXED PRICE	XEROX CORPORATION	$3,282	MAINTENANCE AGREEMENT FOR XEROX 8830DDS.
INR07PG200103	ONLY ONE SOURCE - OTHER	FIXED PRICE	QUINSTAR	$3,310	BACK-UP ALARM DIALER FOR WILSON DAM
INR07PG270056	ONLY ONE SOURCE - OTHER	FIXED PRICE	E AND E ENTERPRISES GLOBAL INCORPORATED	$3,367	INTERNET SATELITE SERVICE

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INR07PV810025	ONLY ONE SOURCE - OTHER	FIXED PRICE	GEOMETRICS INCORPORATED (7136)	$3,375	REPAIR TO STRATAVIEW R-48 S/N 75308 SEISMOGRAPH UNIT
INR07PG6C6036	ONLY ONE SOURCE - OTHER	FIXED PRICE	POWER MOTIVE CORPORATION	$3,418	
INR07PG270035	ONLY ONE SOURCE - OTHER	FIXED PRICE	BUZZ OATES MANAGEMENT SERVICES	$3,454	SECURITY CAMERA
INR07BC1U0190	ONLY ONE SOURCE - OTHER	FIXED PRICE	BENSON FARMS INCORPORATED	$3,539	NATIVE PRAIRIE SEED FOR LAND RESTORATION
INR07PG303232	ONLY ONE SOURCE - OTHER	FIXED PRICE	CLIMAX PORTABLE MACHINE TOOLS INCORPORATED	$3,545	CLIMAX BORING HEAD
INR07PG260005	ONLY ONE SOURCE - OTHER	FIXED PRICE	CHURCHILL COUNTY TELEPHONE SYSTEM	$3,568	TELEPHONE SERVICE FRO FALLON FIELD OFFICE
INR07PG4N0007	ONLY ONE SOURCE - OTHER	FIXED PRICE	WASTE MANAGEMENT OF NEW MEXICO INCORPORATED	$3,600	TRASH SERVICE
INR07PG6C6010	ONLY ONE SOURCE - OTHER	FIXED PRICE	SERVERON CORPORATION	$3,600	SITE VISIT TO CHECK OUT BATTERY SYSTEM AT SWITCHYARD
INR07PG200051	ONLY ONE SOURCE - OTHER	FIXED PRICE	QWEST CORPORATION (3800)	$3,658	KLAMATH BASIN AREA OFFICE TELEPHONE SERVICE
INR07PE810265	ONLY ONE SOURCE - OTHER	FIXED PRICE	COMBYTE U S A	$3,690	SOFTWARE SUPPORT/MAINTENANCE
INR07BC460013	ONLY ONE SOURCE - OTHER	FIXED PRICE	SUPERIOR ALARM INCORPORATED	$3,700	MAINTENANCE FOR THE WESTERN COLORADO AREA OFFICE TELEPHONE SYSTEM (SEIMENS)
INR07BC4N0010	ONLY ONE SOURCE - OTHER	FIXED PRICE	CASCADE BOTTLED WATER COMPANY	$3,800	BOTTLED WATER FOR FIELD CONSTRUCTION INSPECTORS AND MATERIALS TESTING PERSONNEL
INR07PG810258	ONLY ONE SOURCE - OTHER	FIXED PRICE	DEN COL SUPPLY COMPANY	$3,823	HOT-ROLLED STEEL PLATES
INR07PG4E0060	ONLY ONE SOURCE - OTHER	FIXED PRICE	GLOBAL TECHNOLOGY RESOURCES INCORPORATED	$3,851	CISCO 24 PORT SWITCH
INR07PG303194	ONLY ONE SOURCE - OTHER	FIXED PRICE	CALVERT COMPANY INCORPORATED THE (2921)	$3,886	BOOT AND BOOT MOLDS
INR07PG200200	ONLY ONE SOURCE - OTHER	FIXED PRICE	HOME DEPOT USA INCORPORATED	$3,892	PRESSURE TREATED LUMBER FOR 50' BRIDGE BARNES
INR07BC4N0043	ONLY ONE SOURCE - OTHER	FIXED PRICE	WAGNER EQUIPMENT COMPANY	$3,906	LEASE PUMPS FOR THE NAVAJO NATION - PUMP PONDS FOR ENDANGERED FISH.
INR07PG810200	ONLY ONE SOURCE - OTHER	FIXED PRICE	SYPRIS ELECTRONICS LIMITED LIABILITY COMPANY	$3,942	SECURE DATA TRANSFER DEVICE AND ACCESSORIES
INR07PG270031	ONLY ONE SOURCE - OTHER	FIXED PRICE	GOLDSIM TECHNOLOGY GROUP LIMITED LIABILITY COMPANY	$3,950	SOFTWARE
INR07PG4P4780	ONLY ONE SOURCE - OTHER	FIXED PRICE	MACMILLAN IAN	$3,962	ELEVATOR ENGINEERING SERVICES. EMERGENCY REPAIR.
INR07BC303159	ONLY ONE SOURCE - OTHER	FIXED PRICE	SACKS TIERNEY PA	$3,967	RATIFICATION - SAWWRSA MAILING EXPENSE
INR07PG6A0015	ONLY ONE SOURCE - OTHER	FIXED PRICE	WYOMING ENVIRONMENTAL SYSTEMS INCORPORATED	$3,975	TRASH DISPOSAL FOR SEMINOE AND KORTES
INR07PG322012	ONLY ONE SOURCE - OTHER	FIXED PRICE	CLS AMERICA INCORPORATED	$4,000	TELEMETRY DATA FROM JUVENILE BALD EAGLES
INR07PG321027	ONLY ONE SOURCE - OTHER	FIXED PRICE	UNIVERSITY OF ARIZONA	$4,000	20 MAPS OF THE SALT RIVER VALLEY PRODUCED BY USBR IN 1902-03.
INR07BC490023	ONLY ONE SOURCE - OTHER	FIXED PRICE	GATOR PUMP INCORPORATED	$4,041	FREIGHT & RESTOCKING CHARGES FOR HOSE ORDER WHICH WAS CANCELLED.
INR07PG170649	ONLY ONE SOURCE - OTHER	FIXED PRICE	HELWIG CARBON PRODUCTS INCORPORATED	$4,182	CARBON BRUSHES
INR07PG4N0024 A	ONLY ONE SOURCE - OTHER	FIXED PRICE	CAPITAL BUSINESS SYSTEMS INCORPORATED	$4,200	MAINTENANCE ON COLOR COPIER
INR07PG171286	ONLY ONE SOURCE - OTHER	FIXED PRICE	AXSYS TECHNOLOGIES IR SYSTEMS INCORPORATED	$4,300	INFRARED CAMERA REPAIR
INR07PG340178	ONLY ONE SOURCE - OTHER	FIXED PRICE	ENVIRONMENTAL QUALITY ARIZONA DEPT OF	$4,338	REGISTRATION AND PROCESSING FEE FOR ADEQ AQUIFER PROTECTION PERMIT FOR YDP DEMO RUN
INR07BC600001	ONLY ONE SOURCE - OTHER	FIXED PRICE	CONTEMPORARY CYBERNETICS GROUP INCORPORATED	$4,380	MAINTENANCE SUPPORT SERVICES FOR TWO IT PIECES OF EQUIPMENT FOR FISCAL YEAR 2007
INR07PG400034	ONLY ONE SOURCE - OTHER	FIXED PRICE	PERPETUAL STORAGE INCORPORATED	$4,384	TAPE STORAGE
INR07PG600063	ONLY ONE SOURCE - OTHER	FIXED PRICE	AUTOMATED OFFICE SYSTEMS INCORPORATED (3839)	$4,470	CONTINUING MAINTENANCE SERVICE FOR CANON COPIER.
INR07BC4P2034	ONLY ONE SOURCE - OTHER	FIXED PRICE	SKM SYSTEMS ANALYSIS INCORPORATED	$4,500	ARCH FLASH CALCULATION SOFTWARE, TO COMPLY WITH FEDERAL REGISTER FINAL RULE ON SUBPARTS OF 29 CFR
INR07PG810090	ONLY ONE SOURCE - OTHER	FIXED PRICE	MATHSOFT ENGINEERING AND EDUCATION INCORPORATED	$4,630	MAINTENANCE OF SOFTWARE
INR07PG270022	ONLY ONE SOURCE - OTHER	FIXED PRICE	MIKE DAUGHERTY CHEVROLET	$4,719	VEHICLE REPAIR

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INR07BC6A0080	ONLY ONE SOURCE - OTHER	FIXED PRICE	W W GRAINGER INCORPORATED (0280)	$4,753	OHMMETERS
INR07PG270017	ONLY ONE SOURCE - OTHER	FIXED PRICE	PACIFIC BELL INCORPORATED (5535)	$4,800	T1 LINE
INR07230432	ONLY ONE SOURCE - OTHER	FIXED PRICE	ACCURATE AIR ENGINEERING INCORPORATED	$4,862	COMPLETE VALVE
INR07PG340149	ONLY ONE SOURCE - OTHER	FIXED PRICE	AD WARES THE PROMOTION SPECIALIST INCORPORATED	$4,877	SHIRTS
INR07PG460003	ONLY ONE SOURCE - OTHER	FIXED PRICE	CABLE AND CONNECTIVITY SOLUTIONS LIMITED LIABILITY COMPANY	$4,891	
INR07PG810218	ONLY ONE SOURCE - OTHER	FIXED PRICE	TRENDEX INCORPORATED	$4,900	BINDING MACHINE
INR07BC303184	ONLY ONE SOURCE - OTHER	FIXED PRICE	CLINICAL LAB OF SAN BERNARDINO	$4,920	RATIFICATION - CLINICAL LAB TESTING FOR PARKER DAM NPDES RENEWAL FOR BACKWASH WATER TANK.
INR07PU464522	ONLY ONE SOURCE - OTHER	FIXED PRICE	NUCLA NATURITA TELEPHONE COMPANY	$5,000	WIRED COMMUNICATION SERVICES
INR07PG490024	ONLY ONE SOURCE - OTHER	FIXED PRICE	WYOMING STATE OF (0855)	$5,000	WEED CONTROL
INR07PG4N0036	ONLY ONE SOURCE - OTHER	FIXED PRICE	S AND C ELECTRIC COMPANY (7665)	$5,000	SWITCH
INR07PG810105	ONLY ONE SOURCE - OTHER	FIXED PRICE	WESTERN ELECTRICITY COORDINATING COUNCIL	$5,000	WECC ANNUAL MEMBERSHIP DUES ASSESSMENT FOR 2007
INR07PG110210	ONLY ONE SOURCE - OTHER	FIXED PRICE	NEZ PERCE COUNTY OF	$5,000	ORTHOPHOTOGRAPHY OF NEZ PERCE COUNTY IDAHO
INR07PG810156	ONLY ONE SOURCE - OTHER	FIXED PRICE	HAMLET ALAN F	$5,000	PRIEST RAPIDS STUDY
INR07321020	ONLY ONE SOURCE - OTHER	FIXED PRICE	HOHOKAM RESOURCE CONSERVATION AND DEVELOPMENT AREA INCORPORATED	$5,000	CONFERENCE FEES FOR THE SW STRATEGY GATHERING
INR06PE810032	ONLY ONE SOURCE - OTHER	FIXED PRICE	XEROX CORPORATION	$5,012	COPIERS/MAINTENANCE
INR07PG200130	ONLY ONE SOURCE - OTHER	FIXED PRICE	PLANAR SYSTEMS INCORPORATED	$5,095	STEREOSCOPE MONITOR
INR07PG303210	ONLY ONE SOURCE - OTHER	FIXED PRICE	ARDEN INCORPORATED	$5,116	ABRASIVE MATERIALS
INRO07PG810184	ONLY ONE SOURCE - OTHER	FIXED PRICE	SIGMA ALDRICH CORPORATION	$5,129	
INR07PG270027	ONLY ONE SOURCE - OTHER	FIXED PRICE	GE FANUC AUTOMATION CORPORATION	$5,270	SOFTWARE
INR07PG400146	ONLY ONE SOURCE - OTHER	FIXED PRICE	GENERAL ELECTRIC COMPANY	$5,335	CONTROL- ATLAS PC
INR07BC6A0122	ONLY ONE SOURCE - OTHER	FIXED PRICE	WYOMING MACHINERY COMPANY	$5,424	REPAIR OF BULLDOZER
INR07PG120030	ONLY ONE SOURCE - OTHER	FIXED PRICE	HAWKINS INCORPORATED	$5,451	
INR07PG210010	ONLY ONE SOURCE - OTHER	FIXED PRICE	DOW FRED	$5,500	TRASH REMOVAL
INR07BC4N0048	ONLY ONE SOURCE - OTHER	FIXED PRICE	WAGNER EQUIPMENT COMPANY	$5,596	LEASE PUMPS TO DRAIN PONDS AT NAPI - HARVEST ENDANGERED FISH AND STOCK IN THE SAN JUAN RIVER -
INR07PG810029	ONLY ONE SOURCE - OTHER	FIXED PRICE	SUN MICROSYSTEMS FEDERAL INCORPORATED	$5,603	SUN EQUIPMENT MOVE
INR07PE270070	ONLY ONE SOURCE - OTHER	FIXED PRICE	DELL MARKETING LIMITED PARTNERSHIP	$5,640	POWEREDGE SERVER
INR07PG4P3020	ONLY ONE SOURCE - OTHER	FIXED PRICE	LABARGE GARBAGE SERVICE	$5,760	GARBARGE REMOVAL AND GUETHOUSE CLEANING SERVICES
INR07PG810171	ONLY ONE SOURCE - OTHER	FIXED PRICE	SHUNRA SOFTWARE LIMITED	$5,800	SHUNRA JUMP START 2 DAYS TRAINING
INR07PG321004	ONLY ONE SOURCE - OTHER	FIXED PRICE	DELL MARKETING LIMITED PARTNERSHIP	$5,810	POWEREDGE 2650 SERVERS - 2 YEAR EXTENDED SERVICE AGREEMENT
INR07PG210102	ONLY ONE SOURCE - OTHER	FIXED PRICE	SJRRSS INCORPORATED	$5,832	
INR07PG1U0510	ONLY ONE SOURCE - OTHER	FIXED PRICE	OCTAGON SYSTEMS CORPORATION	$5,926	PIT TAG COMPUTER FOR FISH IDENTIFICATION
INR07BC240401	ONLY ONE SOURCE - OTHER	FIXED PRICE	MANTA TEST SYSTEMS INCORPORATED	$5,950	MULTI-FUNCTION RELAY
INR07PG810241	ONLY ONE SOURCE - OTHER	FIXED PRICE	THE NATURE CONSERVANCY	$5,970	FACILITATOR FOR JOINT WORKSHOP AND PRODUCTION OF WORKSHOP REPORT
INRO7PG6A0040	ONLY ONE SOURCE - OTHER	FIXED PRICE	JOHNSON CONTROLS INCORPORATED (0010)	$5,986	HEATING & AIR CONDITIONING SYSTEM MAINTENANCE - MAIN BUILDING

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Contract Number	Type of Sole Source	Contract Type	Contractor Name	Contract Value	Description of Requirement
INR07PG400039	ONLY ONE SOURCE - OTHER	FIXED PRICE	CANON BUSINESS SOLUTIONS MOUNTAIN WEST INCORPORATED	$6,000	COPIER MAINTENANCE
INR07PG430015	ONLY ONE SOURCE - OTHER	FIXED PRICE	R AND C WATER	$6,000	RIVER FLOW READINGS
INR07BC1200230	ONLY ONE SOURCE - OTHER	FIXED PRICE	GLACIER MEDICAL ASSOCIATES	$6,000	
INR07PG1U0950	ONLY ONE SOURCE - OTHER	FIXED PRICE	COLE JAMES V	$6,000	ADJUDICATION FOR COLUMBIA BASIN / BLACK SANDS IRRIGATION DISPUTE
INR07PG400119	ONLY ONE SOURCE - OTHER	FIXED PRICE	DELTA UNIBUS CORPORATION	$6,000	EVALUATE DAMAGED UNIT 8 ISOLATED P HASE INSULATOR BUSHING
INR07PG200191	ONLY ONE SOURCE - OTHER	FIXED PRICE	SMITH ROOT INCORPORATED	$6,026	SUPPLY BUY FOR THE MODEL LR-24 BACKPACK ELECTROFISHER, POLE ELECTRODE, RING ELECTRODE, ELECTRODE RATTAIL LR, TO INCLUDE SHIPPING COSTS.
INR07PG6A0058	ONLY ONE SOURCE - OTHER	FIXED PRICE	ANDERSON HIGHWAY SIGNS AND SUPPLY INCORPORATED	$6,050	TRAFFIC SIGNS
INR07PG270068	ONLY ONE SOURCE - OTHER	FIXED PRICE	ASAP SOFTWARE EXPRESS INCORPORATED	$6,080	SERVER
INR07PG140133	ONLY ONE SOURCE - OTHER	FIXED PRICE	SHOSHONE BANNOCK TRIBES	$6,095	PROVIDE LABOR AND MATERIALS TO CONDUCT ARCHAEOLOGICAL MONITORING IN ALL AREAS TO BE ALTERED OR DISTURBED DURING THE STABILIZATION ACTIVITY TO PROTECT THE FORT HALL HISTORIC LANDMARK. THE INTENT IS TO ENSURE THAT ANY SIGNIFICANT CULTURAL DEPOSITS, IF PRESE
INR07BC4P4710	ONLY ONE SOURCE - OTHER	FIXED PRICE	FERGUSON ENTERPRISES INCORPORATED (1771)	$6,098	GREENHECK VANE AXIAL FAN.
INR07BC200250	ONLY ONE SOURCE - OTHER	FIXED PRICE	SOCIETY OF HISPANIC PROFESSIONAL ENGINEERS INCORPORATED	$6,250	SHPE CONFERENCE REGISTRATION FEE
INR07PG400125	ONLY ONE SOURCE - OTHER	FIXED PRICE	ELITE EQUIPMENT COMPANY INCORPORATED	$6,408	HUEBSH, 50# OPL, GAS, DRYER. DELIVERY, UNCRATE, SET IN PLACE.
INR07PG810277	ONLY ONE SOURCE - OTHER	FIXED PRICE	G M W ASSOCIATES INCORPORATED	$6,450	CURRENT TRANSFORMER
INR07PG303197	ONLY ONE SOURCE - OTHER	FIXED PRICE	FANN INSTRUMENT COMPANY (INC)	$6,480	FILTER PRESS
INR07PV810004	ONLY ONE SOURCE - OTHER	FIXED PRICE	GENERAL ELECTRIC COMPANY (9340)	$6,500	PSLF SOFTWARE ANNUAL UPDATE, SUPPORT, & MAINTENANCE.
INR07PG170191	ONLY ONE SOURCE - OTHER	FIXED PRICE	TRANSPORTATION WASHINGTON DEPT OF	$6,500	STRIPING OF HIGHWAY
INR07PG340095	ONLY ONE SOURCE - OTHER	FIXED PRICE	EMPIRE SOUTHWEST LIMITED LIABILITY COMPANY	$6,503	HEAVY EQUIPMENT RENTAL.
INR07BC210102	ONLY ONE SOURCE - OTHER	FIXED PRICE	PACIFIC OZONE TECHNOLOGY INCORPORATED	$6,523	DIAGNOSE AND REPAIR ON SITE PACIFIC OZONE/OXYGEN GENERATOR
INR07PG430051	ONLY ONE SOURCE - OTHER	FIXED PRICE	DANAHER CORPORATION (5522)	$6,600	REPAIR FLOW METERS
INR07PG400169	ONLY ONE SOURCE - OTHER	FIXED PRICE	SPECTRA LOGIC CORPORATION	$6,660	MAINTENANCE CONTRACT
INR07PG6C6017	ONLY ONE SOURCE - OTHER	FIXED PRICE	BASLER ELECTRIC COMPANY	$6,686	EXCITER BRIDGE REPAIR
INR06BC303297	ONLY ONE SOURCE - OTHER	FIXED PRICE	RECOURSE COMMUNICATIONS INCORPORATED	$6,775	
INR07PG400134	ONLY ONE SOURCE - OTHER	FIXED PRICE	MOUNTAINLAND BUSINESS SYSTEMS INCORPORATED	$6,818	MAIL MACHINE
INR07PG303181	ONLY ONE SOURCE - OTHER	FIXED PRICE	HOLOHIL SYSTEMS LIMITED	$6,850	TORTOISE TRANSMITTERS
INR07PG321016	ONLY ONE SOURCE - OTHER	FIXED PRICE	NORTHERN ARIZONA UNIVERSITY	$6,975	2007 VERDE FIELD SCHOOL - SUPPORT WATERSHED RESEARCH AND EDUCATION PROGRAM FIELD SCHOOL IN WATER SCIENCE, LAW/REGULATION AND POLICY FOR DECISION MAKERS
INR07PG6A0052	ONLY ONE SOURCE - OTHER	FIXED PRICE	NATRONA COUNTY OF	$7,000	WEED CONTROL AT PATHFINDER RESERVOIR
INR07PG200206	ONLY ONE SOURCE - OTHER	FIXED PRICE	PETERSON MACHINERY COMPANY	$7,005	REPAIR OF CATERPILLAR 225B EXCAVATOR
INR07PG270020	ONLY ONE SOURCE - OTHER	FIXED PRICE	INTEGRATED MASS STORAGE SYSTEMS INCORPORATED	$7,061	SOFTWARE SYSTEMS DESIGN
INR07PG303211	ONLY ONE SOURCE - OTHER	FIXED PRICE	SONTEK/YSI INCORPORATED	$7,080	ARGONAUT SYSTEM
INR07PG810035	ONLY ONE SOURCE - OTHER	FIXED PRICE	LAYNE CHRISTENSEN COMPANY	$7,190	BOREHOLE DRILLING

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INR07PG110150	ONLY ONE SOURCE - OTHER	FIXED PRICE	H AND H UTILITY CONTRACTORS INCORPORATED	$7,271	MATERIAL, LABOR, AND EQUIPMENT TO REPLCE DAMAGED POWERPOLE ON CENTRAL AND LOWER BLUFF BLACK CANYON DAM.
INR07PG810123	ONLY ONE SOURCE - OTHER	FIXED PRICE	BRINKMANN INSTRUMENTS INCORPORATED	$7,316	MASTER CYCLER EP MANUAL AND CONTROL PANEL
INR07BC241515	ONLY ONE SOURCE - OTHER	FIXED PRICE	INTERNATIONAL FIBER SYSTEMS INCORPORATED	$7,351	VIDEO TRANSMITTER/RECEIVER
INR07BC430007	ONLY ONE SOURCE - OTHER	FIXED PRICE	QUEST GOVERNMENT SOLUTIONS CORPORATION	$7,380	PHONE SERVICE FOR THE SOCORRO FIELD OFFICE
INR07PE810040	ONLY ONE SOURCE - OTHER	FIXED PRICE	REED ELSEVIER INCORPORATED	$7,428	INTERNET ACCESS
INR07PG171285	ONLY ONE SOURCE - OTHER	FIXED PRICE	CINTAS CORPORATION (7154)	$7,499	ARTIC COATS
INR07PG321014	ONLY ONE SOURCE - OTHER	FIXED PRICE	SCHOOL FOR ADVANCED RESEARCH ON THE HUMAN EXPERIENCE	$7,500	PUBLICATION - THE HOHOKAM MILLENNIUM
INR07PG810220	ONLY ONE SOURCE - OTHER	FIXED PRICE	KELMAN NORTH AMERICAN INCORPORATED	$7,545	HANDHELD CIRCUIT BREAKER ANALYZER
INR07PG107550	ONLY ONE SOURCE - OTHER	FIXED PRICE	WHPA INCORPORATED	$7,600	PER STATEMENT OF WORK, DR. MARK BAKKER SHALL PROVIDE LABOR TO MODIFY TIMTL MODEL.
INR07PG140123	ONLY ONE SOURCE - OTHER	FIXED PRICE	FISH AND GAME IDAHO DEPT OF (0952)	$7,800	PROVIDE FISH STOCKING ACTIVITIES PER STATEMENT OF WORK. A TOTAL OF FORTY THOUSAND RAINBOW TROUTS SHALL BE PLANTED EACH YEAR, TWENTY THOUSAND IN SPRING AND TWENTY THOUSAND IN THE FALL
INR07PG810210	ONLY ONE SOURCE - OTHER	FIXED PRICE	VIRGINIA TECH FOUNDATION INCORPORATED	$7,900	CGPR MEMBERSHIP RENEWAL
INR07PU270028 A	ONLY ONE SOURCE - OTHER	FIXED PRICE	HAPPY VALLEY TELEPHONE COMPANY	$7,920	COMMUNICATIONS TELEPHONE LINE FACILITY ACCESS SERVICE
INR07PG464500	ONLY ONE SOURCE - OTHER	FIXED PRICE	BASIN COMPANY OP	$7,968	MATERIALS FOR FENCING CONLEY PROPERTY
INR07PG140130	ONLY ONE SOURCE - OTHER	FIXED PRICE	MONTANA STATE UNIVERSITY SYSTEM	$7,975	PER STATEMENT OF WORK PROVIDE PROFESSIONAL SERVICE TO ACQUIRE BASELINE DATA AND ANALYZE RIPARIAN PLANT COMMUNITY COMPOSITION AND DISTRIBUTION ON PACIFIC CREEK AND BUFFALO FORK. BOTH OF THESE TRIBUTARIES ARE PART OF THE UPPER SNAKE RIVER WATERSHED.
INR07PG400163	ONLY ONE SOURCE - OTHER	FIXED PRICE	SMITH DONNA L	$8,000	REVIEW FILES AND PROVIDE TRAINING
INR07PG140118	ONLY ONE SOURCE - OTHER	FIXED PRICE	SPINLAB UTILITY INSTRUMENTATION INCORPORATED	$8,290	UPGRADE A 5000 MV BIRD DOG PLUS TO 3 PHASE METER VERIFICATION TO 6000-UG3-BN. INCLUDES: SUCTION CUP INFRARED SENSOR AND OPTOCOM PORT INFRARED SENSOR; NEW RECEIVER BOARD. RECEIVER & FIBER OPTIC; CABLE ENHANCEMENT TO ADD INTO 3 PHASE CONNECTOR BOX6000 UNIT
INR07BC431015	ONLY ONE SOURCE - OTHER	FIXED PRICE	QWEST GOVERNMENT SERVICES INCORPORATED (8481)	$8,400	TELEPHONE SERVICE
INR07PG4N0006	ONLY ONE SOURCE - OTHER	FIXED PRICE	FASTTRACK COMMUNICATIONS INCORPORATED	$8,400	FIBER MAINTENANCE
INE07PG810296	ONLY ONE SOURCE - OTHER	FIXED PRICE	VENABLE CORPORATION	$8,582	SOFTWARE UPGRADE
INR07PG270002	ONLY ONE SOURCE - OTHER	FIXED PRICE	PERFORMANCE SOFTWARE ASSOCIATES INCORPORATED	$8,635	SOFTWARE SUPPORT
INR07PE110290	ONLY ONE SOURCE - OTHER	FIXED PRICE	DELL MARKETING LIMITED PARTNERSHIP	$8,760	QUEST SOFTWARE
INR07PG810278	ONLY ONE SOURCE - OTHER	FIXED PRICE	ADWEL INTERNATIONAL LIMITED	$8,840	CORONA PROBE WITH TELESCOPIC CAPABILITY
INR07PG4N0038	ONLY ONE SOURCE - OTHER	FIXED PRICE	DANAHER CORPORATION (5522)	$8,899	FLOWMETER
INR07PG4N0037	ONLY ONE SOURCE - OTHER	FIXED PRICE	REAL TIME NETWORKS	$9,116	REPAIR FIBER OPTIC CABLE - A-LP PROJECT
INR07PG810157	ONLY ONE SOURCE - OTHER	FIXED PRICE	ENVIRONMENTAL RESOURCE ASSOCIATES INCORPORATED	$9,117	PREPARATION OF CRMS FOR ANALYSIS
INR07PG6C6018	ONLY ONE SOURCE - OTHER	FIXED PRICE	ABB POWER TECHNOLOGIES	$9,337	
INR07PG810076	ONLY ONE SOURCE - OTHER	FIXED PRICE	ESA INCORPORATED	$9,360	EASYPOWER CUSTOMIZED SUITE, VERSION 8.0 SOFTWARE LICENSE WITH FIRST YEAR ANNUAL MAINTENANCE.
INR07PG810276	ONLY ONE SOURCE - OTHER	FIXED PRICE	CONTROL DESIGN INCORPORATED (8008)	$9,360	ELECTRONIC DATA LOGGER/CONTROLLERS FOR CANAL OPERATIONS

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INR07PG200219	ONLY ONE SOURCE - OTHER	FIXED PRICE	FAR WESTERN ANTHROPOLOGICAL RESEARCH GP INCORPORATED	$9,841	UPPER SAN JOAQUIN RIVER BASIN STORAGE INVESTIGATION BORROW SITE DRILLING - ARCHEOLOGICAL MONITORING
INR07PG200027	ONLY ONE SOURCE - OTHER	FIXED PRICE	RIEGL USA INCORPORATED	$9,950	MAINTENANCE SERVICE PLAN FOR RIEGL LMS-Z 210I SERIES PULSED LASER SCANNING UNIT
INR07PG400082	ONLY ONE SOURCE - OTHER	FIXED PRICE	SORENSON DEVELOPMENT INCORPORATED	$10,000	DNA TESTING OF PREHISTORIC SAMPLES
INR07PG303167	ONLY ONE SOURCE - OTHER	FIXED PRICE	SOUTHERN NV HISPANIC EMPLOYMENT PROGRAM	$10,000	HISPANIC EMPLOYMENT PROGRAM LEADERSHIP CONFERNECE SPONSORSHIP
INR07PG810284	ONLY ONE SOURCE - OTHER	FIXED PRICE	ROPEWORKS INDUSTRIAL GROUP INCORPORATED	$10,027	WORK AT HEIGHT EQUIPMENT
INR07PG810261	ONLY ONE SOURCE - OTHER	FIXED PRICE	PISCES MOLECULAR LIMITED LIABILITY COMPANY	$10,045	ZEBRA MUSSEL PCR ANALYSIS
INR07PG810301	ONLY ONE SOURCE - OTHER	FIXED PRICE	FEDERAL EMPLOYEES NEWS DIGEST INCORPORATED	$10,094	FEDERAL EMPLOYEES NEWS DIGEST
INR07PG810047	ONLY ONE SOURCE - OTHER	FIXED PRICE	LIEBERT GLOBAL SERVICES INCORPORATED (8453)	$10,190	UPS REPLACEMENT BATTERIES AND INSTALLATION SERVICES
INR07PG6C8001	ONLY ONE SOURCE - OTHER	FIXED PRICE	UNIVERSITY OF COLORADO (0555) 13747	$10,540	
INR07PG810058	ONLY ONE SOURCE - OTHER	FIXED PRICE	CEA TECHNOLOGY INCORPORATED	$10,560	CEA TECHNOLOGIES ANNUAL MEMBERSHIP RENEWAL FOR THE WATER MANAGEMENT INTEREST GROUP AND TECHNOLOGY WATCH REVIEW.
INR07PG490026	ONLY ONE SOURCE - OTHER	FIXED PRICE	WEBER BASIN WATER CONSERVANCY DISTRICT	$10,575	STREAM GAUGES ON WEBER AND OGDEN RIVERS
INR07PE4N0020	ONLY ONE SOURCE - OTHER	FIXED PRICE	ABM FEDERAL SALES INCORPORATED	$10,688	TONER
INR07PG270049	ONLY ONE SOURCE - OTHER	FIXED PRICE	IMPERIOUS TECHNOLOGY INCORPORATED	$10,716	COMPUTER SUPPORT AND UPGRADE
INR07PE610012	ONLY ONE SOURCE - OTHER	FIXED PRICE	LEICA GEOSYSTEMS GEOSPATIAL IMAGING LIMITED LIABILITY COMPANY	$10,755	SOFTWARE MAINTENANCE
INR07PG810086	ONLY ONE SOURCE - OTHER	FIXED PRICE	LAYNE CHRISTENSEN COMPANY	$10,933	BOREHOLE IMMAGING PROCESSING SYSTEM (BIPS) SERVICES FOR FOLSOM DAM, CA
INR07PG210115	ONLY ONE SOURCE - OTHER	FIXED PRICE	NEW WEST TECHNOLOGIES	$11,055	FISH TAGGING KIT
INR07PG6A0006	ONLY ONE SOURCE - OTHER	FIXED PRICE	ALSCO INCORPORATED (2999)	$11,104	LAUNDRY RENTAL/SERVICE
INR07BC240695	ONLY ONE SOURCE - OTHER	FIXED PRICE	RESCUE TRAINING INSTITUTE INCORPORATED	$11,150	AED EQUIPMENT/OVERSIGHT
INR07BC303168	ONLY ONE SOURCE - OTHER	FIXED PRICE	WASSER CORPORATION	$11,152	PROTECTIVE COATING PAINT
INR07PG200212	ONLY ONE SOURCE - OTHER	FIXED PRICE	FEDERAL NETWORK SERVICES INCORPORATED	$11,498	SMARTNET ANNUAL SERVICE MAINTENANCE.
INR07PG340164	ONLY ONE SOURCE - OTHER	FIXED PRICE	CHEMETEK	$11,600	PURCHASE OF SDI ANALYZER.
INR07PG200128	ONLY ONE SOURCE - OTHER	FIXED PRICE	STACKHOUSE DONALD	$12,000	REGIONAL SURVEYOR
INR07PG400181	ONLY ONE SOURCE - OTHER	FIXED PRICE	FIRMAMENTAL SOFTWARE LC	$12,000	IT SOFTWARE CONSULTING SERVICES.
INR07PG810211	ONLY ONE SOURCE - OTHER	FIXED PRICE	WILLIAM LETTIS AND ASSOCIATES	$12,400	GEOPHYSICIST
INR07PG810298	ONLY ONE SOURCE - OTHER	FIXED PRICE	COLORADO STATE UNIVERSITY	$12,507	ALPHA WEIR SITE WORK
INR07PG200196I NR	ONLY ONE SOURCE - OTHER	FIXED PRICE	MACE USA LIMITED LIABILITY COMPANY	$12,535	FLOW METERS AND VARIOUS COMPONENTS
INR07BC241323	ONLY ONE SOURCE - OTHER	FIXED PRICE	COAST CRANE COMPANY (0926)	$12,614	BOOMTRUCK STABILIZERS
INV07PG810039	ONLY ONE SOURCE - OTHER	FIXED PRICE	GEOKON INCORPORATED	$12,823	NELSON DIKES GEOKON
INR07PG140135	ONLY ONE SOURCE - OTHER	FIXED PRICE	OBRAS LIMITED LIABILITY COMPANY	$13,024	PROVIDE 3 CUBIC YARD DUMPSTERS FOR RENTAL AND TRASH PICKUP WEEKLY. RENTAL AND WEEKLY CLEANING OF (2) PORTABLE RESTROOMS AT LITTLEWOOD FIELD STATION.
INR07BC200020	ONLY ONE SOURCE - OTHER	FIXED PRICE	ARCHITECTES DE MESSAGERIE INCORPORATED LES	$13,125	GWARCHIVE EMAIL SOFTWARE SUBSCRIPTION
INR07PG460009	ONLY ONE SOURCE - OTHER	FIXED PRICE	NETWORK CONSULTING SERVICES INCORPORATED	$13,164	160 1.0 TB WITH SAN/IQ DRIVE AND POWERSUPPLY INSTALLATION AND SETUP
INR07PG600125	ONLY ONE SOURCE - OTHER	FIXED PRICE	MONTANA STATE UNIVERSITY INCORPORATED	$13,444	DALMATION TOADFLAX BIOCONTROL
INR07PG340162	ONLY ONE SOURCE - OTHER	FIXED PRICE	SIGHT ONE CONSULTING	$13,500	ANTI-TERRORISM REVIEW

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INR07PG270065	ONLY ONE SOURCE - OTHER	FIXED PRICE	IMPERIOUS TECHNOLOGY INCORPORATED	$13,538	SOFTWARE UPGRADE
INR07PG321018	ONLY ONE SOURCE - OTHER	FIXED PRICE	MAKINEN PROFESSIONAL SERVICES	$13,600	PROFESSIONAL MEETING FACILITATOR
INR07PG210100	ONLY ONE SOURCE - OTHER	FIXED PRICE	TRACY DELTA SOLID WASTE MANAGEMENT INCORPORATED	$14,000	TRASH REMOVAL
INR07PG200053	ONLY ONE SOURCE - OTHER	FIXED PRICE	PROSOFT SYSTEMS INCORPORATED	$14,000	IFIX DATABLOCK UPGRADE
INR07PG110350	ONLY ONE SOURCE - OTHER	FIXED PRICE	BOISE STATE UNIVERSITY	$14,000	BALD EAGLE MONITORING AT LAKE CASCADE
INR07PG490066	ONLY ONE SOURCE - OTHER	FIXED PRICE	WHEELER MACHINERY COMPANY	$14,024	RENTAL OF TWO MT275 TRACTORS WITH ATTACHMENTS.
INR07BC303068	ONLY ONE SOURCE - OTHER	FIXED PRICE	S AND C ELECTRIC COMPANY (7665)	$14,085	SUPPORT COLUMNS
INR07PG600166	ONLY ONE SOURCE - OTHER	FIXED PRICE	TRACTOR AND EQUIPMENT COMPANY (2890)	$14,400	FURNISH AND DELIVER BROOM ATTACHMENT FOR CATERPILLAR 906 LOADER, CANYON FERRY, MONTANA.
INR07PG4N0005	ONLY ONE SOURCE - OTHER	FIXED PRICE	D O P INCORPORATED	$14,912	MAINTENANCE AGREEMENT - CANON COPIERS
INR07PG260011	ONLY ONE SOURCE - OTHER	FIXED PRICE	UNIVERSITY OF COLORADO (0555) 13747	$14,955	PERSONNEL SUPPORT FOR A BUREAU OF RECLAMATION EMPLOYEE STATIONED AT UCB.
INR07PE810118	ONLY ONE SOURCE - OTHER	FIXED PRICE	WASHINGTON GROUP INTERNATIONAL (OHIO CORPORATION) INCORPORATED	$14,996	ENVIRONMENTAL CONSULTING SERVICES
INR07PK811282	ONLY ONE SOURCE - OTHER	FIXED PRICE	CEA TECHNOLOGY INCORPORATED	$15,000	BEST VALUE STUDY
INR07PG810259	ONLY ONE SOURCE - OTHER	FIXED PRICE	NATIONAL ENVIRONMENTAL EDUCATION AND TRAINING FOUNDATION IN	$15,000	RECLAMATION SUPPORT FOR NATIONAL PUBLIC LANDS DAY TO PROVIDE SUPPLIES AND SERVICES
INR07PG810305	ONLY ONE SOURCE - OTHER	FIXED PRICE	HISPANIC ASSOCIATION OF COLLEGES AND UNIVERSITIES	$15,000	SPONSORSHIP OF 2007 CONFERENCE
INR07BC303080	ONLY ONE SOURCE - OTHER	FIXED PRICE	HYDROSCIENTIFIC WEST	$15,460	SONTEK METER
INR07PG340198	ONLY ONE SOURCE - OTHER	FIXED PRICE	SAGE TECHNOLOGIES CORPORATION (8538)	$15,475	PURCHASE OF A PORTABLE VIBRATOR.
INR07PG200146	ONLY ONE SOURCE - OTHER	FIXED PRICE	YSI INCORPORATED	$15,548	YSI REPLACEMENT PROBES
INR07PG200006 2	ONLY ONE SOURCE - OTHER	FIXED PRICE	LIVEDATA INCORPORATED	$16,200	SERVER MAINTENANCE
INR07PG810209	ONLY ONE SOURCE - OTHER	FIXED PRICE	NORTHERN ECONOMICS INCORPORATED	$16,567	
INR07PG600176	ONLY ONE SOURCE - OTHER	FIXED PRICE	FIELD DATA SOLUTIONS INCORPORATED	$16,628	FURNISH AND DELIVER STREAMPRO WITH POCKET PRO, SECTION BY SECTION AND EXTENDED RANGE
INR07PG110380	ONLY ONE SOURCE - OTHER	FIXED PRICE	WATER RESOURCES IDAHO DEPARTMENT OF (0952)	$16,668	COST SHARE FOR INSTALLATION, OPERATION, AND MAINTENANCE OF A STREAM GAGE ON SQUAW CREEK NEAR SWEET, IDAHO FOR FLOOD CONTROL MEASUREMENT FOR IDWR FISCAL YEAR 2007 PERIOD OF JULY 1, 2007 THROUGH JUNE 30, 2008.
INR07PG110018 0	ONLY ONE SOURCE - OTHER	FIXED PRICE	GEM COUNTY OF	$16,958	PROVIDE LAW ENFORCEMENT SERVICES ON BUREAU OF RECLAMATION RECREATION AREAS IN GEM COUTY FOR THE PERIOD OF MAY 2007 THROUGH SEPTEMBER 2007
INR07PG340001	ONLY ONE SOURCE - OTHER	FIXED PRICE	DIONEX CORPORATION	$17,107	PURCHASE OF SERVICE AGREEMENT FOR MAINTENANCE ON GOVERNMENT-OWNED ION CHROMATOGRAPHY.
INR07PG810057	ONLY ONE SOURCE - OTHER	FIXED PRICE	SENEY DONALD	$17,390	ORAL HISTORY INTERVIEW(S) SERVICE FOR NEWLANDS PROJECT.
INR07PG810117	ONLY ONE SOURCE - OTHER	FIXED PRICE	NORTHTRONICS PTY LIMITED	$17,815	ANABAT SD1 CF BAT DETECTOR W/ST1
INR07PG810063	ONLY ONE SOURCE - OTHER	FIXED PRICE	APROPOS CONSULTING LIMITED LIABILITY COMPANY	$18,000	HEAT IMPLEMENTATION & CONSULTING SERVICES TO UPGRADE EXISTING VERSION OF HEAT CALL TRACKING SYSTEM AND CONSULT WITH STAFF TO RESTRUCTURE THE EXISTING HEAT DATABASE.
INR07PG2002291 NR	ONLY ONE SOURCE - OTHER	FIXED PRICE	DHI WATER AND ENVIRONMENT INCORPORATED	$18,171	DHI SOFTWARE LICENSES
INR07BC430026	ONLY ONE SOURCE - OTHER	FIXED PRICE	QWEST SERVICES CORPORATION	$18,546	PHONE SERVICE
INR07PG810190	ONLY ONE SOURCE - OTHER	FIXED PRICE	EXCEL GEOPHYSICAL SERVICES INCORPORATED	$18,700	SURVEYING
INR07PG6A0045	ONLY ONE SOURCE - OTHER	FIXED PRICE	EXTREME COATINGS INCORPORATED	$18,911	ASBESTOS ABATEMENT FOR BOYSEN POWERPLANT UNIT #2
INR07PG810228	ONLY ONE SOURCE - OTHER	FIXED PRICE	WILLIAM LETTIS AND ASSOCIATES	$19,040	EAST CANYON DAM GROUND MOTION ANALYSIS

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INR07PG810257	ONLY ONE SOURCE - OTHER	FIXED PRICE	WIRE ONE COMMUNICATIONS INCORPORATED	$19,665	VIDEO AND RELATED EQUIPMENT
INR07PG810107	ONLY ONE SOURCE - OTHER	FIXED PRICE	ACTUAL SOFTWARE INCORPORATED	$19,770	
INR07PG1U0080	ONLY ONE SOURCE - OTHER	FIXED PRICE	INTRALOX LIMITED LIABILITY COMPANY	$19,952	INTERLOCKING BELTING FOR USE IN FISH BARRIER PROJECTS
INR07PG431027	ONLY ONE SOURCE - OTHER	FIXED PRICE	SUTRON CORPORATION	$20,000	SUTRON - MAINTENANCE
INR07PG810169	ONLY ONE SOURCE - OTHER	FIXED PRICE	PINK ELEPHANT INCORPORATED	$20,000	ATLAS GOLD ITIL TOOLKIT WITH FIRST YEAR'S MAINTENANCE.
INR07PG810194	ONLY ONE SOURCE - OTHER	FIXED PRICE	GEO SLOPE INTERNATIONAL LIMITED	$20,144	SOFTWARE AND LICENSES
INR07PE270071	ONLY ONE SOURCE - OTHER	FIXED PRICE	MOTOROLA INCORPORATED	$20,294	RADIO EQUIPMENT
INR07PG6A0042	ONLY ONE SOURCE - OTHER	FIXED PRICE	COMPULINK TECHNOLOGIES INCORPORATED	$20,985	CISCO DC SWITCHES
INR07PG810088	ONLY ONE SOURCE - OTHER	FIXED PRICE	LAYNE CHRISTENSEN COMPANY	$21,910	BOREHOLE IMAGING PROCESSING SYSTEM (BIPS) SERVICES FOR YELLOWTAIL DAM, MT
INR07PG200177	ONLY ONE SOURCE - OTHER	FIXED PRICE	YSI INCORPORATED	$22,244	EONET CELLULAR SERVICE AND DATA MANAGEMENT SERVICES RENEWAL
INR07PG210028	ONLY ONE SOURCE - OTHER	FIXED PRICE	TELEDYNE R D INSTRUMENTS INCORPORATED	$23,150	PROBE
INR07PG340136	ONLY ONE SOURCE - OTHER	FIXED PRICE	RURAL/METRO CORPORATION (DEL) (4388)	$23,900	FIRE/HAZMAT PROTECTION
INR07PG200086	ONLY ONE SOURCE - OTHER	FIXED PRICE	AQUA SYSTEMS 2000 INCORPORATED	$24,000	LOPAC GATE
INR07PG430062	ONLY ONE SOURCE - OTHER	FIXED PRICE	SHIVERS MIKE	$24,000	LEASE OF PRIVATE ROAD
INR07PG400132	ONLY ONE SOURCE - OTHER	FIXED PRICE	RUSHFORTH PHYCOLOGY LIMITED LIABILITY COMPANY	$24,000	ALGAE/PLANKTON COLLECTION AND IDENTIFICATION FOR RESERVOIRS WITHIN UC REGION
INR07PG200075	ONLY ONE SOURCE - OTHER	FIXED PRICE	R J LEE GROUP INCORPORATED	$24,480	ASBESTOS LAB TESTING AT THE FOLSOM FACILITY
INR07PG400196	ONLY ONE SOURCE - OTHER	FIXED PRICE	KAIBAB PAIUTE TRIBAL COUNCIL (2971)	$25,000	GLEN CANYON DAM ADAPTIVE MANAGEMENT PROGRAM MONITORING PROTOCOLS
INR07PG400116	ONLY ONE SOURCE - OTHER	FIXED PRICE	PNM RESOURCES INCORPORATED	$25,000	SEDIMENT REMOVAL
INR07PG430090	ONLY ONE SOURCE - OTHER	FIXED PRICE	LAND OFFICE NEW MEXICO STATE	$25,935	MCA ROLITY
INR07PG6A0053	ONLY ONE SOURCE - OTHER	FIXED PRICE	COUNTY OF PLATTE (0886)	$26,000	WEED CONTROL FOR GLENDO AND GUERNSEY
INR07BC464519	ONLY ONE SOURCE - OTHER	FIXED PRICE	QWEST GOVERNMENT SERVICES INCORPORATED (8481)	$26,004	WIRED TELEPHONE COMMUNICATIONS SERVICES
INR07PG340085	ONLY ONE SOURCE - OTHER	FIXED PRICE	AIW INCORPORATED (5517)	$27,000	CATERPILLAR EXCAVATOR 345BL RENTAL FOR 2MOS.
INR07PG400117	ONLY ONE SOURCE - OTHER	FIXED PRICE	PNM RESOURCES INCORPORATED	$28,000	MAINTENANCE AND REPAIR OF FISH PASSAGE
INR07PG810003	ONLY ONE SOURCE - OTHER	FIXED PRICE	LIEBERT GLOBAL SERVICES INCORPORATED (8453)	$28,057	UPS FULL PREVENTATIVE AND REPAIR MAINTENANCE SERVICE FOR LIEBERT EQUIPMENT.
INR07PG200042	ONLY ONE SOURCE - OTHER	FIXED PRICE	INTEGRATED MASS STORAGE SYSTEMS INCORPORATED	$29,378	EXABYTE TECH SUPPORT
INR07PG210033	ONLY ONE SOURCE - OTHER	FIXED PRICE	HUXLEY T MADEHEIM PE	$30,000	UPDATE COMPUTER MODULE "USAN"
INR07PG340154	ONLY ONE SOURCE - OTHER	FIXED PRICE	OSISOFT INCORPORATED	$30,555	SERVICE AGREEMENT FOR PIMS
INR04A6810207	ONLY ONE SOURCE - OTHER	FIXED PRICE	KINEMETRICS INCORPORATED	$31,660	HIGH DYNAMIC RANGE ACCELEROGRAPH
INR07PG600106	ONLY ONE SOURCE - OTHER	FIXED PRICE	TYROX AUTOMATION INCORPORATED	$32,162	CONTOLLOGIX GPS TIME SOURCE MODULE TO BE USED WITH THE SCADA SYSTEM PROJECT IN WYAO
INR07PG6A0055	ONLY ONE SOURCE - OTHER	FIXED PRICE	COUNTY OF PARK (0915)	$33,000	CODY WEED CONTROL
INR07PG810080	ONLY ONE SOURCE - OTHER	FIXED PRICE	ADVANCED DESIGN AND MANUFACTURING PROPRIETARY LIMITED	$37,400	ANALYTICAL SOFTWARE
INR07PG200097	ONLY ONE SOURCE - OTHER	FIXED PRICE	TULELAKE IRRIGATION DISTRICT (7569)	$39,956	O&M ASSESSMENT; TO OPERATE, MAINTIAN, AND DELIVER IRRIGATION WATER TO FEDERAL LEASE LOTS 365, 366, & 367 FOR WALKING WETLAND PURPOSES
INR07PG108110	ONLY ONE SOURCE - OTHER	FIXED PRICE	FISH AND GAME IDAHO DEPT OF (0952)	$42,228	QUANTUM MERUIT SETTLEMENT FOR THE TETON MITIGATION AREAS
INR07PG810245	ONLY ONE SOURCE - OTHER	FIXED PRICE	BINARY RESEARCH INTERNATIONAL INCORPORATED	$42,248	UNIVERAL IMAGING UTILITY
INR07PE810263	ONLY ONE SOURCE - OTHER	FIXED PRICE	VERTEX STANDARD USA INCORPORATED	$44,795	PORTABLE RADIOS

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Contract Number	Type of Sole Source	Contract Type	Contractor Name	Contract Value	Description of Requirement
INR07PG200248	ONLY ONE SOURCE - OTHER	FIXED PRICE	YSI INCORPORATED	$44,866	DATA LOGGERS
INR07PG171244	ONLY ONE SOURCE - OTHER	FIXED PRICE	DOUGLAS GRANT LINCON OKANOGAN COUNTIES PUBLIC HOSPITAL DISTRICT 6	$45,000	BASIC HEALTH SERVICES FOR EMERGENCY PURPOSES
INR07PG810208	ONLY ONE SOURCE - OTHER	FIXED PRICE	STOCKHOLM ENVIRONMENT INSTITUTE US IN	$45,012	KBHEM HYDROLOGIC MODEL
INR07PC200129	ONLY ONE SOURCE - OTHER	FIXED PRICE	ERICK AMMON INCORPORATED	$46,350	BATTLE CREEK SALMON AND STEELHEAD RESTORATION PROJECT, EAGLE CANYON CANAL PIPELINE - GEOLOGIC INVESTIGATIONS. THE WORK INCLUDES PROVIDING SAFETY AND PROTECTIVE MEASURES FOR PERSONNEL AND EXISTING FACILITIES; EXCAVATING TWO TEST-PITS TO A DEPTH UP TO 15 FE
INR07PE600174	ONLY ONE SOURCE - OTHER	FIXED PRICE	FLIR SYSTEMS INCORPORATED (8501)	$47,065	INFRARED CAMERA
INR07PG200131 A	ONLY ONE SOURCE - OTHER	FIXED PRICE	COLLIERS INTERPRETIVE AND INFORMATION CENTER	$48,000	INTERPRETIVE EXHIBIT
INR07PG600049	ONLY ONE SOURCE - OTHER	FIXED PRICE	MACKICHAN ALAN	$50,000	CONVERSION AND ENHANCEMENT OF ROMS MODELS, GREAT PLAINS REGIONAL OFFICE, MONTANA.
INR07PG321015	ONLY ONE SOURCE - OTHER	FIXED PRICE	HART INTERCIVIC INCORPORATED	$50,000	-PURCHASE MICROSOFT DOC-LOCATOR VERSION 3.0 SOFTWARE SERVER LICENSE
INR07PG171629	ONLY ONE SOURCE - OTHER	FIXED PRICE	CINTAS CORPORATION (7154)	$50,989	FLAME RESISTANT CLOTHING PROGRAM
INR07PG810049	ONLY ONE SOURCE - OTHER	FIXED PRICE	MB SEISMIC LIMITED PARTNERSHIP	$52,001	2D SEISMIC DATA TO DETERMINE EARTHQUAKE HAZARDS OF DAM SAFETY INVESTIGATION OF JOES VALLEY DAM.
INR07CS811343	ONLY ONE SOURCE - OTHER	FIXED PRICE	SPECTRUM EXPLORATION INCORPORATED	$57,500	SPECIALIZED DRILLING AT LAUER DAM
INR07PG200152	ONLY ONE SOURCE - OTHER	FIXED PRICE	GE FANUC AUTOMATION AMERICAS INCORPORATED	$58,370	PROGRAM SPECIFIC SOFTWARE
INR07PG6A0054	ONLY ONE SOURCE - OTHER	FIXED PRICE	FREMONT COUNTY WEED AND PEST CONTROL DISTRICT	$63,000	WEED CONTROL AT RIVERTON, PILOT BUTTE, AND BOYSEN
INR07PG200070	ONLY ONE SOURCE - OTHER	FIXED PRICE	T AND T VALVE AND INSTRUMENT INCORPORATED	$64,500	OPERATION AND MAINTENANCE OF DERBY DAM GATE OPERATORS
INR07PG200198	ONLY ONE SOURCE - OTHER	FIXED PRICE	GRAHAM MATTHEWS AND ASSOCIATES	$67,000	GRAVEL MONITORING AND INJECTION DESIGN
INR07PG110071	ONLY ONE SOURCE - OTHER	FIXED PRICE	HSQ TECHNOLOGY A CORPORATION	$67,260	SOUTHERN IDAHO POWERPLANTS TELEPHONE SUPPORT MAINTENANCE AGREEMENT FOR THE SCADA SYSTEM FOR THE PERIOD OF OCTOBER 1, 2007 THROUGH SEPTEMBER 30, 2012
INR07PG810055	ONLY ONE SOURCE - OTHER	FIXED PRICE	SEISMIC EXCHANGE INCORPORATED	$76,045	2D SEISMIC REFLECTION DATA
INR07PG200083	ONLY ONE SOURCE - OTHER	FIXED PRICE	BAE SYSTEMS NATIONAL SECURITY SOLUTIONS INCORPORATED	$80,550	SOCET SET
INR07PG107390	ONLY ONE SOURCE - OTHER	FIXED PRICE	COLVILLE CONFEDERATED TRIBES	$86,217	PROVIDE LABOR AND MATERIALS TO PERFORM PROFESSIONAL CARE AND MANAGEMENT OF THE ARCHAEOLOGICAL COLLECTIONS AS STATED IN THE STATEMENT OF WORK
INR07PG600062	ONLY ONE SOURCE - OTHER	FIXED PRICE	KOHOUT GEORGE	$87,278	LOVELAND CONTROL ROOM (SCADA) OPERATOR, LOVELAND CONTROL CENTER, COLORADO.
INR07PG600059	ONLY ONE SOURCE - OTHER	FIXED PRICE	POWER LINK	$87,278	LOVELAND CONTROL ROOM (SCADA) OPERATOR, LOVELAND CONTROL ROOM, COLORADO.
INR07PG200267	ONLY ONE SOURCE - OTHER	FIXED PRICE	NORTHWEST MARINE TECHNOLOGY INCORPORATED	$87,295	FISH TAGS
INR07PG140127	ONLY ONE SOURCE - OTHER	FIXED PRICE	WATER RESOURCES IDAHO DEPARTMENT OF	$87,350	PER STATEMENT OF WORK PROVIDE STREAMGAGING SERVICES IN 10 GAGES LOCATED IN IDAHO AND WYOMING: SNAKE RIVER NEAR MORAN, WY (JACKSON LAKE DAM), SNAKE RIVER BELOW FLAT CREEK NR JACKSON, WY, SNAKE RIVER ABOVE RESERVOIR NR ALPINE, WY, SNAKE RIVER AT FLAGG RANCH
INR07PG600045	ONLY ONE SOURCE - OTHER	FIXED PRICE	MULESHOE	$89,978	LOVELAND CONTROL ROOM (SCADA) OPERATOR, LOVELAND CONTROL ROOM, COLORADO.
INR07PG200164	ONLY ONE SOURCE - OTHER	FIXED PRICE	TEGELMAN DONNA E	$100,000	CONSULTING
INR07PG810250	ONLY ONE SOURCE - OTHER	FIXED PRICE	RODGERS KIRK C	$148,193	MANAGEMENT REVIEWS
INR07PG200036	ONLY ONE SOURCE - OTHER	FIXED PRICE	HASLER INCORPORATED	$150,000	POSTAGE FOR FY2007 FOR MID-PACIFIC REGIONAL OFFICE

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INR07PG200240	ONLY ONE SOURCE - OTHER	FIXED PRICE	FRAME SURVEYING AND MAPPING	$199,899	GEOTECHNICAL CONSULTING SERVICES
INR07PG200277	ONLY ONE SOURCE - OTHER	FIXED PRICE	WATERCOURSE ENGINEERING INCORPORATED	$316,902	WATER QUALITY MODELING OF THE KLAMATH RIVER FROM LINK RIVER TO KENO DAM
INR07PG200239	ONLY ONE SOURCE - OTHER	FIXED PRICE	HYDROACOUSTIC TECHNOLOGY INCORPORATED	$325,856	DATA LOGGERS
INR07BC200059	ONLY ONE SOURCE - OTHER	FIXED PRICE LEVEL OF EFFORT	COMMUNICATION EXCELLENCE	$3,600	ADR - WEBTEAM PROCESS IMPROVEMENT FACILITATION
INR07CS320210	ONLY ONE SOURCE - OTHER	LABOR HOURS	MURRAY MARVIN R	$353,671	PROFESSIONAL SERVICES - PLANNING SERVICES & SUPPORT - PROGRAM AND DEVELOPMENT DIVISION
INR07PG400133	ONLY ONE SOURCE - OTHER	LABOR HOURS	CONST SOLUTIONS	$9,350	CONSULTANT SERVICES FOR GLEN CANYON TCD
INR07PG200104	ONLY ONE SOURCE - OTHER	TIME AND MATERIALS	PLASS COMMUNICATIONS	$19,825	REPEATER RENTAL FOR THE KLAMATH PROJECT SCADA SYSTEM AT THE STUKEL MOUNTAIN REPEATER TELEMETRY SITE.
INR07PG200162	ONLY ONE SOURCE - OTHER	TIME AND MATERIALS	GROUNDWATER SIMULATIONS GROUP	$22,500	TECHNICAL ADVICE/CONSULTATION REGARDING LONG LAKE VALLEY, KLAMATH BASIN GROUNDWATER MODEL
INR07PG200161	ONLY ONE SOURCE - OTHER	TIME AND MATERIALS	GEOMATRIX CONSULTANTS INCORPORATED	$82,027	CALIBRATION OF HYDROGEOSPHERE/INTEGRATED SURFACE-SUBSURFACE HYDROLOGIC MODEL.
INR07PG200247	ONLY ONE SOURCE - OTHER	TIME AND MATERIALS	GEOMATRIX CONSULTANTS INCORPORATED	$134,706	CONSULTING SERVICES
INR07PG1U0980	PATENT/DATA RIGHTS	FIXED PRICE	MAX PERFORMANCE HYDRAULICS LIMITED LIABILITY COMPANY	$15,000	REPAIR OF WINCHES THAT CONTROL WASTEWAY CANAL FOR RECLAMATION POWER PLANT
INR07BC430091	PATENT/DATA RIGHTS	FIXED PRICE	WAGNER EQUIPMENT COMPANY	$5,114	CAT SOFWARE
INR07PG1U1010	PATENT/DATA RIGHTS	FIXED PRICE	EIMCO WATER TECHNOLOGIES LIMITED LIABILITY COMPANY	$9,087	ACCESSORIE REPAIR PARTS FOR HYDRAULIC TRASH RAKE INSTALLED AT FISH SCREEN SITE
INR07PG1U0650	PATENT/DATA RIGHTS	FIXED PRICE	BEKEL CHRISTOPHER R	$24,806	ADA COMPLIANT DOCKS AT RECLAMATION RECREATION SITE, GRAND COULEE DAM
IN07PG810270	PATENT/DATA RIGHTS	FIXED PRICE	MILES LIGHT	$28,000	IMPROVEMENTS TO THE SECONDARY IMPACTS ESTIMATION TOOL
INR07PG430076	PATENT/DATA RIGHTS	FIXED PRICE	UNIVERSITY OF COLORADO (0555) 13747	$70,000	UPDATE RIVERWARE SOFTWARE
INR07PG108420	PUBLIC INTEREST	FIXED PRICE	STATE OF WASHINGTON DEPARTMENT OF ECOLOGY	$2,580	RENEWAL FOR BUREAU OF RECLAMATION (1) CHEMISTRY I - NON-POTABLE WATER - MAXIMUM FOR CATEGORY (14) CHEMISTRY II - NON-POTABLE WATER (1) MICROBIOLOGY - NON-POTABLE WATER - MAXIMUM FOR CATEGORY
INR07PG200233	SDVOSB SOLE SOURCE	FIXED PRICE	VETERANS ASSISTANCE NETWORK IT INCORPORATED	$12,700	HP DESIGNJET 4500PS PLOTTER
INR07PG1U0840	STANDARDIZATION	FIXED PRICE	BAY VALVE SERVICE INCORPORATED	$6,406	ACTUATORS FOR IRRIGATION DIVERSION ON THE YAKIMA WA PROJECT
INR07PG200119	STANDARDIZATION	FIXED PRICE	SONTEK/YSI INCORPORATED	$7,000	MOUNTING FRAMES FOR WATER MEASURING DEVICES
INR07PA460004	UNICOR	FIXED PRICE	FEDERAL PRISON INDUSTRIES INCORPORATED (5705) 1472114	$3,285	OFFICE RECEPTION FURNITURE REQUIRED SOURCE UNICORE
INR07PA300002	UNICOR	FIXED PRICE	FEDERAL PRISON INDUSTRIES	$4,272	WOOD CRIBBING FOR HOOVER DAM
INR07PG340139	UNICOR	FIXED PRICE	FEDERAL PRISON INDUSTRIES INCORPORATED (5705) 1443894	$8,185	PURCHASE OF REPLACEMENT UNICOR PARTS.
INR07PB240777	UNIQUE SOURCE	FIXED PRICE	SAFETY KLEEN HOLDCO INCORPORATED	$0	SOLVENT REMOVAL
INR07PG5B0010	UNIQUE SOURCE	FIXED PRICE	SCIPAR INCORPORATED	$2,200	SERVICE SCADA COMPUTER SERVICE
INR06PB6B0001 0	UNIQUE SOURCE	FIXED PRICE	SCIPAR INCORPORATED	$9,367	SERVICE SCADA COMPUTER SERVICE
INR07CS200122	UNIQUE SOURCE	FIXED PRICE	FISH AND GAME CALIFORNIA DEPARTMENT OF	$550,099	REVIEW OF OPERATIONS AT THE TRACY FISH COLLECTION FACILITY TO ASSURE COMPLIANCE WITH THE ENDANGERED SPECIES ACT.
INR07PG110190	UNIQUE SOURCE	FIXED PRICE	FISH AND GAME IDAHO DEPT OF (0952)	$750	1 DAY FIELD SURVEY FOR GROUND SQUIRRELS AT THE POISON CREEK REPLACEMENT CAMPGROUND SITE.
INR07PG6A0066	UNIQUE SOURCE	FIXED PRICE	WYOMING HEALTH FAIRS	$1,000	MINI HEALTH SCREEN
INR07PG810095	UNIQUE SOURCE	FIXED PRICE	ROGERS ENGINEERING HYDRAULICS INCORPORATED	$1,200	
INROTPG810096	UNIQUE SOURCE	FIXED PRICE	NORTHERN COLORADO WATER CONSERVANCY DISTRICT	$1,460	
INR07PG810099	UNIQUE SOURCE	FIXED PRICE	UTAH STATE UNIVERSITY	$1,977	SPEAKER SERVICES
INR07PG430015	UNIQUE SOURCE	FIXED PRICE	LAND OFFICE NEW MEXICO STATE	$2,500	WATER LEASE

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INR07BC2000030	UNIQUE SOURCE	FIXED PRICE	SOCIETY OF HISPANIC PROFESSIONAL ENGINEERS INCORPORATED	$3,000	CAREER FAIR IN SAN DIEGO
INR07PG400192	UNIQUE SOURCE	FIXED PRICE	STURM VALERIE	$3,050	INTERPRETER SERVICES
INR07PG110220	UNIQUE SOURCE	FIXED PRICE	DEFENSE INFORMATION TECHNOLOGY	$3,162	IRIDIUM SATELLITE TELEMETRY MONTHLY SERVICE AND SIM CARD
INR07PG240167	UNIQUE SOURCE	FIXED PRICE	INLAND BUSINESS SYSTEMS INCORPORATED	$3,350	COLOR COPIER MAINTENANCE
INR07PG620011	UNIQUE SOURCE	FIXED PRICE	DATASTREAM SYSTEMS INCORPORATED	$3,500	MAINTENANCE SOFTWARE
INR07PE110120	UNIQUE SOURCE	FIXED PRICE	LOTEK WIRELESS INCORPORATED	$3,547	
INR07PG600155	UNIQUE SOURCE	FIXED PRICE	EAST BENCH IRRIGATION DISTRICT	$3,572	CLARK CANYON INTRUSION DETECTION SYSTEM PURCHASE AND INSTALATION
INR07PG600173	UNIQUE SOURCE	FIXED PRICE	MONTANA CONSERVATION CORPORATION	$3,600	SIGN INSTALLATION AT TIBER RESERVOIR
INR07PG490003	UNIQUE SOURCE	FIXED PRICE	UTAH DEPT OF NATURAL RESOURCES	$3,800	5 EACH BUOYS
INR07BC240617	UNIQUE SOURCE	FIXED PRICE	VIBROSYSTM INCORPORATED	$3,808	PCS PROBE
INR07PG400059	UNIQUE SOURCE	FIXED PRICE	MSI SYSTEMS INTEGRATORS INCORPORATED	$3,836	NETBOTZ
INR07PG400154	UNIQUE SOURCE	FIXED PRICE	ARGONAUT INFLATABLE RESEARCH AND ENGINEERING INCORPORATED	$3,946	RAFTING EQUIMENT
INR07PG810097	UNIQUE SOURCE	FIXED PRICE	DIMICK WATER RESOURCES ENGINEERING	$3,995	SPEAKER AT WATER MANAGEMENT WORKSHOP
INR07PG490077	UNIQUE SOURCE	FIXED PRICE	CENTRAL UTAH WATER CONSERVANCY DISTRICT	$4,000	DESIGN AND INSTALLATION SERVICES, TO INCLUDE SUPPLIE,FOR ELECTRICAL POWER FOR MOON LAKE DAM FISH BYPASS PIPELINE AND EQUIPMENT.
INR07PG400143	UNIQUE SOURCE	FIXED PRICE	FIRMAMENTAL SOFTWARE LC	$4,000	DESERT BLOOM SOFTWARE UPGRADES
INR07BC303103	UNIQUE SOURCE	FIXED PRICE	GELCO INFORMATION NETWORK GSD INCORPORATED	$4,382	GELCO TRAVEL MANAGER INSTALLATION
INR07PG322002	UNIQUE SOURCE	FIXED PRICE	SMITH ROOT INCORPORATED	$4,500	1-YEAR SERVICE AGREEMENT - REMOTE MONITORING OF THE CHINA WASH ELECTRICAL FISH BARRIER
INR07BC200153	UNIQUE SOURCE	FIXED PRICE	RED LION HOTELS CORPORATION (4199)	$4,500	ROOM RENTAL FOR ANNUAL REGIONAL NEPA WORKSHOP
INR07BC200220	UNIQUE SOURCE	FIXED PRICE	PD HOTEL ASSOCIATES LIMITED LIABILITY COMPANY	$4,560	CONFERENCE ROOM RENTAL FOR DRAINAGE MEETINGS
INR07PG4P4500	UNIQUE SOURCE	FIXED PRICE	IKON OFFICE SOLUTIONS INCORPORATED (9071)	$4,652	MAINTENANCE AGREEMENT FOR FY07'. TWO CANON COPIERS AND ONE RICOH COPIER.
INR07PG400152	UNIQUE SOURCE	FIXED PRICE	NETWORK CONSULTING SERVICES INCORPORATED	$4,888	VMWARE SUBSCRIPTION
INR07BC303024	UNIQUE SOURCE	FIXED PRICE	CARBONE OF AMERICA INDUSTRIES CORPORATION	$5,971	EXCITER BRUSHES
INR07PG270004	UNIQUE SOURCE	FIXED PRICE	NICE SYSTEMS INCORPORATED	$6,014	ANNUAL HARDWARE MAINTENCE
INR07PG6C0027	UNIQUE SOURCE	FIXED PRICE	NORTHERN COLORADO WATER CONSERVANCY DISTRICT	$6,200	WATER FESTIVAL SPONSORSHIP
INR07BC6A0255	UNIQUE SOURCE	FIXED PRICE	WYOMING MACHINERY COMPANY	$6,447	2000 HOUR SERVICE FOR SEMINOE ROAD GRADER
INR07BC110450	UNIQUE SOURCE	FIXED PRICE	ERGOGENESIS LIMITED LIABILITY COMPANY	$6,762	ERGONOMIC CHAIR
INR07PG400136	UNIQUE SOURCE	FIXED PRICE	MACMILLAN IAN	$7,000	ELEVATOR CONSULTING SERVICES
INR07PG400184	UNIQUE SOURCE	FIXED PRICE	NURSEFINDERS INCORPORATED (3273)	$7,040	TEMPORARY NURSE SERVICES
INR07BC400080	UNIQUE SOURCE	FIXED PRICE	COAST CASINOS, INC	$7,057	CONFERENCE
INR07PG170304	UNIQUE SOURCE	FIXED PRICE	C A E INCORPORATED (0000)	$8,003	CIRCUIT BOARD
INR07PG260007	UNIQUE SOURCE	FIXED PRICE	SBC GLOBAL SERVICES INCORPORATED (4367)	$9,000	WIRED TELECOMMUNICATIONS TO DAMS IN CALIFORNIA AND NEVADA.
INR07PG430030	UNIQUE SOURCE	FIXED PRICE	METROHM PEAK LIMITED LIABILITY COMPANY	$9,100	SERVICE FOR METROHM PEAK SYSTEM
INR07PG400118	UNIQUE SOURCE	FIXED PRICE	ARGONAUT INFLATABLE RESEARCH AND ENGINEERING INCORPORATED	$9,413	RAFTING EQUIPMENT
INR07PG400126	UNIQUE SOURCE	FIXED PRICE	PETROLEUM MARKETERS EQUIPMENT COMPANY LIMITED LIABILITY COMPANY	$9,480	FUELMASTER
INR07BC430008	UNIQUE SOURCE	FIXED PRICE	VERIZON FEDERAL INCORPORATED	$9,840	CELL SERVICE FOR SOCORRO FIELD OFFICE
INR07PG400114	UNIQUE SOURCE	FIXED PRICE	ECOSYSTEMS RESEARCH INSTITUTE	$9,940	PEER REVIEW
INR07PG321001	UNIQUE SOURCE	FIXED PRICE	THE WILDLIFE SOCIETY INCORPORATED	$10,000	SPONSORSHIP FEES - 2007 ANNUAL MEETING OF THE WILDLIFE SOCIETY
INR07PG400121	UNIQUE SOURCE	FIXED PRICE	DOROTHY K WASHBURN MUSEUM CONSULTANT	$10,000	SYMMETRY ANALYSIS OF PREHISTORIC CERAMICS
INR07PG230423	UNIQUE SOURCE	FIXED PRICE	IMO INDUSTRIES INCORPORATED (3751)	$10,080	PUMP REPAIR KIT FOR CARR PP
INR07PE810033	UNIQUE SOURCE	FIXED PRICE	NEXTIRAONE FEDERAL LIMITED LIABILITY COMPANY	$10,503	TELECOMMUNICATIONS - INSTALLED IN DENVER AREA
INR07PG600061	UNIQUE SOURCE	FIXED PRICE	INFORMATION IMAGING	$11,087	GREAT PLAINS REGION ELECTRONIC PLOTTER CARD MAINTENANCE

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INR07PG140128	UNIQUE SOURCE	FIXED PRICE	ESA INCORPORATED	$11,124	ARCFLASH SOFTWARE USED TO PERFORM FLASH SAFETY EVALUATIONS. EASYPOWER 8.0, 300 BUSES. STAND ALONE LICENSE, ANSI SHORTCIRCUIT, ARCFLASH, POWERPROTECTOR, SMARTDESIGN. SMART PDC WITH NETWORK CONVERSION.
INR07PG321010	UNIQUE SOURCE	FIXED PRICE	WASS GERKE AND ASSOCIATES INCORPORATED	$11,460	STATUS REPORT - TRES RIOS DEMONSTRATION CONSTRUCTED WETLAND PROJECT
INR07PG430024	UNIQUE SOURCE	FIXED PRICE	SCIPAR INCORPORATED	$11,532	SCADA MAINTANCE
INR07PG400067	UNIQUE SOURCE	FIXED PRICE	NETWORK CONSULTING SERVICES INCORPORATED	$12,303	COMMTOUCH SPAMMANAGER
INR07PG430071	UNIQUE SOURCE	FIXED PRICE	PYRAMID COMMUNICATION SERVICES INCORPORATED	$12,608	PA SYSTEM FOR NORTEL PHONE SYSTEM
INR07PG430043	UNIQUE SOURCE	FIXED PRICE	SUNLAND KORI SERVICES LIMITED LIABILITY COMPANY	$13,444	PONTOON REPAIR KIT
INR07PG240925	UNIQUE SOURCE	FIXED PRICE	MSDSPRO LIMITED LIABILITY COMPANY	$15,000	CHEMICAL INVENTORY ASSESSMENT
INR07PG430031	UNIQUE SOURCE	FIXED PRICE	PERKINELMER LAS INCORPORATED	$16,047	SERVICE FOR PERKINELMER EQUIPMENT
INR07PG400147	UNIQUE SOURCE	FIXED PRICE	GA INDUSTRIES INCORPORATED	$16,745	ELECTRONIC SURGE CONTROL BOX
INR07PG464524	UNIQUE SOURCE	FIXED PRICE	FIELD DATA SOLUTIONS INCORPORATED	$16,850	STREAMPRO DOPPLER MEASURING DEVICE
INR07PE270047	UNIQUE SOURCE	FIXED PRICE	DELL MARKETING LIMITED PARTNERSHIP	$17,181	POWEREDGE SERVER
INR07BC240749	UNIQUE SOURCE	FIXED PRICE	PATTERSON MEDICAL SUPPLY INCORPORATED	$17,194	BUOYS
INR07PG110180	UNIQUE SOURCE	FIXED PRICE	SHERIFF DEPT (0320)	$17,500	PROVIDE LAW ENFORCEMENT SERVICES ADDITIONAL TO NORMAL SERVICES ON BUREAU OF RECLAMATION LANDS AND RECREASION AREAS SURROUNDING MANN CREEK RESERVOIR, IN WASHINGTON COUNTY
INR07BC4P4150	UNIQUE SOURCE	FIXED PRICE	QWEST GOVERNMENT SERVICES INCORPORATED (8481)	$19,200	LOCAL PHONE SERVICE FOR 6 LINES
INR07PG400108	UNIQUE SOURCE	FIXED PRICE	CLAVEY RIVER EQUIPMENT	$20,993	RAFTS
INR07PG431026	UNIQUE SOURCE	FIXED PRICE	MARK S MYERS	$21,993	PRESSURER TRANSDUCERS
INR07BC241014	UNIQUE SOURCE	FIXED PRICE	SOLAR LIGHTING INTERNATIONAL INCORPORATED	$24,100	SOLAR PARKING LOT LIGHTS
INR07PC600073	UNIQUE SOURCE	FIXED PRICE	MONTANA OPERATING ENGINEERS AND AGC JOINT APPRENTICE COUNCIL	$24,992	EXCAVATION WORK AT CANYON FERRY. THE MT OPERATING ENGINEERS ARE OPERATING AN APPRENTICE PROGRAM, IN WHICH RECLAMATION DOES NOT PAY FOR ANY LABOR, ONLY EQUIPMENT AND MATERIALS.
INR07PG241541	UNIQUE SOURCE	FIXED PRICE	FARWELL LARRY	$25,000	TECHNICAL CONSULTING
INR07PG600083	UNIQUE SOURCE	FIXED PRICE	GREENFIELDS IRRIGATION DISTRICT	$25,000	PROVIDE LABOR, EQUIPMENT, AND MATERIAL IN ASSISTANCE TO RECLAMATION PERSONNEL IN DAM MODIFICATIONS INSTALLING SAFETY OF DAMS MONITORING EQUIPMENT
INR07PG430045	UNIQUE SOURCE	FIXED PRICE	WATER CONSEVATION TECHNOLOGY	$25,000	ET TOOL BOX MAINTANCE
INR07PG400150	UNIQUE SOURCE	FIXED PRICE	ECOMETRIC RESEARCH INCORPORATED (0000)	$25,000	HUMPBACK CHUB HABITAT MODELING FOR GLEN CANYON DAM
INR07PG200232	UNIQUE SOURCE	FIXED PRICE	SYSTECH ENGINEERING INCORPORATED	$25,000	EXPANSION OF WARMF SAN JOAQUIN RIVER WATERSHED MODEL: LANDER AVENUE BRIDGE TO FRIANT DAM
INR08PG240077	UNIQUE SOURCE	FIXED PRICE	S E I SOLID WASTE INCORPORATED	$28,346	TRASH/GARBAGE COLLECTION
INR07PG110060	UNIQUE SOURCE	FIXED PRICE	PROGRAM SUPPORT CENTER (1668) 1516737	$29,000	MEDICAL SURVEILLANCE, BLOOD TESTING, IMMUNIZATIONS, GENERAL PHYSICALS, HAZARDOUS EXPOSURE TESTING, VISION SCREENING FOR BUREAU OF RECLAMATION SNAKE RIVER AREA OFFICE EMPLOYEES, FOR THE PERIOD 01/06/2007 THROUGH 9/30/2007 - UNDER CONTRACT NO. A105178
INR07PG430099	UNIQUE SOURCE	FIXED PRICE	ENGINEER NEW MEXICO STATE (0565)	$37,780	MAINTAIN LAS LUNAS REFUGIUM
INR07PG430033	UNIQUE SOURCE	FIXED PRICE	L AND S ELECTRIC INCORPORATED	$40,000	GOVNER CONSUTLING
INR07PG400159	UNIQUE SOURCE	FIXED PRICE	BRIGHAM YOUNG UNIVERSITY	$44,000	MONITORING AND MODELING WATER QUALITY
INR07PG810230	UNIQUE SOURCE	FIXED PRICE	MIXZON INCORPORATED	$67,000	MODELING OF CONCENTRATE DISCHARGE
INR07PG210031	UNIQUE SOURCE	FIXED PRICE	NATIONAL ENVIRONMENTAL SCIENCES	$68,000	TAXONOMIC SERVICES
INR07PE400168	UNIQUE SOURCE	FIXED PRICE	WAGNER EQUIPMENT COMPANY	$394,134	CATERPILLAR TRACTOR D7
INR07CK101648	UNIQUE SOURCE	TIME AND MATERIALS	WATER SHED RESOURCE SOLUTIONS	$493,000	ADVISORY AND ASSISTANCE TO SUPPORT THE FEDERAL SALMON RECOVERY EFFORTS IN THE METHOW SUBBASIN
INR07CC241106	URGENCY	FIXED PRICE	C AND D CONTRACTORS INCORPORATED	$64,350	FISH HATCHERY PIPELINE REPAIR

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Contract Number	Type of Sole Source	Contract Type	Contractor Name	Contract Value	Description of Requirement
INR07CS200071	URGENCY	FIXED PRICE	COUNTY OF SACRAMENTO (0529) 1453829	$2,778,000	CCAO SECURITY GUARD FORCE. THE SHERIFF SHALL FURNISH THE NECESSARY MANAGEMENT, SUPERVISION, PERSONNEL, TRAINING, EQUIPMENT, SUPPLIES, LICENSES, PERMITS, CERTIFICATES, INSURANCE, PRE-EMPLOYMENT SCREENINGS, REPORTS, FILES, AND CLOTHING TO PROVIDE A PROFESS
INR07PG210014	URGENCY	FIXED PRICE	ALLIED ELECTRIC MOTOR SERVINC	$6,004	EMERGENCY MOTOR/BRAKE GANTRY CRANE REPAIR
INR07PV810003	URGENCY	FIXED PRICE	FORD LAKEWOOD INCORPORATED	$2,775	TRUCK REPAIRS
INR07BC4P3014	URGENCY	FIXED PRICE	SYSTEMS COMMUNICATION CORPORATION	$3,630	REPAIR POWERPLANT PAGING SYSTEM
INR07PG230405	URGENCY	FIXED PRICE	INDUSTRIAL ELECTRIC SERVICE COMPANY INCORPORATED (2424)	$3,850	MOTOR TEARDOWN AND REPAIR OF 1940 VINTAGE MOTOR
INR07PG340207	URGENCY	FIXED PRICE	CONSOLIDATED ELECTRICAL DISTRIBUTORS INCORPORATED (9191)	$4,162	PURCHASE OF ELECTRICAL MOTOR STARTER.
INR07PG260016	URGENCY	FIXED PRICE	TOM FLINT OVERHEAD CRANE CONSULTANTS	$4,200	OVERHEAD CRANE PARTS AND REAPIR.
INR07PV810001	URGENCY	FIXED PRICE	SOUTHWEST TRANSMISSION, INC.	$4,584	DRILL RIG REPAIRS
INR07PG171530	URGENCY	FIXED PRICE	LASER INNOVATIONS	$5,200	LASER REPAIR
INR07PG6A0071	URGENCY	FIXED PRICE	DAN SPURGIN	$5,430	PUMPING OF ALCOVA SEPTIC TANK AND REPLACEMENT OF PUMP
INR07BC241482	URGENCY	FIXED PRICE	J M SQUARED ASSOCIATES INCORPORATED	$7,080	PUMPS
INR07BC200243	URGENCY	FIXED PRICE	SEASONS CHANGE LIMITED LIABILITY COMPANY	$8,043	AIR CONDITIONING FOR THE COMPUTER ROOM FOR THE KLAMATH BASIN AREA OFFICE
INR07BC240890	URGENCY	FIXED PRICE	AMICO TECHNOLOGIES INCORPORATED	$8,136	MAGNETIC CONVERTER
INR07BC230816	URGENCY	FIXED PRICE	MOORE CLARK USA INCORPORATED	$8,414	EMERGENCY MEDICATED FISH FOOD
INR07PG200125	URGENCY	FIXED PRICE	DELL MARKETING LIMITED PARTNERSHIP	$14,993	DELL/EMC PREMIUM ENTERPRISE GOLD SUPPORT SERVICE MAINTENANCE CONTRACT RENEWAL
INR07PG230425	URGENCY	FIXED PRICE	INDUSTRIAL ELECTRIC SERVICE COMPANY INCORPORATED (2424)	$15,696	EMERGENCY REPAIR OF PUMP MOTOR, UNIT 4, SHASTA POWERPLANT
INR07PG200120	URGENCY	FIXED PRICE	DELL MARKETING LIMITED PARTNERSHIP	$31,930	DELL/EMC PREMIUM ENTERPRISE GOLD SUPPORT SERVICE MAINTENANCE CONTRACT RENEWAL
INR07PG241092	URGENCY	FIXED PRICE	WESTERN OILFIELDS SUPPLY COMPANY	$32,753	EMERGENCY TEMPORARY PIPE & PUMP
INR07PG200280	URGENCY	FIXED PRICE	GE FANUC AUTOMATION AMERICAS INCORPORATED	$58,370	COMPUTER EQUIPMENT
INR07PG200199	URGENCY	FIXED PRICE	BURKE JOHN F	$72,000	CONSULTING
INR07PE810073	URGENCY	FIXED PRICE	CARTUS CORPORATION	$111,550	RELOCATION SERVICES
INR07BC303161	URGENCY	FIXED PRICE	SOUTHWEST AIR CONDITIONING SERVICE INCORPORATED	$7,600	HVAC COMPRESSOR
INR07PG110010	URGENCY	FIXED PRICE WITH ECONOMIC PRICE ADJUSTMENT	YANKE MACHINE SHOP INCORPORATED	$12,300	PROVIDE STAINLESS STEEL PLATES AND WELDING WORK NEEDED TO REPAIR DAMAGE TO ARROWROCK GATEHOUSE STRUCTURE.
INR07PG200213	URGENCY	TIME AND MATERIALS	PACIFIC GAS AND ELECTRIC COMPANY	$18,800	EMERGENCY 225 KVA TRANSFORMER REPLACEMENT - GLORY HOLE RECREATION AREA
INR07PU4N0018A	UTILITIES FAR 41.2	COST SHARING	PUBLIC SERVICE COMPANY OF NEW MEXICO	$5,500	NATURAL GAS - FCO
INR07PU6H0002	UTILITIES FAR 41.2	FIXED PRICE	ONEOK INCORPORATED	$0	NATURAL GAS SERVICES FOR OKLAHOMA CITY OFFICE
INR07PU6H0001	UTILITIES FAR 41.2	FIXED PRICE	OGE ENERGY CORPORATION	$0	ELECTRIC SERVICES FOR OKLAHOMA CITY OFFICE
INR07PU430003	UTILITIES FAR 41.2	FIXED PRICE	SIERRA ELECTRIC COMPANY OP INCORPORATED	$500	ELECTRICY FOR REPETER SITE
INR07PU200081	UTILITIES FAR 41.2	FIXED PRICE	KLAMATH FALLS CITY OF (2195)	$1,200	WATER SERVICE FOR THE KLAMATH BASIN AREA OFFICE
INR07PU110370	UTILITIES FAR 41.2	FIXED PRICE	IDAHO POWER COMPANY	$1,440	PROVIDE ONGOING POWER SERVICE AT SCHAFFER BUTTE
INR07PU110380	UTILITIES FAR 41.2	FIXED PRICE	IDAHO POWER COMPANY	$1,440	PROVIDE ONGOING POWER SERVICE AT COW HOLLOW
INR07PU1100170	UTILITIES FAR 41.2	FIXED PRICE	IDAHO POWER COMPANY	$1,440	PROVIDE ONGOING POWER SERVICE AT MONTOUR RV CAMPGROUND
INR07PU431016	UTILITIES FAR 41.2	FIXED PRICE	SAN LUIS VALLEY RURAL ELECTRIC COMPANY OPERATIVE INCORPORATED	$1,800	POWER FOR MOSCA/SAND DUNES DRUM SCREEN
INR07PU260009	UTILITIES FAR 41.2	FIXED PRICE	SOUTHWEST GAS CORPORATION	$1,800	NATURAL GAS SERVICE FORE THE FALLON FIELD OFFICE.

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INR07PU322005	UTILITIES FAR 41.2	FIXED PRICE	GLENDALE CITY OF	$2,400	WATER AND SEWER SERVICES FOR THE PHOENIX AREA OFFICE AT 6150 WEST THUNDERBIRD ROAD, GLENDALE AZ 85306
INR07BC302001	UTILITIES FAR 41.2	FIXED PRICE	COACHELLA VALLEY WATER DISTRICT	$5,800	WATER SERVICES AT SALTON SEA
INR07PU4N0031	UTILITIES FAR 41.2	FIXED PRICE	CITY OF DURANGO (0582)	$6,000	UTILITIES
INR07PU430004	UTILITIES FAR 41.2	FIXED PRICE	EL PASO ELECTRIC COMPANY	$7,000	ELECTRIC POWER FOR CABALLO WAREHOUSE
INR07PU4N0014	UTILITIES FAR 41.2	FIXED PRICE	NAVAJO TRIBAL UTILITY AUTHORITY	$7,131	UTILITY - POTABLE WATER GALLEGOS PUMPING PLANT
INR07PU4P2005	UTILITIES FAR 41.2	FIXED PRICE	KINDER MORGAN INCORPORATED	$7,200	NATURAL GAS SERVICE FOR OAK GROVE WH & MORROW PT (CIMARRON)
INR07PG1U0221	UTILITIES FAR 41.2	FIXED PRICE	WASTE MANAGEMENT (6342)	$7,713	REMOVAL OF OLD HOUSING
INR07PG340208	UTILITIES FAR 41.2	FIXED PRICE	WELLTON MOHAWK IRRIGATION AND DRAINAGE DISTRICT	$8,004	UNDERGROUND SECONDARY SERVICES.
INR07PU322003	UTILITIES FAR 41.2	FIXED PRICE	SOUTHWEST GAS CORPORATION	$9,600	NATURAL GAS SERVICE FOR THE PHOENIX AREA OFFICE AT 6150 WEST THUNDERBIRD ROAD, GLENDALE, AZ 85306
INR07PG464512	UTILITIES FAR 41.2	FIXED PRICE	WEST BUILDING	$12,500	ELECTRIC SERVICE FOR COMPUTER ROOM STATION AT BOR
INR07PG200138	UTILITIES FAR 41.2	FIXED PRICE	LANGELL VALLEY IRRIGATION DISTRICT	$12,899	OPERATION OF DAMS
INR07PU4300012	UTILITIES FAR 41.2	FIXED PRICE	THE SOCORRO ELECTRIC COOPERATIVE INCORPORATED	$15,000	ELECTRIC
INR07PU430018	UTILITIES FAR 41.2	FIXED PRICE	CENTRAL VALLEY ELECTRIC COOPERATIVE INCORPORATED	$15,000	ELECTRIC SERVICE
INR07PU430012	UTILITIES FAR 41.2	FIXED PRICE	SOCORRO CITY OF	$15,000	SEWER SERVICE
INR07PU464521	UTILITIES FAR 41.2	FIXED PRICE	CITY OF FARMINGTON (0129)	$17,000	ELECTRIC SERVICE FOR BUREAU OWNED BUILDINGS
INR07PU4P4301	UTILITIES FAR 41.2	FIXED PRICE	CITY OF PAGE (9760) 1349236	$18,000	NEW PURCHASE ORDER FOR REMAINING 9 MONTHS OF 2007. ORIGINAL ORDER HAD A WRONG VENDOR CODE.
INR07PG600074	UTILITIES FAR 41.2	FIXED PRICE	NORTHWESTERN ENERGY LIMITED LIABILITY COMPANY	$18,575	CANYON FERRY YACHT BASIN POWERLINE RELOCATION
INR07PU4N0028	UTILITIES FAR 41.2	FIXED PRICE	LA PLATA ELECTRIC ASSOCIATION INCORPORATED	$19,800	UTILITY
INR07PU430014	UTILITIES FAR 41.2	FIXED PRICE	CENTRAL VALLEY ELECTRIC COOPERATIVE INCORPORATED	$20,000	ELECTRIC FOR WELLS
INR07BC302000	UTILITIES FAR 41.2	FIXED PRICE	IMPERIAL IRRIGATION DISTRICT INCORPORATED	$21,000	ELECTRICITY FOR UTILITIES AT SALTON SEA
INR07PU4N0023	UTILITIES FAR 41.2	FIXED PRICE	CITY OF FARMINGTON (0129)	$27,000	UTILITY
INR07PD600042	UTILITIES FAR 41.2	FIXED PRICE	BUFORD TRENTON IRRIGATION DISTRICT	$29,002	FY06 WHEELING COSTS REIMBURSEMENTS.
INR07PU322004	UTILITIES FAR 41.2	FIXED PRICE	SALT RIVER PROJECT AGRICULTURAL IMPROVEMENT AND POWER DISTRICT	$60,000	ELECTRICAL SERVICES FOR THE PHOENIX AREA OFFICE AT 6150 WEST THUNDERBIRD ROAD, GLENDALE AZ 85306
INR07PG1U1020	UTILITIES FAR 41.2	FIXED PRICE	BENTON RURAL ELECTRIC ASSOCIATION	$60,000	INSTALLATION OF 3-PHASE POWER TO FISH SCREEN SITE, CENTRAL WASHINGTON
INR07PU4P2056	UTILITIES FAR 41.2	FIXED PRICE	CENTURYTEL OF EAGLE INCORPORATED	$3,493	NEW PHONE LINE FOR UPPER MOLINA POWER PLANT.
INR07BC431013	UTILITIES FAR 41.2	FIXED PRICE	SUNFLOWER TELEPHONE COMPANY INCORPORATED	$660	TELEPHONE SERVICE FOR SLL PUMPING PLANT
INR07PU4P4300	UTILITIES FAR 41.2	FIXED PRICE WITH ECONOMIC PRICE ADJUSTMENT	CITY OF PAGE (9760) 1349236	$24,000	ELECTRICITY FOR GLEN CANYON FIELD DIVISION. 5 ACCOUNTS.
INR07BC302106	NOT COMPETED UNDER SAT	FIXED PRICE	VARIAN INCORPORATED	$2,632	MAINTENANCE ON SPECTROPHOTOMETER FOR REGIONAL LAB.
INR07PB600133	NOT COMPETED UNDER SAT	FIXED PRICE	THINK RESOURCES INCORPORATED	$0	TEMPORARY SERVICES, HYDROELECTRIC PLANT MECHANIC, GLENDO POWERPLANT AND GUERNSEY POWERPLANT, WYOMING.
INR07PB301016	NOT COMPETED UNDER SAT	FIXED PRICE	LANDS END INCORPORATED	$4,400	AUTHORIZED CLOTHING FOR VISITOR CENTER AT HOOVER DAM.
INR07PB600034	NOT COMPETED UNDER SAT	FIXED PRICE	METCOM	$25,000	NEEDED MAINTENANCE AND CALIBRATION OF EQUIPMENT OUT IN FIELD
INR07PG430065	NOT COMPETED	FIXED PRICE	TELEDYNE TEKMAR COMPANY	$4,575	SERVICE FOR FMS 100 MERCURY ANALYZER
INR07PE810068	NOT COMPETED	FIXED PRICE	K P F F INCORPORATED (5897)	$13,900	GEOPHYSICAL SERVICES
INR07PG110040	NOT COMPETED	FIXED PRICE	BIOMARK INCORPORATED	$14,625	PASSIVE INTEGRATED TRANSPONDER TAGS, ITEM NO. TX 1400 SST, 4,500 EACH
INR07PG200072	NOT COMPETED UNDER SAT	FIXED PRICE	NEOPOST INCORPORATED	$240	POSTAGE METER LEASE MAINTENANCE AGREEMENT
INR07PG260002	NOT COMPETED UNDER SAT	FIXED PRICE	BURGARELLO ALARM INCORPORATED	$900	SECURITY ALARM MOINTORING SERVICE

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INR08PG260001	NOT COMPETED UNDER SAT	FIXED PRICE	BURGARELLO ALARM INCORPORATED	$934	SECURITY ALARM MONITORING SERVICE
INR07PG200026	NOT COMPETED UNDER SAT	FIXED PRICE	AERO METRIC INCORPORATED	$1,020	
INR08PG600004	NOT COMPETED UNDER SAT	FIXED PRICE	CITY OF BILLINGS (1237)	$1,254	DUMPSTER AND DISPOSAL FEES FOR OUR GARBAGE
INR08PE600003	NOT COMPETED UNDER SAT	FIXED PRICE	HEWLETT PACKARD COMPANY (1436)	$2,567	MAINTENANCE ON OLD ALPHA SYSTEM REQUIRED
INR07BC6A0118	NOT COMPETED UNDER SAT	FIXED PRICE	NETWELL MARKETING INCORPORATED	$2,916	SEMINOE OFFICE SOUND PROOFING MATERIAL
INR07BC303020	NOT COMPETED UNDER SAT	FIXED PRICE	INTEGRATED SUPPORT SYSTEMS INCORPORATED	$2,967	AIR CONDITIONING PROCESSOR BOARD
INR07BC303018	NOT COMPETED UNDER SAT	FIXED PRICE	VERIZON CALIFORNIA INCORPORATED	$3,000	LOCAL PHONE SERVICE FOR SCAO.
INR07BC303106	NOT COMPETED UNDER SAT	FIXED PRICE	BURRTEC WASTE AND RECYCLING SERVICES	$3,200	REFUSE DISPOSAL FOR SALTON SEA
INR07PV810036	NOT COMPETED UNDER SAT	FIXED PRICE	UPS FREIGHT INCORPORATED	$3,449	DELIVERY FOR OFFICE SUPPLIES
INR07PE600162	NOT COMPETED UNDER SAT	FIXED PRICE	HEWLETT PACKARD COMPANY (1436)	$3,668	NEW MAINT AGREEMENT FOR N4000
INR07PG303132	NOT COMPETED UNDER SAT	FIXED PRICE	EARTH RESOURCE GROUP	$3,700	MICROBIBIAL SURVEY & TESTING AT HOOVER DAM POLICE BUILDING.
INR07PG490015	NOT COMPETED UNDER SAT	FIXED PRICE	SYSTEMS COMMUNICATION CORPORATION	$4,200	RENTAL OF TABBY MOUNTAIN REPEATER SITE FOR TWELVE MONTHS
INR07BC4P3023	NOT COMPETED UNDER SAT	FIXED PRICE	PERRY INDUSTRIAL INCORPORATED	$4,506	REPAIR JLG
INR07BC1U0730	NOT COMPETED UNDER SAT	FIXED PRICE	RS EXCAVATING INCORPORATED	$4,518	EMERGENCY RENTAL OF EXCAVATOR FOR DEBRIS REMOVAL AT PROSSER WA FISH LADDER
INR07BC302114	NOT COMPETED UNDER SAT	FIXED PRICE	PERKINELMER LAS INCORPORATED	$4,632	MAIANTENANCE ON THE AANALYST 100 INSTRUMENT IN REGIONAL LAB
INR07PG620012	NOT COMPETED UNDER SAT	FIXED PRICE	RED RIVER BASIN COMMISSION	$5,000	RED RIVER BASIN CONFERENCE (PARTIAL SPONSORSHIP)
INR07PG340126	NOT COMPETED UNDER SAT	FIXED PRICE	ENVIRONMENTAL QUALITY ARIZONA DEPT OF	$5,000	
INR07PG230428	NOT COMPETED UNDER SAT	FIXED PRICE	DICKENSON STEPHEN	$5,000	GRASS VALLEY CHANNEL SURVEY
INR07PG1L0170	NOT COMPETED UNDER SAT	FIXED PRICE	HERMISTON IRRIGATION DISTRICT	$5,159	DELIVERY OF IRRIGATION WATER TO OXBOW PROPERTY
INR07PG240126	NOT COMPETED UNDER SAT	FIXED PRICE	ENOSERV LIMITED LIABILITY COMPANY	$5,195	ADP SOFTWARE
INR07BC437014	NOT COMPETED UNDER SAT	FIXED PRICE	GOLDEN EQUIPMENT COMPANY	$5,610	RENTAL OF BACKHOE
INR07PG303124	NOT COMPETED UNDER SAT	FIXED PRICE	HEMPHILL DAVID C	$6,000	SERVIES OF DAVID HEMPHILL TO PERFORM CHEMICAL ANALYSIS AND OTHER DUTIES FOR THE REGIONAL LAB ON AS "AS NEEDED" BASIS.
INR06PG200087	NOT COMPETED UNDER SAT	FIXED PRICE	MACE USA LIMITED LIABILITY COMPANY	$6,256	DOPPLER AGRIFLO SERIES 3 METER
INR07PG107380	NOT COMPETED UNDER SAT	FIXED PRICE	SPOKANE TRIBE OF INDIANS (6339)	$6,344	BURIAL SITE INSPECTIONS AT LAKE ROOSEVLET SHORELINE.
INR07PG600057	NOT COMPETED UNDER SAT	FIXED PRICE	CONTEMPORARY CYBERNETICS GROUP INCORPORATED	$6,413	EMERGENCY BACKUP EQUIPMENT
INR07PG200025	NOT COMPETED UNDER SAT	FIXED PRICE	TRIMBLE NAVIGATION LIMITED	$6,500	TERRAMODEL ANNUAL MAINTENANCE
INR07BC303034	NOT COMPETED UNDER SAT	FIXED PRICE	NEW ALBERTSONS INCORPORATED	$7,068	GIFT CARDS
INR07PG810201	NOT COMPETED UNDER SAT	FIXED PRICE	HOTLINE ELECTRICAL SALES AND SERVICES	$7,272	OHMMETER
INR07PG600086	NOT COMPETED UNDER SAT	FIXED PRICE	DECISIONONE CORPORATION (8680)	$7,464	SERVICE AGREEMENT FOR APERTURE CARD SCANNER
INR07PE600046	NOT COMPETED UNDER SAT	FIXED PRICE	CA INCORPORATED	$7,800	SOFTWARE AND MAINTENANCE REQUIRED
INR07BC303062	NOT COMPETED UNDER SAT	FIXED PRICE	UNITED ANCO SERVICES INCORPORATED (0824)	$8,000	SCAFFOLDING FOR INSTALLATION OF REPLACEMENT BUTTERFLY VALVES AT HOOVER DAM.
INR07PG303233	NOT COMPETED UNDER SAT	FIXED PRICE	UNIVERSITY OF COLORADO (0555) 13747	$8,000	PROVIDE ADSWES HDB TRAINING TO RECLAMATION PERSONNEL IN BOULDER CITY, NV AND YUMA, AZ.
INR07PG321012	NOT COMPETED UNDER SAT	FIXED PRICE	BUECHER DEBBIE C	$8,000	ACOUSTIC BAT SURVEY ON LOWER SAN PEDRO RIVER AND MIDDLE GILA RIVER - 2007
INR07PG4P3017	NOT COMPETED UNDER SAT	FIXED PRICE	WYOMING STATE OF (0855)	$8,268	WEED SPRAYING AT FONTENELLE DAM
INR06PG107160	NOT COMPETED UNDER SAT	FIXED PRICE	REED ELSEVIER INCORPORATED	$8,304	SUBSCRIPTION FOR LOOK-UP-SERVICE FOR LEGAL PRECEDENTS

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INR07PG107160	NOT COMPETED UNDER SAT	FIXED PRICE	REED ELSEVIER INCORPORATED	$8,304	ONLINE SUBSCRIPTION FOR LEGAL RESEARCH
INR07PE600088	NOT COMPETED UNDER SAT	FIXED PRICE	DELL MARKETING LIMITED PARTNERSHIP	$8,693	MONITORS FOR MTAO AND CANYON FERRY
INR07PG810136	NOT COMPETED UNDER SAT	FIXED PRICE	SUN MICROSYSTEMS INCORPORATED	$9,000	SOFTWARE MAINTENANCE
INR07PE600140	NOT COMPETED UNDER SAT	FIXED PRICE	DELL MARKETING LIMITED PARTNERSHIP	$9,444	SERVER FOR CADD
INR07BC303017	NOT COMPETED UNDER SAT	FIXED PRICE	WEST PUBLISHING CORPORATION	$9,953	ON-LINE LIBRARY SERVICES
INR07PG600066	NOT COMPETED UNDER SAT	FIXED PRICE	SCHULZ ENTERPRISES	$10,000	PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM.
INR07PG200256INR	NOT COMPETED UNDER SAT	FIXED PRICE	AMERICAN RIVER NATURAL HISTORY ASSOCIATION	$10,000	CONTRACTOR TO PROVIDE A VARIETY OF SUPPLIES NEEDED TO SUPPORT THE ANNUAL AMERICAN RIVER SALMON FESTIVAL.
INR07PG303108	NOT COMPETED UNDER SAT	FIXED PRICE	ARIZONA STATE OF	$10,000	2007 NATIONAL AGRICULTURAL INVENTORY PROGRAM (NAIP) IMAGERY FOR AZ
INR07PG108230	NOT COMPETED UNDER SAT	FIXED PRICE	INTEGRATED ENVIRONMENTAL DESIGN	$10,851	REHABILITATION OF DAMAGED VERNAL POOL HABITAT AT AGATE RESERVOIR
INR07BC303180	NOT COMPETED UNDER SAT	FIXED PRICE	LGS INNOVATIONS LIMITED LIABILITY COMPANY	$11,193	RADIO REPAIRS
INR07BC303139	NOT COMPETED UNDER SAT	FIXED PRICE	LANDS END INCORPORATED	$11,226	POLO SHIRTS FOR HOOVER, PARKER AND DAVIS DAMS
INR07BC302107	NOT COMPETED UNDER SAT	FIXED PRICE	PERKINELMER LAS INCORPORATED	$11,616	MAINTENANCE ON REGIONAL LAB EQUIPMENT
INR07BC303033	NOT COMPETED UNDER SAT	FIXED PRICE	GENERAL ELECTRIC COMPANY (1975)	$11,996	AIR GAP SENSORS FOR HOOVER DAM
INR07BC302102	NOT COMPETED UNDER SAT	FIXED PRICE	HACH COMPANY	$13,200	WATER & WASTEWATER PREVENTATIVE MAINTENANCE AT HOOVER DAM.
INR07BC303120	NOT COMPETED UNDER SAT	FIXED PRICE	BAUER COMPRESSORS INCORPORATED	$13,435	AIR COMPRESSOR
INR07PG600141	NOT COMPETED UNDER SAT	FIXED PRICE	DATACORE TECHNOLOGY INCORPORATED	$14,263	NECESSARY RENEWAL OF LICENSE AND TECH SUPPORT FOR SOFTWARE WE CURRENTLY USE
INR07PG315003	NOT COMPETED UNDER SAT	FIXED PRICE	IRIS POWER ENGINEERING INCORPORATED	$15,305	PDA COUPLERS PACKAGE AND EXPERT SERVICE
INR07BC303058	NOT COMPETED UNDER SAT	FIXED PRICE	GROVE MADSEN INDUSTRIES INCORPORATED	$15,611	SUBSCRIPTION FOR SOFTWARE SUPPORT/UPDATES FOR WASTE WATER SCADA SYSTEM AT HOOVER DAM.
INR07PG108360	NOT COMPETED UNDER SAT	FIXED PRICE	FOAM CONCEPTS LIMITED LIABILITY COMPANY	$18,300	FOAM REQUIRED TO SEAL OFF CAVE AND OLD MINE OPENINGS FOR SAFETY PURPOSES
INR07PG107230	NOT COMPETED UNDER SAT	FIXED PRICE	BIOMARK INCORPORATED	$19,158	MAINTENANCE OF PIT TAG DETECTION SYSTEM AT CLE ELUM DAM NEAR CLE ELUM, KITTITAS COUNTY, WA
INR08PG600005	NOT COMPETED UNDER SAT	FIXED PRICE	HASLER INCORPORATED	$20,000	POSTAGE
INR07PG108190	NOT COMPETED UNDER SAT	FIXED PRICE	DOUBLE EAGLE HISTORY	$20,000	CONDUCT HISTORICAL RESEARCH AND COLLECT INFORMATION AND REFERENCE MATERIAL FOR RECLAMATION STAFF IN SUPPORT OF THE SNAKE RIVER BASIN ADJUDICATION LITIGATION SUBCASE 63-3618 INVOLVING A CHALLENGE TO THE WATER RIGHT HELD BY RECLAMATION FOR STREAMFLOW MAINTE
INR07PG230429	NOT COMPETED UNDER SAT	FIXED PRICE	L AND S ELECTRIC INCORPORATED	$20,000	ENGINEERING SERVICES
INR07PG303126	NOT COMPETED UNDER SAT	FIXED PRICE	REGENTS OF THE UNIVERSITY OF CALIFORNIA THE (2123)	$20,000	SPONSORSHIP FOR WATER ACHIVES
INR07PG107090	NOT COMPETED UNDER SAT	FIXED PRICE	SAFWAY SERVICES INCORPORATED (1339)	$22,862	SCAFFOLDING FOR FORT SIMCOE JOB CORPS
INR07PE600119	NOT COMPETED UNDER SAT	FIXED PRICE	SUTRON CORPORATION	$23,120	UPDATE SATELLITE EQUIPMENT
INR07PE600150	NOT COMPETED UNDER SAT	FIXED PRICE	SUTRON CORPORATION	$23,120	PHASE II, DCP'S
INR07PG308098	NOT COMPETED UNDER SAT	FIXED PRICE	RNT CONSULTING INCORPORATED	$24,256	EVALUATE LOWER COLORADO RIVER DAMS' (HOOVER, PARKER, AND DAVIS) VULNERABILITY TO QUAGGA MUSSEL BIOFOULING AND RECOMMEND MACROFOULING CONTROL STRATEGIES.
INR07BC303136	NOT COMPETED UNDER SAT	FIXED PRICE	FLATIRONS ENGINEERING INCORPORATED	$24,500	TECHNICAL SUPPORT FOR SCADA SYSTEM AT HOOVER DAM.
INR07PG810300	NOT COMPETED UNDER SAT	FIXED PRICE	L R P PUBLICATIONS INCORPORATED (2160)	$27,425	HR PUBLICATIONS
INR07PE600037	NOT COMPETED UNDER SAT	FIXED PRICE	APPTIS INCORPORATED	$27,775	IT MAINTENANCE AND RENEWAL

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Contract Number	Type of Sole Source	Contract Type	Contractor Name	Contract Value	Description of Requirement
INR07PE600039	NOT COMPETED UNDER SAT	FIXED PRICE	XEROX CORPORATION	$28,234	LEASE XEROX BLACK AND WHITE COPIER
INR07PE600038	NOT COMPETED UNDER SAT	FIXED PRICE	XEROX CORPORATION	$31,896	LEASE OF COLOR COPIER AND MAINTENANCE
INR07PV810035	NOT COMPETED UNDER SAT	FIXED PRICE	ACQUISITION SOLUTIONS INCORPORATED (2068)	$34,500	VAO SUBSCRIPTION
INR07PE600152	NOT COMPETED UNDER SAT	FIXED PRICE	INTERNATIONAL BUSINESS MACHINES CORPORATION	$58,015	N4000 REPLACEMENT FOR IT
INR07PG303208	NOT COMPETED UNDER SAT	FIXED PRICE	GE FANUC AUTOMATION AMERICAS INCORPORATED	$65,573	IFIX KEYS & EDA TOOL KIT
INR07PG210031	NOT COMPETED UNDER SAT	FIXED PRICE	NATIONAL ENVIRONMENTAL SCIENCES	$68,000	TAXONOMIC SERVICES
INR07PG107080	NOT COMPETED UNDER SAT	FIXED PRICE	PITNEY BOWES INCORPORATED (5050)	$68,000	PURCHASE ORDER FOR POSTAGE FOR THE POSTAGE METERS IN THE REGION AS NEEDED
INR07PG303125	NOT COMPETED UNDER SAT	FIXED PRICE	WATER EDUCATION FOUNDATION	$70,000	WATER EDUCATION OUTREACH EFFORTS
INR07PG107180	NOT COMPETED UNDER SAT	FIXED PRICE	WATER RESOURCES OREGON DEPARTMENT OF	$71,468	STREAM GAGING SERVICES FOR 2006 / 2007 WATER YEAR.
INR07PE600055	NOT COMPETED UNDER SAT	FIXED PRICE	CARTUS CORPORATION	$80,000	RELOCATION
INR07PG303063	NOT COMPETED UNDER SAT	FIXED PRICE	HARTMAN VALVE CORPORATION	$211,115	BUTTERFLY VALVE SEAL REPLACEMENT AT HOOVER DAM.
INR06CS811270	NOT COMPETED UNDER SAT	TO BE DETERMINED FOR EACH ORDER)	ONERAIN INCORPORATED	$0	EARLY WARNING SYSTEM SUPPLIES AND SERVICES FOR DAM SAFETY PROGRAM.
INR07CS200002	NOT AVAILABLE FOR COMPETITION	TIME AND MATERIALS	SHASTA COUNTY OF (0535)	$277,810	LAW ENFORCEMENT PATROL AT SHASTA DAM. REDDING, CA
INR07PV810010	NOT COMPETED UNDER SAT	FIXED PRICE	PROFESSIONAL SIGN LANGUAGE INTERPRETING INCORPORATED	$3,795	AMERICAN SIGN LANGUAGE INTERPRETING SERVICES
INR07PG810151	NOT COMPETED UNDER SAT	FIXED PRICE	MESSAGING SOLUTIONS LIMITED LIABILITY COMPANY	$4,275	MARSHAL INTEGRATED MCAFEE ANTI-VIRUS 6000 USERS SOFTWARE MAINTENANCE RENEWAL
INR07BC303042	NOT COMPETED UNDER SAT	FIXED PRICE	B E WALLACE PRODUCTS CORPORATION	$5,836	CRANE, 2 TON TRI-ADJUSTABLE FOR HOOVER DAM.
INR07PG4P2053	NOT COMPETED UNDER SAT	FIXED PRICE	VALLEY CONCRETE PUMPING LIMITED LIABILITY COMPANY	$6,500	CONCRETE PUMPER TRUCK RENTAL
INR07PG303071	NOT COMPETED UNDER SAT	FIXED PRICE	EARTH RESOURCE GROUP	$7,000	AIR SAMPLING OF VARIOUS AREAS AT HOOVER DAM
INR07PG230415	NOT COMPETED UNDER SAT	FIXED PRICE	TETRAD SERVICES INCORPORATED	$8,290	PUMP REPAIR
INR08PG107020	NOT COMPETED UNDER SAT	FIXED PRICE	MACHINEXL LIMITED LIABILITY COMPANY	$9,050	COMMISSIONING OF THE VIBRATION MONITORYING SYSTEM AT THE COLUMBIA RIVER PUMPING PLANT, USBR PACIFIC NORTHWEST REGION, UMATILLA FIELD OFFICE, UMATILLA COUNTY, OREGON.
INR07PG303145	NOT COMPETED UNDER SAT	FIXED PRICE	PROJECT SERVER SUPPORT INCORPORATED	$10,000	MS PROJECTS CONSULTANT
INR07PG303107	NOT COMPETED UNDER SAT	FIXED PRICE	MURPHY RICHARD	$15,000	ENVIRONMENTAL COMPLIANCE CONSULTING SERVICES OF RICHARD MURPHY.
INR07BC303174	NOT COMPETED UNDER SAT	FIXED PRICE	COMPUTER PROJECTION SYSTEMS LIMITED LIABILITY COMPANY	$15,252	
INR07BC303112	NOT COMPETED UNDER SAT	FIXED PRICE	PRECISION MACHINE AND SUPPLY INCORPORATED	$16,884	UNIT A2 MODIFICATION OF 18 COUPLING BOLTS FOR HOOVER DAM.
INR07PG303207	NOT COMPETED UNDER SAT	FIXED PRICE	COMPUTER PROJECTION SYSTEMS LIMITED LIABILITY COMPANY	$17,163	MSCP LARGE CONFERENCE ROOM SMART BOARD EQUIPMENT AND ACCESSORIES.
INR07PG303133	NOT COMPETED UNDER SAT	FIXED PRICE	SCHUTTE AND KOERTING ACQUISITION COMPANY	$17,750	EDUCTORS FOR AZ/NV AT HOOVER DAM.
INR07PG810131	NOT COMPETED UNDER SAT	FIXED PRICE	GEO TEST UNLIMITED	$17,968	FOLSOM DAM FOUDATION SLIDING
INR07PG107210	NOT COMPETED UNDER SAT	FIXED PRICE	SPATIAL DYNAMICS	$23,000	PROTOCOL MANAGER DATABASE APPLICATION DEVELOPMENT AND SUPPORT SERVICES.
INR07PG303148	NOT COMPETED UNDER SAT	FIXED PRICE	METROPOLITAN MARINE SOLUTIONS	$27,198	RATIFICATION - OIL SPILL LAKE HAVASU
INR07PG810135	NOT COMPETED UNDER SAT	FIXED PRICE	WESTEC SERVICES INCORPORATED	$31,245	PURCHASE OF UNDERWATER CAMERA EQUIPMENT.
INR07PG230410	NOT COMPETED UNDER SAT	FIXED PRICE	HYDRAULIC CONTROLS INCORPORATED (2234)	$56,298	LUBRICATING SYSTEM
INR07PG303054	NOT COMPETED UNDER SAT	FIXED PRICE	EINERT MARTIN P	$97,500	PLANNING CONSULTANT SERVICES

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INR07PB101230	NOT COMPETED UNDER SAT	TO BE DETERMINED FOR EACH ORDER)	SNYDER JO	$100,000	PROVIDE TECHNICAL WRITING SERVICES AND TRAINING FOR GRANT/PERMIT APPLICATIONS AND OTHER RELATED TECHNICAL SUPPORT SERVICES REQUIRED BY USBR PACIFIC NNRTHWEST REGION TO ACCOMPLISH COLUMBIA SNAKE RIVER HABITAT IMPLEMENTATION PROGRAM GOALS
INR07PG290001	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	HASLER INCORPORATED	$9,000	
INR07PG210116	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	DILLARD TRUCKING INCORPORATED	$11,058	
INR07PU290009	NOT COMPETED	FIXED PRICE	NEVADA BELL TELEPHONE COMPANY	$0	
INR07PG290017	NOT COMPETED	FIXED PRICE	MICHAEL ANTHONY, PRIOR	$960	
INR08PB301009	FOLLOW ON TO COMPETED ACTION	FIXED PRICE	CELLCO PARTNERSHIP DBA VERIZON WIRELESS	$0	WIRELESS SERVICES
INR08PB301016	FOLLOW ON TO COMPETED ACTION	FIXED PRICE	CINGULAR WIRELESS LIMITED LIABILITY COMPANY (5068)	$0	WIRELESS PHONE SERVICE
INR08PB301007	FOLLOW ON TO COMPETED ACTION	FIXED PRICE	CELLCO PARTNERSHIP DBA VERIZON WIRELESS	$0	WIRELESS SERVICES
INR08PB301004	FOLLOW ON TO COMPETED ACTION	FIXED PRICE	UNITED PARCEL SERVICE INCORPORATED (OH) (2075)	$0	MAIL SERVICES
INR08PB301011	FOLLOW ON TO COMPETED ACTION	FIXED PRICE	FEDERAL EXPRESS CORPORATION	$0	OVERNIGHT MAIL SERVICES
INR08PB301010	FOLLOW ON TO COMPETED ACTION	FIXED PRICE	UNITED PARCEL SERVICE INCORPORATED (OH) (2075)	$0	MAIL SERVICES
INR08PB301017	FOLLOW ON TO COMPETED ACTION	FIXED PRICE	CELLCO PARTNERSHIP DBA VERIZON WIRELESS	$0	WIRELESS SERVICES
INR06PB230164	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	MT SHASTA SPRING WATER COMPANY INCORPORATED	$25,000	DRINKING AND DISTILLED WATER
INR07PB210016	NOT COMPETED	FIXED PRICE	MODESTO STEEL AND WELDING PRODUCTS INCORPORATED	$0	BPA - WELDING SUPPLIES & ACCESSORIES
INR07PB6A0039	NOT COMPETED	FIXED PRICE	WOODWARD TRACTOR AND RENTAL INCORPORATED	$0	RENTAL OF VARIOUS EQUIPMENT
INR07PB210001	NOT COMPETED	FIXED PRICE	SILVAS OIL COMPANY INCORPORATED	$0	BPA - UNLEADED AND DIESEL FUEL
INR07PB6A0020	NOT COMPETED	FIXED PRICE	FASTENAL COMPANY (8415) 3926	$0	MISC. SUPPLIES
INR07PB6A0035	NOT COMPETED	FIXED PRICE	ENERGY EQUIPMENT AND SUPPLY INCORPORATED	$0	MISC. SUPPLIES
INR07PB210017	NOT COMPETED	FIXED PRICE	COMFORT AIR INCORPORATED (3371)	$0	BPA - HEATING & AIR CONDITIONING SERVICE
INR07PB210018	NOT COMPETED	FIXED PRICE	DAMERON HOSPITAL ASSOCIATION INCORPORATED	$0	BPA - OCCUPATIONAL PHYSICALS
INR07PB6A0030	NOT COMPETED	FIXED PRICE	W W GRAINGER INCORPORATED (0280)	$0	MISC. SUPPLIES
INR07PB6A0038	NOT COMPETED	FIXED PRICE	STEVENS FIRE PROTECTION SERVICE	$0	SERVICE & MAINTENANCE OF FIRE EXTINGUISHERS, EEBA'S, SCBA'S & LARGE CO2 GENERATING UNIT PROTECTION
INR07PB210019	NOT COMPETED	FIXED PRICE	BRADFORD STEVEN MACHINE	$0	BPA - MACHINE/PIPE REPAIR
INR07PB6A0019	NOT COMPETED	FIXED PRICE	REXEL INCORPORATED (4244)	$0	MISC. SUPPLIES
INR07PB6A0017	NOT COMPETED	FIXED PRICE	DOOLEY OIL INCORPORATED	$0	MISC. SUPPLIES OIL, GREASE, & LUBRICANTS
INR07PB6A0026	NOT COMPETED	FIXED PRICE	MSC INDUSTRIAL DIRECT COMPANY INCORPORATED	$0	MISC. SUPPLIES
INR07PB6A0027	NOT COMPETED	FIXED PRICE	HUGHES	$0	MISC. SUPPLIES
INR07PB6A0025	NOT COMPETED	FIXED PRICE	LAB SAFETY SUPPLY (6218)	$0	MISC. SUPPLIES
INR07PB6A0048	NOT COMPETED	FIXED PRICE	ENERGY LABORATORIES INCORPORATED	$0	SERVICE FOR LAB TESTING OF ITEMS FOR ASBESTOS, PCB, HEAVY METALS, TCB, & WATER SAMPLES
INR07PB170006	NOT COMPETED	FIXED PRICE	LABOR SYSTEMS INCORPORATED	$0	WELDING INSPECTOR
INR07PB6A0021	NOT COMPETED	FIXED PRICE	GASES PLUS INCORPORATED	$0	DEMURRAGE ON BOTTLES AND BOTTLES TO BE FILLED WITH GAS
INR07PB6A0023	NOT COMPETED	FIXED PRICE	ABM FEDERAL SALES INCORPORATED	$0	MISC. SUPPLIES
INR07PB6A0032	NOT COMPETED	FIXED PRICE	VOGEL PAINT AND WAX COMPANY INCORPORATED	$0	MISC. SUPPLIES
INR07PB210015	NOT COMPETED	FIXED PRICE	VALLEY PACIFIC PETROLEUM SERVICES INCORPORATED	$0	BPA - UNLEADED AND DIESEL FUEL
INR07PB6A0022	NOT COMPETED	FIXED PRICE	IMAGING SYSTEMS LIMITED LIABILITY COMPANY	$0	MISC. SUPPLIES
INR07PB6A0036	NOT COMPETED	FIXED PRICE	J H KASPAR OIL COMPANY	$0	UNLEADED GAS AND DIESEL FOR SEMINOE CAMP
INR07PB6A0028	NOT COMPETED	FIXED PRICE	AMERICAN GOVERNOR COMPANY	$0	MISC. SUPPLIES
INR07PB210003	NOT COMPETED	FIXED PRICE	OCCUPATIONAL HEALTH CENTERS OF CALIFORNIA A MEDICAL CORPORATION	$0	OCCUPATIONAL PHYSICALS
INR07PB6A0047	NOT COMPETED	FIXED PRICE	RESERVOIRS ENVIRONMENTAL INCORPORATED	$0	SERVICE FOR LAB TESTING OF ITEMS FOR ASBESTOS, PCB, HEAVY METALS
INR07PB6A0018	NOT COMPETED	FIXED PRICE	CRUM ELECTRIC SUPPLY COMPANY INCORPORATED	$0	MISC. SUPPLIES

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INR07PB6A0029	NOT COMPETED	FIXED PRICE	APPLIED INDUSTRIAL TECHNOLOGIES INCORPORATED	$0	MISC. SUPPLIES
INR07PB6A0031	NOT COMPETED	FIXED PRICE	MC MASTER CARR SUPPLY COMPANY	$0	MISC. SUPPLIES
INR07PB6A0037	NOT COMPETED	FIXED PRICE	NEW PIG CORPORATION	$0	MISC. SUPPLIES
INR07PB6A0024	NOT COMPETED	FIXED PRICE	CHEROKEE LASER LIMITED LIABILITY COMPANY	$0	MISC. SUPPLIES
INR07PB210002	NOT COMPETED	FIXED PRICE	ABM FEDERAL SALES INCORPORATED	$0	BPA - IT CONSUMABLES AND EQUIPMENT
INR07PB200113	NOT COMPETED	FIXED PRICE	FRONTIER GEOSCIENCES INCORPORATED	$0	BPA FOR LABORATORIES TESTING AND ANALYSIS
INR07PB210001	NOT COMPETED UNDER SAT	FIXED PRICE	SILVAS OIL COMPANY INCORPORATED	$0	FUEL DELIVERIES
INR07PG200197	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	INLAND BUSINESS SYSTEMS INCORPORATED	$290	ANNUAL MAINTENANCE AGREEMENT FOR HP 8550N COLOR LASER PRINTER
INR07PG600023	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	J AND H OFFICE EQUIPMENT (1266)	$616	CONTINUING MAINTENANCE SERVICE FOR CANON COPIER.
INR07PG600022	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	AUTOMATED OFFICE SYSTEMS INCORPORATED (3839)	$780	CONTINUING MAINTENANCE SERVICE FOR CANON COPIER GP-3600
INR07PG290012	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	EAGLEWEIS INCORPORATED	$970	
INR07PG600025	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	AUTOMATED OFFICE SYSTEMS INCORPORATED (3839)	$2,001	CONTINUING MAINTENANCE SERVICE FOR CANON COPIER NP6085.
INR07PG600079	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	EATON CORPORATION (6467)	$2,750	CONTINUING SERVICE
INR07PE600065	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	ECONOMIC SYSTEMS INCORPORATED	$3,054	CONTINUING RETIREMENT INFORMATION SERVICE
INR07PG303164	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	PUBLIC OFFICIALS FOR WATER AND ENVIRONMENTAL REFORM	$5,000	POWER CONFERENCE SPONSORSHIP
INR07PG600024	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	HEWLETT PACKARD COMPANY (1436)	$5,169	CONTINUING MAINTENANCE SERVICE FOR HEWLETT PACKARD EQUIPMENT.
INR07BC430005	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	T MOBILE USA INCORPORATED	$6,000	CELL SERVICE FOR SOCORRO FIELD OFFICE
INR07PG430061	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	NAMBE PUEBLO GOVERNORS OFFICE	$6,000	MAINTAINE NAMBE REC AREA
INR07PE210120	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	SIGMA BREAKTHROUGH TECHNOLOGIES	$6,118	MINITAB LICENSES & SOFTWARE
INR07PG4P3003	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	WYOMING STATE OF (0855)	$7,569	WEED SPRAYING AT FONTENELLE DAM
INR07BC230815	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	BIOMARK INCORPORATED	$7,900	PIT TAG PURCHASE
INR07PG600011	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	AUTOMATED OFFICE SYSTEMS INCORPORATED (3839)	$8,736	
INR07BC290003	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	RSC EQUIPMENT RENTAL INCORPORATED	$9,260	
INR07BC240992	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	PATTERSON MEDICAL SUPPLY INCORPORATED	$9,724	FLOAT COLLAR BUOYS
INR07PG340087	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	SEVERN TRENT WATER PURIFICATION INCORPORATED	$11,086	PURCHASE OF AMMONICA FEED SYSTEM TO BE COMPATIBLE WITH EXISTING GAS SYSTEMS AT THE YUMA DESALTING PLANT.
INR07PG1U0770	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	ALIMAK HEX INCORPORATED	$14,020	SERVICE / REPAIR/ INSPECTION AND INSTALLATION OF REQUIRED SAFETY DEVICE AT FREIGHT ELEVATORS AT RECLAMATION DAMS
INR07PG230407	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	WESTERN BUSINESS EQUIPMENT INCORPORATED (0798)	$18,807	MAINTENANCE SERVICE AGREEMENT FOR GOVERNMENT OWNED KYOCERA MITA COPIERS AND ON FAX MACHINE
INR07PG110050	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	MALHEUR COUNTY OF (2306)	$20,000	PROVIDE LAW ENFORCEMENT SERVICES ADDITIONAL TO NORMAL SERVICES ON BOR LANDS AT OWYHEE RESERVOIR, BULLY CREEK, BEULAH RESERVOIR AND WARM SPRINGS RESERVOIR JANUARY THROUGH DECEMBER 2007.
INR07PG400155	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	UNIVERSITY OF COLORADO (0555) 13747	$30,000	HDB CADSWES
INR07PG200215	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	BIOMARK INCORPORATED	$32,515	PURCHASE PIT TAGS FOR USE IN FISHERIES BIOLOGICAL MONITORING
INR07PG810287	NOT AVAILABLE FOR COMPETITION	FIXED PRICE	WELLS RESOURCES INCORPORATED	$68,923	RAPID INTERPRETIVE ASSESSMENT TOOL
INR07PG600036	NOT COMPETED	FIXED PRICE	AUTOMATED OFFICE SYSTEMS INCORPORATED (3839)	$107	CONTINUING MAINTENANCE SERVICE
INR07PG290006	NOT COMPETED	FIXED PRICE	HASLER INCORPORATED	$456	
INR07PG600027	NOT COMPETED	FIXED PRICE	REPRO GRAPHICS INCORPORATED	$540	CONTINUING CADD SERVICE.
INR07PG290014	NOT COMPETED	FIXED PRICE	WASTE MANAGEMENT INCORPORATED (9529)	$2,022	

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INR07PG6A0050	NOT COMPETED	FIXED PRICE	HYDROACOUSTIC TECHNOLOGY INCORPORATED	$2,075	HTI SOFTWARE LOAD
INR07PG290007	NOT COMPETED	FIXED PRICE	SINCLAIR HEATING AND AIR CONDITIONING	$2,360	
INR07PG600075	NOT COMPETED	FIXED PRICE	PHOENIX SOFTWARE INTERNATIONAL INCORPORATED	$3,106	CONTINUING SERVICE
INR07PG6C8003	NOT COMPETED	FIXED PRICE	CRANE TECHNICAL TRAINING AND INSPECTION INCORPORATED	$4,587	
INR07BC290009	NOT COMPETED	FIXED PRICE	AD WARES THE PROMOTION SPECIALIST INCORPORATED	$4,832	
INR07PG600026	NOT COMPETED	FIXED PRICE	AUTOMATED OFFICE SYSTEMS INCORPORATED (3839)	$4,928	
INR07BC3144	NOT COMPETED	FIXED PRICE	LIFT EQUIP CERTIFICATION COMPANY INCORPORATED	$7,600	RATIFICATION - LIFE EQUIPMENT - JLG BOOM TRUCK (PLATE # I-153840) RONALD HAWKINS POC
INR07PG810167	NOT COMPETED	FIXED PRICE	ATA SERVICES INCORPORATED	$8,308	PLANNING PROCESS WORKSHOP DEVELOPER, COORDINATOR, FACILITATOR
INR07BC460001	NOT COMPETED	FIXED PRICE	QWEST CORPORATION (3800)	$11,000	FOR OFFICE T1 CIRCUIT LINES, FTS CALLING CARDS, AND BUSINESS PHONES AT FISH HATCHERY AND RIFLE GAP.
INR07PG290008	NOT COMPETED	FIXED PRICE	FOUR SEASONS YARD AND LANDSCAPE	$16,200	
INR07PG431017	NOT COMPETED UNDER SAT	FIXED PRICE	STEFFENS QUALITY PLUMBING AND HEATING INCORPORATED	$1,242	HVAC FILTER SERVICE
INR07PG200061	NOT COMPETED UNDER SAT	FIXED PRICE	PARADIGM IMAGING GROUP	$1,800	INSTALLATION AND TRAINING FOR A CONTEX ACS4200 APERTURE CARD SCANNER
INR07BC431037	NOT COMPETED UNDER SAT	FIXED PRICE	GOBLE SAMPSON ASSOCIATES INCORPORATED	$3,750	CHECK VALVES
INR07BC490080	NOT COMPETED UNDER SAT	FIXED PRICE	WHEELER MACHINERY COMPANY	$3,828	REPAIR RADIATOR ON CAT 320C EXCAVATOR TO INCLUDE FIELD SERVICE TRAVEL
INR07BC303049	NOT COMPETED UNDER SAT	FIXED PRICE	VORTEX INDUSTRIES INCORPORATED	$4,056	REPAIR OF SHOP ROLL-UP DOOR
INR07BC430006	NOT COMPETED UNDER SAT	FIXED PRICE	SPRINT INTERNATIONAL INCORPORATED	$4,200	CELL SERVICE FOR SOCORRO FIELD OFFICE
INR07PG107640	NOT COMPETED UNDER SAT	FIXED PRICE	CAPITOL SECURITIES CORPORATION	$4,501	UPDATE ELEVATORS TO ADA STANDARDS AT THE USBR PACIFIC NORTHWEST REGIONAL OFFICE
INR07PG620001	NOT COMPETED UNDER SAT	FIXED PRICE	MLP INCORPORATED	$4,512	COPIER MAINTENANCE AGREEMENT
INR07PG620013	NOT COMPETED UNDER SAT	FIXED PRICE	TRI COLLEGE UNIVERSITY	$5,000	INTERNATIONAL CONFERENCE SPONSORSHIP
INR07PG303165	NOT COMPETED UNDER SAT	FIXED PRICE	FORT VALLEY STATE UNIVERSITY	$5,000	OUTREACH AND RECRUITMENT OF STUDENTS IN THE COMMUNITY.
INR07PG303230	NOT COMPETED UNDER SAT	FIXED PRICE	SCIPAR INCORPORATED	$8,000	SCADA MAINTENANCE
INR07PG620003	NOT COMPETED UNDER SAT	FIXED PRICE	PITNEY BOWES INCORPORATED (5050)	$8,400	POSTAGE FOR COMMERCIAL METERS
INR07PG431044	NOT COMPETED UNDER SAT	FIXED PRICE	MARK S MYERS	$8,645	PRESSURE TRANSDUCERS
INR07PG107240	NOT COMPETED UNDER SAT	FIXED PRICE	EBERLE W DAVID CONSULTING INC	$10,000	CONSULTING SERVICES RELATED TO THE DALLES IRRIGATION DISTRICT V UNITED STATES (NO. 05-1042 COURT OF FEDERAL CLAIMS).
INR07PG810273	NOT COMPETED UNDER SAT	FIXED PRICE	COOGAN PHD JAMES C	$12,000	
INR07PG431043	NOT COMPETED UNDER SAT	FIXED PRICE	SUTRON CORPORATION	$12,920	CONDUCTIVITY PROBE
INR07PG400187	NOT COMPETED UNDER SAT	FIXED PRICE	PATTON TIM	$13,189	ADVISE ON FISH POPULATION EVALUATION.
INR07PG431049	NOT COMPETED UNDER SAT	FIXED PRICE	SUMMERS GROUP INCORPORATED	$13,543	ELECTRICAL PANEL
INR07PG400188	NOT COMPETED UNDER SAT	FIXED PRICE	BIOMARK INCORPORATED	$19,931	DEVELOPMENT OF MOBILE PIT TAG DETECTION SYSTEM FOR USE IN RIVER SYSTEMS.
INR07PG431042	NOT COMPETED UNDER SAT	FIXED PRICE	SUTRON CORPORATION	$22,845	FLOWMETER
INR07PG431028	NOT COMPETED UNDER SAT	FIXED PRICE	GOBLE SAMPSON ASSOCIATES INCORPORATED	$23,787	CHECK VALVES
INR07PG108210	NOT COMPETED UNDER SAT	FIXED PRICE	SPATIAL DYNAMICS	$24,072	CONTINUED DEVELOPMENT AND SUPPORT OF PROTOCOL MANAGER DATABASE APPLICATION FOR THE USBR PACIFIC NORTHWEST REGION.
INR07PG107330	NOT COMPETED UNDER SAT	FIXED PRICE	CAPITOL SECURITIES CORPORATION	$25,838	MODIFICATION OF LEASE - BUILDING OWNER TO ADD AUTOMATIC RELEASE DOOR HOLDERS TO INTERIOR FIRE DOORS.
INR07PG431041	NOT COMPETED UNDER SAT	FIXED PRICE	GLOBAL TECHNOLOGY RESOURCES INCORPORATED	$35,538	PHONE SYSTEM

36. *Please provide for the record a list of all BOR contracts with or grants to firms or individuals for public relations purposes, including the firm or individual, the dollar amount and the purpose of the contract or grant for the period of fiscal year 2007 and the first quarter of fiscal year 2008.*

Contract Number	Type of Sole Source	Contract Type	Contractor Name	Contract Value	Description of Requirement
INR07PG107400	NOT COMPETED UNDER SAT	FIXED PRICE	K AND N ELECTRIC MOTORS INCORPORATED	$38,225	EMERGENCY SERVICE AND REPAIR G3 EXCITER FROM HUNGRY HORSE DAM, HUNGRY HORSE, MT
INR07PG200095	NOT COMPETED UNDER SAT	FIXED PRICE	GE FANUC AUTOMATION CORPORATION	$42,668	SOFTWARE LICENSE RENEWAL
INR07PG303187	NOT COMPETED UNDER SAT	FIXED PRICE	OTTAWA ENGINEERING LIMITED	$51,250	SMALL HYDRO POTENTIAL STUDY

37. Please provide for the record a list of all non competitive contracts or cooperative agreements issued by BOR, including the type of sole-source contract (8A, Small Business set aside, etc), type of contract (fixed price, etc.), firm or individual, the dollar amount and the purpose of the contract or cooperative agreement. Why do we sole-source?

Mr. Commissioner. Please see attached spreadsheet.

The reasons vary on a case-by-case basis regarding a decision to utilize a sole-source contract.

At times Reclamation awards sole-source contracts in order to obtain the required supplies or services to allow the Bureau to meet mission needs. The decision to award sole source contracts is driven by statutory and or regulatory requirements or may be based on market accessibility.

Examples where statutes either allow or require Reclamation to sole-source are the following:

1) 8(a) - A Small Business Administration program that offers business assistance programs for small disadvantage businesses.

2) HUBZone - An Empowerment Contracting program that provides federal contracting opportunities for qualified small businesses located in distressed areas.

3) SDVOSB - Service-Disabled Veteran Owned Small Businesses.

4) JWOD - (Javits-Wagner-O'Day Program) Provides employment opportunities for people who are blind or have other severe disabilities in the manufacture and delivery of products and services to the Federal Government.

5) UNICOR (trade name) - (Federal Prison Industries) - Produces market priced quality goods and services for sale to the Federal Government.

6) Utilities, Inc. - Provides high-quality water, waste water services and wastewater system management.

Examples where Reclamation is expressly authorized to sole-source contract i.e. market accessibility:

Follow-On contracts, Mobilization, Only One Source, Patent Rights, Public Interest, Standardization, Unique Source, Urgency.

Micro-Purchase – micro-purchases may be awarded without soliciting competitive quotations.

#37			
Contract Number	**Contractor Name**	**Contract Value**	**Description of Requirement**
INR06A3204097H	CIRCLEPOINT	$909,340.00	CENTRAL VALLEY PROJECT IMPROVEMENT ACT PERFORMANCE REPORTS
INR06A4204097H	CIRCLEPOINT	$1,311,414.00	CENTRAL VALLEY PROJECT IMPROVEMENT ACT INDEPENDENT REVIEWS
INR06A2204097H	CIRCLEPOINT	$65,551.80	SAN JOAQUIN RIVER RESTORATION PROGRAM, PUBLIC INVOLVEMENT PLAN & PUBLIC OUTREACH SUPPORT.
INR06A1204097I	KEARNS AND WEST INCORPORATED	$84,848.54	SAN JOAQUIN RIVER RESTORATION PROGRAM PUBLIC INVOLVEMENT PLAN AND PUBLIC OUTREACH SUPPORT.

37. Please provide for the record a list of all non competitive contracts or cooperative agreements issued by BOR, including the type of sole-source contract (8A, Small Business set aside, etc), type of contract (fixed price, etc.), firm or individual, the dollar amount and the purpose of the contract or cooperative agreement. Why do we sole-source?

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RED RIVER DIVERSION - GARRISON

38. Commissioner Johnson, the Bureau has recently selected an option for the Garrison Diversion Project that includes an inter-basin transfer of water. This has not been a popular choice, and I'm sure it will continue to be debated for some time.

Would you explain to the Committee why you chose this option, especially since you're apparently not authorized to implement it without further action from Congress? You could have chosen an in-basin solution, which you are authorized to implement.

Mr. Commissioner. P.L. 99-294 directed the Department of the Interior to take a collaborative approach in selecting the alternative to construct the Red River Valley Water Supply Project (Project). The Project's authorizing legislation, the Dakota Water Resources Act, specified the process to be used in selecting the preferred alternative in the Project's Record of Decision (ROD). The Administration is still reviewing the project planning documents and the proposed alternative.

Did you follow your standard down-selection process in choosing this option?

Mr. Commissioner. The Administration is still reviewing the project planning documents and the proposed alternative.

Can you satisfy us that this process is adequate to ensure that all options were fully considered?

Mr. Commissioner: The Administration is still reviewing the project planning documents and the proposed alternative.

CALFED/Bay Delta

39. As you know, Judge Wanger issued a final ruling in December ordering the California State Water Project and the federal Central Valley Project to restrict pumping operations to protect the endangered Delta smelt. The order also gives federal officials until September of this year to develop a long-term plan to protect the smelt. I understand that the Bureau, in consultation with the Fish and Wildlife Service, is developing an updated Central Valley Project operating plan in order to provide better protection.

Can you tell us how the Bureau and the Fish and Wildlife Service are progressing with the operating plan and if you are on track to meet the court-imposed deadline?

Mr. Commissioner. Currently, Reclamation and the Fish and Wildlife Service are on schedule to meet the court deadline. Reclamation is working closely with the FWS to ensure that its Biological Assessment, which will be submitted to the FWS, includes sufficient information to allow the consultation to be completed in a timely manner. Reclamation intends to submit the Biological Assessment to FWS by the end of April. The court order calls for the FWS to issue its Biological Opinion not later than September 15, 2008.

40. California's water supply is in crisis and is facing challenges from historically low flows in the Colorado River, the effects of global climate change on traditional water sources, and the competing interests in the Delta. When I look at the Bureau's budget proposal, however, I see the status quo – and that may be sugar-coating it.

Take CALFED for example. The proposed CALFED request represents an $8 million reduction in funding. The majority of the reduction comes out of the CALFED water storage component.

How do you justify the CALFED reductions given the precarious state of California's water supply?

Mr. Commissioner. The FY 2009 President's request for CALFED reflects a $250,000 increase over the FY 2008 President's request. The Administration supports the completion of the four storage feasibility studies in FY 2010 as reflected in the FY 2009 request. Along with the Administration's efforts, it is important that State and local entities fulfill their responsibilities and continue to make water conservation and management priorities.

WATER RECLAMATION AND REUSE PROGRAM (P.L. 102-575, TITLE XVI)

41. As a past Chairman and member of the House Water & Power Subcommittee, I remember being told time after time that the Bureau opposed any bill that authorized new Title 16 water projects. In each instance the Bureau stated that the Title 16 program was oversubscribed and had a backlog of projects.

Now, sitting in my new chair as a member of the Appropriations Committee, I see that the Bureau's budget requests less than a third of the amount that Congress provided last year for Title 16 projects.

If the Bureau opposes the authorization of Title 16 projects and does not make funding them a priority, is it safe to assume the Title 16 Program is not a Bureau priority?

Mr. Commissioner. The Administration continues to support the Title XVI Water Recycling and Reuse Program when it is focused on demonstration projects. The component of the Title XVI request allocated to research is combined with the request made under the Desalination and Water Purification Research Program administered as a coordinated, joint program. The FY 2009 budget request reflects Reclamation's attempt to balance the many competing priorities for funding within the Federal Government and within Reclamation.

OCEAN DESALINATION

42. As we continue to look for new and innovative ways to increase our water supply, the prospect of ocean water desalination looks more and more promising each year. In California alone, innovative projects in Long Beach and Dana Point are exploring the use of subsurface intakes as a way of avoiding harm to ocean wildlife while at the same time utilizing the ocean floors natural filtration to lower costs. This type of research and development will help ocean desalination technologies contribute to our water supply needs in the near future.

What level of funding and activities are the Bureau proposing specifically for ocean desalination R&D?

Mr. Commissioner: Reclamation is currently finishing several seawater desalination pilot and demonstration research projects. We do not anticipate any significant starts in FY 2009. Reclamation's R&D request made under the Desalination and Water Purification Program is focused on inland desalination applications. However, the technologies used for inland and ocean desalination technologies are fundamentally the same and many technological advances can typically apply to either application. Because of the strong international industry presence that has emerged in desalination technologies over the past 5 to10 years, Reclamation contracted with the National Academy of Sciences (NAS) to evaluate the current state of desalination technologies, future research directions, and the most appropriate future role for federal investments in desalination R&D. The NAS report is scheduled to be released in April 2008. Reclamation plans to evaluate these NAS findings in planning future desalination R&D investment strategies.

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