ECONOMIC AND BUDGETARY EFFECTS OF NATIONAL ENERGY POLICY

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BEFORE THE

COMMITTEE ON THE BUDGET
HOUSE OF REPRESENTATIVES

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ECONOMIC AND BUDGETARY EFFECTS OF NATIONAL ENERGY POLICY

WEDNESDAY, JUNE 20, 2001

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE BUDGET,
Washington, DC.

The committee met, pursuant to call, at 10 a.m. in room 210, Cannon House Office Building, Hon. Jim R. Nussle (chairman of the committee) presiding.

Members present: Representatives Nussle, Hoekstra, Collins, Watkins, Hastings, Culberson, Brown, Kirk, Spratt, Clement, Hooley, McCarthy, Moore, Capuano, Honda and Matheson.

Chairman NUSSLE. Good morning. The full committee hearing today, the subject of which is the economic and budgetary effects of the national energy policy and its impact on the Federal budget. Underlying the current debate over the national energy policy here in Washington is the assumption that energy supplies and prices are a significant factor in economic growth and, of course, the Federal budget. But both areas are really not that well understood, or understood only superficially.

Examples that have been given to me are it is reasonable to expect that rising energy prices tend to slow economic growth. Most people would assume that to be the case. But sharp fluctuations in price by themselves can also have a similar effect, partly because of the uncertainties they create for businesses and consumers. Likewise, energy prices have obvious direct effects on the government's fuel and utility costs, but these prices also contribute to the growth in the Consumer Price Index, which forms the foundation for cost-of-living adjustments and many government entitlement programs.

In short, energy supplies and prices contribute in various ways to the economy and to our budget, making them an important factor in evaluating the long-term economic and budgetary issues that we face here at this committee. Further, Congress' ability to maintain consistent tax surpluses allowing for tax reduction as a regular practice or spending increases depends on reliable economic growth and spending control. Hence, the development of a long-term energy policy is fundamentally important to the Budget Committee apart from any particular spending commitments such a policy might entail.

Part of the solution for the national energy crisis is going to be taken up in many other committees of jurisdiction, but the results will be felt here in large measure within the budget. A long-term energy policy is desired in this country. It has taken us many years

to get into the problems and challenges that we face. Short-term, quick-fix, Band-Aid, political, get-it-done-before-the-next-election kind of solutions, while attractive to some, have gotten us arguably to where we find ourselves today. And a long-term energy strategy is desired at this point in order to stabilize the economy and to keep our economic growth in the positive range so that the impacts on the budget are not only acceptable, but predictable.

This hearing is intended, therefore, to illuminate the economic and budgetary factors related to energy policy. This hearing will consist of three panels. The first panel will take a look at the national economic impact of energy policy. We have two very distinguished witnesses. The first witness that we will be hearing from today is Francis S. Blake, Deputy Secretary, Department of Energy, to review the findings of the Energy Information Administration in a report titled "Energy Price Impacts on the U.S. Economy." He will be joined shortly by Dr. Hubbard, Robert Glenn Hubbard, Chairman of the Council of Economic Advisers, to discuss the effects of the energy supplies and prices on gross domestic product and inflation.

The second panel will discuss the State policies and experience that are out there. Congressman Bob Filner of California will be with us to describe the impact of California's energy crisis on his district in San Diego. John Hanger, president of the Citizens for Pennsylvania's Future and the former commissioner of the Pennsylvania Public Utility Commission, will discuss the State's approach to energy policy. And Sandy Liddy Bourne, director of the Energy, Environment and Natural Resources, and Agriculture task force at the American Legislative Exchange Council, will describe various State approaches to energy policy and deregulation.

The last panel, panel 3, will discuss private sector perspectives: Justin Bradley, energy project manager from the Silicon Valley Manufacturing Association, also from California, who will discuss effects of energy prices and supplies on the private sector businesses; William Beach, director of the Center for Data Analysis at the Heritage Foundation, will describe the economic impact analysis of the President's energy proposal currently being conducted at the center; and David Bradley to discuss the impact of poor energy policy on low-income Americans.

With that, we have Secretary Blake with us until 11 a.m. And so, we will begin here shortly. At this point I would like to turn over to John Spratt of South Carolina, the ranking member, for any comments that he would like to make.

Mr. SPRATT. Let me simply say this is a highly relevant and highly important topic at a timely point in our economy's history and has a lot to do with the budget. I appreciate your calling the hearing. I appreciate our witnesses for participating. And in the interest of time, let's get on with the hearing.

Chairman NUSSLE. I would ask unanimous consent that members have an opportunity to place statements in the record at this point. So ordered.

[The prepared statement of Congressman Matheson follows:]

PREPARED STATEMENT OF HON. JIM MATHESON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF UTAH

Mr. Chairman, I would like to thank you and Ranking Member Spratt for holding this hearing today to examine the impact of energy prices on the economy, the stability of energy markets, and the relationship between energy policy and the Federal budget. I appreciate the Committee's timely attention to this critical issue.

Having worked in the energy business for thirteen years, both in the development of new power generation and working with large consumers of energy to better manage their options in a deregulated marketplace, I have a strong appreciation for the impact of Federal energy policy on the economy, consumers, and the energy industry. As Congress considers proposals to implement new national energy policy, it is important that we do so in a forward-thinking, deliberative fashion so that the policies enacted address short-term and long-term issues of supply and demand and provide a predictable policy environment so that the energy sector can make rational, long-term decisions on investment in new generation, technologies, and infrastructure.

As this hearing today is focused on the economic impact of energy pricing and policy, I would like to share some of the challenges Utahns are currently facing. I have convened a cross-section of individuals in Utah to examine the appropriate role of Federal energy policy. This group includes a wide spectrum of energy interests including large industrial consumers, the research community, investor-owned utilities, municipal utilities, rural electric cooperatives, state regulators, low-income energy advocates, and other interested parties. I would like to share with the Committee some of the common concerns and serious interests of these experts regarding national energy policy initiatives.

The current energy supply-demand imbalance in the West has created serious hardships for individual residents, small businesses, and large industrial consumers of energy. Residential consumers and small businesses are seeing significant increases in their power bills. The Utah Manufacturing Association has indicated that they regularly receive calls from their membership regarding rising energy costs and reliability, and that energy costs are one of their top concerns. Increasing energy costs can lead to laying off personnel, and any reliability problems within the transmission system can have serious repercussions on some of the high tech industries in Utah.

Let me just mention a few examples of the impact of recent electric rate increases in Utah. State regulators approved an interim rate increase of around 10 percent earlier this year, and the utility has recently asked for a rate case for a second increase of around 10 percent based on their wholesale market cost increases. Say an average medium-sized company, like some of the refineries in Utah, uses 100,000 megawatt hours per year. Based on the rate schedules a company this size would be under, their average cost would be about $35 per megawatt hour. The increased costs for the initial rate increase alone would be around $350,000.

Consider the impact of increased costs on a very large, energy-intensive industry like steel. Large industries which use a lot of energy for their production could use as many as 850,000 megawatt hours annually and spend around $2 million per month on energy costs. It doesn't take a lot of thought to see how expensive a 10-percent increase in energy costs could be for a company this size.

These are just a few of the examples of the impact of energy pricing on large consumers of electricity. Significant increases in costs can result in hardships for individual consumers and the potential for personnel cuts for small businesses and large industrial companies. Obviously these problems can and do have an impact on our nation's economy. We must consider these economic implications as energy policy is developed.

Again, I appreciate the opportunity to have this hearing today and I look forward to hearing the perspectives of these witnesses. I look forward to working with my colleagues to enact comprehensive, balanced energy legislation that increases energy supplies, promotes greater energy efficiency, and provides a predictable policy process.

Chairman NUSSLE. Secretary Blake, we welcome you to the committee, and we would invite you for your testimony at this point.

STATEMENT OF FRANCIS S. BLAKE, DEPUTY SECRETARY, U.S. DEPARTMENT OF ENERGY

Mr. BLAKE. Good morning, Mr. Chairman, Congressman Spratt, members of the committee. Thank you very much for inviting me

here this morning to address what is truly both an important and timely topic, the impact of energy on the Nation's economy. What I would like to do is submit my testimony for the record and then proceed through a few charts in an overview.

Chairman NUSSLE. We will place your entire testimony in the record. You can summarize as you would like.

Mr. BLAKE. Thank you very much.

Beth Quinn, who works with EIA at the Department of Energy, will help me as we go through these charts.

The first chart here shows some general numbers on the country's energy consumption. In 2000, we consumed approximately 100 quadrillion BTU of energy. We produced about 72, and the remainder we made up through imports. If we keep at the projected demand growth of about 1.3 percent a year, we would be consuming nearly 180 quads in the year 2020, but because of our energy efficiency program, structural changes in the economy and the like, we anticipate that that number is going to be more like 127 quads as shown on the chart, which continues the 58 percent decline in what we call the energy intensity of the economy.

We go to the second chart. The point of this chart is that electricity represents an increasing share of our total energy consumption. As you see, the green line that is declining shows consumption per unit of GDP, and that has been declining consistently, while electricity sales, spiking as the country as a whole got access to electricity, has actually been stable over the last several years.

If we go to chart 3, we now get to one of the fundamental changes that is occurring in energy production in the country, and that is the fuel that is used for electricity generation. As you can see from this chart, now and projected into the future, coal remains an important source of fuel for our electricity generation. But what is notable on the chart is the role of natural gas. Natural gas, which was really a modest component of our fuel generation in the 1970's and 1980's, has increased substantially over the last several years and into the year 2020, as you can see, is projected to grow dramatically.

If we go to the next chart, there are a number of reasons for this. I think you are all aware of the environmental constraints on new coal-fired capacity, the difficulty in siting nuclear plants and the like. But part of the change may be attributed to how we have deregulated electricity generation and the emphasis that competition puts on technologies that have lower capital costs, particularly when producers are not assured of the recovery of their capital costs. This chart breaks out for the different technologies, coal, combined cycle natural gas, wind, and nuclear, what their projected costs are, divided capital O and M and fuel in the future. And you will see there is an economic driver, as well as an environmental driver for why natural gas represents an increasing share of our fuel for electricity production in the United States.

The next chart gets to some of the practical issues that we face as we shift and add generation on our current infrastructure. This challenge is one of the major issues addressed in the national energy policy. A similar chart could be drawn showing constraints on the natural gas pipeline infrastructure and showing the additional pipelines that we are going to need to supply all of this natural gas

for power generation. This chart is showing what is called transmission load relief logs. It is really a way of determining when transmission systems are stressed and under constraint. It goes month by month, with the different years, and you can see last year a dramatic increase in constraints on our transmission systems, and this year we have had the data through May and obviously a significant increase there as well. We have yet to determine what the numbers will be for the rest of this year.

The next chart shows where we are in terms of capacity additions across the country. To fully understand this, as a reference point, we have about 780 gigawatts of capacity in our national system. You can see very small replacement rates over the last several years as the industry is faced with the uncertainty of deregulation in cost recoveries, including actual net removals of capacity in 1998. Now we are starting to see substantial pickup in capacity additions with increases in 1999, 2000 and projected to increases in 2001 and 2002.

Now, that is the last of the overview charts. How do you translate all of this into the economic impacts, and what does our national energy policy have to do with this? Dr. Hubbard, who is unfortunately detained, in his testimony outlines the broad macroeconomic impacts of this on GDP, inflation, downstream industries, the residential consumer, and across the economy.

As you reference, Mr. Chairman, in your introduction, EIA, which is an independent statistical analytical arm of DOE, has done a study of what the impacts of increased prices of fuel as well as fuel price volatility will be on our overall economy. Their study suggests that if we had a steady path of energy prices from 1997 to 2001, instead of the volatility that we in fact saw, GDP could have been boosted by two-tenths of a point from 4.1 percent to 4.3 percent. That is a substantial impact on the economy just from a reduction in the volatility. That doesn't even address the question of removing some of the pressure on the increased price and how that would effect GDP.

There are obviously as some more qualitative impacts of fuel price volatility and high prices. They impact business decisions on plant siting and investment decisions. I would also point to another, a fourth impact, that I think we are only beginning to understand, which is the extent to which our economy is increasingly dependent on electricity.

We talk about our economy as entering the information age. It is worth remembering that to move a bit of information, the technical computer term "bit of information," you need an electron. An interesting example of this is found if you look at the energy usage—I was just looking at a study this morning that looked at the energy usage of a plain telephone. The energy usage of just the normal telephone is about 40 kilowatt hours per year. The wireless phone that we all carry around everywhere and see everywhere is 140 kilowatt hours a year when you take into account the power used for recharging and the power used for the various wireless towers, and the entire infrastructure required with those phones.

In addition to the increase in the usage of electricity, the need for reliability of that electricity grid has increased, and there have been a number of studies on industries, particularly our high-tech

industries, that require what is called nine 9's or six 9's of power. A higher amount of power than you would have, rather than what we see on our transmissions grid.

Turning just briefly, and I won't go through all the recommendations in the national energy policy, but just summarizing them, it is, we believe, a comprehensive approach. It looks at energy efficiency, conservation renewables and the role that they need to play going forward. It looks at our supply side of the equation and constrained supply and how we address that. And it also looks at stressed infrastructure, the issues on our transmission system, our pipeline system and the like, and how we address those.

Just from my own perspective, coming to DOE from industry just the last 2 weeks, the comment that I would make is a lot of it seems to me to be very sound common sense. If you know, as you can see in the charts I put up previously, that you are going to start adding large numbers of power plants to the transmission grid in the United States, you need to turn and say, what are we doing from a policy perspective to ensure that the grid can handle that additional power generation? Similarly, if you know, as outlined, that natural gas is going to play an increasingly large role, what are we doing to ensure that we get the adequate supply and adequate transmission so that we don't see these tremendous spikes in prices and volatility?

In summary, the policy sets forth a balanced and valuable blueprint for where the country needs to move. I think the purpose of this hearing could not be better timed in terms of a fuller understanding of the economic impacts that our energy infrastructure has on the country. And again, thank you very much for inviting me to be here this morning.

Chairman NUSSLE. Thank you, Mr. Secretary.

[The prepared statement of Francis S. Blake follows:]

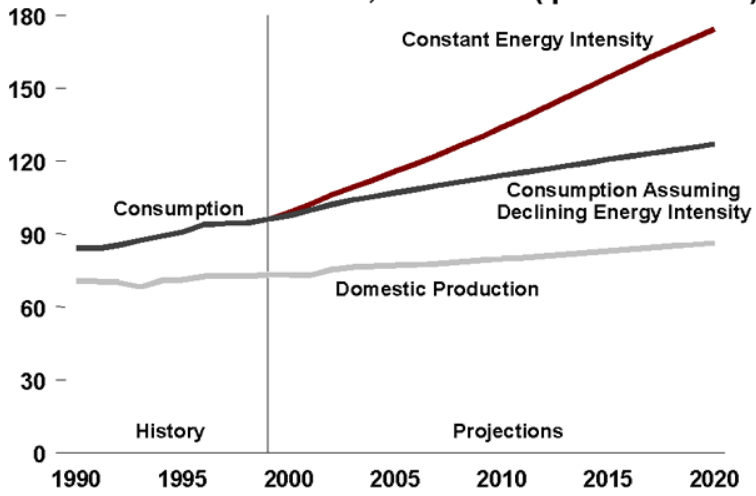
PREPARED STATEMENT OF FRANCIS S. BLAKE, DEPUTY SECRETARY, U.S. DEPARTMENT OF ENERGY

Mr. Chairman, Congressman Spratt and Members of the Committee, I want to thank you for the opportunity to testify before you today on the economic effects of energy policy.

TRENDS IN THE ENERGY MARKETS

I will begin my testimony by discussing some of the major trends in energy markets and changing patterns in US energy consumption. In 2000, America consumed 99 quadrillion British thermal units (or quads) a year in all forms of energy, while our domestic production was only 72 quads. This imbalance between energy demand and domestic energy production is made up with imports. Between now and 2020 our energy demand is projected to rise at a rate of 1.3 percent a year. If the energy intensity of the U.S. economy—the amount of energy needed to generate a dollar of GDP—remained constant, our energy demand would reach 179 quads in 2020. Under current policies, improved energy efficiency and structural changes in the economy suggest that forecasted energy demand in 2020 can be lowered to 127 quads. This would continue the decline of 58 percent in US energy intensity since 1970.

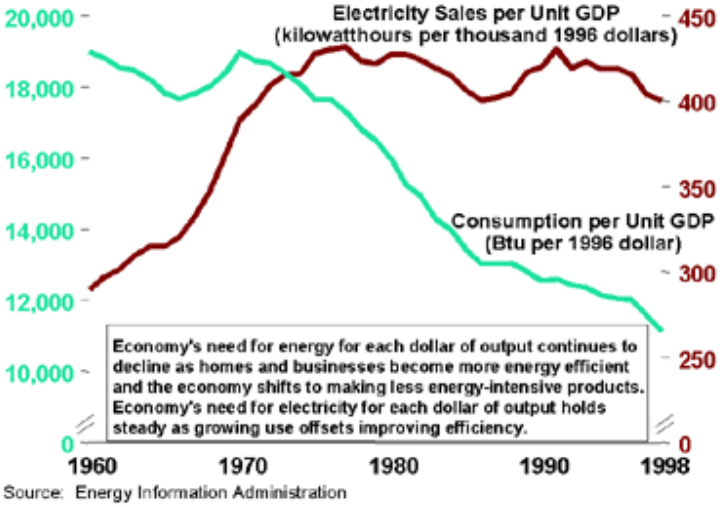
Figure 1. Projected U.S. Energy Consumption and Production in Three Cases, 1990-2020 (quadrillion Btu)



Source: Energy Information Administration

Another important trend relates to energy consumption and the electricity generation mix. Electricity represents an increasingly larger share of total energy consumption.

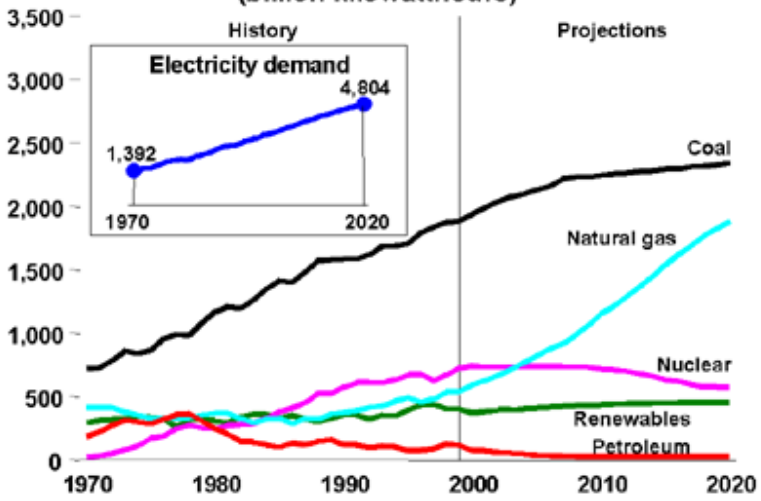
Figure 2. Total Energy Consumption and Electricity Sales per Unit of Gross Domestic Product, 1960-1998



Source: Energy Information Administration

This trend will likely continue as our high technology economy becomes more dependent on electricity to power everything from our computers, to our cell phones and palm pilots. At the same time, the mix of fuels we use to generate electricity has changed and will continue to do so over the next 20 years, with natural gas predicted to be the fuel choice for most new power plants.

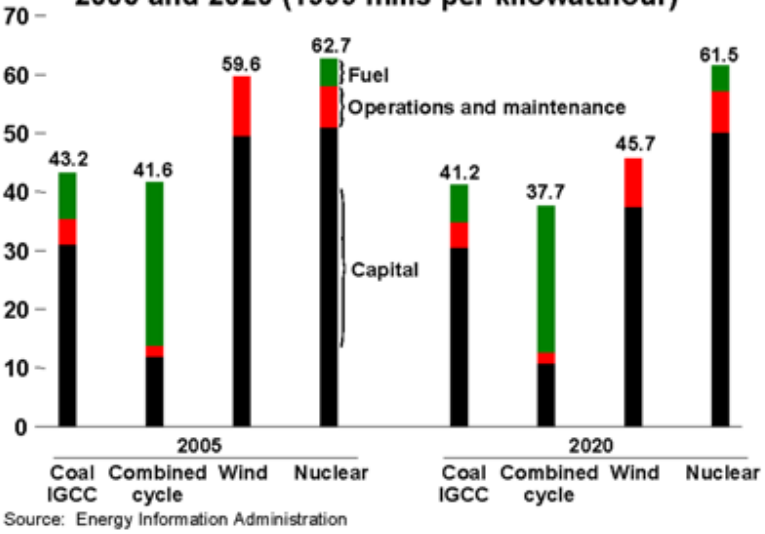
Figure 3. Electricity Generation by Fuel, 1970-2020 (billion kilowatthours)



Source: Energy Information Administration

Increasing competition has also spurred significant change in the structure of our energy industry. To better understand the changing mix of electricity generation resources, it is helpful to look at both capital and fuel costs for different types of power plants. In a deregulated environment in which recovery of capital costs is no longer guaranteed to power plant developers, firms are less likely to commit the massive capital investments required to construct large nuclear and coal base load facilities. Instead, they are attracted to the relatively lower capital cost of smaller and more modular new natural gas fired facilities, despite higher fuel costs.

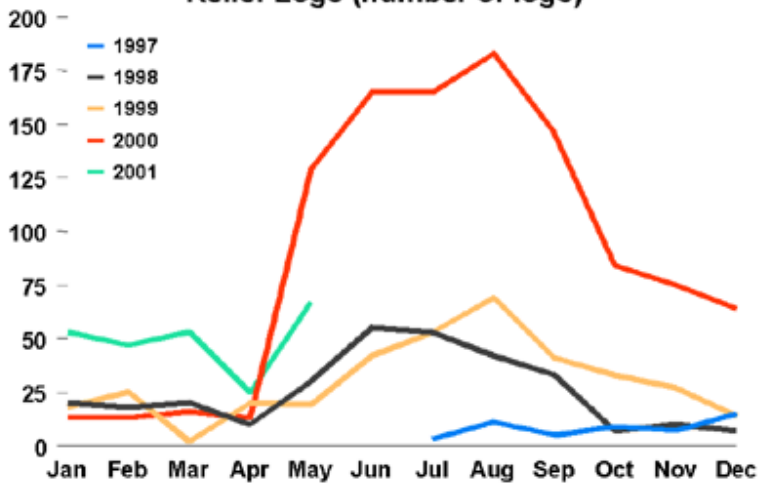
Figure 4. Projected Electricity Generation Costs, 2005 and 2020 (1999 mills per kilowatthour)



Source: Energy Information Administration

Increased demand for natural gas has strained both production capabilities and the pipeline delivery system. Bottlenecks and capacity constraints have restricted this new dynamic industry, resulting in soaring commodity price volatility. Similarly, our electricity system is strained. Investment has not kept pace with demand, with the result that system overloads are occurring with increasing frequency.

Figure 5. Level 2 or Higher Transmission Load Relief Logs (number of logs)

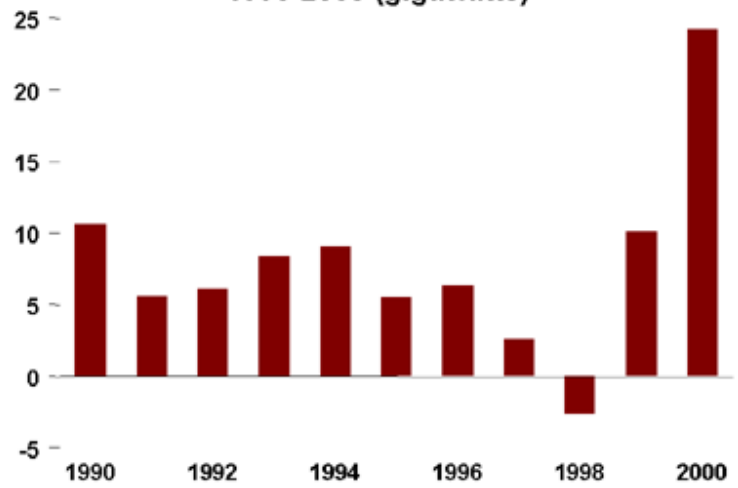


Source: North American Electric Reliability Council

These infrastructure limitations exacerbate problems of supply and demand in areas like California.

Increased volatility adds risk for energy dependent businesses, including producers and consumers. Accompanying this increased price risk has been the added regulatory uncertainty associated with an industry in transition and an outmoded set of rules and regulations that often restrict or delay new investment and can result in investment dollars being allocated inefficiently. An example of the effect of regulatory uncertainty can be seen in the slow pace of investment in new power generation throughout most of the 1990's when the rules of the newly competitive generation market were still being developed in many States. This in turn has been followed by a significant acceleration in investment over the last couple of years as competitive wholesale markets have taken hold.

Figure 6. Net U.S. Electricity Capacity Additions, 1990-2000 (gigawatts)

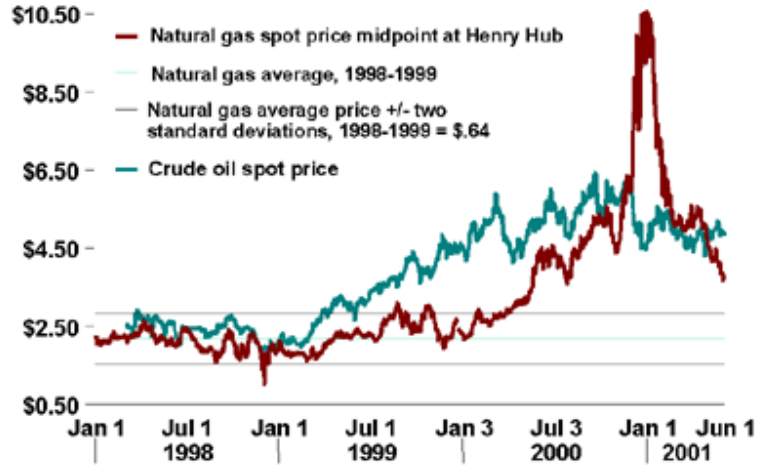


Source: Energy Information Administration

ECONOMIC EFFECTS OF THE NATIONAL ENERGY POLICY

Chapter Two of the Report of the National Energy Policy Development Group (NEPDG) is entitled "Striking Home" and addresses the impacts of high energy prices on families, communities and businesses. The Report points to a nearly 20-year decline in the share of household income devoted to energy needs. But importantly, the Report notes that between 1998 and the end of last year, that share has risen by almost 26 percent from 3.8 to 4.8 percent of after-tax income.

Figure 7. Natural Gas and Crude Oil Spot Prices, January 1, 1998 - June 1, 2001 (nominal dollars per million Btu)



Source: Financial Times Energy, Gas Daily

The Report also cites higher fuel and oil prices as representing one-third of the increase in farm production costs in 2000.

On March 7, 2001, the Federal Reserve reported that businesses across the country experienced high fuel and other energy costs in February 2001 but were unwilling or unable to pass these costs on to consumers. This absorption of increased energy cost decreased the profit margins of many businesses. About one quarter of the increase in total unit costs of non-financial, non-energy corporations in the final quarter of last year reflected a rise in energy costs. Beyond the costs associated with higher energy prices for families, agriculture and businesses, there is also a broader macroeconomic impact of energy price increases as set out in Dr. Hubbard's testimony.

With an energy industry in transition and an economy that has been negatively affected by recent high energy prices, it is important that we develop the tools to more critically evaluate the effects of energy policies on the economy. Earlier this year the Energy Information Administration (EIA), the independent statistical and analysis arm of the Department of Energy, released a report entitled "Energy Price Impacts on the U.S. Economy." The report concluded that both the level of prices and the level of price volatility may hinder economic growth and lead to inappropriate investment decisions. The report also suggested that over the entire 4-year period 1997 through 2001, a steady path of energy prices throughout could have boosted GDP growth by 0.2 percentage points, to a rate of 4.3 percent rather than its actual 4.1 percent. As we look to implement the recommendations of the NEPDG and develop long-term solutions to our energy challenges, we will need to build on the analytical capabilities of groups like EIA to undertake further work of this kind.

As we study the effects of energy on the economy, it is important to note the need for improved transparency in competitive energy markets. Price volatility has spurred increased use of energy risk management tools ranging from long-term contracts, to futures and options and complex energy derivatives. These tools are of growing importance to businesses for the mitigation of energy price risk. In order for these markets to thrive and provide energy producers and consumers with a forum to manage risk, there must be a level of information symmetry. Transparency provides consumers with the information to make rational decisions on energy consumption, and we need reliable, independent information to provide transparency to our competitive energy markets.

NATIONAL ENERGY POLICY

The Report of the NEPDG recommends a comprehensive approach to challenges that are long-term in nature. The recommendations are balanced, with a number of proposals addressing energy efficiency to ensure that the improvements made in lowering the level of energy intensity over the last 30 years continue into the next two decades. At the same time, the report recognizes the changing nature of the energy industry and the need to address issues of constrained supply and infrastructure to meet our energy needs in the future.

The Report addresses the need to expand and diversify our energy resource base by increasing domestic production while looking to expand global markets through cooperation within our own hemisphere and encouraging increasing energy resource development abroad. Removing transmission bottlenecks, expanding refinery capacity and encouraging the expansion of our pipeline network will further decrease the likelihood for future price spikes caused by supply limitations or disruptions. The Report also recognizes the important role of renewable fuels and promotes environmentally sound increases in energy supply.

The Report further addresses regulatory barriers and regulatory complexity. Working to limit regulatory uncertainty will create a more robust investment environment; allowing refiners, electricity generators, and other energy providers to make the appropriate investment decisions to improve the efficiency of existing facilities, while simultaneously, looking to new projects to better serve the energy consumer. The Report also requires EPA to study opportunities to maintain or improve environmental benefits of state and local "boutique" clean fuel programs while exploring ways to increase the flexibility of the fuels distribution infrastructure, improve fungibility, and provide added gasoline market liquidity.

Finally, the Report advocates protecting lower income consumers from the effects of high energy prices by strengthening the Low Income Home Energy Assistance Program (LIHEAP). Additionally, the President recently requested $150 million in FY2001 supplemental funding for LIHEAP. The NEPDG also recommends further funding of $1.2 billion over the next 10 years for the Department of Energy's Weatherization Assistance Program, which concentrates on making homes more energy ef-

ficient. This increase nearly doubles the funds dedicated to this program over the next decade.

CONCLUSION

Today, there is little question that the effects of energy on the economy are significant. Recognizing this fact, the NEPDG has provided a valuable and balanced blueprint to address the energy needs of the American economy through increased energy supply, improved infrastructure and more efficient use of our energy resources. Meeting our energy challenges is critical to maintaining a healthy economy and while we recognize that additional work needs to be done to quantify the relationship between the energy and the economy, we must act now to ensure that supply limitations and price volatility do not limit economic growth.

I again thank the Committee for the opportunity to testify today and look forward to answering any of your questions.

Chairman NUSSLE. When I was home in my district over the recess here for Memorial Day, I had the opportunity, as I know many Members did just from conversations I had with people on the way back, where we took the opportunity to visit a number of different energy kinds of examples in my district, everything from nuclear, coal, and natural gas. We have many others out in my State as there is a variety throughout the Nation such as wind and methane. We obviously have biodiesel and ethanol, but we also have ag lubricants. We are now making lubricants and transformer box oils and things out of all sorts of different renewable resources.

I noticed on your chart that renewables—and I have noted in the report and the recommendations that renewables and many different types of energy are important to the solution. To start with, I just wanted to get your impression.

It has been my impression of what the Vice President has said, and others from the administration have indicated, that while they are part of the solution, we can't do enough in renewables and we can't do enough in conservation in order to solve the problem in and of itself. I am concerned about that to some extent because I think that part of the beauty of our economy is the fact that people will step up to the plate and solve a problem. It is as much as whether it is solving a problem, coming up with new ideas, using manure for methane, which is a very unseemly kind of thing for maybe some to consider, but out in Iowa we have a lot of it, and, therefore, that may be part of the solution. We also have a lot of wind, and not only when I am there, but throughout the year. There are many other opportunities. How important are these two areas, conservation and renewables, to the overall solution to the energy strategy that the administration has put forth?

Mr. BLAKE. I think they are tremendously important. You have outlined some of the really interesting technological advances, just the ingenuity people are now applying to what we can do with the resources that we have. It obviously happens to be an important issue because whether using your manure or wind or ethanol, whatever it is, they are going to be local U.S. sources. Conservation by definition is largely local. So it all has a very important role, and I think maybe that has been somewhat misunderstood in terms of the importance of the role. The administration and the Vice President's group recognize that.

The only point that still needs to be made though, is that this is not a set of issues that will go away through conservation and renewables. Just, again, with the data on where we are now, we

already have issues with our transmission system. Those issues will remain whether that new power plant is run on biomass or natural gas. We are going to be putting more natural gas-fired turbines on the system. That is going to put a stress on our pipeline structure. It is going to require some additional activity in terms of supply.

Your basic point is exactly right. These are very important sources of energy. They are recognized as very important. The only thing to remember is that they don't supply the entire answer.

Chairman NUSSLE. Again, as we concern ourselves with the volatility of energy prices and what that means to overall economic growth and its impact on the budget, you indicated that the Energy Information Agency has done a report, and I am interested in some of its conclusions. Growing up, as I am sure we all have, with a father or mother that constantly, maybe more so for me than others, who constantly said, you know, shut the door when the air conditioning is on; what were you born in, a barn? Turn the lights off, what, are you paying the bills; every one of us in the room has had that experience. So there is a mindset that we have that if the prices go up, that is bad, and if the prices come down, that is good. But what you are telling us is that the volatility in those prices can be just as bad; is that true?

In other words, is volatility worse than steadily increasing prices? Can the economy still grow with steadily increasing prices if it is predictable, or is one worse than the other, volatility versus steadily increasing prices? What did the report indicate?

Mr. BLAKE. The report was not trying to indicate that volatility is worse than steadily increasing prices. The economy is better off on the main to the extent you have a good balance of supply and demand and prices are declining. The point of the report was that volatility itself has an effect on the economy that is negative.

As we think as a country what we can do to tamp down some of that volatility, helps the overall economy as we think as a country of our policy decisions. It helps investment decisions. It helps people react in a more timely way. As you know, on the west coast some businesses have looked at dramatically increased prices and have found continued production extremely difficult.

Chairman NUSSLE. I think the two go hand in hand. The more options that we have out there, the more alternative energy supplies that we have that are producing energy for us, I think the better the marketplace will be. So I appreciate those parts of the energy strategy that diversify so that it can help keep volatility to a minimum.

Mr. Spratt.

Mr. SPRATT. Thank you very much for your testimony. It was very useful.

Let me ask you this: In the 1970's, we prioritized the use of natural gas, preferring human needs customers over boiler heat customers, and even over process users of natural gas. In the late 1980's, we removed most of those restrictions and allowed gas to be used once again extensively for electric generation. When we did that, did we see or foresee or explore the consequences for human needs use? Did we have reason to see that this was going to create

a demand for gas that would run the price up before the supply would be there to meet the requirements?

Mr. BLAKE. Not having been part of the planning process in the 1980's, I don't know that I can directly address that. I could say, though, that as you said, in the late 1970's with the Fuel Use Act, the use of natural gas for generation was actually prohibited in large parts of the country; that I think an objective look at that would be that that had, and a number of the other energy control programs in the late 1970's actually had, a negative impact on supply. It wasn't well calibrated to the needs of the country for clean generation, which natural gas provides. I think every estimate that I have seen is what we are going through now is a market perturbation that needs to be addressed in terms of making sure that we have the right infrastructure.

Mr. SPRATT. One of your charts showed the demand for natural gas continued to rise steeply and steadily right on to 2020 to the far end of the chart. Do prices have to stay where they are for new gas to come on to meet that kind of demand level, or can gas come back down to affordable levels and still have the exploration and development of new gas needed to supply that curve?

Mr. BLAKE. I think you are already seeing natural gas prices come down. When I checked this morning, I think the price is now slightly down below $4. I can't remember exactly what the forward pricing is, but that is also going down. So the markets would say, yes, it is possible to supply this demand for power generation and maintain reasonable costs for consumers.

Mr. SPRATT. If we allow electric generation fuel by natural gas, which is very efficient and very cost-efficient in particular, what happens to other alternatives like nuclear production which has a high front-end capital cost? Does it discourage the use of other alternatives, resort to other alternatives?

Mr. BLAKE. I think, and the Vice President's group addressed the use of nuclear power. Nuclear power has a very important role to play for the Nation's overall energy picture in terms of the existing plants that are now online, and how to make sure that they have a full, useful life, including extending the licensing. Building new nuclear plants, in my experience at least, is a different issue. There private sector would say that the capital cost issue may be secondary to some of the regulatory uncertainty issues. They are capital-intensive, as you suggested, and as you make your investments, you need some regulatory certainty.

Mr. SPRATT. Still the capital cost on the front end and the time it takes to begin and carry out a plan on your books before you get any return is a significant hurdle to cross. And if you have natural gas out there as an easy alternative, aren't most utilities going for the easy alternative?

Mr. BLAKE. I think what you see now is exactly that, although, as I said, I would say that the issues with nuclear are that the capital issue and capital cost recovery is probably secondary in the case of nuclear to other issues.

Mr. SPRATT. You mentioned the need for transmission lines. One component of the President's recommendations, I believe, is that utilities engaged at least in wholesale sale of power would have Federal condemnation rights. Is that truly needed? I mean, the

State utilities seem to have all the authority they need to run transmission lines about anywhere they want. I say that as someone who owns a farm, and I have a 505-foot right of way through my farm. The power company didn't have any trouble at all acquiring it. When I tried to get them to move it, they wouldn't think of it. So why do we need to give them the additional authority of Federal prescription for doing that?

Mr. BLAKE. It is an option that is being considered. It matches the authority FERC has on natural gas.

The interesting thing, and I don't know the specific laws in your State, but I think actually over half of the States for their standing laws actually don't allow consideration of benefits that are external to the State. The issue transmission is that we are now increasingly a regional system rather than a State-by-State system. So one of the issues is how do you open up the consideration of benefits? If the line going through Connecticut, for example, as there was a recent incident along these lines, is to benefit Long Island, how does Connecticut take that into account? Right now the Connecticut structure would not allow that to be taken into account, or that is my understanding of the Connecticut regulations.

Chairman NUSSLE. Mr. Collins.

Mr. COLLINS. Thank you, Mr. Chairman.

I think we can all agree that the changes in energy prices, whether it be gasoline or electricity or natural gas or whatever, has a real impact on our economy from the standpoint that it has forced families to change the cash flow of their own home budget. Many of you have experienced in the past the opportunity to buy other products or other items, things that they would like to have for their families, now having to shift that cash flow to provide a necessity for the families. So it has had a tremendous impact.

In Georgia about 3 or 4 years ago, we had a deregulation of the natural gas industry. I believe that deregulation has probably slowed down if not completely halted the deregulation of electricity. At least I hope it has, because natural gas prices in Georgia increased dramatically, and one of the reasons, I believe, was the fact that we created another profit center. When you deregulated natural gas, you left in place a company that owned the transport lines, and then you created other entities that actually sold the gas, but had to use the transport lines. So instead of one profit center, we then had two profit centers. The gas people themselves are creating another profit center. So that, I think, has had a lot to do with the increase in price of natural gas which consumers of natural gas have to pay.

Prior to deregulation in California, because that has been the focus of this whole problem as far as the part of this problem, part of the deregulation of electricity in California. Were the utilities companies profitable?

Mr. BLAKE. I am sure they were. As regulated utilities they would have had a regular rate of return that would have included an equity return.

Mr. COLLINS. It is questionable to me. I am having a problem understanding, then, after deregulation, creating a wholesale market and entity to handle those wholesale prices or the wholesale sales of that electricity, why the rates had to increase so when the plants

were producing the same power, and the lines were transporting the same current? Why did we have such a drastic increase in rates?

Mr. BLAKE. The California situation is rooted in the structure of their deregulation plan. They couldn't have had a worse plan for a situation where you have constrained supply and unconstrained demand. The way they did their deregulation—their retail rates were not reflective of the charges that they were seeing at the wholesale level. The utilities were told to buy spot market rather than long-term bilateral contracts, and they didn't build anything.

Mr. COLLINS. I understand that, but I am talking about the wholesale rate. Why did the wholesale rate in some instances increase tenfold?

Mr. BLAKE. The way they structured their deregulation, the price of electricity, wholesale electricity, is determined at the margin by the last unit that was dispatched or the last price in. So take the least efficient, old gas turbine, say, for an example.

Mr. COLLINS. I understand that. But your first answer was they were profitable before deregulation, and yet when you deregulated, wholesale price coming from the same plants, carried over the same transmission lines in some instances increased tenfold. I don't follow that scenario. I know supply and demand. I have been in the marketplace for 30 something years, almost 40 years. I know what supply and demand does. But I also have a little bit of understanding and feeling when somebody is just a little bit dadgum greedy.

Mr. BLAKE. If in 1997 or 1996 to 2001, the 5 years they had remained totally regulated, and they still hadn't built these plants, they would be in the same position.

Mr. COLLINS. Maybe some folks would be sitting in the dark. I mean, that is just natural. I mean, I can take my house, and I can put in enough appliances that my switch box won't carry. My circuit breakers will go to tripping left and right. But the power company is still putting the same amount of power at my house. If the power companies were still pulling the same amount of power from those plants through those transmission lines, then why did it increase tenfold?

Mr. BLAKE. Again——

Mr. COLLINS. I don't understand this. Don't use the words that the natural gas prices went up considerably. Did it cost more to get the natural gas out of the well because of this fact? I go back, I understand supply and demand, but I also understand just plain greed and gouge, and I am afraid we have had a little bit of all of this as we have tried to justify supply and demand. Prices have been just accelerating too much.

Mr. BLAKE. FERC has authority on unjust and unreasonable rates. They have ordered rebates in California. I think the fundamental question, though, remains that if you don't build supply, and your demand continues to increase, something has to give.

Mr. COLLINS. I understand that, too. I think you have to have profits in order to be able to encourage investments, and that must happen. We have got to have the investments of the invested utilities to build these plants, and we need some changes in the government regulations that has hindered this from taking place as well.

But we also need to be very conscious of what is happening in the power structure.

Chairman NUSSLE. The gentleman's time has expired. If you have a response, we will take it. Otherwise—do you have a response to that question? Statement?

Mr. BLAKE. No, I understand the point. Again, the structuring of the market in California was not well thought out, and that has created the pricing problem that they have now.

Chairman NUSSLE. Mr. Capuano.

Mr. CAPUANO. Thank you, Mr. Chairman.

Mr. Blake, I just have a few questions on some of the numbers. Your first page of written testimony you talk about 99 quadrillion BTUs versus 72 that we produced. I am just curious. Of that 72, is that any of the energy resources that we exported to other countries?

Mr. BLAKE. Yes.

Mr. CAPUANO. So, that is already taken into account. So if we hadn't exported any energy anywhere, that 72 would have been a higher number?

Mr. BLAKE. Well, I will have to check on that.

MR. BLAKE'S REPLY TO MR. CAPUANO'S QUESTION ABOUT BTU EXPORTS

Yes, of the 72 quadrillion BTUs that we produced, 4 quadrillion BTUs were exported to other countries.

Mr. CAPUANO. If you could, because I am not sure. I think the answer is no. I think that is not taken into account. So I would suggest that if we are really interested in increasing our production, that the very first thing we should do is tell those companies that have paid this government and the American people that they should stop exporting immediately if they are really concerned about what is happening in America. But, again, I will wait to hear that answer.

I guess the other question I have for you is relative to increasing production. I don't think you are going to find too much disagreement. There may be some differences of priorities, but I don't think you find too much disagreement that an increase in production is necessary. But I guess I would like to be clear, and are you suggesting that increased production is all we need to do?

Mr. BLAKE. No.

Mr. CAPUANO. I didn't think so, but I didn't hear the words. Because I don't think that is possible. I mean, I think we should increase production on certain levels, but at the same time I don't think it is possible at any level that increased production is going to solve problems that we have today or will have tomorrow. I am glad to hear that you feel the same way. I also hope that it is fully understood within the entire administration, it is not just you speaking. I presume that when you speak, the administration understands that as well.

I guess I have some concerns again in your written testimony, as I was trying to read quickly, I didn't see the word "conservation" or "conserve" anywhere. Now, maybe it is there and I missed it, but I didn't see it. I saw a whole bunch of things about national energy policy, talking about increased production, but the word "conservation" wasn't there with the exception of a little talk about weather-

ization, which is a good thing. But I didn't see anything else there. I didn't see anything there relative to research and development, because unless I am mistaken, I don't think you will find too many people, again, unless you disagree, that would say that the current technology that we have available is going to be capable, even if fully implemented right now and fully dispersed—the economy right now would actually get us to where we want to be as far as energy efficiency standards. So that being the case, I wonder, first of all, if you agree with that; and second of all, if you do, then why did the President cut research and development into energy issues in his budget request?

Mr. BLAKE. Let me respond in two parts. First, nothing in my testimony was intended to reflect that conservation is not an important priority.

Mr. CAPUANO. But it is not mentioned there. I thought important priorities might be mentioned.

Mr. BLAKE. This was a summary, and I don't know if you were here as I summarized.

Mr. CAPUANO. Yes. I didn't hear the word until the chairman asked the question, which was a good question and a good answer. But I didn't hear the word prior to that, but that is already——

Mr. BLAKE. And I think on the research and development front, the administration is putting significant funds in research and development both on conservation and renewables and on clean coal technologies. I think the commitment is something like $2 billion.

Mr. CAPUANO. I would like to see those numbers because the last numbers I saw, were still significantly below last year's. And the last I heard, it was actually the House Appropriations Committee that was increasing those numbers, not the administration. Again, if I am wrong, I am happy to be educated and clarified on that.

Because I said before during the budget discussions here, and I will say it again, that I think that the only way this country is really going to be ahead of the curve is not through production. I mean, production is part of it, I don't disagree. But it is not through production. That is not going to put us ahead unless we want to significantly cut out consumption, which I don't think we will. So that leaves us only with research and development to provide more energy-efficient means.

Talk about the cell phones, you know as well as I do that cell phones run for several hours on the same amount of energy that it used to take for about 30 minutes. And we all have the same thing. It can go further and further and further, as it should, all research and development, not done out of thin air, not done by the government, done by private enterprise with the help of government assistance.

And I can't argue strongly enough if we really want to look long term, past this election, past this decade, it is only going to be research that gets us out of it unless somebody comes up with new natural gas fields or whatever.

I would also like to shift a little bit again to production. It amazes me, absolutely amazes me, that we are sitting here talking about natural gas, and that is all well and good. We had a humongous natural gas reserve that is in the ground, put back into the ground, taken out and put back into the ground in Alaska in

existing fields; not new fields, existing fields. This government, before I was here, gave the authority to build a natural gas pipeline alongside the oil pipeline. That wasn't taken. Has anybody started pushing, demanding, insisting that that natural gas pipeline be built as soon as possible? If those reserves are there, California would not have a productivity problem at this point in time. They still have some problems with power plants, but there would be no problem with energy supply.

Mr. BLAKE. I don't know what percentage of contribution that could make to California, but I take your point and will give you a response on it.

MR. BLAKE'S REPLY TO MR. CAPUANO'S QUESTION ABOUT THE ALASKAN PIPELINE

The Alaska North Slope gas producers currently are reviewing whether projected market conditions will support construction of a pipeline to deliver Arctic gas to the lower 48 States. Alaska's known gas reserves, which are estimated to be over 35 Tcf, could have a significant impact on the natural gas supplies for the United States. For over a decade the gas has helped pressurize the oil reservoirs on the North Slope, which have produced over 13 billion barrels since 1977. The need to reinject gas has diminished at a time when domestic gas transmission capacity is considered insufficient to meet projected demand.

There are a number of Alaska gas pipeline proposals, including the transportation system approved in 1977. While the U.S. Government remains project neutral, the President's National Energy Policy recommends the Government coordinate its activities to expedite the construction of a gas pipeline to the lower 48. We have created an interagency working group that will smooth the way for the approval and construction of a pipeline, whenever private industry determines to begin the project.

Mr. CAPUANO. I guess I have to wait for a couple of responses, because, honestly, I appreciate you being here today. I could have gotten no answers by not coming here as well. I kind of wonder why we are doing this if thus far I haven't heard any real new insight except to hear that the administration is for more production. I saw that in the news a couple weeks ago. I appreciate you coming, but I already knew that, and I would like to know what we are going to do now we have problems.

I know that FERC did a little top spin and finally came around to a little bit of something is better than nothing, but I would really like the administration to try to put together something that is comprehensive and answers the questions that we have. I don't mean to be disrespectful, but you didn't answer any questions of mine, you didn't answer many of Mr. Collins', and my guess is you are not going to be able to answer many of the questions you are going to get for the rest of the day. But I appreciate you coming.

Chairman NUSSLE. Mr. Culberson.

Mr. CULBERSON. Thank you, Mr. Chairman.

Mr. Blake, when did California cease the construction of new power plants?

Mr. BLAKE. There was not a formal policy decision not to construct new plants. It is something that has occurred over the last 5 to 7 years. We really haven't seen net plan additions in the State.

Mr. CULBERSON. By not building those new plants, clearly that had an impact, wouldn't you agree, on the profitability of the California energy industry, the utilities out there?

Mr. BLAKE. For quite a while their prices remained very reasonable because they had reserve capacity so that for a number of years they were eating into their reserve capacity without building

the new facilities. But as demand continued to grow, they crossed over the point, and that is where they are now.

Mr. CULBERSON. Now, from what I have seen of the national power grid, I know that for example in Texas—we are blessed with an excess of electricity where we are doing well with electric generation but can't transmit a lot of that power outside of the Southwest and get it out to the West. Could you talk to someone about what is being done? What can be done to get power from regions like Texas where we do have some excess out to portions of the country like California that might need it?

Mr. BLAKE. That is an absolutely critical issue. The plan is to do a comprehensive study of our transmission grid, identify the key bottlenecks across the country, know where some of them are that prevent power from moving efficiently from one region that has the power generation sources to another region that has the demand. You see that problem just within California where they have transmission constraints preventing power from southern California from moving to northern California. An additional thing that needs to be addressed is the rate structure, how people build these transmission lines so that they have the incentives to put them in the right place.

Mr. CULBERSON. From what you have seen, what led to this virtual stoppage of construction of new power plants in California? What sort of factors led that State to decide to quit building new plants?

Mr. BLAKE. I think you had a number of permitting and site issues. I think probably given a choice, a lot of localities would choose not to have a power plant in their area. If you multiply that decision by locality after locality, you don't build new plants.

Mr. CULBERSON. So from the evidence you have seen, it was principally, when you say permitting issues, environmental concerns, not in my backyard, we don't want the power plant here, and that just magnified and snowballled across the State to the point where they are today?

Mr. BLAKE. That was definitely part of the problem of the "Not In My Backyard" phenomenon. Other people have talked about a BANANA phenomenon: Build absolutely nothing anywhere near anything.

Mr. CULBERSON. Mr. Capuano asked an interesting question about the failure to build a natural gas pipeline across Alaska, which would be terrific if it were there. Marketplace forces, what effect would that have on the price of natural gas? Would the price of natural gas support the construction of such a pipeline? What led, in your opinion, and from the evidence you have seen, to the failure to build such a pipeline?

Mr. BLAKE. I have to apologize on that to Congressman Capuano. I have been on the job 2 weeks. I am really not familiar with that. I am just not familiar enough with the dynamics of that pipeline to be able to address it, but I will get a response to it.

MR. BLAKE'S REPLY TO MR. CAPUANO'S QUESTION ABOUT AN ALASKAN GAS PIPELINE

The original proposal to build a gas pipeline from the North Slope of Alaska to the lower 48 States relied on a number of factors all coming together at the right time. At the time the pipeline was proposed the national was facing severe energy shortages. There was a belief that the United States was running out of natural gas.

There were a few major new finds of natural gas at the time and the Alaskan reserves seemed to be the obvious answer. With the anticipated shortfall in supply, gas prices were expected to rise dramatically. Finally, in the beginning of oil production there was no obvious need for the natural gas on the North Slope.

The market place changed. Additional natural gas deposits were found in the U.S., Canaca, and off shore in the Gulf of Mexico. Price increases never materialized and in fact prices actually declined. The producers on the North Slope found that the highest and best value for gas was to reinject it to boost oil production, since oil was marketable because the Trans-Alaska Pipeline System was already operational. As a result, the gas pipeline sponsors decided that the construction of the pipeline system necessary to bring the North Slope gas to the lower 48 States' market was not economic at that time.

Mr. CULBERSON. Thank you, sir.

Chairman NUSSLE. Ms. Hooley.

Ms. HOOLEY. Thank you, Mr. Chairman.

Thank you, Mr. Secretary, for being here today. Actually I have several questions, but I will try to limit those questions. What I have a problem with is when you look at the proposed energy plan over the next 20 years, there are some things that I have a difficult time trying to reconcile. For example, the President proposed 48 percent reduction in research on solar, wind and geothermal energy, 46 percent reduction in research and development on energy efficiency. So while those are being reduced, at the same time the Department of Energy put out a report that says with increased efficiency in renewable energy, that we can meet 60 percent of the Nation's need for new electric power plants over the next 20 years. So you have a report coming out of the Department of Energy saying we can do this, and yet you have cuts going on in the budget for renewable and energy efficiency. I have a problem with that, trying to reconcile those two things.

The other thing I have a problem with is, again, I think in the energy policy it calls for some kind of a study to raise the gas mileage standards for light trucks and vans, and yet we know the technology is there to do that. And it would save us millions of barrels of oil if we just did that one simple thing, just to raise the CAFE standards. But I have—and you can comment on those, but I want to make sure I get all my questions in really quickly.

The third issue that I have, and I would like to spend some time discussing this, is—and I am from the State of Oregon. We are impacted by the deregulation in California but we also have a drought. Little did we think both of those things would happen in the same year. I have talked to a lot of school districts. The State board of education just did a survey with all of our schools, and what they found is those increases in electric prices are just skyrocketing. And we have not only have that increase right now by anywhere from 30 percent to 200 percent, but we anticipate in October there is going to be another jump in prices. One of my school districts, one of my larger school districts, they have budgeted an additional $850,000 for increase in energy costs, and what that means is they are going to spend less money on hiring teachers. The money has to come from someplace. And that could hire 24 new teachers. That impacts class size. That impacts the learning of children.

My question is does the administration or does the Department have any intention of recommending some kind of a program for schools that have all of a sudden these very high increase in energy

costs? I can understand trying it with you has to decrease your need for or you have to become more efficient, but you know we have a program for low-income people, but all of a sudden our schools are going to be tremendously impacted by this. I would really like to know if you think you could go back and look at some kind of a program or plan to help these schools out. Hopefully this is temporary.

Mr. BLAKE. Congresswoman, that is a good question. We should take a look at what the impacts are in schools and in other areas. In Oregon I know because of Bonneville that Bonneville Power has gone out and done, what I think is, a very forward-thinking thing to address the issue. They are buying down demand, and by doing that I think they have reduced the amount of the rate increase that might otherwise hit by two or three times.

Ms. HOOLEY. Correct.

Mr. BLAKE. Again, if you look at the situation in Oregon, there are pending new generation plants that will start coming online, some for this year and many more for next year.

Ms. HOOLEY. Right.

Mr. BLAKE. But I will take your question on the impacts and on the schools as a question to follow up on.

MR. BLAKE'S REPLY TO MS. HOOLEY'S QUESTION ABOUT ENERGY COSTS' IMPACT ON SCHOOLS

From 1978 through 1995, the Congressionally established Institutional Conservation Program (ICP), with annual appropriations ranging from under $20 million to over $100 million, enabled the Department of Energy (DOE) to provide grants for energy-efficiency improvements in approximately 69,000 schools and hospital buildings. Since 1995, the ICP has been merged with the State Energy Program (SEP), to maximize States' flexibility in the use of energy grant program funds. Although total funding was concurrently cut nearly in half, many States have been allocating part of their SEP resources for energy efficiency improvement in schools. From program inception to the merger of ICP with the SEP, cumulative cost savings of $5.7 billion (FY95 dollars) and cumulative energy savings of 930 MMBtus were realized.

In 1998, DOE launched its EnergySmart Schools Campaign as a national initiative focused on reducing energy consumption and costs, and increasing use of clean energy technologies in K–12 schools nationwide. This initiative is part of DOE's Rebuild America program. Since its inception, EnergySmart Schools has helped communities complete energy improvements in 70 million square feet of schools with estimated energy savings of $51 million per year or 3.1 MMBtus. This represents a 23 percent return on investment since total private energy efficiency investments generated in K-12 schools by the Rebuild America program currently total nearly $220 million.

Over the next 3 years (2001-2003), more than $79 billion in school projects will be completed nationwide with the majority involving new construction and/or renovation of existing school facilities. DOE estimates this nation's 112,000 existing schools could easily save 25 percent of their energy costs, or approximately $1.5 billion per year, through better building design, energy saving capital improvements, and renewable energy technologies. Through the Department's Office of Building Technology, State and Community Programs, we expect to continue offering a variety of technical and financial assistance to help achieve this potential.

Ms. HOOLEY. OK.

Mr. BLAKE. On CAFE standards, as you know, that is an item that the Vice President's group recommended be studied. There are a number of factors, safety being an important one, that also must to be part of the consideration on what you do with the CAFE standards. And on renewables, the answer is, yes, it is very important. We are trying to address that as best we can. It doesn't solve all the problems, but it is an important element.

Ms. HOOLEY. I understand it doesn't solve all the problems, but I just have a hard time reconciling how they can cut it by 50 percent and yet your own Department says this is going to make up 60 percent of demand in the next 20 years.

Mr. BLAKE. And there were some budgetary increases proposed as well in the plan.

Ms. HOOLEY. Thank you.

Chairman NUSSLE. Mr. Brown.

Mr. BROWN. Thank you, Mr. Chairman.

Mr. Blake, thank you for coming today; and I know, as we look at the report and certainly hear some questions, a great deal of attention of the folks on the other side of the aisle that this probably just didn't happen yesterday. I just got up here in January myself, but this energy problem has been coming for a long time, and I think we need to all accept some responsibility for it instead of trying to plug holes in what you are trying to do.

In fact, I read in your report, in your conclusory remarks, it says, the blueprint to address the energy needs of the American economy through increased energy supply, improved infrastructure and more efficient use of our energy resources. I think that certainly answers the question the gentleman just asked a while ago that it doesn't have any efficiencies in this particular proposal; and certainly I think we are all cognizant of, whether they are closing the barn door or cutting off the lights, we all have a part in making that work.

Being from South Carolina, we have got a great energy policy there. I think each State should have their own energy policy. I don't know why they are looking to the Federal Government for a bailout or handout. We have done well, but we have had a great mix between hydropower, between coal, oil and natural gas. And it concerns me as we move to the future with the price fluctuation where we have it, how are we going to determine a good mix between public power, the private power to make a good energy plan that is going to work for everybody?

Mr. BLAKE. I thank you, Congressman.

First, I appreciate those comments; and the point of a balanced usage of fuels is in one of the charts I showed. That is critical. We need to understand as we put more reliance on natural gas both what that does on our infrastructure—but also perhaps that we need to look at other resources, how we get more clean-burning coal, how we use the nuclear resources that we have in place and the hydroresources that you have in place. The policy actually addresses each one of those fuels as well as renewable fuels in conservation. It is a balanced plan. States need to work toward balanced plans, and the Federal Government needs to work toward a balanced plan.

Chairman NUSSLE. Mr. Honda.

Mr. HONDA. Thank you, Mr. Chairman; and thank you, Mr. Blake, for being here.

I took particular interest in Mr. Collins' comments in asking what the differences were between pre- and post-deregulation, and I guess the query for him was why there is such a great increase in rates. Your response was, if I remember correctly, was that it

was an issue of increased demand versus the supplies. Can you tell me what in that time frame, what the increase in demand was?

Mr. BLAKE. I don't have the exact numbers, but I can get that for you.

[The information referred to follows:]

MR. BLAKE'S REPLY TO MR. HONDA'S QUESTION ABOUT NATURAL GAS CONSUMPTION

Demand for natural gas used in electricity generation is reflected in utility and non-utility consumption data. The Energy Information Administration (EIA) has statistics on total consumption of natural gas for electricity generation during the years pre- and post-electricity deregulation (approximately 1991–2000) in California. Electricity is generated by both regulated utilities and non-utility generators. As the electricity industry adjusted to regulatory reform, increasing quantities of electric power were provided by non-utility power generators, including industrial firms who were co-generators of electricity and steam. Over this period the use of natural gas for total electricity generation has varied from year to year and has not shown a clear trend.

TABLE 1.—CALIFORNIA NATURAL GAS CONSUMPTION BY NON-UTILITY AND UTILITY GENERATORS, AND PRICES TO ELECTRIC UTILITIES, 1991–2000

[Million cubic feet and dollars per thousand cubic feet]

California	Consumption (MMcf)			Prices ($/Mcf)
Year	Non-utility and utility generators	Non-utility generators	Utility generators	Utility generators
1991	787,596	338,582	449,014	$2.95
1992	922,630	358,198	564,432	$2.81
1993	892,550	426,489	466,061	$3.05
1994	980,428	379,138	601,290	$2.56
1995	787,974	393,276	394,698	$2.28
1996	708,632	390,607	318,025	$2.75
1997	751,666	373,719	377,947	$3.08
1998	831,370	560,216	271,154	$2.79
1999	918,035	773,380	144,655	$2.76
2000 (preliminary)	1,083,801	954,052	129,749	$6.04

Note: Non-utility use excludes coke-oven, refinery, blast furnate gas, and landfill gas.

Sources: For 1991–1999 consumption—Form EIA–759, ''Monthly Power Plant Report''; Form EIA–860B, ''Annual Electric Generator Report—Nonutility'' (data for 1997 and prior from Form EIA–867, ''Annual Nonutility Power Producer Report''); for preliminary 2000 consumption—Form EIA–906, ''Power Plant Report''; for 1991–2000 prices—Form FERC–423, ''Monthly Report of Cost and Quality of Fuels for Electric Plants.''

Mr. HONDA. My understanding, it was 5 percent.

Mr. BLAKE. Yes.

Mr. HONDA.Then the increase in the rates was about what? He said 10 times.

Mr. BLAKE. Well, I think he's looking at the marginal cost, the marginal rate rather than——

Mr. HONDA. I think he was talking about the cost of natural gas. You were talking about how the bidding goes, and there is a big gap between the cost of transport of natural gas and the price of natural gas to California and that there is a bunch of steps between that and the bidding.

I agree that the bidding process is kind of strange, but I think that there is probably a lot of questions of what goes on between those steps, and it is probably a wonderful area for examination.

My other question is, if you said that the structure was faulty, in the process of deregulation does not the plan have to go before the Federal Energy Regulatory Commission before it is completed?

Mr. BLAKE. My memory is that it would have gone before FERC.

Mr. HONDA. And if it went before them, why was not the faults at least questioned at that point?

Mr. BLAKE. I wasn't in government at the time. I don't know what was in the record at that time.

Mr. HONDA. But you are criticizing it right now.

Mr. BLAKE. I know what people from the outside were saying, disconnecting the wholesale rate from the retail rate, relying wholly on the spot market would create an issue; and whether those comments were made by FERC at the time, I honestly don't know.

Mr. HONDA. But it did go through the process.

Mr. BLAKE. Yes.

Mr. HONDA. And the function of FERC is to make sure that they have oversight over unreasonable, unjust rate increases. So the process was in place. So, like Mr. Brown says, there is probably enough fault to go around for everybody.

Mr. BLAKE. Yes, including the Federal level outside of California.

Mr. HONDA. The question of supply before deregulation, did the State of California receive power and negotiate power from outside of California also?

Mr. BLAKE. Before?

Mr. HONDA. Deregulation.

Mr. BLAKE. Yes.

Mr. HONDA. OK. So the reliance on supplies didn't necessary happen in the boundaries of California.

Mr. BLAKE. No, and I think that is a good point.

And to the point on the original design of the system, the deregulated system, if you maintained a structure where you had more supply than demand, I think that what they had structured might well have worked. When you shifted to where you have more demand than supply, there becomes a problem——

Mr. HONDA. Demand has only 5 percent. We had supplies that we relied upon and negotiated from without the State, so the real issue about energy and the crisis that we face today was precipitated by a faulty deregulation plan. And perhaps there could have been some, I guess, it is not my word, "gaming" the market.

So, you know, when there is terminology, there must be behavior; and if there is behavior, then somebody is doing it. So, you know, I am kind of concerned about gaming the market.

Does the Department of Energy get into those kinds of concerns?

Mr. BLAKE. That is the direct responsibility of FERC. It does have oversight on unreasonable rates.

And just to pick up on another point that you made——

Mr. HONDA. Well, let me continue. Then if you say that is FERC, does the Department of Energy have any responsibility in encouraging FERC to pursue the responsibility? If they in fact had determined that there was something that was unjust and unreasonable, is there a responsibility on the part of the Department of Energy to pursue this or encourage them?

Mr. BLAKE. Well, I think the President, not just the Department of Energy, has called on FERC to exercise that responsibility. FERC actually has ordered rebates under this administration, which was not the case previously.

Mr. HONDA. When did this happen?

Mr. BLAKE. I think they ordered it January, is my memory, but I can double-check on that.

MR. BLAKE'S REPLY TO MR. HONDA'S QUESTION ABOUT FERC ORDER DATES

FERC issued orders on March 9 and March 16, 2001, requiring that various suppliers of wholesale electricity to California make refunds for certain sales in January-February 2001 or provide the Commission with a justification of the pricing of such sales.

Mr. HONDA. And then they stop; and since then we have been asking for, in their terms, market mitigation measures to look at the increased rates, because it was still unfair and unjust.

I think the other area I am a little concerned about is the budgetary actions. The budget is a reflection of our priorities, and I understand that the Department of Energy's budget is less than it was last year or in the previous administration. Is that a concern of yours?

If we are looking at increasing our activities in the area of conservation, which you said, increasing our activities in research, and your own laboratories have said that if we pursue conservation and alternative research that we can be less dependent by something like 47 percent, is that a direction that the Department of Energy will be pursuing based upon the laboratories that are under your Department, based upon their conclusions?

Mr. BLAKE. The labs play an important role in the research and development efforts of the Department. The Department is pursuing energy conservation, and renewable energy. Those are part of the budgetary requests. There have been some supplemental requests that address that.

The Department's budget obviously addresses a number of other things as well, and you know there is a balance in the programmatic increases and decreases there. I don't think you would look just at the energy, what the Department does related to the energy plan for the budgetary impacts and what the budget submission was.

Chairman NUSSLE. Mr. Hoekstra.

Mr. HOEKSTRA. Thank you, Mr. Chairman.

Mr. Blake, good morning and thank you for being here.

I think the question that I have, Bill's offered the same kinds of questions that Mr. Collins had, is that what is going on in energy?

And you talked about natural gas prices in California, the tenfold increase in prices there for electricity. I know that when I go home and I talk to my constituents they have a hard time understanding what this deregulation and these prices, price fluctuations. They simply ask a very matter of fact question: Who is getting the extra profit?

We had a situation where in one day gas prices went up by 20 percent, and all the gas stations did it at like 11 o'clock in the morning. So gas went up by 30 cents a gallon. And, you know, they don't see any problems in the Mideast. They don't see any fluctuations in the price per barrel. They don't read about a refinery going down. Refineries are running at high capacity.

So the question they come back with is, hey, Pete, who got the 30 cents? You know, who is getting the extra 30 cents this afternoon and what is it being used for?

I hope that the Department of Energy does an analysis of where this extra income is going and what is driving these costs factors. Because with a lack of a clear explanation, what is happening with consumers is there is a distrust of market forces. There is a distrust of deregulation. There is a distrust of the consolidations and the mergers that are going on in the industry and the basic conclusion that perhaps it is time for more regulation rather than less regulation.

If we don't come up with some specific answers and explanations that actually make sense, as well as a strategy that says, you know, here is what market forces will work in the long run and why they may not be working in the short term. I don't know if you have got any comments or response to that statement or not.

Mr. BLAKE. A couple of quick comments.

First, on the pricing, and, you know, there has been this longstanding debate on price caps and whether price caps are an appropriate response to what is happening in the market and some notion of improper profits. It is worth just pausing and remembering that if you have got an essential problem of supply and demand, a price cap addresses neither. It doesn't improve your future supply, and it doesn't affect your current demand. If anything, it makes your future supply more difficult to get on line and increases your current demand. It is a general comment.

On the oil and gas and pricing, there are constrained refineries. One of the things that the policy points out is that we haven't kept up in terms of building new refineries. And I note that as I came here this morning I asked what was the price of regular gasoline, and it is $1.60, which is 8 cents lower than it was this time last year.

One of the things that has happened is we saw an increase earlier than usual; and that, along with all of the other discussion, I think has created some of the issues that you raised. But it is worth bearing that in mind.

Mr. HOEKSTRA. We are going to need more help in understanding exactly why those prices come in, you know, because, my consumers, they understand supply and demand. What they are also facing in electricity, in natural gas and these types of other areas, they are coming out of a regulated market where for a long time demand was not a problem, supply was not a problem, and prices weren't a problem. We had basically relatively inexpensive sources of electricity and natural gas. And what they are now seeing is they are seeing deregulation in these areas, and the end result they see is now, all of a sudden, we have got a problem with supply, we have got a problem with demand, and the only benefit I am getting as a consumer is I am getting to pay these folks more money.

So tell me where the benefit of deregulating the market in these areas is. That is a question that we face when we go home, and it is a question that I ask, that says, you know, do market forces really necessarily work in these types of industries the way that we expect them to work in other markets?

Mr. BLAKE. Those are very legitimate questions, and we need to do a better job in education.

Because if you go back and you look at the concept of these regulated markets with cost of service regulations, what the utilities did was basically add up their costs and put a return on equity. If you look at the debates that existed in the 1970's and 1980's of utilities building enormous plants that people argued weren't necessary, the debate that I am sure you are familiar with not that many years ago on stranded investments, investments that were made in a regulated structure, where people said, we don't need this. What is all this capacity for? It is far too expensive.

The basic concept was, and I think it is proven out in a well-designed structure, the market is going to do a better job of allocating investment dollars and we will see reduced costs. You can look to a number of markets around the country where that is happening.

But your very questions emphasize the extent to which we have got to do a better job of education.

Mr. HOEKSTRA. Thank you.

Chairman NUSSLE. Mr. McDermott.

Mr. MCDERMOTT. Thank you, Mr. Chairman. I appreciate your bringing the author of the fossil fuel study to the committee. I assume you wrote this. That is why they sent you up here as the spokesman.

Mr. BLAKE. No.

Mr. MCDERMOTT. Who did?

Mr. BLAKE. There were two individuals employed at EIA, at DOE.

Mr. MCDERMOTT. At EIA?

Mr. BLAKE. EIA is the Energy Information Administration.

Mr. MCDERMOTT. And who are those individuals?

Mr. BLAKE. Ron Early is one name, and Kay Smith is the other name.

Mr. MCDERMOTT. Kay Smith. Thank you very much.

I would point out to Mr. Brown that South Carolina may stand alone. They may have a wonderful energy process, but you would do a service to the country if you stopped calling this a California problem. Because those of us who are further up the west coast, the decisions made by FERC made it much worse for us when they said Bonneville had to ship electricity down to California and force them to do it. We wound up having our dams drawn down in a drought year. We are going to have salmon problems. We are going to have all kinds of problems. So this is a regional issue and people better get it clear in their heads that no State is going to stand alone and be able to do it all by themselves.

As the pressure that you see on the west coast comes on, it is going to come across the country. That is the view of the Department of Energy, isn't it? Or do you think this is just a California problem?

Mr. BLAKE. It is not just a California problem.

Mr. MCDERMOTT. Is it just a west coast problem?

Mr. BLAKE. It is not just a west coast problem.

Mr. MCDERMOTT. How far does it come?

Mr. BLAKE. Well, there are transmission issues that exist around the country. The bottlenecks are not just on the west coast. There are bottlenecks in the Midwest, Southeast, and Northeast. So you are right in saying that the issue is not just in California.

Mr. MCDERMOTT. We were the first to get it is what you are saying, basically.

Mr. BLAKE. The combination of the drought, the supply and demand.

Mr. MCDERMOTT. All the things that happened——

Mr. BLAKE. Yeah.

Mr. MCDERMOTT [continuing]. Happened on the west coast first, but the rest of the country is going to get it.

Second thing is, people have asked the question here, and I want to put a finer point on it. Mr. Collins kind of walked around it, and I keep dropping a bill in the Ways and Means Committee on an excess profits tax. Do you think 20 percent profit on your investment is adequate? I mean, you are a free enterpriser, right?

Mr. BLAKE. It depends on the investment and the risks and the return. I mean, what is the return?

Mr. MCDERMOTT. Energy would be a pretty solid return, wouldn't it?

Mr. BLAKE. Here is the reason why that is, what is the period of time over which you are going to recover your investment? What are the risks associated with the investment?

Mr. MCDERMOTT. Utilities commissions have been giving out 10, 12, 14 percent for years; and everybody's been buying Florida Gas, Electric and Commonwealth Edison and everybody else, right?

Mr. BLAKE. When you are a utility, you know that on the rate structure, if it is used and useful, you get a recovery on it. When you are developing as a merchant power plant developer, the fact that you built a plant doesn't mean that you will get a return. They are very different economic structures.

Mr. MCDERMOTT. So in this period what you are suggesting is that Enron and all these companies should make as much as they possibly can at the moment because there will be a dry period someplace, right?

Mr. BLAKE. No, I wasn't suggesting that.

Mr. MCDERMOTT. You don't think there should be any limit on them, do you, in how much they take out of the people?

Mr. BLAKE. I don't think price caps work.

Mr. MCDERMOTT. I didn't ask you about price caps. I asked you, as a public policy, do you think there should be any limit whatsoever on how much an industry takes out of an essential for living? In this country, you cannot live without electricity.

Mr. BLAKE. On the electricity structure, there is now a regulatory process where FERC ensures the wholesale rates are just and reasonable. So the answer to your question——

Mr. MCDERMOTT. Okay, that is good. I like that. FERC was just and reasonable. Do you say that the rates in California were just and reasonable?

Mr. BLAKE. I think FERC has already made some decisions that have required rebates on rates where they said they were not just and reasonable.

Mr. MCDERMOTT. Where have they given these rebates?

Mr. BLAKE. I mean, they apply to the wholesale market in California. I assume they go to whoever was on the other side of the transaction.

Mr. MCDERMOTT. So the rebates go to Southern California Gas and Electric. Does it flow on then down to the users?

Mr. BLAKE. I don't know in those instances who were the buyers that got the benefit of the rebates and how it flowed down.

Mr. MCDERMOTT. But it is your testimony that the FERC has set in motion a plan that guarantees rebates to California producers.

Mr. BLAKE. Producers?

Mr. MCDERMOTT. Of electricity.

Mr. BLAKE. They have jurisdiction over wholesale rates. They have jurisdiction to assure that the wholesale rates are just and reasonable. They have made some conclusions that they aren't. I would think the rebates in that case would go to the buyers of that wholesale power, whoever those might be. It might be a municipality. It might be an investor-owned utility. It might be the State. I don't know enough about it.

Mr. MCDERMOTT. I will check that, because I don't think there have been any rebates. At least I am not aware of them.

Mr. BLAKE. I think they have been ordered and been found but where the actual cash transaction is, I don't know.

Mr. MCDERMOTT. The next question I have and Mr. Honda has suggested that the budget sets the priorities. And when you have the kind of cuts that are in this budget, in solar particularly, which is one that really troubles me. Because with solar energy, there is seven times the energy that California uses in a given day falls on California, and I wonder why I see nothing creative in this proposal that came out of the Department of Energy on how to use the solar energy.

I have a bill in the House Ways and Means Committee on granting the abilities to sell bonds to utilities so that they can put solar panels on people's houses interest free and let them pay them back in the rates. This is an enormous source of energy that is simply not talked about and certainly no money is put into it, in this budget. I can't understand who set those priorities except people who are interested in gas, oil and coal. That is the only thing I see.

Mr. BLAKE. No, I think the budget actually reflects sums to renewable energy sources. I don't know the specifics on the solar.

Mr. MCDERMOTT. It reduced it by 53 percent. The only increase was in the weatherization program. That is the only one they increased.

Thank you, Mr. Chairman.

Chairman NUSSLE. Thank you.

Thank you very much, Secretary Blake.

There is no question that this is not merely a California problem or a west coast problem or west of the Mississippi problem. This is a national concern, and that is why we are here today, because of its impact on the overall economy and therefore its impact on our budget. The purpose of this hearing today is to examine that and to get a handle on why we need, after many years of neglect, a national energy strategy so that we can put some predictability into the system.

I appreciate your testimony today. I applaud the administration for putting a product on the table for discussion and debate.

Other committees of jurisdiction are now engaged in debating that, coming up with ideas and proposals. We have many members

who have ideas as Mr. McDermott suggested. I have some. Many other members of the committee have alternatives and ideas, and that is where the debate needs to happen.

But it is clear from this hearing that it needs to be done now. We have to begin the process because it will have a short-term, medium-term and long-term effect on this budget; and we have got to get our arms around it immediately.

We appreciate your testimony here today and the fact that the administration would at least start this process. Thank you very much.

Mr. BLAKE. Thank you very much. Congressman Spratt, members, thank you.

Chairman NUSSLE. At this point in time, we invite to the witness table a colleague from California, Congressman Bob Filner, who represents the 50th District. Have I got that right, Bob?

Mr. FILNER. Yes, sir.

Mr. NUSSLE. You see, when you come from a State like Iowa and you have only have five, 50 is a big number. That is why I just want to make sure. The 50th District of California, which encompasses San Diego, the southern half of the City of San Diego.

Representative Filner was elected in 1992, as I understand, and serves on the Transportation and Infrastructure Committee and Veterans Affairs Committee, is that correct? Any other committees you serve on?

Mr. FILNER. No, that is enough.

Chairman NUSSLE. That is enough for now.

Well, all right, while we appreciate that you would come and give us your reflection on what has been happening out in your State, while we heard from Mr. McDermott this is not just a California problem, certainly there are some issues that California is going through, and we would enjoy hearing that and its impact on the overall economy. So we would invite you at this point to provide your testimony.

STATEMENT OF THE HON. BOB FILNER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. FILNER. Thank you, Mr. Chairman; and I thank you for this opportunity. Your statement that you just concluded the previous panel with is something I think we all agree with. This hearing is necessary, action is necessary, because our economy is at risk. And I do want to point out that the west coast economy, California's economy is at risk. We have had some good news in the last week or so, but we are at risk, and the economy is teetering, and that means the national economy is at risk and a recession perhaps is possible.

The disaster is overwhelming right now, Mr. Chairman. If this were a natural disaster such as an earthquake, a flood, fire; FEMA, the President and everybody would be in there dealing with it. This is man-made disaster that is equal to many of those natural disasters, and yet we don't see any Federal help.

Let me just give you two statistics to measure that impact.

In my County of San Diego, which was ground zero, by the way, in this whole crisis we have been dealing with it now for a year. In a study by our Chamber of Commerce, 65 percent, think of that

statistic, 65 percent of our small businesses face bankruptcy this year because of the prices of electricity. If that is not a disaster, you have to tell me what is.

Businesses by the score have already closed. Businesses are not just affected by the prices but by the availability of electricity. As you know, if you are in business you need a reliable source. Even an hour of blackout to some businesses means millions, even tens of millions of lost production.

The third biggest employer in my District, a textile plant, is going to shut down not so much of the prices, although that is a problem, but because potential blackouts mean they cannot keep up a uniform production.

Now the solution of these issues is obviously wide ranging and comprehensive. Various plans have been put forward that is a balanced approach between new capacity for our Nation, and I would echo Mr. McDermott's earlier comments that renewables ought to be a basic concentration of that. We obviously need more conservation, and California is now the leading per capita conservation State in the Nation. So we are doing our job.

But I want to concentrate today on the price structure and the prices that are really killing us.

I have heard various comments and questions, and I heard the testimony of the Secretary. There seems to be an assumption here that comes from economics 101 that if you don't have enough supply, and you increase demand you are going to have problems with prices. Well, when you get to economics 102 you figure out that when you have a monopoly or oligopoly or cartel or a manipulated market, there are no supply and demand curves that you can talk about with any reality. The market is not free. The price is not set by the market. The price is set by the cartel or the oligopolies or the monopoly, and that is what occurred and is occurring in California and soon the rest of the Nation.

I will tell you we are being bled to death by this manipulated market. Whereas we have paid $7 billion, our whole State, for electricity 2 years ago, we paid $27 billion last year, and we have been paying anywhere from between $50 and $70 billion this year, and that is without any big increase in demand. We have conserved, and the cost of production, except for natural gas, which is another area also capable of being manipulated, there has been no appreciable rise in the cost of production. So you can't account in traditional economics 101 terms for the price increases or increased demand or decreased supply.

We do have tight supplies, and we are dealing with that. The Governor of California has approved plans for a dozen new plants. We are conserving, as I said, but only the Federal Government can deal with the price structure of the wholesale market, and the Federal Government has not acted, and we are facing, as I said, disaster.

When my constituents a year ago opened their bills, and we were the first probably in the whole Nation to face full deregulation, not partial. We had deregulation of our retail prices and our wholesale prices. Within 30 days, the first bill was opened up, everybody's prices doubled. Thirty days later, they tripled.

Now you imagine, Mr. Chairman, a small business, a restaurant, running on very tight margins had an $800 bill, went up to $1,500, $1,600, then to $3,000 with no end in sight. How can you survive? Many did not.

If you are a family on a fixed income, you went from fifty bucks to 125 to 200 in 2 months, even those that were not on a fixed income were hit very hard.

Virtual revolution broke out in San Diego, Mr. Chairman. And I can tell you there is a revolution when Congressman Hunter, who is in my adjacent district, and I agree on anything, you know there is a crisis. And the State moved in because you had a very conservative community in rebellion. People tore up their utility bills. They burned them in public. Conservative city councils and school boards refused to pay their electricity bill.

Everybody in San Diego knew, because there was not a hotter summer and no increased cost, that these prices were a result of a manipulated market; and the State acted and gave us a temporary reprieve through a price cap.

But I will tell you that the call for price controls and in fact public power in San Diego is completely bipartisan and almost unanimous as a result of this situation. When Duncan Hunter, Duke Cunningham, former Representatives Bilbray and Packard and Bob Filner are all together on price controls and public power, you know there is a disaster in our county.

We presented our evidence, by the way, of a manipulated market, of withholding of supply, of falsifying data, of laundering electrons, to FERC, our Federal Energy Regulatory Commission. They investigated on our evidence, and they said, yes, indeed, the prices come from a manipulated market. They are unjust and unreasonable.

This finding was made by FERC last November and December. The prices under the Federal Power Act were illegal and are illegal, and yet FERC did nothing at the time. I think it is because of that FERC inaction and administration inaction, I am talking about a Democratic administration then and I am talking about a Republican administration now, but administration inaction led to the market saying, hey, we can steal the State blind; and that is exactly what they have done.

We have an integrated market in the Western grid, so those prices hit Oregon and Washington, New Mexico, Wyoming, Montana. So FERC found a manipulated market, had no action. We are where we are now because of that.

Now I have been told and I have heard on this committee that price controls, and I use that word although that is not what we call for in our legislation, do not produce one kilowatt of electricity. I think I could prove right away otherwise, but let me just say we have a balanced approach in California and the West. We are putting new capacity on, and we are conserving. Price controls, the cap, market-based rates as they were under regulation is what is needed, because the prices are killing us.

If I can coin a phrase from a recent election, it is the prices, stupid. That is what is killing us. That is what is driving people out of business, and that is what is wrecking the State economy and maybe the national economy.

Price controls do not produce a kilowatt of electricity, although I will tell you in a manipulated market, you get higher prices by withholding capacity. And if you had a stable market, with a market-based rate, there would be no incentive for the withholding capacity. We would get more capacity out of that. So we have structural deficiencies in our market.

FERC has not acted. FERC must act. And I will tell this committee and I will be telling the Congress as we move forward with the national energy policy, yes, we deal with production and new capacity, yes, we deal with conservation, but we also deal with this manipulated market that is producing prices that are just horrendous.

Mr. Chairman, if you took 2 cents to produce a commodity like electricity and you were selling it for 3 or 4 cents, as was the case, you made a hell of a profit. But now they are selling it for the relatively same cost of proconduction at 20 cents, at 50 cents, a buck. It went up to $4 at times. That is not a working market. There is no competition. That is a manipulated market, and only the Federal Government can intervene and bring back the stability that is so needed.

So as you move forward with a balanced energy policy, look at the market and we need a windfall profits tax, as Mr. McDermott had said earlier.

We in San Diego, again a very conservative community, are unanimously moving toward public power so we are not subject to this cartel any longer. We are going to build our own capacity as a public utility, and that is a tremendous change in the thinking of people in San Diego.

So look at the structure of the market, please. Realize that there is not a free market at work. There is no supply and demand curve that you have got to take into account, and you need to get us out of this situation by reforming that market, whether it is a regulated price based on cost or whether it is a move toward public power. The government can make that easier for municipalities. We have to look at that, because there is not a free market at work.

I thank the chairman.

Chairman NUSSLE. I thank you, Mr. Filner, for your testimony.

[The prepared statement of Congressman Filner follows:]

PREPARED STATEMENT OF HON. BOB FILNER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Chairman and colleagues, I appreciate this opportunity to address you on the most pressing threat to the economy in the western United States-the energy crisis.

I live in San Diego County, which I have often referred to as "Ground Zero" because it was the first community in the western United States to experience the effects of this failed policy of deregulation of the electricity industry. We were the first to experience the disaster—skyrocketing prices and business closings. Last summer our electricity bills doubled in 1 month and tripled the next month until the State Legislature adopted a retail price cap of 6.5 cents per kilowatt hour for residential users and deferred the remainder of the cost in a so-called balancing account. This provided some measure of relief for our citizens, although it raised concerns about payment of a huge debt—and it provided no relief for our businesses.

At that time, I said this was not simply a supply and demand crisis. I said that this crisis was caused by market manipulation by the wholesale power generators, operating like a cartel—American companies withholding supply and "gaming" the market to artificially inflate prices.

This has been proven. The evidence has been rolling in over the past few months—the California Independent System Operator (Cal-ISO), the California Public Utilities Commission (CPUC), even the Federal Energy Regulatory Commission (FERC) have all issued reports citing "unreasonable and unjust"—therefore illegal—wholesale electricity rates. These agencies have all found that price gouging and market manipulation did, in fact, occur and have agreed that some refunds are due to the public. What they have not agreed on is the amount of refunds due nor the solution to this problem.

The State of California has identified over $6 billion in overcharges. The FERC has ordered $124 million in refunds due to overcharges. According to Governor Gray Davis, California has yet to receive one cent of these refunds.

California has requested that cost-based rates be set, even if they are only temporary. The FERC first responded with soft price caps during energy alerts that had so many loopholes they were useless. Finally, just a couple of days ago, the FERC set price caps—now called price mitigation—in the entire 11-state, western United States. While these soft price caps are a small step forward, the fact that caps are necessary is a significant acknowledgement about the breadth and depth of this issue. It also recognizes that previous actions—or inaction—by the FERC have been ineffective in dealing with this crisis.

There are two key problems with the recent FERC action. First, the maximum price caps are soft. This means that a generator may charge more for electricity, it simply has to "justify" its pricing to the FERC. Secondly, and more importantly, it sets the maximum wholesale price for every generator based on the costliest and least-efficient generating plant. Let's get this straight, we find the most inefficient and ineffective plant with the highest cost of production, add to its cost a profit and then pay this price to every other electricity producer. This is not a solution—it is preposterous. FERC is simply continuing to reward the energy cartel with windfall profits for gouging consumers in California and the West.

Similarly, the Administration has refused to act on this crisis. It has repeatedly refused to set price caps because "it would be counterproductive. Price caps would discourage conservation and new plant construction." These reasons demonstrate a complete lack of understanding of the situation. When this crisis began, California was second in per capita energy consumption. As a result of this crisis, Californians now use less energy per capita than any other state.

But this energy conservation was not due to the high price of electricity. Municipal utility districts serve Sacramento and Los Angeles, and public power has protected them from volatile electricity prices. Californians in areas served by Pacific Gas & Electric and Southern California Edison continue to have retail rates set by the CPUC.

Only San Diego experienced the full brunt of deregulated prices last summer, and even here the State Legislature imposed retail rate caps to protect consumers. So contrary to what the Administration would have you believe, California has improved its energy conservation despite retail price caps.

California has also approved 16 generating plants in the past year. Some of these plants will start producing electricity this year, some next, and some the year after that. This will help increase the supply of electricity, and it is disingenuous at best to believe that construction will be halted simply because the FERC establishes cost-based rates. After all, cost-based rates have been the rule for more than one hundred years, and utilities have always been among the most profitable sectors of our economy.

I have introduced legislation, HR 268, that would direct the FERC to set cost-based wholesale rates if it finds that wholesale rates are unjust and unreasonable. Cost-based rates, rates that take into account the cost to produce electricity and provide a reasonable rate of return, are the only answer to the situation in the West. Cost-based rates remove the incentive to "game" or manipulate the market. Cost-based rates remove the incentive to withhold power. Cost-based rates provide power producers with a reasonable rate of return. Cost-based rates will protect our consumers and our economy.

Thank you for the opportunity to provide this testimony.

Chairman NUSSLE. There is no question that you have been in the eye of the hurricane, as they say. I appreciate the perspective that you bring to this, and you need to advocate what you advocate, how you are advocating it at this point in time.

The rest of us from around the country are trying the best we can to learn a couple of different things.

First of all, what you have just gone through, when did it start? How did it start? How do we stop it? How do we prevent the rest of the country from going through what you have had to go through and endure in San Diego?

Secondly, how do we come up with a long-term strategy so that the rest of the Nation can provide some stability in energy overall?

And, finally, what can we do in the short term to deal with your situation?

There are other committees that are going to be doing that. The purpose of our committee hearing today is to understand, first and foremost, that it has an impact on the long-term stability of our economy and on the long-term impact on the budget. And clearly, with your very first statistic that you cited where 65 percent of the businesses are at least facing some economic disaster this year, possibly even as far as bankruptcy, is certainly proof enough to me that this is going to have long-term impact.

It is the price, stupid, you know, in San Diego might be true right now, and I do not take anything away from what you said. Unfortunately, for many of us in other parts of the country, when the prices go back down we forget about the problem. We saw that since the Gulf war.

I remember—but you weren't here then—it was my very first vote as a brand new Member, was whether or not to use force in the Gulf war. Everybody that day on the floor made promises up one side and down the other, the administration at that time—the new incoming administration at that time, everybody made promises that we would never go through this again because we didn't want to be dependent on foreign sources of energy and that we had to do something for a long-term strategy. And, boy, we made all sorts of promises to one another and the Nation made promises to one another.

All of a sudden the Gulf war ended, prices went back down, and everybody buried their heads in the sand. Congress, the administration, everybody, buried their heads in the sand, and nothing has been done. And now all of a sudden we face this crisis again because the prices went back up, and everybody says, oh, my God, now we have got to have a long-term energy strategy.

My point is that, while I certainly respect your perspective from San Diego that it currently is the price that is stupid, I would suggest to you that, at least from my perspective, and this isn't to contradict yours, but it is the long-term energy strategy that is stupid as far as I am concerned. Because we can come up with all sorts of short-term figures, and you need one maybe right now, but for the rest of us we can't afford to go through the roller coaster that you just went through.

I would be very interested in you showing us, whether it is me or anybody else, how price controls produce one kilowatt hour of energy or one more gallon of gas or one more BTU, whatever unit you want to use. I would be very interested in somebody proving to anybody that that produces more. I would be happy to——

Mr. FILNER. If I may, Mr. Chairman, your opening statement of the problem is exactly right. You pose the right questions on what this Congress has to deal with and this administration or any ad-

ministration should have dealt with. And your historical point is well taken. You can extend it back to the gasoline crisis of 1974.

But I will tell you, my major point was that it is not the just the prices, it is the structure of the market that has to be looked at. And it was the structure of the market that made sure that all the steps we took after 1974 and after the Gulf crisis went for naught. That is, the utilities bought up all the cogeneration and stopped all the renewable energy kinds of research that was being done, and the car companies stopped the stuff that dealt with increasing the fuel efficiency and on and on. So it is the structure of the market that I think you have to look at.

But in answer specifically to your question, we are not claiming that price controls produces one kilowatt of electricity, although I think I can prove that. We are saying that, while we are increasing supply, we have got 12 plants on line, and while we are urging Californians to conserve even more and we are the leaders of the Nation now, it is the prices that are killing the economy, literally killing it. I mean, you have got scores of businesses in my District that have gone out of business. A quarter of a million jobs apparently are threatened in the Northwest just by the prices.

So you have to deal with it as part of an overall policy. It is not just, quote, price controls.

In the market that exists, there is an incentive for withholding capacity because the prices spike enormously as a result. So it is the lack of price controls that is hurting our supply. And because the utilities in our State have gone bankrupt, supply was taken out because nobody was being paid for their production. So it was the lack of control that reduced our capacity, and it was the rush toward regulation without really thinking it through in our situation and probably the national situation that led to this. We too quickly bought the economic benefits of deregulation.

Especially when you are dealing with, as you earlier said, with a basic commodity such as electricity, and I will just end with a quote from my Republican colleague, Mr. Hunter. He and I have had hearings all through San Diego and Washington. His explanation, his description of the problem, I think it serves us well: if you are going into a hospital for a 3 p.m. life-and-death operation, and the hospital administrator came to you at 5 minutes to 3 p.m. and says, now what were you going to pay for the oxygen? The issue is not supply, it is not cost, the issue is control of a basic commodity at the time that you need it. That is what is occurring, and therefore the price can be anything you want to charge. It has nothing to do with any other thing but control of the market at that moment.

And we will get increased supply, I will tell you, with some stability in the marketplace. Nobody is entering the market now. You can't.

Chairman NUSSLE. Your point is well taken. As I say, you are in the eye of the hurricane, and I am not. I don't take anything away from what you are suggesting.

I just want to make sure and for the point of this hearing which is to make sure that we do what we can do in order to protect our economy nationwide, certainly California being an integral part of that. That because of its impact on the budget that we don't, as you

just counselled us, rush into some buying some quick fix or buying some easy answer.

As you say, we too easily bought deregulation. We too easily were lulled to sleep by some particular issue. I don't want us to do that from our Iowa perspective, from wherever you are from in the country.

We don't want to go through what California is going through, and we don't want to buy what California has had to endure. Therefore, as we go through this, we need a long-term strategy. We shouldn't buy some quick fix is my only point, and I appreciate the fact that you would come today and give us a taste of what you have been through, because it clearly has an impact on our economy overall and, therefore, on our budget.

Mr. Spratt.

Mr. SPRATT. Bob, just one question. Thank you for your testimony, first of all. It was very grabbing, very effective.

Do you see any way out for California without an assertive role by FERC?

Mr. FILNER. Mr. Spratt, I thank you for your question and interest and your leadership. The chairman's statements I think are very well on point, and I hope the Congress adopts them as the way we approach this.

We are bringing capacity on line. There are a dozen plants on line. We are conserving more than any other State. That is what the State has done. Only the Feds through FERC or through Congress or through the administration can deal with the wholesale prices. That is the only level that has the authority to do this. So—FERC must go beyond what it did yesterday. It is not sufficient.

And we are still suffering, by the way. If these prices have been illegal since last June, what of all the financial hardship that has been wreaked since then? When you have ill-gotten gains that have been estimated anywhere between $8 and $20 billion, that is a lot of money from one State. Those ill-gotten gains ought to be returned to those who were robbed.

There was an earlier debate in the colloquy between Mr. McDermott and the Secretary. The fact is, not one cent of rebate or overcharge has in fact been paid up to this moment.

Chairman NUSSLE. Are there any other questions for Mr. Filner? Otherwise, I know you have a time constraint.

We appreciate you coming today and providing your testimony. I know it is very near and dear to you and you live there. You pay the prices and your constituents do. We appreciate the fact that you took time and shared that with us.

Mr. FILNER. I thank you for the comprehensive approach that you are taking, Mr. Nussle.

Chairman NUSSLE. Thank you very much.

Now we have the opportunity to hear from three additional witnesses.

First, we have Dr. Glenn Hubbard, who is the chairman of the Council of Economic Advisers. We also have with us John Hanger, who is the President of Citizens for Pennsylvania's Future; and Alexandra Liddy Bourne. I hear it is Sandy, is that right?

Ms. BOURNE. Yes.

Chairman NUSSLE. I am not sure how you get Sandy out of that.

Ms. BOURNE. Out of Alexandra.

Chairman NUSSLE. Okay. Your mom gave you that, right? See? We all have that.

Sandy Bourne, who is here. She is the director of the Energy, Environment, Natural Resources and Agriculture Task Force for the American Legislative Exchange Council.

All of your testimony will be provided for the record, and you may summarize with the time that you have.

STATEMENTS OF R. GLENN HUBBARD, CHAIRMAN, COUNCIL OF ECONOMIC ADVISERS; JOHN HANGER, PRESIDENT, CITIZENS FOR PENNSYLVANIA'S FUTURE; AND SANDY LIDDY BOURNE, AMERICAN LEGISLATIVE EXCHANGE COUNCIL

Chairman NUSSLE. Dr. Hubbard.

STATEMENT OF R. GLENN HUBBARD

Mr. HUBBARD. Thank you very much, Mr. Chairman and Congressman Spratt.

I would like to, first, thank you for holding a hearing like this. I think this is a very important issue for the economy and for the budget, and I commend you for doing this. I apologize that a shift in the President's schedule made me late for the first panel.

Chairman NUSSLE. You name-dropper you. Thank you for coming.

Mr. HUBBARD. Let me just go through, if I might, some developments in energy markets that have brought us here, talk just a little bit about energy prices in the economy, and then the administration's view toward a national energy policy.

I think it is fair to say that much of the higher recent energy prices that we have seen have reflected economic growth, that is, demand pressures. As in many markets, energy supply and demand take time to adjust. While none of us as a consumer likes high prices, high prices provide very important incentives for changes in producer behavior, including increasing supply, and changes in consumer behavior, changing habits or conservation.

With the aid of thoughtful policy, I think most economists would tell you that market adjustments will bring forth the right amount of adjustment on both of those margins.

In my testimony I outline current conditions in key energy markets.

Just to hit the high points, I think it is fair to say in the petroleum market that oil prices are expected to remain high through 2002, putting pressure on oil-using sectors.

In the gasoline market, we have seen recent pressures, but market responses including imports of gasoline and increased production are helping mitigate.

We are seeing some regional problems having to do with boutique fuels, the fact that refiners face additional challenges as a result of various State and local clean fuel requirements.

In the natural gas market, we have seen significant wellhead price increases last winter that have since declined, a trend that is expected to continue but declines are expected over the next year.

Electricity, of course, was just touched on in the previous testimony. We can come back to it, if you wish.

The import of all this, I think, for the hearing that you are having today, Mr. Chairman, is that these developments in energy markets are occurring at a time when we are experiencing concern about the economy's strength; and indeed energy price increases are one factor in the growth slowdown that we are seeing. But why is this?

Energy price increases have several channels through which they can reduce real output in the economy. First, on the supply side, by increasing the cost of inputs and leading to lower profits, output and capital formation; on the demand side, by lowering consumer incomes and consumer spending; by reducing real money balances and consumer wealth; by increasing imports in some markets, like oil, where imports are at the margin, thereby reducing GDP; and if changes in these relative energy prices are long lasting, they can trigger quite costly adjustments in the economy.

So on the output side, there are several ways in which higher energy prices can be bad news.

Insofar as inflation is concerned, 7.2 percent increase in the CPI over the 1997 to 2000 would have been smaller had it not been for the direct contribution from the 11.6 percent increase in energy prices over that period. There are also a variety of indirect effects of energy price increases in the overall CPI, just a longhand way of saying that's a big deal.

What is the macroeconomic impact of this? Well, the International Monetary Fund has done a set of studies on effects of oil price shocks on the economy. One summary conclusion for you is that a shock of the size that we saw in the 1998 to 2000 period could be expected, in and of itself, to reduce GDP by just under half a percentage point by the second year after a shock and raise core inflation for 4 years after the shock.

In the natural gas market, increases in natural gas prices are reflected in overall energy costs and inflation. I think it is important though to raise the point that much of what we have seen in the debate and experienced in the natural gas market has been differential prices for natural gas across regions, and this is largely because of infrastructure difficulties and I think buttresses the administration's argument that substantially more resources need to be devoted to enhancing the natural gas delivery infrastructure.

California electricity also has potential macroeconomic implications. There is some concern, although to be candid it is modest, on effects on the national GDP, but quite significant problems in California. That is, California could suffer in terms of current gross state product and, by creating a climate that is not particularly friendly for new business location, long-term State output effects as well.

Your interest, of course, is principally in budget effects of these energy price changes. On the receipt side, the linkage is actually quite straightforward. As energy prices affect national incomes and its components, they automatically affect receipts. So as an important factor in the growth slowdown as energy prices have been, they also are important in affecting receipts.

On the outlay side, the principal effect would be through cost-of-living adjustments, or COLAs. Recall I said that some of the run-up in CPI inflation that we saw in the 1997-2000 period came directly from energy. Some quite significant programs, the OASI, Social Security Retirement Program, Disability Insurance, Civil Service Retirement, Military Retirement, SSI and so on, have COLAs, and hence the energy price increases would have a direct effect on the budget.

In terms of overall energy policy, I think it is important to focus on the economic contributions of the President's National Energy Policy. Insofar as the subject of your hearing is on the level and volatility of prices, I think the energy policy report highlights the positive role of markets in mitigating price spikes and price volatility.

The report also highlights the need to repair and expand energy infrastructure so that we can enhance the geographic scope of supply sources that can respond to market signals. An intelligent policy energy mix should be a very important component of an overall policy mix to promote productivity, growth and higher living standards which is, after all, our ultimate goal of economic policy. Bottom line for you, changes in energy prices can have a very potent effect on the economy's actual potential output and on inflation.

Those influences carry over to Federal receipts and the budget outlays as well. Managing the economic and budget impacts of energy price changes is made easier by a sound energy policy that enhances the role of markets and market forces.

Thank you very much, Mr. Chairman. I look forward to answering your questions.

Chairman NUSSLE. Thank you very much.

[The prepared statement of R. Glenn Hubbard follows:]

PREPARED STATEMENT OF R. GLENN HUBBARD, CHAIRMAN, COUNCIL OF ECONOMIC ADVISERS

Mr. Chairman, Congressman Spratt, and members of the committee, I welcome the opportunity to comment on the effects of energy policy on growth of the United States' economy, and to present my views of energy policy challenges facing the Nation.

BACKDROP

Before discussing the links between energy policy, economic policy, and economic performance, let me sketch briefly the current state and future prospects of the energy market. Higher recent energy prices reflect, in part, the rapid pace of economic growth we have witnessed over the past decade. As in most markets, energy supply and demand take time to adjust. Although no consumer likes high energy prices, higher prices do serve the useful function of signaling the need for exploration, development, and production by producers and changes in consumption by consumers. With the aid of thoughtful policy, market adjustments will bring forth additional supplies and improve efficiency in consumption. For example, improved technologies would enable us to increase supply cleanly, while efficient consumption would improve the environment. Distorted market signals can lead to shortages, high prices, and pollution.

Oil is a vital input to our economy. The Energy Information Administration (EIA) expects oil prices to remain high through 2002, affecting the cost of transportation, heating, electricity generation, and industrial production. High oil prices mean high prices for petroleum products, such as gasoline, diesel fuel, heating oil, jet fuel, and propane. In May, the U.S. benchmark West Texas Intermediate crude oil price averaged about $29 per barrel. The tight gasoline market helped increase demand for crude oil, thereby pushing its price higher as concerns grew that the approaching summer driving season would face price instability similar to that in 2000. The EIA

projects that oil prices will rise this summer by another $2 to $3 per barrel from their May levels. These higher prices are expected to be maintained for the rest of the year, in part because OPEC members have announced that their production quotas will not increase this summer. The recent decision by Iraq to halt oil exports, which were about 2 million barrels per day, was slow to elicit a response in spot and futures markets for oil. This may have been due to initial questions about the credibility of Iraq's statement and/or market expectations that OPEC members may change their supplies. Perhaps due to changes in these market perceptions, spot and futures prices have since risen.

The rapid increase in wholesale gasoline prices led to widespread increases in U.S. pump prices. It also generated record spreads in April of spot gasoline price over crude oil cost. Relatively low levels of gasoline inventories until May of this year may have contributed to the duration of the recent price increase. These increases in spreads have, however, encouraged suppliers to accelerate production and increase imports to take care of existing or expected shortfalls in product availability. Consequently, retail gasoline prices have fallen from their peak, and total stocks have since risen substantially—to levels above those at this time last year. Refiners face additional challenges as a result of various state and local clean fuel requirements for distinct gasoline blends ("boutique fuels"). These different requirements sometimes make it difficult, if not impossible, for regions to draw on gasoline supplies from nearby areas or states when the local supply is disrupted. When there is a shortfall of supply relative to demand, prices will increase until supply increases and/or demand falls enough to regain balance between the two. Therefore, to the extent that the existence of "boutique fuels" limits potential sources of additional supply when prices rise, price spikes will be greater than they would be if gasoline blends across geographic regions were more similar, or were given greater flexibility to be used as substitutes for each other.

Between October 2000 and March 2001, natural gas prices at the wellhead averaged $5.74 per thousand cubic feet, more than double the price over the same period 1 year earlier. Natural gas prices began climbing last summer primarily in response to consumption increases coupled with tightened supplies, including low levels of underground gas storage that would be available for the heating season. Following the largest winter withdrawals since the 1995–1996 season gas storage levels ended the heating season 36 percent lower than last year. As a result of record injections since the beginning of the refill season, as of June 8 gas storage levels were less than 1 percent below the 6-year average level. In 2001, the annual average wellhead price is projected by EIA to be $4.75 per thousand cubic feet. Next year, EIA expects a dip in the average annual wellhead price to $4.24 as increases in production and imports needed to keep pace with the rapidly growing demand will be furnished, for the time being, by relatively expensive supplies for gas due to rising marginal production costs.

Spot prices for electricity and natural gas have been high in California compared to the rest of the country. Spot prices for electricity in the California-Oregon border market have recently been about four times higher than spot prices prevailing in the Pennsylvania-New Jersey-Maryland market.

Electricity reserve margins remain quite slim in the California system as a whole. In their summer assessment report published in late March, the California Independent System Operator (CAISO) estimated that almost 3,400 MW of new generating capacity will come online by September. However, the new capacity will not be able to satisfy the growing demand for electricity. The CAISO estimated that capacity deficiency, inclusive of imports, will range from over 3,600 MW in June to 700 MW in September. Given this forecast, the CAISO expects that load curtailments (blackouts) will occur this summer.

RECENT ECONOMIC DEVELOPMENTS

These developments in energy markets are occurring at a time in which we are experiencing concern about the strength of the economy. Beginning in the fourth quarter of 2000, GDP growth declined from the unsustainably high rate of 4.2 percent recorded in the first three quarters. Real GDP growth slowed to 1 percent in the fourth quarter, and 1.3 percent in the first quarter of 2001. The Conference Board's index of coincident indicators peaked last September at 116.6, dipped to 116.3 in November, and has since risen to 116.5 in April.

The slowdown in the pace of economic growth reflects myriad factors. Consumption, which accounts for approximately two-thirds of aggregate demand, has held up relatively well during the recent growth slowdown despite the reduction in wealth that has accompanied the decline in equity prices. However, business fixed investment spending overall has stagnated over the past two quarters. Equipment and

software growth declined noticeably in the fourth and the first quarters. In contrast, investment in nonresidential construction is up sharply, with first-quarter real investment 10 percentage points above its level a year ago. This growth is being led by construction in energy extraction industries, and is likely to continue as more electricity generating plants are built.

Also, the rising cost of energy over the past 2 years has acted as a kind of tax on both consumers and those firms that are not energy producers.

Despite the deceleration, it is unlikely that the U.S. economy is in a recession, as real growth has been and is anticipated to remain positive. The June Blue Chip consensus of economic forecasters foresees real GDP to grow 1.8 percent during the four quarters of 2001, and 3.4 percent during 2002. Nevertheless, there are some factors that threaten to delay a full recovery in growth.

THE MACROECONOMIC IMPACT OF ENERGY PRICE INCREASES

As noted earlier, one area of concern is the impact of high energy prices. Although the share of households' budgets devoted to energy needs are not at historical highs, the elevation of relative prices comes at a time when the economy is fragile. Firms face increased energy costs in a period of slackening demand. The sharp rise in energy costs reduced profit margins for nonfinancial, nonenergy corporations in the fourth quarter. A substantial portion of the rise in total costs of nonfinancial, nonenergy corporations between the second quarter of last year and the first quarter of this year reflected the increase in energy costs. Before discussing specifics of how developments in each energy market may affect the economy, it is useful to review briefly the broad mechanisms by which changes in energy prices affect two key measures of economic performance: GDP growth and inflation.

As with price increases in any other market, an increase in the price of energy goods may reduce real GDP growth through six channels:

- Increasing the cost of production inputs, thus leading to lower profits, output, and capital formation
- Lowering the real income of consumers, thereby dampening consumer spending
- Lowering the level of real money balances (money supply divided by price level) by raising aggregate price levels. If the money supply were to remain constant, interest rates would rise in order to maintain equilibrium between money demand and supply. This, in turn, would have a depressing effect on investment holding all else constant.
- In the case of oil, as with any other product of which the United States is a net importer, increased prices affect the purchasing power of our national income through their impact on our terms of trade. The increased price of imported oil forces us to devote more production to exports as opposed to satisfying domestic consumption of goods and services, even if we consume the same physical quantity of foreign oil as before.
- There is also an indirect impact upon U.S. growth through third-country effects. If an oil price increase negatively affects growth in other countries, they will consume less. This could lower demand for imports from the United States.
- If changes in the price of energy relative to other goods are expected to be long-lasting, these changes will trigger adjustments in the economy—shifts of resources among sectors—that entail real adjustment costs.

Both directly and indirectly, energy price increases may also bring about changes in the aggregate price level (inflation). As of December 2000, the prices of refined oil products, natural gas, and electricity contributed 3.8 percent, 1.4 percent, and 2.5 percent respectively to the Consumer Price Index for all Urban Consumers (CPI-U). In sum, energy products contributed 7.7 percent to the CPI-U level. Thus changes in energy prices have the potential to directly affect the CPI-U level.

Energy is, of course, an important input in many goods and services provided in our economy. Its price also contributes to individuals' perception of their cost of living—thereby affecting efforts by some to gain wage concessions. As a result, an increase in energy costs can filter through to raise the price of other goods and services, indirectly putting upward pressure on the CPI-U. The strength of these effects varies depending on certain characteristics of the economy. One key determinant is how competitive markets are in those sectors in which energy products constitute an important input. Second, the inflationary impact of higher energy prices can vary across countries depending on the bargaining power of labor, relative to management. Finally, reactions of monetary policy to energy price changes will also influence the response of consumer prices to higher energy prices.

While the historic direct contribution of energy price changes to changes in the CPI-U can be determined by examining data, the mitigating factors cited above

make a determination of the overall effect of energy price increases on the price level difficult.

IMPACT OF DEVELOPMENTS IN SPECIFIC ENERGY MARKETS

I would now like to address the impact of developments in each of the key energy markets: petroleum, natural gas, and electricity.

Petroleum. From 1998 to 2000, the prices of many energy products rose sharply from their low levels—crude oil cost as little as $11 per barrel in December 1998, when it had cost $20 per barrel for much of 1997. To assess the effect of this price increase on the economy, it is important to make the distinction between permanent and temporary energy price increases. To the extent that it is unlikely that the oil prices in 1998 were long-term equilibrium prices, it may be more reasonable to use the $20 price as a baseline. Evaluated from this perspective, the relevant price increase experienced since 1997 (that might be expected to persist for some years) was about $10 a barrel or approximately 50 percent (the price of West Texas Intermediate has recently been approximately $29 per barrel).

A recent International Monetary Fund (IMF) analysis[1] of oil price shocks on the US economy determined that a price shock of this magnitude results in a 0.2 percentage point reduction in output below what it otherwise would have been in the first year after the shock, and a 0.4 percentage point reduction in the second year, with the effect diminishing thereafter. The shock adds 0.2, 0.7, and 0.5 percentage points, respectively, to core inflation in the 3 years after the shock (overall inflation, which incorporates energy prices, will be much higher the first year after the shock). Another macroeconometric model suggests that an increase of $10 per barrel yields a 0.4 percent reduction in output relative to baseline in the first year. While the models differ in their exact predictions, they yield effects of similar magnitude. Given relative stability in oil prices since their peak in the latter part of 2000, barring future shocks, we anticipate the effects of the oil price increase should dissipate over the next year.

The most recent price pressures in the petroleum market have been in gasoline prices, which brought about concerns with respect to possible effects on consumer spending, and thereby on the overall economy. A rise in these prices acts as a tax on households' incomes and spending. The surge in wholesale and retail gasoline prices in recent months has been attributed less to changes in crude oil prices than to, among other factors, low gasoline inventories earlier this spring and a shortage of refinery operating capacity in the United States. Thus the economic effect of recent increases in gasoline prices (and natural gas prices—see below) has been mostly redistributive within the United States. The resulting increased margins—or scarcity rents—for suppliers of refined products provide important signals to potential suppliers, eliciting responses (both increased imports and domestic production) that have already resulted in greater available supply and reduced prices. Furthermore, higher margins encourage investment in new refining capacity after many years in which low returns on investment in the refining industry likely discouraged such investments.

The impact of crude oil price increases may also affect the United States through its effect on trading partners. The IMF analysis cited above suggests that an increase in the price of a barrel of oil from $20 to $30 would result in a 0.1 percentage point reduction in Eurozone output in the first year after the shock, and a 0.4 percentage point reduction in the second year. It suggests Japan would be less significantly affected—no impact in the first year and only a 0.1 percentage point reduction in output in the second year. This may affect the United States to the extent that these impacts on our trading partners' output reduce their demand for imports from the United States.

Natural Gas. The rise in natural gas prices in the last quarter of 2000 contributed directly and indirectly (through its effect on the cost of electrical power generation) to much of the rise in overall energy costs for nonfinancial, nonenergy corporations. However, because we import little natural gas, higher prices are largely redistributive in nature—resulting in a transfer of income within the United States from natural gas users to natural gas producers. The increased expenditure on natural gas imports in 2000 due to prices being above 1997 levels was roughly one-sixth to one-seventh that on oil imports.[2] Moreover, it is important to recall that virtually all of the 16 percent of natural gas consumption that is accounted for by imports

[1] Benjamin Hunt, Peter Isard and Douglas Laxton, 2001, "The Macroeconomic Effects of Higher Oil Prices," IMF Working Paper WP/01/04.

[2] This calculation compares the values for the following calculation for oil and natural gas: quantity imported in 2000 times the absolute change in price per unit of quantity between 1997 and 2000.

originates in Canada, a large importer of U.S. goods. Thus the net "withdrawal" of spending from the U.S. economy is made smaller since a large proportion of the resulting Canadian spending is on U.S. exports. Nonetheless, these higher prices are still likely to weigh on the economy in the short run because the increase in capital spending by energy producers is unlikely to offset the drag on spending by energy consumers.

Natural gas prices are higher relative to trend all over the country. However, during the past few months, they were highest in California. Even there, however, a recent study published by the Federal Reserve Bank of San Francisco notes that "* * * although rising natural gas prices have hurt some producers and consumers in the Twelfth [Federal Reserve] District, there is little evidence that rising costs have significantly slowed economic growth in the region." Further, the study observes that expenditures on natural gas in the Twelfth District amount to less than 1 percent of Gross State Product (GSP).[3]

It is also of interest that some firms stopped production, not because they could not afford to purchase natural gas, but because they had forward contracts for natural gas, and found it more profitable to resell the gas than to use it to produce their goods.

The differences in prices for natural gas observed across regions, and occasional interruptions in gas supply, buttress the Administration's argument that more resources need to be devoted to enhancing the Nation's natural gas delivery infrastructure. Accordingly, the National Energy Policy Development Group has highlighted this policy measure in its report.

California and the Electricity Situation. Nowhere is the concern about the impact of the electricity market on the economy greater than in California. Most analysts have concluded that the reductions in electricity consumption (due to rolling blackouts and voluntary outages) have thus far had only a small impact on California GSP, and hence national GDP, because of ample opportunity to reallocate production and consumption activities around the outages.

Unfortunately, much of the significant additions to capacity that are currently being planned or are under construction will not be in place in time for the rising seasonal demand this summer which threatens shortfalls and blackouts. Even more unfortunate are press reports that planned capacity may be canceled due to uncertainty regarding the regulatory environment in California. The likely impact of the outages during the upcoming summer months is difficult to determine given the vagaries of the weather and the uncertain effect of the rate structure that the California Public Utilities Commission has implemented. Gauging from the past, the damage from summer blackouts is likely to be limited if firms with critical needs for uninterrupted power install backup generators; some reduction in demand results from higher retail prices; and we experience a moderate summer. California's third-quarter GSP growth might be reduced noticeably, however, if an unseasonably hot summer were to be combined with limited response to the change in retail prices.

As long as California and Federal policies do not discourage new electricity generation, the imbalance should only be a concern in the short run. It is nonetheless a concern for the national economic outlook. The major impact on California will be felt in the longer term, as firms make decisions regarding where to locate. Firms that depend on a stable, uninterrupted supply of electricity, or use energy as a key component of their production process, may opt for locating outside of California.

EFFECT OF ENERGY PRICES ON GOVERNMENT OUTLAYS AND RECEIPTS

In addition to having an impact on consumer demand, business investment, and possibly exports, changes in energy markets will also affect government outlays and receipts. One important channel through which energy price increases will impact outlays is through their effect on the CPI-U and thus on Cost of Living Adjustments (COLAs). COLAs affect payments for Social Security, Disability Insurance, Civil Service Retirement, Military Retirement, and Supplemental Security Income; as well as many smaller programs. While the total contribution of energy price increases to change in the CPI-U is uncertain, given the size of these outlays, even small contributions to changes in the overall CPI-U would have nontrivial absolute impacts on outlays. Finally, inasmuch as increased energy prices reduce national income, government receipts will also be affected.

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[3] Mary Daly, "Economic Impact of Rising Natural Gas Prices," Federal Reserve Bank of San Francisco Economic Letter 2001–04 (February 9, 2001)

ENERGY POLICY

The President's National Energy Policy lays out a comprehensive blueprint for addressing energy problems facing our country. There are many excellent ideas in the National Energy Policy, but I would like to emphasize two economic contributions. First, and perhaps the most important, markets have, in general, done an excellent job providing energy to alleviate scarcity and mitigate price spikes. Where possible, market-based solutions will provide the best response to our energy needs. However, where market distortions occur, action may be necessary to meet the challenge of increasing supply and reducing demand. Relying on market signals to allocate resources does not require abandoning vulnerable groups. Because there is a significant potential for energy problems throughout the remainder of this year, the effects of higher market prices can be mitigated for those people who need help through programs like the Low Income Home Energy Assistance Program (LIHEAP) and weatherization assistance, which also promotes conservation. Second, an important policy challenge is to repair and expand our energy infrastructure. This point relates to the first in that an improved infrastructure enhances the geographic scope of potential sources of supply that can respond to market signals in any particular location.

Markets have shown the powerful ability to send signals to alleviate scarcity by bringing about supply and demand responses. Therefore one of the contributions of the President's Energy Plan is to ensure that government policies in the furtherance of valid policy aims, such as environmental protection, achieve these aims while minimizing the extent to which they delay appropriate responses to market signals.

Our current network of electric generators, transmission lines, pipelines, and refineries that convert raw materials into usable fuel is in need of repair and expansion. The natural gas distribution system, likewise, is hindered by an aging and limited network of pipelines. Meeting the anticipated growth in demand will require some 38,000 miles of new gas pipelines, along with 263,000 miles of distribution lines. Similarly, an antiquated and inadequate transmission grid hinders our ability to use electricity generation surpluses in some regions to alleviate shortages in others. A crucial transmission bottleneck in the middle of California limits the amount of available power in the south that can be shipped to the north during emergencies. While some of the concerns about future energy prices arise from the balance between anticipated available supply and demand at the national level, a number of local energy markets make up this aggregate national energy market. Even if the supply is plentiful at the aggregate level, the lack of adequate infrastructure can cause unnecessary and harmful local price spikes when local supply falls short of local demand, and infrastructure limits constrain the influx of additional supplies from other areas. In addition to the issue of "boutique" fuels mentioned earlier, one additional example is the case of electricity in New York City. The tight match there between available supply and peak demand that some observers expect will set the stage for relatively high wholesale electricity prices and potentially significant price spikes. Transmission constraints into the city limit the extent to which prices there can be mitigated by expected surplus capacity in the rest of the state, and additional surplus supply from outside the state. With these concerns in mind, the President's National Energy Policy makes numerous recommendations with an aim toward improving this infrastructure.

Energy problems facing our economy have been building for years and families and businesses are paying the price for higher energy costs. Only a concerted, focused and forward-looking effort by both the public and private sectors will succeed in strengthening America's response to the energy problems now facing us.

LONG-TERM ECONOMIC OUTLOOK

While we have talked in depth about the effects of developments in energy markets on the economy, it is important to recognize that most of these effects are short-run phenomena. While this is not to say they are unimportant, it is important to remember that they do not drive the long-run growth potential of our economy. Over the longer term, the prospects for the U.S. economy remain bright. I say this because of the acceleration of trend productivity growth observed over the last few years, and the accompanying rise in the growth rate of potential output, making possible rising living standards and low inflation. Over the 1973 to 1994 period, the average annual growth rate of labor productivity in the nonfarm business sector was 1.4 percent. From 1994 to 2000, it was 2.5 percent. Over the same period, manufacturing productivity grew at 4.7 percent, versus the 2.6 percent observed in the earlier period.

The latest release on productivity growth has given some observers pause for thought. Two cautionary points are in order. First, labor productivity is pro-cyclical,

so that some reduction in productivity growth is to be expected. Second, the productivity growth rate for the first quarter is likely to be downwardly biased, because of the difficulty in measuring self-employed hours. Subsequent observations on productivity are likely to reaffirm a higher trend growth rate.

Rapid productivity growth, upon which our future prosperity rests, does not occur in a vacuum. It depends upon the appropriate general policy framework and energy policy framework. These frameworks require that firms face the correct incentives to invest, and households face market signals in allocating their expenditures.

CONCLUSION

Changes in energy prices exert important influences on the economy's actual and potential output growth and inflation. These influences carry over to Federal receipts and outlays. Managing economic and budgetary impacts of energy price changes is made easier by sound energy policy that enhances the role of market forces.

Thank you, Mr. Chairman. I would be happy to answer any questions.

Chairman NUSSLE. Mr. Hanger.

STATEMENT OF JOHN HANGER

Mr. HANGER. Thank you, Mr. Chairman. I appreciate the invitation from you and the members of the committee, and also I appreciate the assistance of staff.

I served on the Pennsylvania Public Utility Commission from 1993 to 1998, and in 1992 this Congress passed the Energy Policy Act of 1992 which deregulated the price of electric generation in the wholesale markets in all 50 States. All 50 States have a form of electric deregulation that is in the wholesale market, and in Pennsylvania we determined that the world had very seriously changed and potentially there were a lot of opportunities as a result of that change.

By 1996, the legislature and the PEPCO utility commission had worked to formulate a plan for Pennsylvania's restructuring of its electric industry, and I am here today to highlight some of the events and successes, quite frankly, that have been experienced in Pennsylvania.

Pennsylvania I think has gotten very little national attention. Perhaps it is because we are the equivalent of a passenger liner that has, so far at least, safely gone across the Atlantic Ocean. We didn't hear the iceberg, and California and some other places have had more serious problem s. And, understandably, bad news seems to get a lot of the attention, as opposed to some of the good news.

In Pennsylvania, the market fully opened on January 1st, 1999. We passed our Electric Competition Act in 1996, the same year that California did. So far, over 787,000 customers have switched to competitive suppliers. That is more customers being served by competitive suppliers, and these are retail customers, than all other States combined.

Thirty-three percent of Duquesne's residential customers have switched. Duquesne is the utility that serves the Pittsburgh area. Thirty-four percent of PECO energy's residential customers have switched. PECO energy is a utility that serves the City of Philadelphia and the surrounding suburbs.

Eight thousand megawatts of new generation will be added in the Pennsylvania Jersey power pool by 2002, so we have a significant amount of new generation that has been added, and none of that is through a captive ratepayer base. These are merchant plants that are being built with private investment, and there is

no guarantee of return, but nonetheless there is a very significant amount of new supply that is being built.

I am glad to say one of Penn Future's major purposes is to improve Pennsylvania's environment and economy, that this new generation is 99 percent cleaner in emissions when looking at nitrogen oxide and sulfur dioxide, and 33 percent cleaner on carbon dioxide than many of the existing coal-fired plants that were, in some cases, operating before the passage of the original Clean Air Act.

Competitive retail prices, compared with what customers were paying utilities, are anywhere from about one-half of a cent per kilowatt hour to as much as 3.65 cents per kilowatt hour below the monopoly rate.

Now, frankly, customers aren't receiving the full benefits of the competitive market as a result of stronger cost policies that were put in place, and Pennsylvania is giving both customers and its utilities a long transition period to make this passage from 60 years of monopoly regulation to, hopefully, a fully competitive market successful, and utilities have so far managed to make this passage well in Pennsylvania.

The bond ratings have been unaffected. They have in some cases sold some generation, but the utilities are free to decide whether they sell generation or not. There is no mandate to divest generation. Utilities are being completely free to decide what financial instruments they will use to buy or sell power. They are free to buy power on the spot market or use future contracts or any kind of financial instrument, including very long-term contracts.

As a part of the bargain to sort of offset the government intervention in the market on behalf of the shareholder and pay over $11 billion of strain of cost to those shareholders, rates are capped during the period of the strain of cost recovery. So Pennsylvania consumers have rates capped up to 2005. Savings so far from rate cuts and shopping savings are over $2.8 billion in Pennsylvania, and that is just through the Year 2000.

Again, every customer in Pennsylvania is either paying less or no more than they were paying on January 1st, 1997, 5 years later. Frankly, this winter, electricity in Pennsylvania was a bargain. Our State average rate, which was 15 percent above the national average in the mid-nineties, is now 1 percent below the national average.

We believe we have got a positive impact on our State economy from our electric policy. Duquesne's customers will receive a 21 percent rate cut. That is for utilities serving Pittsburgh next year, when the strain of cost charges come off the bill. And that is only part of the good news that will come into the Pittsburgh market next year.

I was very impressed, Mr. Chairman, by your interest in diversifying fuel supply and encouraging renewable and energy efficiency certainly. That is one of our goals in Pennsylvania. Frankly, one of the reasons we have gone to a policy plan is the old regulated monopoly system really underinvested in energy efficiency and totally underinvested in renewals. And we have now a burgeoning wind industry in Pennsylvania. We never had any wind power. We now have nearly 100 megawatts of wind power that is either under construction or has purchase power agreements that will allow for its

construction, and that should be operating by 2002. We believe in Pennsylvania it is actually quite possible to talk about 1,000 megawatts of wind being built in the next 10 years.

I was looking at Secretary Blake's chart net additions, and he showed 10,000 megawatts of net additions in the year, I believe, 2000. The U.S. wind industry put up 700 megawatts in the year 2000. That is roughly 7 percent of the net additions, and they are going to be putting up 1,500 megawatts this year of the net additions of about 25,000.

As you can see in one of the charts that I have handed out here or made available for the record, that the competitive prices are well below the utilities' to start monopoly generation rates. And the full benefit of those prices are working their way through to customers as the strain of cost charges come off.

I do believe there are challenges in restructuring this market, and, frankly, Pennsylvania is taking anywhere from 12 to 14 years to complete the transition entirely. This is an historic transition, and it must be done carefully, must be done thoughtfully, and, frankly, nobody knows all the answers at any one time. But we are learning in Pennsylvania, and we realize that we are at sea, and there are icebergs out there, and you have to be watchful.

The forward prices and PJM have been high, nowhere near as high, I am glad to say, as on the west coast or other parts of the country. One of the concerns that those forward prices reveal to us in Pennsylvania is the inability of customers to change their demand in real time. Electricity essentially is a product that customers buy before knowing the price. They open up the bill 30 days after they use it. This makes electricity very unlike gasoline or the price tag on a pair of shoes or anything else in the marketplace.

We need to increase the ability of customers to see prices before they make consumption decisions, and that in order to do that, we have to pay attention to the demand side infrastructure as an appropriate emphasis in the national energy plan on building.

I would put more emphasis on renewables and energy efficiency than the Vice President and President have done, but I was disappointed to see too little emphasis on the demand side of the infrastructure. We need to make the time of use meters, appliance control devices, equipment that can give customers the ability to, frankly, be wise shoppers, and every house has all had a meter. The problem right now is that meter is an antiquated 40-year piece of technology. It does not record usage in hourly increments. If we can get a small amount of demand responding to prices in real time, we will break what I call the hockey stick.

This is what the price curve looks like on very hot hours of the year, and there are typically about 100 hours in the course of a year when the prices of electricity literally just shoot right up, and it is because customers do not see that demand or do not see those prices in real time. In order to break this hockey stick, we do not have to have every Social Security recipient or every small business customer with a real time meter watching the price of electricity. We need a relatively small number of customers who have the capability to do that. Indeed in our marketplace we have calculated that a 1 percent shift in demand in real time, in other words 1 percent of the demand going offline or being reduced, re-

duces the peak spot price by 10 percent. So we can break that hockey stick by perhaps getting 4 or 5 percent of the customer demand able to remove in real time, and they can profit from doing so.

This is not a question of driving customers to bankruptcy or forcing scarcity or rationing on customers. This is a matter of giving customers the ability to profit from changing how and when they use electricity. By doing so they can sharply discipline the prices in the wholesale market.

Frankly, we have concluded in Pennsylvania that wholesale markets will not work properly unless customers have increased real time demand responsibility. And no State, Pennsylvania included, has adequately addressed this matter. I think increased demand response is so important to the functioning of the electric markets at the wholesale and retail level that it is something that the Congress and the United States ought to address as well.

In addition to that, the Congress of the United States needs to address the failure now after 9 years since the passage of the Energy Policy Act to have workable wholesale markets. Markets are horribly Balkanized. Frankly, if we organized tomato markets or corn markets or car markets in the same way we have organized electric markets, we would have a disaster in any of those products or services. We have a series of hundreds of individual electric markets with individual ideosyncratic rules, separate tariffs, separate charges that prevent the free movement of electricity.

This is a responsibility, I believe, of the Congress of the United States and the Federal Energy Regulatory Commission. It is a responsibility of those entities because of the interstate commerce clause. The 50 States are supposed to be a free trade zone for movement of products and services. In electricity we are so far removed from significant free trade zones that it is imperiling the Nation's economy and will continue to imperil those States who have deregulated at the retail level.

The last thing I want to say is in our experience in Pennsylvania, you cannot have a competitive electric market simply by having a competitive wholesale market. You must have a both a competitive wholesale market and a competitive retail market. I would agree that it must be genuinely competitive. A cartel, a monopoly or an oligopoly is not going to allow for competitive pricing at the wholesale levels or the retail levels.

But I am concerned that we have a policy that is emerging in this country that is neither fish nor fowl. In 1992, we came up to the edge of the river, and we decided to cross the river. We got on our horse in the middle of the river, frankly. That was when we deregulated the price of electricity in the wholesale generation market. We have still yet to cross the river. We are still in the river. And that is because we haven't created liquid effective wholesale markets, and it is because we don't have effective competitive retail markets. It is the wholesale market that sets the supply curve essentially, and it is the retail market that sets the demand curve. Now, unless we can get the supply curve and demand curve both responding to price in real time, this Nation is going to have problems with electric supply.

In my testimony I have provided over 30 other lessons learned which I have not touched upon. I would ask that they be incorporated in the record.

Chairman NUSSLE. Is that this packet?

Mr. HANGER. I think that is the short version.

Chairman NUSSLE. Oh. We will put both the short and long version.

Mr. HANGER. Thank you.

[The prepared statement of John Hanger follows:]

PREPARED STATEMENT OF JOHN HANGER, PRESIDENT AND CEO, CITIZENS FOR PENNSYLVANIA'S FUTURE

COMPETITIVE MARKET

5,370.40 megawatts of load have switched to competitive suppliers:
787,846 customers have switched
708,071 residential customers have switched
77,421 commercial customers have switched
2,354 industrial customers have switched
33.40 percent of Duquesne's residential customers have switched
34.10 percent of PECO's residential customers have switched
8,000 megawatts of new generation will be added in PJM market by 2002.

For most residential customers, without stranded costs, competitive rates are from 0.50 cents to 3.65 cents below historic monopoly rates.

NUMBER OF CUSTOMERS SERVED BY AN ALTERNATIVE SUPPLIER AS OF APRIL 1, 2001

	Residential	Commercial	Industrial	Total
Allegheny Power	2,152	1,343	9	3,504
Duquesne Light	175,160	7,964	271	183,395
GPU Energy	35,973	10,478	666	47,117
PECO Energy	467,424	41,045	1,052	509,521
Penn Power	8,377	1,192	44	9,613
PPL	17,278	15,327	312	32,917
UGI	1,707	72	0	1,779
Total	708,071	77,421	2,354	787,846

Pennsylvania Office of Consumer Advocate 04/03/01.

PERCENTAGE OF CUSTOMERS SERVED BY AN ALTERNATIVE SUPPLIER AS OF APRIL 1, 2001

	Residential	Commercial	Industrial	Total
Allegheny Power	0.40	1.60	8.70	0.50
Duquesne Light	33.40	13.90	17.30	31.40
GPU Energy	3.90	8.30	13.30	4.50
PECO Energy	34.10	27.50	32.80	33.50
Penn Power	6.30	6.70	19.60	6.30
PPL	1.60	10.30	5.80	2.60
UGI	3.10	1.00	.....	2.90

Numbers courtesy of the Pennsylvania Office of Consumer Advocate.

UTILITIES

- Utilities' bond ratings were not affected by transition.
- Utilities were allowed an opportunity to recover 100 percent of approved, not claimed, stranded costs.
- GPU and Duquesne have divested about 5000 megawatts of generation.
- No utility was required to divest generation.
- All utilities are free to use any financial instrument to buy or sell power, including forward contracts.
- Nearly all charges for stranded costs and other transition costs expire from 2002 to 2010.
- PECO Energy merger completed; GPU merger pending.

CONSUMERS

• Consumer savings totaled $2.84 billion by 2000 from rate cuts and shopping savings.
• Most consumers received from a 2 percent to 8 percent 1-year rate cut.
• PECO customers receive rate cuts from 1999 to 2005.
• Total rates are capped at January 1, 1997 levels until at least 2005 in many cases.
• Generation rates are capped at set levels until 2010 in most service territories.
• Duquesne customers will receive approximately a 21 percent rate cut in early 2002 when stranded cost charges expire.

ENVIRONMENT & UNIVERSAL SERVICE

• Budgets for low-income assistance programs have nearly quadrupled from pre-competition levels.
• Budgets for energy conservation targeted at low-income families have quadrupled.
• Renewable energy and cleaner energy products are available. 80,000 customers have switched to such products.
• Pennsylvania has had its first and second wind farms developed and should have 100mW of wind generation operating by 2002.
• Four Sustainable Development Funds have been formed with $75 million of funding to support clean energy initiatives.
• Dominating the new generation market is gas-fired generation. It is nearly twice as fuel efficient and 99 percent cleaner on NOx and SOx emissions than many old coal-burning plants.

PENNSYLVANIA WIND ENERGY DEVELOPMENT

Existing	Operator	Online	Capacity	Power Purchaser/User
Hazleton, Luzerne County ...	Energy Unlimited	December 1999	0.13 mw, 2 turbines	Community Energy, Inc.
Garrett, Somerset County ...	National Wind Power	May 2000	10.40 mw, 8 turbines	Green Mountain Energy

NEW WIND PROJECTS IN PENNSYLVANIA

Project	Location	Status	Capacity	Online Date
Mill Run Wind Project	Fayette County	Construction August 2000	15.0 mw	Late 2001
Somerset Wind Farm	Somerset County	Planned	9.0 mw	December 2001
Waymart Wind Farm	Wayne County	Proposed	52.0 mw	Late 2001/Early 2002

NEW WIND PROJECTS IN PENNSYLVANIA

Project Developer	Location	Status	Capacity	Online Date
Global Winds Harvest, Inc.	Bear Creek & Jefferson Townships	Proposed	18.2 mw	2002
Atlantic Renewable Energy Corp./Zilkha Renewable.	Meyersdale	Proposed	30.0 mw	TBD
Keystone Wind	Somerset County	Proposed	25.0 mw	TBD
Energy Unlimited	Mountaintop	Proposed	16.9 mw	TBD

COMPARISON OF RESIDENTIAL UNBUNDLED EMBEDDED GENERATION TO RETAIL POWER PRICES

[In cents/kWh]

	2000 Shopping Credit	Lowest Retail Price	100 Percent Green Power Prices	Embedded Gen. and Trans.
Duquesne	4.80	4.60	6.49	8.75
GPU Met-Ed	4.53	4.60	7.09	5.70
GPU Penelec	4.53	4.50	7.09	5.40
PECO	5.65	4.65	6.37	8.65
PPL	4.61	4.30	7.09	6.26
Allegheny	3.24	4.90	6.49	5.30

Note: 2001 shopping credits will be moderately higher in some cases.

FORWARD PRICES, PJM, 4/24/01

Month	$/mWh
May	$51.25
June	75.00
July	117.00
August	117.00
September	46.50
October	42.85
November	42.85
December	42.85
January	48.00
February	48.00
March	40.50
April	40.50

http://www.energysource.com/Home__News/Pricing/Current__Pricing/

FORWARD PRICES, INTO CINERGY, 3/20/01

[On Peak Power]

Month—Cinergy	$/mWh
April	$41.25
May	49.50
June	76.50
July	121.50
August	121.00
September	45.25
October	43.00
November	43.00
December	43.00
January	47.50
February	47.50
March	39.25

THE HOCKEY STICK

DEMAND-SIDE RESPONSE

• Electric restructuring in Pennsylvania, California, or any other state will not be complete until consumers are able to modify their electricity usage in response to prices.
• These days, the case for fostering demand-side response has never been stronger.
• As the next crucial stage in its electric restructuring, Pennsylvania must now lead the way to increasing opportunities for demand-side response.
• How does it work?
— Remote appliance controls
— Time-of-use meters
— Internet-based energy management platforms
• Until consumers can respond to prices, risks of blackouts, prices, and pollution levels will be higher than they should or need be.

RETAIL COMPETITION LESSONS

1. The most important decision is to decide what is the goal of the transition:
a. Genuine retail competition that features 4 or 5 companies competing for all customer classes;
b. Wholesale competition with a retail dominant company subject to price regulation;
c. Wholesale competition with a retail dominant company not subject to price competition.

2. Electric restructuring will not work anywhere unless consumers are able to modify demand in response to real-time prices.
• How it works:

— Remote appliance controls
— Time-of-use meters
— Internet-based energy management platforms

• 1 percent reduction in peak demand can produce about 10 percent reduction in peak price.
• Helps solve 100-hour peak demand problems and break the hockey stick.

3. Wholesale competition is vital to robust retail competition:

a. FERC and Congress have failed so far to meet their constitutional duty of ensuring the interstate commerce of electricity;
b. Wholesale markets are balkanized and often not transparent;
c. FERC must mandate membership in appropriately-sized, independent regional transmission organizations;
d. Failure of FERC and Congress to ensure unimpeded interstate movement of electricity is creating both increased costs, market power abuses, and avoidable risks to reliability.

4. Retail competition is vital to healthy competitive wholesale markets.

a. Retail market establishes demand
b. Demand response can powerfully limit wholesale prices
c. Retail market can offer consumers products that increase or decrease exposure to wholesale price

5. Successful transition to electric competition requires:

a. Genuinely competitive wholesale markets
b. Genuinely competitive retail markets

6. Transitions to retail competition can be designed to entrench retail market dominance of incumbent utilities. Most, but not all, transitioning states have adopted incumbent entrenching plans.

Transition plans that entrench retail market dominance have several common characteristics:

a. Setting the amount that customers no longer pay the incumbent if they switch well below what they pay the incumbent for unbundled generation.
b. The amount not paid to the incumbent if customer switches is usually set at a wholesale market benchmark.
c. Weak safeguards against cross subsidization and anti-competitive safeguards.
d. Highly bureaucratic phase-in or customer switching rules.

7. Transitions to retail competition can be designed to permit the development of genuine retail competition. Such plans contain several features:

a. Setting the amount that customers no longer pay the incumbent as close as possible to what customers pay the incumbent for unbundled generation—the incumbent's unbundled generation rate.
b. Divestiture of generation assets.
c. Strong safeguards against cross subsidization and anti-competitive practices.
d. Streamlined customer switching rules.

8. Generally, stranded investment is being recovered, is being recovered much more quickly than the life of the asset that is stranded, and is being recovered in ways that entrench retail market dominance of incumbents.

a. Stranded investment recovery is a massive government interference in the free market that is seriously distorting the price signal sent by the total delivered rate of electricity.
b. This basic point needs repeating because too many in the electricity industry wish to ignore it for obvious reasons as they parade around under the banner of "Efficient Competition."

9. Sizing the shopping credit or the amount that a customer no longer pays the utility if the customer switches is the key regulatory decision in designing a transition plan.

Shopping credit is the portion of utility's unbundled generation rate that customers avoid if they switch to a new supplier.

Shopping credit is not a payment from anyone to anyone, a subsidy to anyone, or a penalty of non-shopping customers.

10. Normal rule of a free market would be that whatever amount the customer was paying the utility for unbundled generation would be the amount the customer no longer pays if the customer switches.

No state has followed this normal rule of a free market, as all states are allowing some stranded cost recovery.

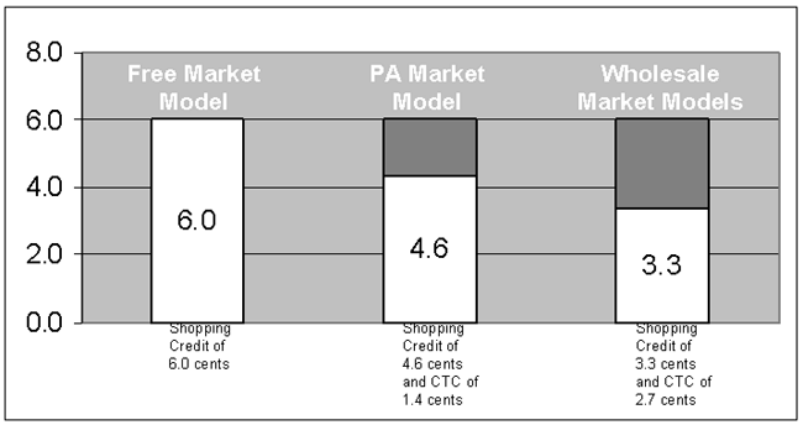
Every state has intervened in the free market to penalize the shopping customer by adding a stranded cost charge to competitive electric offers.

Not surprisingly, these stranded cost charges have deterred shopping, deterred market entry, and entrenched retail market dominance of incumbents.

11. Three basic approaches to sizing shopping credit and treating stranded costs have been proposed.

To simplify, these models can be called: the Free Market Model, the Pennsylvania Transition Plan, and the Wholesale Market Plan.

The following examples assume a residential customer paying an unbundled generation rate of 6.0 cents per kilowatt hour.



The Free Market Model would trigger massive shopping, large numbers of new entrants competing for all customer classes, and great competitive pressure on incumbents to defend market share by cutting their prices. This is basically what is taking place in Germany.

The Pennsylvania Model allows recovery of 100 percent of authorized stranded costs, creates conditions that make new entry possible, can provide competitive choices for all customer classes, and breaks retail market dominance of incumbents.

The Wholesale Market Model allows recovery of 100 percent of stranded costs on a fast schedule, limits new entry, creates few or no choices especially for smaller customers, and entrenches retail market dominance of new entrant.

Under all three approaches the non-shopping customer pays 6.0 cents per kilowatt hour unless the incumbent reduces its prices or the government orders a rate cut. Then the non-shopping customer receives the rate cut and that is all.

12. Strong universal service policies are needed. Pennsylvania nearly quadrupled spending on low-income bill assistance programs and on low-income energy conservation programs.

13. Environmental regulations and laws are not blocking the construction of new generation:

a. The PJM market will add 8,000 megawatts by 2002;

b. The nation will add 90,000 megawatts by 2002;

c. Old plants exempted from original Clean Air Act should be required to meet same New Source Review emissions standards as new plants;

d. Closing the old plant loophole in the Clean Air Act is a matter of competitive fairness.

14. Competition has benefits for the environment by:

a. Spurring major new investment in cleaner, more efficient combined cycle natural gas plants;

b. Putting pressure on fuel costs that will put a premium on plants that use fuel efficiently;

c. Allowing customers to choose renewable energy products who have been denied this option—there is considerable interest in renewable energy products;

d. Spurring technological innovations and commercialization of new metering products and distributed generation such as fuel cells.

15. Transition plans should include public policies that benefit the environment:

a. Establish funds to support renewable energy and energy efficiency;

b. Renewable energy portfolio standards;

c. Speed deployment of real-time meters and appliance-control technology.

16. Competition should produce more savings for customers once stranded cost recovery ends.

High rate utilities have residential generation rates that are as much as 4 cents per kilowatt-hour above residential competitive prices.

Average rate utilities have residential generation rates that are about 2 cents per kilowatt-hour above competitive prices.

17. Aggregation can be a powerful tool for small customers to leverage higher savings. Municipalities are well-placed to be aggregators for residential customers.

18. Retail market dominance of incumbents creates risks:

a. Competitive savings will not reach consumers when stranded cost recovery ends.

b. Rate regulation of incumbents will have to be continued to ensure wholesale price is passed through to consumers.

c. Only spot market price will be passed through.

Chairman NUSSLE. Mrs. Bourne.

STATEMENT OF SANDY LIDDY BOURNE

Ms. BOURNE. Thank you, Mr. Chairman. It is an honor to appear before you as a representative of the American Legislative Exchange Council. The American Legislative Exchange Council is comprised of 2,400 Democrat and Republican State legislators who have a keen interest in free market enterprise and individual market freedom.

ALEC's Energy, Environment, Natural Resources and Agriculture task force has been carefully monitoring the situation in California, and in response we have created an energy working group that is tasked with evaluating the current status of energy generation and distribution in all 50 States. Specifically our goal is to provide a menu of policy options to assist the State lawmakers who wish to adopt an effective energy legislative package that provides affordable electricity in a competitive market to homes, businesses and schools and health care facilities of our citizens. Today I would like to provide you with an updated snapshot or a photograph today of restructuring in the States and list what responses, if any, the States have had to the California energy crisis.

If you look at the chart over there on the easel, I have tried to lay out for you the States that have enacted restructuring, and the States that have not enacted restructuring. The yellow States are the States that have delayed restructuring in the past session, this year in response to California. Please apologize to the Congressman from Texas. I did not intend for Texas to be black. It was supposed to be green, but that Texas tea keeps bubbling up there. Texas had one of its power regions delayed, and I will get into that later, but that is why it is a different color.

Since the early 1990's, the States have individually been studying whether they should deregulate their utility markets, and to date 26 States and the District of Columbia have enacted some form of electric utility restructuring either through legislation or regulation. But it is important to note that not all of those States have yet adopted final rules governing restructuring. Many are phasing in components of a market-based structure either through legislation, regulation or by executive order.

All of the States have initiated a review of the fiscal implications of deregulation and are considering a revision of portions of their tax codes to accommodate restructuring in a variety of ways. How-

ever, it should be noted that in light of the recent blackouts in California, as I mentioned earlier, a few States have delayed this process until the situation is thoroughly evaluated.

States that historically had the highest prices for electricity, such as California, Pennsylvania, New York and Connecticut and the other New England States, were among the first to enact deregulation, and they opened their retail markets to allow customers to choose suppliers. Other States proceeded more cautiously, limiting the number and type of customers getting access to competitive markets.

The major goal of deregulation was to lower the price of electricity through a free market system, and we have to remember that at that time of national debate over deregulation, the driving issue was the high cost of electricity in a regulated environment, and to that end industry analysts cite Pennsylvania as a success story and California as providing us with lessons to be learned.

I have provided for you several graphs that you can refer to. There is a graph that is the average revenue per kilowatt by all sectors, and in there I have noted the prices in 1996, when the States began to enact restructuring, and the estimated prices of this past January.

States have used two types of structures to facilitate operations in a restructured market, and the independent system operator is designed to provide nondiscriminatory open access to transmission. A power exchange is an open bulk power market for sales of electric power for resale. And primary, as you well noted today, regulatory authority over these entities resides at the Federal Energy Regulatory Commission and not in the States.

A majority of the restructured States assumed this type of system as a basis for their restructured markets. Nine States and the District of Columbia directed their utilities to transfer the control of their transmission assets to an independent transmission organization. A few of these States allow other types of regional organizations.

Texas, again, is unique in that it divides itself into four power regions that correspond to NERC regions within Texas. Each power region is to establish an ISO or transmission company of its own. In terms of divestiture in the restructuring language of several States, divestiture of generating assets has either been required or encouraged for the purpose of increasing competition between power generators, reducing the risk of electric company monopolies, and providing an opportunity for stranded cost recovery incurred by utilities for investments in power plants or long-term contracts under a regulatory environment that may not have been recovered in a free market competitive environment.

In my written testimony I have noted that the Department of Energy stated at the end of 2000 that only 16 percent of all electric utility-generated capacity had been sold. It is my understanding that that has increased to 22 percent.

Functional separation is different than divestiture. A utility can form into separate corporations or reorganize into separate divisions. The point is to unbundle vertically integrated systems to mitigate market power. Although functional separation can be a less stringent alternative to divestiture, both have been imple-

mented by the States. Seven States require separation into different corporations. Nine States require reorganization by function, but not by separate corporate entities.

Most States, in a well-intentioned attempt to protect customers from price spikes in the transition period, imposed four types of price fixes: rate reductions, rate freezes, capping rates, freezing rates at preexisting levels. All of these structures applied to the rates of incumbent utilities for the service to customers who do not change suppliers and to the distribution or delivery service for customers who do change providers. The basic difference here between a rate cap and rate freeze, as I am sure you know, is that the cap rates may decline if costs decline, but frozen rates stay the same regardless of the changes of cost.

Now, it is important at this point in time in my testimony to point out that we have no idea what the effectiveness of all these rate cuts, caps and freezes and the long-term economic impacts have in a regulated or deregulated market. The information is simply not available at this time. We are going to need to study that. Twelve States required rate cuts. Rate caps were imposed in nine States. Rate freezes were imposed in six States. And like most tax codes, there is a garden variety of exceptions and adjustment allowances. Pricing for transfers of assets and services between competitive and regulated operations has been an issue in some States. Asymmetrical pricing and symmetrical pricing have been put into effect, but it is important to note that symmetrical pricing, which is market value pricing for all transactions, is only in effect in Texas at this time.

In providing choice to customers, a majority of the restructuring States imposed disclosure requirements upon the incumbent utilities and suppliers. The disclosure rules fall into three categories: rates, terms and conditions of service, fuel mix and emissions or environmental effects. Disclosure about rates and prices are required in 12 States, information about fuel mix is required in 13 States, and environmental effects must be reported in 13 States.

And this last disclosure I would describe as somewhat political or perhaps disingenuous in that it is virtually impossible to trace electrons after they leave their power source. They go onto the grid, can travel into a variety of transmission paths with electrons from other power sources before they reach the end user. And in reality the consumer really does not know what electrons are actually delivered to his or her electric outlets.

I want to mention, and there is a graph here that lists the State supplements and the moneys that they have been collecting for energy efficiency and low-income assistance. I have also listed for you the Federal moneys that have been put aside for the States.

As to the States that have delayed restructuring, each has delayed for a different reason. Arkansas has delayed deregulation until 2003 or 2005. They are monitoring the California market. The Governor of Arkansas wanted to incorporate the delay, and he signed a bill that requires that all retail choice not begin until the Public Service Commission can find effective market structures.

Oklahoma has eliminated the deadline for restructuring. Oregon still has a bill in session. They don't close session for another 3

weeks. They have introduced a bill that will delay regulation or deregulation until 2003.

And the two most contentious issues in Oregon at the moment, in debate at any rate, is the establishment of a 3 percent public purposes surcharge and a potential date for deregulation. That bill is sitting in the senate at this time in Oregon.

Nevada passed legislation to halt electric restructuring, but interestingly enough they are allowing more users the ability to purchase electricity on a competitive basis, and we are waiting for that bill to be signed by the Governor.

New Mexico had no political pressure for deregulation.

Texas, as I mentioned previously apparently delayed restructuring in their Southwest power pool. They are waiting until 2007. The reason for that is they only have one dominant supplier in that area, and so what they want to do is build another power plant, and they will—once they have more choice there, they will fully deregulate that area. In the meantime, the rest of Texas is fully deregulated at this point and has a 40 percent oversupply of power.

Now, I will get into a little bit of the California crisis and provide you with ALEC's perspective on this at this point. The electricity crisis in California, while it does indeed have serious short-term effects for the residents of California, we look at it as an anomaly for the rest of the Nation. There are a lot of factors that came into play. The faulty regulatory scheme in California is only one aspect of the problem. Current prices of natural gas is another aspect. Add a gas pipeline breakage incident in August of 2000, the lack of significant generation and transmission infrastructure, the drought; you have at one point in California, in 1999, 46 percent of electricity that was fueled by natural gas. The drought has increased California's dependence upon natural gas as a fuel for electricity generation. No one in 1996, given the significant growth in electronic commerce in the high-tech industry, ever anticipated the high demand for electricity today.

No new power plants of a significant size had been built in California in 10 years. Now, typically before this time 20 percent of the power supply in California had been imported. That percentage has increased, but it has also been affected by the amount of growth and the increased demand for power in the rest of the western grid. That is what is causing everyone to be a little bit shaky right now in the western grid. What new power plants have been built in the West have been fired by natural gas, and that price has gone up. The price quadrupled in 1998.

In the California market—now. In 1998, looking at the national average, the price had gone up from $2 per million BTUs to $8 per million BTUs. But in the California market, which had the pipeline break, the price jumped to $60 per million BTUs. With 50 percent of its power supplied by natural gas, it is no wonder California is paying a high price for electricity right now. States with a more diverse fuel source of power have been better able to absorb the national price spike of natural gas.

When evaluating California's restructuring scheme, it is clear that deregulation did not, in effect, take place. The biggest structural defect is the requirement placed on utilities to purchase all of their energy needs on the daily spot market, which is the Cali-

fornia Power Exchange. No other State has this requirement. Unfortunately, about 60 percent of the current supply is purchased on the spot market. In comparison, other power markets such as Pennsylvania, New Jersey, Delaware and Maryland areas have a maximum level of 20 percent purchased on the spot market.

The second structural defect was the capped retail rates. That is why we need to look at that in all of the other States. The three utilities in California ran up a $12 billion debt purchasing electricity from the exchange and selling it at capped retail rates. That is no way to run a business in any market, much less a free market. Because the rates are capped, consumers have no incentive to change their behavior. In short, California has a pricing problem, not a deregulation problem.

Very few States have fully deregulated at this point in their electric utilities. Each State has developed its own unique market structure and has implemented its own timetable for full restructuring. To that end there is very little quantifiable data that effectively measures the economic impact of deregulation.

The National Association of Budget Officers released a fiscal survey in December 2000 that did not show any budgetary impacts or adjustments related to restructuring. I would suspect that in their next report that will be coming out shortly, we thought perhaps it would come out yesterday, there would probably be some budgetary impacts, but I could not testify to that right now.

In reviewing the State revenues, it is clear that the States are collecting funds through a variety of mechanisms that can be used for relief if necessary. The critical question at this point is to determine if the Federal Government should intervene with any legislative actions. In ALEC's opinion, it would be premature to introduce legislation at this point. It would run the risk of hampering the efforts of deregulation or, even worse, possibly exacerbating the power supply shortage. We feel we should evaluate California carefully and use it as an opportunity for lessons learned.

Mr. Chairman, now is not the time to constrain market forces, but to unleash them. The market forces will correct the current shortage of supply as we build more power plants and enhance our infrastructure. The States should proceed as they see fit. A few of them have chosen to delay. They are making good, prudent choices right now. They are collecting a significant amount of revenue through their utility and fuel taxes. If the price spikes are going up so high that they feel concern they can suspend the taxes. Last year when the gasoline prices went up, two States suspended those taxes; one State for 6 months. Michigan reduced its electricity tax. The States always have the option of repealing or suspending their utility tax or fuel tax if they are concerned about high prices.

I would like to recommend two options to the committee. I think it would be very appropriate at this point in time to commission a comprehensive study of the current state of electric restructuring in the Nation and its impact upon the fiscal status of the States. I think that should be done before any Federal legislation is introduced.

Secondly, whenever we go through a transition, there are going to be people who fall out and are hurt during that transition, in particular small businesses, as the Congressman from California

mentioned. Small businesses can be affected in an energy crisis, and they most often don't have reserve power generators like the large commercial enterprises. They could easily shut down in 90 days. A rational way to provide relief would be to relax the regulatory guidelines that govern the allocation of small business grants or low-income assistance funds to help maintain their fiscal stability on a prorated basis for those small businesses that are clearly struggling in the power shortage. Thank you.

Chairman NUSSLE. Thank you.

[The prepared statement of Ms. Bourne follows:]

PREPARED STATEMENT OF ALEXANDRA LIDDY BOURNE, ENERGY, ENVIRONMENT, NATURAL RESOURCES, AND AGRICULTURE TASK FORCE DIRECTOR FOR THE AMERICAN LEGISLATIVE EXCHANGE COUNCIL

Mr. Chairman, Members of the House Budget Committee, it is an honor to appear before you as a representative of the American Legislative Exchange Council (ALEC). The American Legislative Exchange Council is comprised of 2400 Democrat and Republican state legislators who have a keen interest in free market enterprise and individual freedom.

ALEC's Energy, Environment, Natural Resources, and Agriculture Task Force has been carefully monitoring the situation in California. We have created an Energy Working Group tasked with evaluating the current status of energy generation and distribution in all 50 states. Specifically, our goal is to provide a menu of policy options to assist state lawmakers who wish to adopt an effective energy legislative package that provides affordable electricity in a competitive market to the homes, businesses, schools, and health care facilities of our citizens. Today, I would like to provide you with an update on restructuring in the states and list what responses, if any, the states had to the California energy crisis.

CURRENT STATUS IN RESTRUCTURING

Since the early 90's, the states have individually been studying whether they shoud deregulate their utility markets. To date, 26 states and the District of Columbia have enacted some form of electric utility restructuring, through legislation or regulation, but not all of those states have adopted final rules governing restructuring. Many are phasing in components of a market-based structure either through legislation, regulation, or by executive order.

All of the states have initiated a review of the fiscal implications of deregulation and are considering a revision of portions of their tax codes to accommodate restructuring in a variety of ways. However, it should be noted that in light of the recent black outs in California, a few states have delayed restructuring until the situation is thoroughly evaluated.

The states that historically had the highest prices for electricity, such as California, Pennsylvania, New York, Connecticut, and other New England states were among the first to enact deregulation and opened their retail markets to allow customers to choose suppliers. Other states proceeded cautiously, limiting the number and type of customers getting access to competitive markets. The major goal of deregulation was to lower the price of electricity through a free market system. We have to remember, that at the time of the national debate over deregulation, the driving issue was the high cost of electricity in a regulated environment. To that end, industry analysts cite Pennsylvania as a success story, and California as providing us with lessons to be learned.

MARKET STRUCTURE

States have used two types of structures to facilitate operations in a restructured market. The Independent System Operator is designed to provide nondiscriminatory open access to transmission. A Power Exchange is an open bulk power market for sales of electric power for resale. Primary regulatory authority over these entities resides at the Federal Energy Regulatory Commission and not in the states. A majority of the restructured states assumed this type of system as a basis for their restructured markets.

Nine states (AZ, AR, IL, MI, OH, TX, VA, and WV) and the District of Columbia directed their utilities to transfer the control of their transmission assets to an independent transmission organization. (AR,MI,OH,VA, and WV) A few of these states allow other types of regional organizations. Michigan and Ohio allow utilities to

choose between transferring operation and control of their facilities to an ISO or divest their transmission assets. Texas is unique in that it divides itself into four power regions that correspond to the four NERC regions that are within Texas. Each power region must establish an ISO or a transmission company.

The Power Exchange was first formed in California under their restructuring legislation. The northeastern state power pools began as PX, but changed to ISO's.

DIVESTITURE

In the restructuring language of several states, divestiture of generating assets has either been required or encouraged for the purpose of increasing competition between power generators, reducing the risk of electric company monopolies, and providing an opportunity for stranded cost recovery incurred by utilities for investments in power plants or long term contracts under a regulatory environment that may not have been recovered in a free market competitive environment. According to the Department of Energy only 16% of all electric utility generating capacity had been sold to unregulated companies or transferred to subsidiaries by the year 2000.

Some states have only allowed competitive services to be provided by separate affiliates, which is a structural approach to regulate affiliate transactions, rather than governing the relations between competitive business functions through regulation. CA, CT, ME, NV, NM, and RI require competitive services only through affiliates. New Jersey has authorized the NJBPU to impose competitive services. CA, ME, NV, and VA require a public service commission pre-approval of certain competitive activities.

Divestiture has been required in statute by two states, New Hampshire and Maine. Most of the states that have restructured have encouraged or required incumbent utilities to divest all or some of their generation assets through regulatory orders. The thought was to reduce the market power of the incumbent utilities or use the sale of an asset to determine its value for stranded cost calculations.

Michigan and Texas use divestiture as an alternative in a menu of options. They use capacity auctions with parameters. CA and NY encourage divestiture, but have not required it. Utilities in both states have divested most of their non-nuclear assets. Several states differentiated between nuclear assets and fossil fuel assets. Divestiture of nuclear assets were either deferred or delayed for long period of time. Five states, AR, DE, NJ, NV, and OR have permitted their public utility commissions to order divestiture. AR, DE, and NJ have standby authority to intervene if they desire, NV chose to limit ownership of generation and transmission facilities. Oregon provides incentives for divestiture.

CT, MA, and RI linked divestiture with stranded cost recovery. MA requires all utilities that seek stranded cost recovery must divest all non-nuclear generation assets; RI requires at least 15% of non-nuclear generation divesture. CT requires divestiture or transfer to an affiliate. If the assets were transferred to an affiliate, then the utility may not recover stranded costs.

PRICING AND MARKETING

Pricing for transfers of assets and services between competitive and regulated operations has been an issue in some states. Asymmetrical pricing, which bases prices for transfers from utility to affiliate on the higher of fully allocated cost or market value, and from affiliate utility at the lower of fully allocated or market value is in effect in CA, MA, and NV. Symmetrical pricing, (market value pricing for all transactions) is only in effect in Texas.

There are a wide variety of rules for marketing between competitive and non-competitive operations in a number of states. Joint marketing is banned in eight states. (CA, CT, IL, ME, MA, OR, TX, and West Virginia.) Five require affiliations with a corporate name to use disclaimers. (CA, CT, MA, OR, and Texas.) Maryland and Maine require royalty payments by the affiliate for using the corporate name.

ENERGY EFFICIENCY

Most of the state restructuring plans have provisions for energy efficiency programs. These programs are funded through a mechanism called a System Benefit Charge (SBC). This is a use charge levied on end users by the distribution utility. Twelve states have this type of fee (AZ, CA, CT, DE, DC, MA, MT, NJ, NY, OH, PA, and RI.). The amount varies state to state. Only four of those states have set a time limit on the SBC. Twelve states that have initiated a System Benefit Charge. In OH, the SBC funds a revolving loan program for energy efficiency.

STATES DELAYING RESTRUCTURING

As I mentioned previously, a few states have delayed implementation of restructuring. Oklahoma, Oregon, Nevada, New Mexico, and a power pool in Texas fall into this category. I would like to speak to those states specifically.

Oklahoma enacted Senate Bill 440, which establishes an electric restructuring advisory committee to the Governor and the Legislature. The previous deadline for restructuring of July 1, 2002 has been eliminated. Restructuring will be implemented subsequent to the issuance of the final report of this advisory committee and the adoption of electric restructuring legislation by the Legislature and signed by the Governor. Tax credits were put into place for electric generators that have zero emission facilities.

Oregon drafted a bill, to delay deregulation until 2003. The debate is focused on the crisis in California and the continuing drought in the northwest. The two most contentious issues are the establishment of a 3% "public purposes" surcharge and a potential date for deregulation. This has passed the House and is now in the Senate.

Nevada passed legislation, signed by the Governor, to halt electric restructuring until they can determine the impact of California's crisis upon the western grid. Their primary concern related to the stability of power supply due to the increase in natural gas prices and the drought. However, A.B. 5 (formerly HB 661) which passed both houses allows large users the ability to purchase electricity on a competitive basis is pending the Governor's signature.

New Mexico delayed implementation of deregulation for a variety of reasons. The price of electricity is low and there is not a lot of political pressure to deregulate. Of utmost concern was revamping their tax code, and legislation was introduced to compare their tax structure in a regulated and deregulated environment.

Texas passed legislation that delayed restructuring in only one portion of the state that is covered by the Southwest Power Pool until 2007. This delay is in compliance with their restructuring law that allows the state to delay any portion of their grid if it appears that there would be a lack of choice. (The bill, is pending signature by the Governor.) That portion of the state, the Panhandle, shares a grid with New Mexico that has one dominant power supplier. The rest of Texas is fully deregulated and has a 40% over supply of power. Their intent is to build another power plant and transmission lines in their western grid to complete restructuring throughout the state.

States that have not formally deregulated by legislative action are actively studying restructuring to determine how their individual states may be impacted. It is important to note that state revenues are tied to public utilities and that electric restructuring requires a review of the tax code to ensure that the existing tax system does not distort a competitive market.

CALIFORNIA CRISIS

The electricity crisis in California, while it has serious short-term effects for residents in California, can best be described as an anomaly for the rest of the nation. There are many factors that came into play and no one, in industry or policy, predicted the current situation.

The faulty regulatory scheme in California is only one aspect of the power supply problem. The current prices of natural gas, coupled with a gas pipeline breakage incident in August of 2000, and lack of significant generation and transmission infrastructure development have adversely affected the availability of power. 46% of the electricity consumed in California in 1999, was fueled by natural gas. Furthermore, the drought over the past 2-3 years has decreased the availability of hydropower further increasing California's dependence upon natural gas as a fuel for electricity generation. Given the significant growth in electronic commerce in the high tech industry over the past 5 years, no one in 1996 anticipated the high demand for electricity today.

No new power plants of a significant size had been built in California in 10 years. Typically, 20% of the power supply had been imported. That percentage has increased and has been affected by the amount of growth and increased demand for power in neighboring states in the Western grid. What new power plants that have been built in the west have been fired by natural gas. The price of natural gas quadrupled between 1998 and 2000, from $2/million BTU to $8/million BTU. In the California market, which had a pipeline break, the price jumped to $60/million BTU. (1000 cubic feet). Now with more than 50% of its power supplied by natural gas, it is no wonder that California is paying a high price for electricity. States with a more diverse source of power have been better able to absorb the national price spike of natural gas.

When evaluating California's restructuring scheme, it is clear that deregulation, did not, in effect, take place. The biggest structural defect is the requirement placed on utilities to purchase all of their energy needs on the daily spot market, which is the California Power Exchange. No other state has this requirement. Unfortunately, about 60% of the current supply is purchased on the spot market. In comparison, other power markets, such as the Pennsylvania, New Jersey, Delaware, and Maryland area only have a maximum level of 20% purchased on the spot market. The second structural defect is the capped retail rates. The three utilities in California ran up over $12 billion in debt purchasing electricity from the CalPX and selling it at capped retail rates. This is no way to run a business in any market, much less a free market. Because rates are capped, consumers have no incentive to change their behavior. In short, California has a pricing problem, not a deregulation problem.

ECONOMIC IMPACTS OF DEREGULATION

Very few states have fully deregulated their electric utilities. Each state has developed a unique market structure and has implemented its own timetable for full restructuring. To that end, there is very little quantifiable data that effectively measures the economic impact of deregulation. In their fiscal survey released in December 2000, the National Association of State Budget Officers did not indicate any significant adjustments in state budgets that correlate to deregulation or the energy crisis. In reviewing state revenues, it is clear that the states are collecting funds through a variety of mechanisms that can be utilized for relief if necessary.

The critical question at this point is to determine if the Federal Government should intervene with any legislative actions. In my opinion, it would be premature to introduce legislation at this point in time. You would run the risk of hampering the efforts at deregulation or even worse, exacerbating the power supply shortage. We should evaluate California carefully and use it as an opportunity for lessons learned. No states have fully implemented restructuring for a length of time to collect sufficient data to evaluate the economic effects of deregulation. There simply is not enough information to determine the positive or negative impacts of electric restructuring in the states.

Mr. Chairman, now is not the time to constrain market forces, but to unleash them. The market forces will correct the current shortage of supply as we build more power plants and enhance our infrastructure. The states should proceed as they see fit. The states collect a significant amount of revenue through their utility and fuel taxes. For example, when the gasoline prices escalated last year, Illinois and Indiana suspended their gasoline tax for a short duration. Michigan reduced its electricity tax. The states always have the option of repealing or suspending their utility tax or fuel tax if they are concerned about high prices.

I would like to recommend two options to the Committee. I do think it would be appropriate for this Committee to commission a comprehensive study of the current state of electric restructuring in the nation and its impact upon the fiscal status of the states. This should be done before any Federal legislation is considered.

Secondly, small businesses can be adversely affected in an energy crisis. They may not have reserve power generators like the large commercial enterprises. They could easily shut down in ninety days. A rational way to provide relief would be to relax the regulatory guidelines that govern the allocation of small business grants or low-income assistance funds to maintain fiscal stability, on a prorated basis, for those small businesses that are clearly struggling in a power shortage.

Thank you.

1999 STATE NET ELECTRICITY GENERATION FUEL SHARES

[Percentage]

State	Natural Gas	Hydro	Coal	Nuclear	Fuel Oil	Other*
Alabama	3	6	61	26	.....	4
Alaska	63	14	9	.....	14	.....
Arizona	6	12	46	36	.....	.....
Arkansas	10	6	52	27	.....	5
California	46	22	1	18	1	12
Colorado	13	4	83	.....	.....	.....
Connecticut	9	2	7	45	29	8
Delaware	36	.....	42	.....	22	.....
District of Columbia	.....	.....	.....	.....	100	.....

1999 STATE NET ELECTRICITY GENERATION FUEL SHARES—Continued

[Percentage]

State	Natural Gas	Hydro	Coal	Nuclear	Fuel Oil	Other*
Florida	23	.....	36	17	20	4
Georgia	2	2	63	26	2	4
Hawaii	3	1	13	.....	74	9
Idaho	2	92	.....	.....	.....	5
Illinois	3	.....	46	50	.....	.....
Indiana	5	.....	94	.....	1	.....
Iowa	1	2	86	10	.....	.....
Kansas	7	.....	70	22	1	.....
Kentucky	.....	3	96	.....	1	.....
Louisiana	53	1	24	15	2	5
Maine	.....	22	8	.....	36	34
Maryland	5	3	57	26	8	2
Massachusetts	27	1	28	11	26	5
Michigan	13	1	68	14	1	3
Minnesota	3	2	61	27	2	4
Mississippi	24	.....	37	24	9	6
Missouri	2	2	83	12	.....	.....
Montana	.....	40	58	.....	2	.....
Nebraska	5	5	57	32	.....	.....
Nevada	30	9	55	.....	1	5
New Hampshire	.....	9	20	53	10	8
New Jersey	31	.....	14	51	2	2
New Mexico	13	1	86	.....	.....	.....
New York	33	15	16	26	9	2
North Carolina	1	3	62	32	1	1
North Dakota	.....	8	91	.....	.....	.....
Ohio	1	.....	86	12	.....	1
Oklahoma	33	6	61	.....	.....	.....
Oregon	12	81	7	.....	.....	1
Pennsylvania	2	1	57	37	2	1
Rhode Island	92	.....	.....	.....	6	2
South Carolina	1	1	40	57	.....	1
South Dakota	2	63	35	.....	.....	.....
Tennessee	1	8	61	29	1	.....
Texas	49	.....	39	10	.....	1
Utah	2	3	94	.....	.....	.....
Vermont	.....	19	.....	72	.....	8
Virginia	7	.....	47	38	5	4
Washington	3	83	7	5	.....	1
West Virginia	.....	1	99	.....	.....	.....
Wisconsin	3	3	69	19	2	3
Wyoming	1	3	96	.....	.....	.....

*Includes generation by geothermal, wood, waste, wind and solar.

Source: EIA.

AVERAGE REVENUE PER KILOWATTHOUR BY, ALL SECTORS IN CENTS

[Residential, Commercial, Industrial, Other]

State/Region	1996	2000 (Revised estimate)	2001 (Estimate, January)
Alabama	5.35	5	5.5
Alaska	10.24	9.6	9.9
Arizona	7.54	6.5	6.3
Arkansas	6.15	5.2	5.8
California	9.48	8	11.8
Colorado	6.05	5.8	5.8
Connecticut	10.51	9.5	9.8
Delaware	6.88	6.3	6.8
District of Columbia	7.35	6.2	6.5
Florida	7.18	6.7	7.4

AVERAGE REVENUE PER KILOWATTHOUR BY, ALL SECTORS IN CENTS—Continued

[Residential, Commercial, Industrial, Other]

State/Region	1996	2000 (Revised estimate)	2001 (Estimate, January)
Georgia	6.43	5.8	5.9
Hawaii	12.12	13.2	14.3
Idaho	3.96	4	4.4
Illinois	7.69	6.1	5.9
Indiana	5.23	5.1	5
Iowa	5.94	5.6	5.7
Kansas	6.52	5.8	5.9
Kentucky	4.03	3.9	4
Louisiana	6.07	5.7	7.5
Maine	9.46	10.3	10.7
Maryland	6.96	6.3	5.9
Massachusetts	10.13	8.6	10.5
Michigan	7.1	7.3	7.2
Minnesota	5.54	5.5	5.6
Mississippi	6.01	5.6	6
Missouri	6.11	5	5.2
Montana	4.72	5.2	5.4
Nebraska	5.32	4.7	4.8
Nevada	5.95	5.8	6.4
New Hampshire	11.59	11.7	11.8
New Jersey	10.5	9.1	9.4
New Mexico	6.76	6.3	7.2
New York	11.13	10	11.2
North Carolina	6.53	6.5	6.4
North Dakota	5.65	5.1	5.1
Ohio	6.3	6.2	6.3
Oklahoma	5.56	4.5	5.9
Oregon	4.77	4.8	4.9
Pennsylvania	7.96	6.3	7.5
Rhode Island	10.48	9.3	10.8
South Carolina	5.67	5.5	5.5
South Dakota	6.18	6	6.1
Tennessee	5.24	5.4	5.6
Texas	6.16	5.8	6.7
Utah	5.28	4.5	4.8
Vermont	9.74	11.7	10.8
Virginia	6.09	5.7	5.8
Washington	4.19	4.4	4.8
West Virginia	5.21	5	5
Wisconsin	5.25	5.5	5.9
Wyoming	4.31	4.3	4.3
U.S. Average	6.86	6.29	6.89
New England	10.28	9.6	10.5
Middle Atlantic	9.76	8.3	9.3
East North Central	6.48	6.1	6.1
West North Central	5.91	5.4	5.5
South Atlantic	6.54	6.1	6.3
East Coast Central	5.04	4.9	5.2
West South Central	6.08	5.6	6.7
Mountain	6	5.6	5.7
Pacific Contiguous	7.54	6.6	8.9
Pacific Noncontiguous	11.49	11.7	12.5

Source: EIA.

ANNUAL AND POPULATION PERCENTAGE GROWTH, 1990'S

State	Annual Growth Rate of Electric Power Industry Generating Capability 1988–1998	U.S. Population Growth Rate 1990–2000
Alabama	1.4	10.1
Alaska	1.6	14
Arizona	n/a	40

ANNUAL AND POPULATION PERCENTAGE GROWTH, 1990'S—Continued

State	Annual Growth Rate of Electric Power Industry Generating Capability 1988–1998	U.S. Population Growth Rate 1990–2000
Arkansas	n/a	13.7
California	–0.5	13.8
Colorado	0.3	30.6
Connecticut	–1.6	3.6
Delaware	2.4	17.6
District of Columbia	0	–5.7
Florida	1.5	23.5
Georgia	2	26.4
Hawaii	0.4	9.3
Idaho	1.3	28.5
Illinois	–0.2	8.6
Indiana	0.8	9.7
Iowa	0.7	5.4
Kansas	0.5	8.5
Kentucky	n/a	9.7
Louisiana	0.3	5.9
Maine	–2.9	3.8
Maryland	1.6	10.8
Massachusetts	–0.7	5.5
Michigan	–0.3	6.9
Minnesota	0.8	12.4
Mississippi	0.3	10.5
Missouri	0.8	9.3
Montana	0.1	12.9
Nebraska	n/a	8.4
Nevada	1.8	66.3
New Hampshire	5.3	11.4
New Jersey	0.6	8.9
New Mexico	0.5	20.1
New York	0.4	5.5
North Carolina	0.7	21.4
North Dakota	n/a	0.5
Ohio	0.4	4.7
Oklahoma	–0.2	9.7
Oregon	–0.2	20.4
Pennsylvania	0.5	3.4
Rhode Island	2	4.5
South Carolina	1.7	15.1
South Dakota	1.1	8.5
Tennessee	0.4	16.7
Texas	1.1	22.8
Utah	0.8	29.6
Vermont	–0.6	8.2
Virginia	1.8	14.4
Washington		21.1
West Virginia	0.6	0.8
Wisconsin	1.2	9.6
Wyoming	n/a	8.9

Source: Annual Growth Rate figures are from EIA. Population figures are from the Census Bureau.

FEDERAL AND STATE FUNDS: LOW–INCOME AND ENERGY CONSERVATION PROGRAMS

States	State by State Supplements to Energy Assistance and Energy Efficiency 1999-2000	Federal State Energy and Weatherization Program 2000	Federal State Energy and Weatherization Program 2001	Federal LIHEAP Total FY 2001 Net Allotments
Alabama	$4,704,842	$1,949,000	$2,225,000	$15,391,608
Alaska	5,128,850	1,262,000	1,440,000	8,199,055
Arizona	9,131,292	1,271,000	1,452,000	6,695,222
Arkansas	282,397	1,633,000	1,856,000	11,828,642
California	194,024,888	5,899,000	6,734,000	83,564,820
Colorado	9,185,512	3,763,000	4,270,000	29,508,966

FEDERAL AND STATE FUNDS: LOW–INCOME AND ENERGY CONSERVATION PROGRAMS—Continued

States	State by State Supplements to Energy Assistance and Energy Efficiency 1999-2000	Federal State Energy and Weatherization Program 2000	Federal State Energy and Weatherization Program 2001	Federal LIHEAP Total FY 2001 Net Allotments
Connecticut	16,325,068	1,983,000	2,241,000	38,737,465
Delaware	513,724	566,000	647,000	5,098,480
District of Columbia	1,331,300	599,000	683,000	5,935,168
Florida	3,789,906	2,276,000	2,601,000	22,832,348
Georgia	14,060,000	2,460,000	2,804,000	19,493,640
Hawaii	.....	355,000	409,000	1,754,871
Idaho	832,386	1,431,000	1,632,000	10,608,421
Illinois	72,830,000	9,627,000	10,894,000	107,758,782
Indiana	5,804,047	469,000	5,318,000	48,209,925
Iowa	3,138,770	3,434,000	3,896,000	34,462,679
Kansas	.....	1,927,000	2,188,000	15,862,659
Kentucky	3,279,264	3,223,000	3,663,000	24,159,896
Louisiana	.....	1,669,000	1,926,000	15,793,748
Maine	10,510,713	2,123,000	2,412,000	23,801,167
Maryland	56,581,181	2,191,000	2,480,000	29,262,298
Massachusetts	42,179,186	4,645,000	5,256,000	77,326,683
Michigan	6,540,712	10,206,000	11,558,000	102,528,794
Minnesota	11,189,589	6,573,000	7,446,000	72,967,826
Mississippi	918,641	1,358,000	1,551,000	13,291,039
Missouri	2,000,000	4,222,000	4,789,000	42,251,922
Montana	3,151,752	1,753,000	1,994,000	11,199,768
Nebraska	.....	1,803,000	2,049,000	17,066,470
Nevada	455,387	769,000	884,000	3,418,118
New Hampshire	2,156,123	1,176,000	1,336,000	14,543,697
New Jersey	92,810,684	4,001,000	4,523,000	72,478,497
New Mexico	500,000	1,430,000	1,631,000	8,846,522
New York	55,296,250	13,921,000	15,730,000	236,485,833
North Carolina	2,104,658	3,213,000	3,654,000	33,015,992
North Dakota	.....	1,727,000	1,966,000	11,520,492
Ohio	127,359,566	9,484,000	10,742,000	94,532,311
Oklahoma	1,981,037	2,004,000	2,280,000	13,287,038
Oregon	11,695,654	2,105,000	2,396,000	20,940,364
Pennsylvania	140,715,909	10,076,000	11,409,000	126,165,069
Rhode Island	3,855,081	947,000	1,076,000	12,846,941
South Carolina	537,289	1,514,000	1,729,000	12,099,894
South Dakota	923,719	1,364,000	1,553,000	9,706,274
Tennessee	.....	3,109,000	3,535,000	23,785,839
Texas	4,333,601	5,169,000	5,936,000	40,596,786
Utah	2,194,731	1,557,000	1,774,000	13,509,870
Vermont	4,638,207	986,000	1,121,000	10,808,709
Virginia	2,202,689	3,120,000	3,541,000	34,491,924
Washington	18,768,914	3,288,000	3,746,000	33,054,374
West Virginia	3,207,371	2,275,000	2,582,000	16,128,816
Wisconsin	28,189,986	5,829,000	6,603,000	65,903,241
Wyoming	.....	915,000	1,046,000	5,459,900

Source: Supplements and LIHEAP figures are from the LIHEAP Clearinghouse. State Energy and Weatherization figures are from the OMB.

Chairman NUSSLE. First of all, Dr. Hubbard, you have had an opportunity to listen to some of the State circumstances as Mrs. Bourne has just outlined it. What would you suggest in a nutshell are the lessons learned thus far from the west coast experience, in your opinion, as we begin to look at an overall national energy strategy?

Mr. HUBBARD. Well, I first agree with what Mrs. Bourne said. I think it is very important to stress the role of market forces, but we have to remember that market forces have to be completely market forces. I think one lesson we have learned is that very partial deregulations can lead to very significant adverse con-

sequences. So I think that in implementing deregulations, one of the lessons from the State experiments is that we need to focus on getting complete deregulation.

Chairman NUSSLE. The purpose of this hearing, just from an overall macro sense, because that is what we have to deal with here at the Budget Committee is obviously making macrodecisions about Federal priorities as we move forward. And obviously economic growth, the economy in general has a very large impact on that both from a receipt standpoint as you have outlined as well as an expenditure standpoint.

Clearly from your testimony there is a very direct impact on the budget, short term and long term. Is there a way that you can boil that down for us so that as I am talking to colleagues, as I am talking to people in the media, as I am talking to constituents, that I can describe for them what the impact will be on the budget in the short and long term? How would you describe it for me in a nutshell, without being disrespectful, in a noneconomist, as much as that is possible, language so that I can describe it to other Members and to constituents?

Mr. HUBBARD. Sure. I think the simple way to think of it is the energy price increases reduce national income, and you can use rules of thumb. Every percentage point of GDP lost is about $100 billion. And the tax share in GDP at the margin is about .3. So you can use calculations like that to illustrate.

The effects are actually, as you said, Mr. Chairman, quite substantial. I think they point toward a long-term focus, because, frankly, in real time there is very little that the committee could do in reacting to energy price fluctuations. But I think what you can do is encourage long-term infrastructure investments and remind people that if we make the right long-term policies, we are much less likely to pay those costs that you have identified impacts.

Chairman NUSSLE. One of the primary concerns after the budget is written here at the committee and we begin to enact the budget is to enforce it, because if, in fact, we are not able to enforce the constraints, I call them riding the fences. We have got fences around Medicare and fences around Social Security. We have got so many fences, we are building fences all the time. The good news about those fences is that so far they are holding, but if they don't hold, and if we see a downturn, and that has an impact on the budget that you are describing, then there is going to be pressure on those fences, on the tax fences and the possibility of providing additional tax relief in the future, on the spending fences, because we are going into the appropriations season right now, and Washington likes to spend money. That is how we send out the press releases back home, let people know what we are bringing to them in the different appropriation bills that are moving.

And so what you are describing for us right now is that there is in our energy strategy a direct nexus between our ability to do a good job and in providing the stability in this market and the overall long-term stability and predictability in the budget. Do you see any icebergs out there in the immediate future that we need, as has been described? I think "iceberg" was used by Mr. Hanger.

What icebergs do you see out there in the immediate future that we need to keep an eye on?

Mr. HUBBARD. Well, in regards to energy markets and electricity markets, I think one iceberg is clearly the California situation, which I don't anticipate any early resolution of. A second iceberg is, just as came up in Mr. Hanger's testimony, the fact that we do have Balkanized energy and electricity markets in many ways, and until we move toward a better and more uniform infrastructure, we can get regional price spikes. We can get gasoline prices that are quite high in some parts of the country, or it could be electricity, or it could be natural gas. So I think it a focus on infrastructure is one.

Chairman NUSSLE. Mr. Hanger, your testimony on the demand information to the consumers, the consumer information, I thought was quite illuminating. Your entire testimony was. I appreciate you coming and you are right, when the ocean liner reaches the shore, and there isn't any malfunction along the way, it doesn't really get much attention. We are trying to give you that attention here today.

Back in my district I had the opportunity to talk to a local municipality that is doing some of the things that you were suggesting, providing better consumer information, prior to getting the bill about exactly what the prices will be of the energy used during different parts of the day, year, season, et cetera. One of the examples they used is going out and I am not sure I know all the fancy language for it, but they do some blow tests to show where the leaks are in the house for weather decisions, as an example. They also take photographs, infrared photographs, to show whether or not they need insulation, as an example.

Is there a way to quantify the effect, in your opinion, on what this can have? I think there has been a lot of good comments today about conservation and renewables, but in this area in particular, where there is some personal responsibility in this energy crisis, this isn't just a matter of just accepting this and assuming that you have no impact on it. The personal responsibility here I think is important. Is there a way to the quantify how this can effect the energy situation that we find ourselves in?

Mr. HANGER. A couple comments before getting to the quantification issue. I would like to distinguish between what I call energy conservation or energy efficiency and demand response. Energy efficiency or conservation is, I think, vital to navigating our energy future. In that category I would put things like the increasing insulation in homes, appliance efficiency standards, auto efficiency standards, compact fluorescent light bulbs, both public policies and market choices that people make in order to use energy less wastefully.

Demand response is what I am trying to focus on, is giving consumers both the tools, they need some tools, and the information in order to make changes in how they use electricity and when they use electricity. That is critical to the functioning of a market.

I think it is unfortunate the energy conservation has become almost polarized ideologically. There are some people that just think it is a waste of time and money, and there are some people that think it is the Holy Grail. I am more, frankly, in the camp that it

is the Holy Grail. But I want to distinguish that debate from the need to get demand response functioning in the market. You cannot have an effective electric market, either the wholesale or retail level, unless customers can change how they use electricity and when they use electricity. You will get price spikes. You will have market power, you will have misallocation of resources, no matter how you design the market.

So I just want to make it clear that there is a distinction between demand response and energy efficiency. I have seen data on the Nation's energy efficiency, and certainly I believe it is the case that more or less our economy is about 40 percent more energy-efficient today than it was, say, 30 years ago. So we have made significant progress over the last 30 years in generating more GDP with less energy per dollar GDP. And Secretary Blake indicated that that was likely to continue and should continue.

Many customers can certainly reduce electric usage with very minimal interventions in their height of business operations or homes by 10 percent. That is an easy goal for many businesses or homes to do, and in some cases that is happening through price spikes. Price spikes did make people aware of the need to conserve energy. And other cases it is being advanced by energy policies like the appliance standards that are going through the Department of Energy's regulatory process now.

Chairman NUSSLE. Thank you very much.

Mr. Spratt.

Mr. SPRATT. Thank you all for your testimony. And I have questions for all of you, but for the fact that time is getting away from us, I wanted to ask Dr. Hubbard quickly. I read your testimony and listened to what you had to say, and I gather that you weren't greatly concerned about the impact of energy prices on the economy right now so long as there is no further shock in price increases. And I may be misreading what you have written.

Mr. HUBBARD. Well, I think the fair way to say it is that energy price increases have contributed to the growth slowdown we are in right now, but going forward the question is one of the impact of even higher energy prices, and I think there the worry is a little less severe than it has been in the past couple of years. That doesn't mean, though, we are not going to have very important regional price spikes, and that is where I think the attention needs to be.

Mr. SPRATT. Don't you think that if oil stayed ratcheted about $30 a barrel and gas prices stayed over $5 per MM BTU, that this would create a drag on the economy?

Mr. HUBBARD. It certainly would, Congressman. The oil prices are predicted to stay high through 2002. Gas prices are predicted to come down a bit.

Mr. SPRATT. One of the rules of thumb that you cited on page 8 of your testimony was from an IMF analysis indicating that the shock that we have experienced before, going from $11 to $20 and then on up to $30 a barrel over a 3-year period of time would have an effect of about two-tenths of a percent the first year and then four-tenths of a percent on production and the output in the second year.

OMB told us not long ago as a rule of thumb if there is a 1-year, ½-percentage point reduction in GDP, that we could expect about $6 billion reduction in the unified surplus the first year, about $15 billion the second year, and by year 4 or 5 it would be about $20 billion, cumulative effect. Do you have any rules of thumb like that for applying the likely diminution in output to the budget that we are dealing with and to the unified surplus in particular?

Mr. HUBBARD. Again, going back to the chairman's question, too, the easiest rule of thumb is on the tax side. So a half of percentage point loss of GDP is about $50 billion, and that would lead to revenue shortfalls as much as $15 billion. The spending would depend on your assumptions about pass-through into COLAs, but you could well be looking at budget hits at least $15 to $20 billion, so the OMB number is perfectly plausible.

Mr. SPRATT. The first year or over time?

Mr. HUBBARD. By the second year probably.

Mr. SPRATT. Are those effects factored into the forecast that we are working with now?

Mr. HUBBARD. Well, certainly when the Congressional Budget Office does a macroeconomic forecast for you and for the Congress, they would be making assumptions about energy prices. The administration does that in coming up with our own budget. So that would be factored into assumptions that the CBO would be doing for you about growth and the economy.

Mr. SPRATT. We have got that May study, but the two forecasts that we have been using, the OMB's budget that came up in January and CBO's analysis that came on January 30, both really came too early in January to be based on fourth quarter calendar year 2000. They really went back to the third quarter with some extrapolation. And a lot of this has kind of reared its ugly head since last fall. We have only begun to see that this is something that is a significant change. It is not going away in a hurry. We hope it will go away in time, but it is not going to disappear in a hurry. My question is have we really taken account of these effects of energy yet in the forecasts that we are basing the budget upon?

Mr. HUBBARD. Certainly the forecasts, at the time the budget documents and the CBO analysis were prepared, would have used energy price forecasts at that time. We are in midsession review season both here and in the administration, so whatever the current forecasts are going forward for energy prices would be used in the review. So I think when you get the midsession review from the CBO, the new energy information should be reflected in that baseline.

Mr. SPRATT. When will you have your review completed at OMB and the White House?

Mr. HUBBARD. My guess is that we should have ours completed sometime in early August. We are in the middle of the process now.

Mr. SPRATT. Thank you very much.

Chairman NUSSLE. Mr. Bentsen.

Mr. BENTSEN. Thank you, Mr. Chairman. I will say coming from the oil patch, I have sort of a mixed view on this, because at the same time of the high prices, particularly of gas prices, it is having a very detrimental effect on the petrochemical economy, which I also have a great deal, since most of our petrochemical plants now

use gas and feed stock as compared to their competitors abroad, which still use oil as a feed stock, so it creates a problem. But I think it also is indicative of how quickly the energy markets clear, because if you go back just a couple of years ago, as you noted in your testimony, Mr. Hubbard, gas prices were 50 percent of where they were. In gas E and P was off dramatically. The same could be said in the oil market where oil prices dip below $10 a barrel, and the E and P was off as well.

The ability to raise capital, and I think the ability to raise capital in the United States is pretty indicative of a free enterprise market, was almost impossible. And the ability to raise capital for a refinery operation, because the margins are so narrow, as you know, was next to nil.

In fact, I can remember 15 years ago, before I was in this job, in the investment banking business where you couldn't rise a dime of capital for a refinery, and, quite frankly, it had little to do with environmental regulation. It had to do with the fact that you just really couldn't make any money in it.

I do have some questions that I want to ask you. You talk about the boutique fuels and the tightness in that market. I am curious why, if the administration is cognizant of that fact, why would the phaseout of MTBE as a fuel additive because of its effect on groundwater supplies, why the administration would go ahead and move toward this imposition of use of ethanol, which could seem to me to only further Balkanize the refined fuel markets. And so I am curious about that.

I would also like to get your opinion, which doesn't affect administration policy, but from your academic background—well, it does take into effect administration policy. The administration policy is now to push for expansion of E and P, and I have two issues with that. One, what is the risk that we overshoot, as we have overshot in the past, by artificially trying to create investment. Second, whatever the reason, just a few years back when you had transmission companies apparently moving out of the transmission business and consolidation occurring somewhat in that, along particularly in the pipeline business, and transmission companies, including some in my home area, moving more into the consumer and trading side, what was the impetus for that?

Mr. HUBBARD. Well, you have really asked three questions. Let's take them in turn. On the boutique fuels issue, I think the MTBE decision is reflective that it was a very good environmental policy. My purpose in bringing it up is simply to make sure that we all understand the trade-offs and we make these policy decisions between environmental policy and energy markets.

Mr. BENTSEN. If I might interrupt, I appreciate that because I do agree there are trade-offs. I guess my question is why wouldn't the EPA move with a phaseout rather than a complete walking away completely from MTBE, but a phaseout of MTBE as opposed to imposing a requirement for ethanol? I don't want to get crosswise with the chairman being from the Corn Belt, because, quite frankly, the transmission structure of that, the refinery structure of that is not in place. It would seem to me that would be counterproductive to where this administration wants to go to stabilize refined gasoline prices.

Mr. HUBBARD. Well, again, I apologize. I would really have to defer to my EPA colleagues, but I think the general principle that was involved was, again, environmental policy versus energy markets.

On your second question about overshooting, you are absolutely right to frame the problem in the way that you did. And you started with the example in the past of low margins. And I think this industry, take refining in your example, is one in which you have very uncertain prices, and uncertainty can affect investment greatly. So I think the goal in energy policy, in the energy strategy, is not for overshooting, but to provide the right market incentives to guide that long-term investment, which could be everything from more certainty in regulatory policy to making sure that we have neutral playing fields for those investments.

So I agree with you. You are focused on exactly the right thing, but at least the goal of the energy strategy is to let market signals provide that as opposed to shifting regulatory regimes.

Your question about the activities of the companies involved, really it is hard to say these are sound business decisions of folks in the private sector. I think it reflects the fact that energy is quickly evolving, as you know quite well, into a risk management business as well. And I think much of the shift you are seeing in some of the companies involved reflects that increased focus on risk management and the availability of more instruments for risk management in energy.

Mr. BENTSEN. Thank you.

Chairman NUSSLE. Mr. Honda.

Mr. HONDA. Thank you, Mr. Chairman.

I guess the graph that I was interested in was a chart that Mrs. Bourne had shared with us and the chart with all the States and their state of deregulation. The column, price, fixed rate, cuts, caps and freezes, you had something like 14 States that had either freezes or rate caps, and the rest weren't. I guess there were 7 others that didn't have any. Could you tell me and share with us the reasoning behind the States' decision on imposing State freeze caps on regulatory caps and those States who had not imposed those?

Mrs. BOURNE. Each State made the decision separately. Some wanted to have more of a market approach to it, and others were very concerned about the rates possibly going up, so they just selected different things that they thought would work for those States.

Not having been in the process at the time, I have not yet found the reasoning for each State. Just from a personal perspective it was a very well intentioned approach to put these things into place. They were anticipating some jumps in prices, it could happen, so they put these price controls in place, and they put it in each State that they have them, each was a different way as well. It could be for a period of 3 years or 5 years. Some, I think Pennsylvania, has one for 9 years. Some of them are for residential customers; some of them are just for industrial customers. Some are at the wholesale level; some are at the retail level.

Mr. HONDA. Would it be fair to say that these various States imposed these tools because there was—there was—I guess it is a measure of their confidence whether the market was going to really

go down for the rates, so they imposed certain kinds of price capping, if you will. Some were temporary, others were permanent; is that correct?

Mrs. BOURNE. None of them are permanent that I can find. They are just for different lengths of time.

Mr. HONDA. Would you say that the motivation was to see what happened in terms——

Mrs. BOURNE. Sure. And that is probably a prudent thing to do. When you are in a free market, and you are going from a regulated environment to a deregulated environment, you don't necessarily know how things are going to respond. But what we do not know now is what these various caps, freezes, etc., what kinds of an impact they had. I think that is more important to find out at this point in time. I think someone used the word "gaming" the market earlier today, and I don't know if we are talking about regulators gaming the market or the private side gaming the market. I don't even like the term "gaming the market," because I don't think that is what was taking place, but clearly the controls maybe having an impact. But we really don't know what that impact is.

Mr. HONDA. In those States that have imposed these freezes or caps, although temporary, have they experienced what the Western States have experienced?

Mrs. BOURNE. Each State is different. For example, California had a cap in place, and it still has prices going up. Other States have not had those prices. I think it is more of a reflection of the fuel mixes that they have. They are not so dependent on one particular type of fuel for energy.

Mr. HONDA. So did any of those States have the bidding process that California had? What are some of the distinctions?

Mr. HANGER. Can I jump in here? The PJM power pool, which serves Maryland, Delaware, New Jersey, soon to be all of Pennsylvania, and this building, Washington, DC, do have the same bidding process that is used in California. This bidding also has a wholesale price cap of $1,000 per megawatt hour. The reason why Pennsylvania has a rate cap is that this is a transition period. We are going from 60 percent of monopoly regulation of a commodity that has unique characteristics. We cannot basically store electricity. Beyond that, supply and demand have to be constantly in balance every minute of every time. It is quite different from coal, where you can pile it up and store it. Gas you can store.

Frankly, the market institutions are not in place to do the trading. We don't have free movement of electricity in large regional markets. So there has been two huge interventions in the free market in every State that I am aware of, one on behalf of shareholders. It is called stranded cost recovery. A market wouldn't recover those costs for shareholders. They have lost it. The trucking industry didn't have stranded cost recovery. The airline industry when it was deregulated did not have stranded cost recovery. If you switched from Eastern to United, you didn't keep paying Eastern for the ticket you no longer bought from them. I have switched my supplier, I am still paying my old supplier $10 a month.

That is huge growth intervention, raising the price of the market price of electricity on behalf of the shareholder. To compensate or offset that during the periods of transition, Pennsylvania, I think

wisely, has done two things, imposed a rate cap while that period of stranded cost recovery is going on, but give the utilities all the instruments so they can meet the costs of rate cap; in other words, supply power at that capped rate.

That is what California failed to do. California imposed the rate cap at the retail level then mandated that the utilities divest 50 percent of their power plants and buy all of their power out of the spot market. Pennsylvania did not mandate divesting the historic power plants that the ratepayer basically had paid for through the cost of service, regulatory process, and gave utilities complete and total discretion on contracting, so that the utilities in Pennsylvania, with the one exception of GPUs recently had some problems, but we are through that now, had no problems meeting the rate caps. In fact, they are flourishing. I am delighted to say that Pennsylvania utilities are highly profitable, and the rates are capped, and we are building over time a competitive market.

Mr. HONDA. So in the process of giving a stamp on these plans, different States, all these plans went through FERC?

Mr. HANGER. Well, Pennsylvania's retail plan never really went through FERC. I want to compliment FERC for cooperating, at least when I was on the commission. I think it has happened since I left the commission, with Pennsylvania's retail plan. We had, frankly, the benefit of having a very sophisticated, probably, of what the wholesale markets call the PJM power plants, frankly, the largest free trade zone for electricity, and that basic wholesale market was able to be as liquid and as free and as successful as it was because it existed for 60 years.

California tried to create the wholesale market or trading mechanism out of whole cloth. You didn't have anything up to 1998. So FERC did not review the Pennsylvania retail plan, but FERC certainly played a constructive role in the wholesale market in Pennsylvania. But States don't have to give a retail restructuring plan to FERC for an approval.

Mr. HONDA. So the key, in your opinion, then, in California was that although there was a rate cap imposed on utilities, and the piece was that they should not have allowed the utilities to buy versus or——

Mr. HANGER. They required them. That did two things.

Mr. HONDA. That was the piece that would supply——

Mr. HANGER. They imposed a rate cap, which you can do. Pennsylvania's rate caps are going to survive until 2010. But you have got to give the utilities the way to meet the cost of that rate cap, and they have had historic generations that they have been paid for by ratepayers that are basically paid off in many cases. Plus if you give them the contracting capability so they can enter into long-term contracts—when Pennsylvania made the transition in 1998, there was oodles of power on a long-term basis well below the rate cap. So any utility could have gone out and bought electricity at basically 3 cents a kilowatt hour, and all these companies have been accused of price gouging, but have been lined up to sell in Pennsylvania at 3 cents for 5 or 10 years. It was at that time in Pennsylvania a buyers' market.

Mr. HONDA. I don't disagree with that. This probably was a mistake of requiring PG&E to divest themselves of the production por-

tion of it. Was the assumption that if they were required to divest themselves, that would open up the entire market of supply in different States?

Mr. HANGER. I served with some of the commissioners in California at the time, and I know that the concern was there was horizontal market power. In other words, the existing utilities own the most of the generation. You would not have a competitive generation market unless you required divestiture. That was the concern, and that is an important, legitimate concern.

And another unique characteristic of electricity is that demand is highly inelastic. That is why I come here today talking about demand response, which I think is a matter of national importance. We have to make the demand curve more elastic for electricity. But when have you a commodity or a product with a demand curve that is highly inelastic, it is very easy to exercise market power. You don't, in fact, have to have 80 percent of the market cornered in one company in order to get very serious market power problems. And I do not believe that electric restructuring competitive generation markets will maintain public support simply by repeating illogical statements. They have to work. They have to produce results for the consumers. And if the public loses confidence in this, we can come up here with all of the paeans to the free market, and it won't mean a hill of beans.

Congressman Hoekstra's question about where did that 30 cents go is going to get more poignant and more difficult to answer. We have to make these markets be properly designed, have to have a transition period, and, very frankly, we have to make them genuinely competitive. And there is a role for government in making sure that they are genuinely competitive.

Mr. HONDA. That is?

Mr. HANGER. That role? Well, do we have all day? At a minimum it is two or three things that I would highlight. One is working right now on the demand response. These markets won't be, in my mind at least, free of very troubling market power until you get demand response.

The second is making sure that the way you collect stranded cost recovery doesn't, in fact, kill the market. In California, another problem is that he collected stranded cost in a fashion that made it impossible for any new company to enter that market at the retail level. Enron is getting kicked around a lot in the media these days. Enron spent about $10 million in 1998 trying to enter the retail market in California, and they lost their shirts. They finally figured out one of the rules that been established there, which is basically called the default rate, made it impossible for any new entrant to enter that market and beat the default rate, which was an artificially imposed lower price.

So there is a whole series of policies both at the Federal level and the State level that need to be emphasized.

And the last thing I would say is that we do not have trading mechanisms for electricity across this country. You can build all the power line you want, and that will not create competitive wholesale markets. We do not have the institutions. I am talking about institutions—we don't have the equivalent of the New York Stock Exchange and the SEC that creates the trading mechanisms.

So merely building power lines isn't going to create a competitive market. All that may do is entrench the local monopoly.

We have got hundreds and hundreds of separate markets that are basically in the wholesale level. Each local utility service territory is almost its own individual wholesale market. Again, if we organize any market, whether it is cars, potatoes, I don't care what it is, in that fashion, we would have a disaster. So the details matter. Ideology, whether it is from the left or the right, isn't going to get us through this.

Mr. HONDA. Great. Thank you.

Chairman NUSSLE. I thank the gentleman. Those are great questions and very interesting responses, which is why I let it go a little longer than it should have, but that is what we are looking for.

I appreciate the testimony of this panel. I appreciate you taking the time to do this. It was all very interesting testimony. And clearly, again, we have established that not only does this have an impact on the economy, but, therefore, on the budget overall. And so I appreciate the testimony that you have provided us here today. Thank you.

The final panel that we have before the Budget Committee today consists of three witnesses: Justin Bradley, who is the energy project manager at the Silicon Valley Manufacturing Association; William Beach, who is the director of the Center for Data Analysis of the Heritage Foundation; and David Bradley, who is the executive director for the National Community Action Foundation.

Welcome, all three of you, to the witness table. Your entire testimony will be made part of the record, and I would ask that you take the time allotted to summarize your testimony as you see fit. And we will begin with Mr. Bradley.

Welcome.

STATEMENTS OF DAVID BRADLEY, EXECUTIVE DIRECTOR, NATIONAL COMMUNITY ACTION FOUNDATION; WILLIAM W. BEACH, DIRECTOR, CENTER FOR DATA ANALYSIS, THE HERITAGE FOUNDATION; JUSTIN D. BRADLEY, DIRECTOR OF ENERGY PROGRAMS, SILICON VALLEY MANUFACTURING GROUP

STATEMENT OF DAVID BRADLEY

Mr. DAVID BRADLEY. Thank you. I appreciate this opportunity to share some thoughts with you. This hearing has thoroughly explored the long-run promise of the free market for energy consumers. I am a little bit afriad it falls for me to raise further deep concerns about the promise, concerns I believe are shared among millions of American consumers, not only the very low-income families who are clients of community action agencies that I work with. Many others live from paycheck to paycheck and have little flexibility and few assets to draw down when facing dramatic changes in the cost of energy. Low-income consumers need stable and affordable prices. Both these adjectives are important.

Our low-income clients are indeed very concerned about price, immediate, midterm and long-term. The poor live in a short time frame because of the continuous threat of economic loss and prices without having any reserves or wealth to tide them over bad times.

Community action agencies, of which the weatherization program you saw in Iowa would be the operating home, specialize in getting families and elderly through these crises of their life and trying to keep people on the brink of poverty from losing ground as they struggle to remain self-sufficient. The roughly half billion dollars of LIHEAP assistance they deliver annually, and the weatherization assistance services are part of about $6 billion in services that the 1,100 CAAs provide nationwide.

It is important to understand that there are two things that we are deeply concerned about. One of them is volatility, especially when it means higher cost. It is not tolerable for the small consumer without discretion to switch family spending priorities or to draw down assets. Many families will cut back on vacations this summer, but the poor have cut back on medication, food, and have run up debt.

I have two charts which I would like to submit for the record showing the impact of the fiscal year 2001 energy bills on the poor. Figure 1 in my testimony shows the cost as a percent of income for poor and nonpoor consumers. If the median-income household expense of energy were as high a share of income as the poor have this year, its bills would have exceeded $6,000 by now on average and would be $10,000 come October.

And I realize a lot of this hearing is focused on the administration's national energy policy. There are some things about the energy policy that we are very much in favor of, and there are others, obviously, that we and others have raised concerns about.

It is important to note that the National Energy Policy Development Group did recognize the energy burden on low-income households, energy bills are higher as a proportion of income than for other American households, and also it recognized that low-income families have to make the choice between basic needs: food, clothing, rent and paying their utility bills. Once they are behind on the bills, getting caught up becomes impossible for many. The elderly will often forego the prescriptions, the medical care and even basic nutrition that enables them to maintain their health and independence to pay utilities.

The NEPD Group recognized two important programs: Weatherization and LIHEAP. And on the first, weatherization, the administration proposed a $120 million increase, which I believe this Budget Committee supported, but unfortunately, what we are seeing right now is the clash between energy policy and budget policy. The administration's energy policy request and the initiative that they unveiled had one primary low-income energy program initiative in there, and that was weatherization, but on the first test, the first test of funding this program, the House Interior Committee, despite a bipartisan, strong effort, failed. The President's low-income weatherization funding request was not honored; it has fallen short of the request that the administration thought that they would get.

We were delighted when the President insisted on raising weatherization back to its historic levels and enjoyed the partnership in working with the new DOE staff, but we are concerned that new budget policies make for difficult low-income energy choices for millions of Americans.

This extremely effective program cuts the main fuel bill by over 20 percent on average. It saved weatherized families an average of $300 this year, or nearly half of one typical client's Social Security check. Figure 3 in my written testimony shows the value of past weatherization to the families who are now enjoying lower bills, along with the LIHEAP funding now available this year.

The second major concern, particularly for the low-income energy consumer, is LIHEAP. The major tool in dealing with volatility in energy is the LIHEAP program. It is a very blunt instrument. Even when it is delivered in time to plan, advertise and manage the program, as it was in fiscal year 2001 when the contingency funds in regular appropriations totaling $2.25 billion were available early in winter, and our local agencies could hire the staff, open the phones, and States could set the highest possible benefits in eligibility, their forecasters thought prudent. This year has proven that, even when the funds are available early and when coupled with 10 to 20 percent more in charitable, utility, State, and local giving, there simply was not enough to meet the demands and prevent massive numbers of utility shutoffs in this warmer season.

We have worked with the Congress and several members on this committee on a bipartisan basis to win a $600 million LIHEAP supplemental, and one-half of that is now in the supplemental appropriations bill for 2001. There is some hope that the Senate on a bipartisan basis may add double that figure to $600 million for the supplemental.

The President has repeatedly expressed his concern for LIHEAP as recently as in his trip to the west coast 2 weeks ago, and he is obviously feeling the constraints as well. The administration's request on LIHEAP actually is 20 percent below the current outlays of the energy program. This comes in spite of the Department of Energy predicting no real energy price changes, in the upcoming year.

I would hope that as you look at the energy policy, as you look at programs that make a difference in the lives of people, that you keep an eye on both weatherization and the LIHEAP program. Senators Murkowski and Lott have sought to increase LIHEAP to $3.4 billion through fiscal year 2010 and increase weatherization from $250 million up to $500 million by fiscal year 2005. The Senate has also adopted with bipartisan support an amendment to the bankruptcy legislation that would increase LIHEAP authorization to $3.4 billion. Many, including Senator Domenici, joined on that amendment.

Low-income families need your assistance, and they need to be remembered as this debate develops. According to DOE, more than 1.1 million low-income families lost their heat in winter for several days or more because of their inability to pay in 1997. We believe this year will be worse than in any recent year in history. Our agencies have cobbled together many programs and many program resources to deal with families facing these crises, and move them to shelters, evaluate them for food and medical and other benefits that could help them pay their bills; however, all of the programs that help the low-income cope with the effects of this devastating energy crisis in some way are supported by Federal (or State) dis-

cretionary funds, so strategies need to be considered and dealt with in light of the budget caps and uncertain funding in the future.

We hope your committee over the coming year will seek to recognize low-income energy concerns in both the policy and the spending priorities so that low-income energy consumers are not left out in the proverbial cold. Thank you very much.

Chairman NUSSLE. Thank you very much.

[The information referred to follows:]

PREPARED STATEMENT OF DAVID BRADLEY, EXECUTIVE DIRECTOR, THE NATIONAL COMMUNITY ACTION FOUNDATION

My name is David Bradley, Executive Director for The National Community Action Foundation (NCAF). NCAF is a private, non-profit organization which serves as an advocate and lobbyist for low-income programs. NCAF works on a broad range of issues, including: including the Community Services Block Grant, the Low-Income Home Energy Assistance, Weatherization, Workforce Development, Housing and Shelter for the Homeless, Health, Nutrition, Tax and Incomes Policy, Welfare Reform, Head Start, Child Care Block Grant. Community Action Agencies deliver most of the DOE Weatherization Assistance Program services, about 40 percent of the LIHEAP benefits and services, and more than $100 million of "leveraged" energy resources such as energy efficiency contracts from investor-owned utilities.

Our Community Action Agencies also work on redesigning and expanding the limited resources available today for keeping energy supplies flowing to the homes of the poor. They have been advocates at utility commissions and legislatures when the needs of residential customers are at stake.

Many members of this Committee have been vocally concerned about the energy situation we have faced this year. Members from both Majority and Minority of this committee are counted among the longstanding champions of LIHEAP. The Ranking Member, Mr. Spratt is a long time champion of a vast range of our local initiatives. Congressman Moran is fresh off the field of funding battles on which, together, we fought for the President's Request for Weatherization last week—and got most of the way to victory.

A recent report, "The Winter Behind, the Summer Ahead: Low-Income Energy Consumers Face a Harsh Spring by Economic Opportunity Studies of Washington" confirms in cold statistics the growing anguish of low-income energy consumers. I am attaching a copy for the Committee Record; using Department of Energy statistics, it shows:

• Over the fiscal year 2001, the poor will need to spend about one-fifth of their entire income to purchase their basic home energy supplies for heat, hot water, lights and appliances;

• Worse, during the winter, the majority of poor ran up bills equal to nearly 30 percent of their entire winter income;

• These burdens were far worse for some:

• For homes heated with natural gas, bills since October for gas and electricity together have averaged $1100 so far; they can expect another $700 in costs for all energy before next fall;

• Fuel-oil users have spent about the same as gas customers so far this year; they face slightly lower summer bills:

• Propane users have been hit hard; their heating season costs, usually lower than average, averaged over $1000;

• Homes heated by electricity did not fully experience the price increases in gas this winter; their heating season bills averaged over $500 for all fuels; that statistic brings down the national average for all the poor. (DOE predicts no change in electricity costs; the bills we are seeing from communities across the country suggest the opposite, and we expect the burdens of electric heat users to become far worse shortly;)

• The households, who are not low-income, the majority of home consumers, will see annual energy bills total about 40 percent more on average than in past year, but their Energy Burden, or the percent of income they have to devote to energy, will be less than 5 percent—as compared to 20 percent for the poor. The change means they have to give up nearly 1 percent more of their budget on average this year; for moderate income families, the percentage is higher, of course. And this is a significant expenditure to most families. Other spending will be delayed.

To put it another way, if the energy bills of a family with $50,000 a year ate up the same share of its income that the annual energy bills of low-income families de-

vour, their average energy bills for would be $10,000. Of that, they would already owe more than $6,000 today!

When economics or nature brings on such crises, most families adjust activities to pay for necessities. The poor do not eat out, take trips or plan home remodeling that can be put off, they do not have the savings to tap. This year, most of them do not expect a tax refund check. The poor, who not have enough disposable income to meet their needs and deal with life's unpleasant surprises at any time, face dramatic reductions in their budgets for food, shelter, medicine and other necessities. LIHEAP resources available this year have not kept up—but cuts loom in the future, nevertheless. The President's Budget Request would be a quarter lower than the resources available this year, if he chooses to release all emergency contingency funds.

Mr. Chairman, the 29 million households that quality for LIHEAP will have spent $44 billion for their household energy in fiscal year 2001. Available LIHEAP totaled about $2.3 billion in Federal funds and perhaps another $200 million in contributions from charities, states and utilities. These funds are exhausted in most states; caseloads went up by about a million families, including people our local CAA's have never seen come seeking help. We are told by the utilities that unpaid debts are at record levels and that stoppages of utility service will follow. We are hoping for a $600 million supplemental.

In other words, $2.5 billion cannot meet the need this winter. The future, under the new Budget Resolution, portends reductions in real discretionary spending.

The Outlook: Similar bills, growing debt, shrinking assistance resources.

Mr. Chairman, the reason consumer energy costs are national headlines is the story about the new price of natural gas. 60 percent of all Americans use gas, most of them for home heat. Natural gas deregulation is complete; this winter was a trial run of market pricing of this basic, irreplaceable commodity under severe weather conditions. It has proved deregulation of a basic commodity means consumer prices will be unstable, at best, as demand is at the mercy of weather and the industry's needs. To the poor, this market means they cannot afford to be housed, fed and clothed, and to keep warm all in the same month.

There is no reason to believe these energy costs represent a short term or unpredictable phenomenon. In most areas, this winter's weather was not extreme; the weather service averaged about 7 percent colder than normal. This was far worse than in the previous 2 years that were warmer than normal and may have been the aberration. Normal weather will recur.

Further, retail gas and oil prices, while at record highs, are predicted by DOE to remain at comparable levels for several years. Attached is DOE's table of predicted residential costs: As you can see, natural gas prices are expected to be 24 percent higher next summer than this year, and roughly the same this winter. In 2002, they are not expected to improve. The Department of Energy predicts next years natural gas price, and the price this year will be essentially the same. $ 9.77 and $ 9.02. Fuel oil and propane prices are expected to be the same as well. And that is based on the weather being normal. The debts of the poor will keep growing, and the LIHEAP resources will not.

WEATHERIZATION—a real solution but constrained by the spending caps:

We are delighted to be working with the administration, which recognizes Weatherization Assistance is an effective way to provide immediate and permanent energy cost reductions to the neediest low-income consumers. No other Federal program can promise comparable cost-effective, long-term impact on the energy burdens of the poor, while reducing demand so that all consumers benefit.

The Impact of the Proposed 2002 Funding Increases:

• If the current Administration's Budget for FY 2002 restores the program to historic levels, family energy bill savings worth about $37 million per year will be added annually, or about $555 million over the life of the energy improvements purchased with the additional $120 million.

Relieving the burden of rising bills, for years to come:

• About $48 million was billed to poor families this year that could have been avoided if the original program levels had been maintained over the past 5 years. In 1994, the Weatherization Program had planned to improve 200,000 more low-income homes by now than have actually been improved.

• While 15 to 20 million more low-income homes need Weatherization, about 5 million homes have already been Weatherized with DOE and leveraged funding in tandem since 1979. Taking into account the changes in the homes and the improvements program over time, the avoided energy cost—the fuel not used and not billed to that low-income population of Weatherized homes this year—is about one billion dollars. Clearly, this is comparable to nearly half of LIHEAP expenditures this year.

But we did not win the full Presidential request in the Interior Appropriations for 2002. Constraints on discretionary funds are pressing downwards on even this bipartisan initiative. We hope to regain ground, with the help of the White House, before spending levels are set in stone..

And, finally, Mr. Chairman, those two domestic programs are not the only tools to solve this crisis; yet the proposed Additional Energy Policy offers nothing for the mid-term or long term needs of residential consumers.

• The supply of residential gas, fuel oil, and propane needs to be stabilized by re-building storage near the consumer, as proposed by the House Democratic Caucus;

• Regulations governing consumer protections, conditions in which families, children and or the elderly may be left in the dark or cold because they cannot pay must be re-examined. There is no longer real 'universal service!' The Federal Trade Commission should have a role in regulating the denial of service as a routine collection practice.

• Our public and rural power system has virtually no protections nor help for needy families—yet we continue to heavily subsidize its growth and operations.

• There were extraordinary fuel bills charged to our local Community Action Agencies, too. Our Head Start and Senior Day Care centers are not in modern updated facilities, not our multi-service centers, out Weatherization crew offices nor our food pantries. CAAs stayed open nights and weekends through the worst of winter, and our overhead has skyrocketed. Our services may suffer; there are no Weatherization grants, subsidized loans or tax credits for our community-based centers.

• Indeed, the tax cut bill just put in place not only constrains programs, it put an end to the hope expressed in the programs of both parties that call for targeted tax credits as incentives for new technology and efficiency. CAAs could have used such credits as they use real estate investment credits, to lower the cost of energy efficient community developments.

In closing, we appreciate this opportunity to emphasize that the benefits of market pricing are really only available to those who can respond to them. The poor cannot, and our local community action agencies cannot. The nation must find a better response and more effective protection for the growing numbers of vulnerable families hurt by the new and transformed energy economy.

Chairman NUSSLE. Mr. Beach.

STATEMENT OF WILLIAM W. BEACH

Mr. BEACH. Thank you very much, Mr. Chairman. My name is William W. Beach. I am the director of the Center for Data Analysis at the Heritage Foundation, and I will exercise my privilege as one of the last witnesses and keep this very, very brief. Let me just read a few paragraphs from my submitted remarks.

The President's energy plan shows great promise on a crucial redirection toward greater energy supply. The plan achieves greater energy production by prudently altering the schedule for attaining certain emission goals that power is generating, and refine facilities are encouraging conservation, developing alternative energy sources, encouraging gas and petroleum exploration, and supporting efforts to achieve more energy-efficient homes and office buildings. Indeed, the plan may be faulted, if for anything, for doing too much, not too little. It dramatically changes the course of energy neglect and bad practices by State and Federal Government over the past 10 years.

If Congress enacts key components of the President's plan, long-term prices for electricity and gasoline as well as its natural gas and coal will likely be lower than currently forecasted. The economic benefits of generally lower energy prices have been reviewed by the chief economist over at the Council of Economic Advisers, and it was put it in this testimony, and I won't go through them in any great detail except to say that it would generally raise the economy, indeed just as especially high petroleum prices almost al-

ways lead to sharp economic slowdowns in the U.S. economy. And that is almost without exception since World War II the case: lower-than-expected energy prices almost always support improved economic performance.

It is commonly known that the surplus, or technically the net deficit, of which your committee is keenly concerned, of the Federal Government is intimately tied to long-term economic performance. Any set of events or policy changes that push the U.S. economy on a higher growth path usually results in improved financial performance. Tax cuts have this effect, and so do sustained reductions in energy prices.

Your committee asked me to perform a simulation, which I now report to you. I used the very standard model of the U.S. economy used by Fortune 500 companies. Most of the agencies which testified before you during the course of the year and many, many think tanks around town and the United States we felt we needed macroeconomic model to illustrate the economic and financial effects of a modest decline in energy prices, in this case a 10 percent reduction in crude oil prices beginning in the fourth quarter of this year through the end of 2011.

Mr. Chairman, we are busy almost around the clock doing an analysis of the President's plan, and I would be more than happy at some future time to come back and report the results of those, but this little simulation indicates the direction of our results.

While many in Congress and certainly the President have in mind much more aggressive energy solutions than the one I have chosen here, what is true of this small change will hold for those envisioned in the more global plan. The economic model indicates the following probable effects of crude oil changes, of this decline of 10 percent, will occur if that 10 percent decline begins in the fourth quarter of 2001.

First, inflation-adjusted gross domestic price product prices by an average of $52 billion per year between 2001 and 2011. This is after inflation or by about one-half of a percentage point. The near-term economic growth rate rises by three-tenths of a percentage point, and that is a significant and fairly substantial response from just that small of a decline in oil.

Secondly, the decline in oil prices produces an average of 173,000 more jobs per year. The increased productivity of the economy accommodates those new jobs, and the unemployment rate drops consistently below the forecast with higher oil prices. I have a chart in my extended remarks called chart 2 which shows the employment side. The civilian labor force increases by a small amount in the first 6 months following the decline, about 2,000 jobs, before bounding up to 205,000 additional jobs by the end of the second year. Productivity gains keep the unemployment rate amazingly below the baseline forecast throughout this entire 10-year period. Fixed investment, adjusted for inflation, increases by a total of $202 billion over the 10-year period.

Now, with respect to Federal revenues, we see a modest increase in Federal revenues, but we have a significantly lower expenditure picture in the forecast period. As my fifth chart shows, lower energy costs reduce Federal outlays.

Some observers of the Federal budget process need to be reminded, certainly not yourself, Mr. Chairman, that the surplus frequently changes for nonrevenue reasons. Enormous attention paid to the tax policy changes over the past several months likely has obscured the fact that the general fund surplus is affected by changes in outlays more often than it is affected by revenue variation. Our analysis indicates that this small change in petroleum prices would produce a total of $100 billion in lower outlay savings for the Federal budget over the next 10 years, so it is a $100 billion drop which you are currently looking at as your forecast.

The reduction in energy prices results in a modest drop in inflation. While this decrease in the CPI affects the budget positively, it results in small decreases in revenues when compared with the baseline.

And finally, as my sixth chart shows, the net effect of revenue and outlay changes adds a total of $76 billion to unified budget surpluses over this 10-year period, of which the greatest part is attributable to the general fund, and if your own estimates of what the President has proposed are correct, both on the tax side and on the budget side, it essentially means that if we see a 10 percent drop in petroleum prices, the surplus will rise sufficiently to cover all of the costs that you are looking at now in this 10-year plan.

Considering that the crude oil policy changes largely enhance U.S. exploration and drilling, combined with foreign policy moves toward OPEC constitutes a small portion of the President's plan, it is doubtful save to assert that the results of a comprehensive modeling of this initiative will show much greater and larger budget results. That modeling effort is now under way at the Center for Data Analysis.

Thank you, Mr. Chairman.

Chairman NUSSLE. Thank you.

[The information referred to follows:]

PREPARED STATEMENT OF WILLIAM W. BEACH, DIRECTOR, CENTER FOR DATA ANALYSIS, THE HERITAGE FOUNDATION

The current energy problems in the western and New England states, particularly California and New York, stem from a combination of Federal and state policy failures and higher foreign oil prices. While the low supplies of gasoline and the prices of electrical power that brought these problems to national attention have begun to improve, the underlying policy challenges remain. U.S. consumers of gasoline and electricity need more domestically produced supply, and Federal energy policy needs now to be redirected to producing wide-ranging increases in supply.

The President's energy plan shows great promise on this crucial redirection toward greater supply. The plan achieves greater energy production by prudently altering the schedule for attaining certain emission goals at power generating and refining facilities, encouraging conservation, developing alternative energy sources, encouraging gas and petroleum exploration, and supporting efforts to achieve more energy efficient homes and office buildings. Indeed, the plan may be faulted for doing too much, not too little. It dramatically changes the course of energy neglect and bad practices by state and Federal Governments over the past 10 years.

If Congress enacts key components of the President's plan, long-term prices for electricity and gasoline (as well as natural gas and coal) will likely be lower than currently forecasted. The economic benefits of generally lower energy prices are widely shared throughout the economy in the form of higher productivity, higher real wages, and greater levels of economic output than would otherwise result from generally higher energy prices. Indeed, just as especially high petroleum prices almost always lead to sharp economic slowdowns in the United States, lower than expected energy prices almost always support improved economic performance.

It is commonly known that the surplus (or, technically, the net deficit) of the Federal Government is intimately tied to long-term economic performance. Any set of events or policy changes that puts the U.S. economy on a higher growth path usually results in improved financial performance. Tax cuts have this effect and so do sustained reductions in energy prices.

I used the WEFA Macroeconomic Model to illustrate the economic and financial effects of a modest decline in energy prices, in this case a 10-percent reduction in crude oil prices beginning in the fourth quarter of this year through the end of 2011. While many in Congress and certainly the President have in mind much more aggressive energy solutions than the one I've chose here, what is true of this small change will hold for those envisioned in the more global plans.

The WEFA Macroeconomic Model is well suited for this simulation. Besides being one of the oldest and most widely respected models of the U.S. economy, it is in extensive use in Fortune 500 companies and throughout the Federal Government. The Heritage Foundation has been using the WEFA model for the past 4 years to perform simulations of major policy changes.

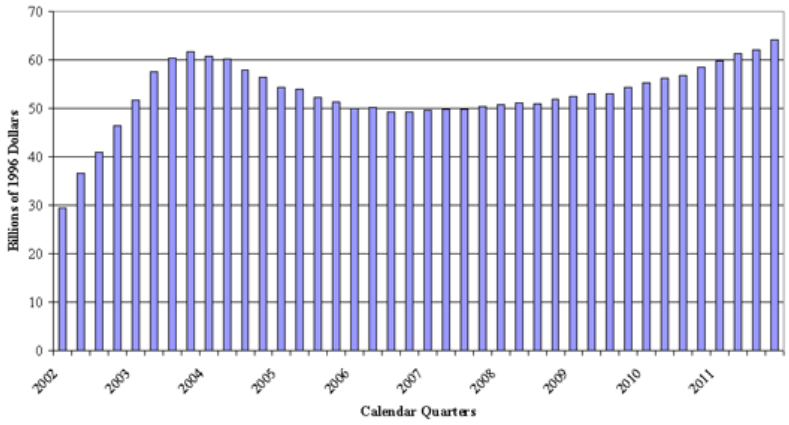
In preparing this simulation, no other changes were made to the model. In other words, I did not assume that the labor force would grow as non-workers decided to take advantage of increased economic activity to enter the labor force. Nor did I assume that borrowing costs would be lower than predicted by the model itself. It actually is quite common for economists to make these assumptions, and both of these changes to the model would have significantly improved the results. In other words, I allowed the model to calculate the effects of the one change I did impose on the equations: a 10-percent drop in petroleum prices.

This economic model indicates the following probable effects if crude oil prices decline by 10 percent beginning in the fourth quarter of 2001:

• Inflation adjusted Gross Domestic Product rises by an average of $52 billion dollars per year between 2001 and 2011, or by about one-half of a percentage point. The near-term economic growth rate rises by .3 percent.

Chart 1 shows the pattern of forecasted GDP growth following the price decline. Output jumps by nearly $30 billion above baseline in the first year before doubling by the end of the third year following the initial price drop. The sustained patter of above-baseline forecasts indicates that the energy price decline had a significant effect on economic productive.

Chart 1
Additional Gross Domestic Product
(After Inflation)

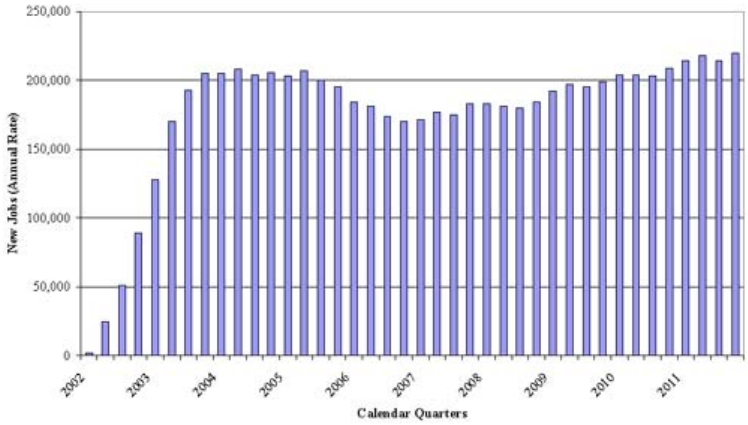


• The decline in oil prices produces an average of 173,000 more jobs per year. The increased productivity of the economy accommodates these new jobs, and the unemployment rates drops consistently below a forecast with higher oil prices.

Chart 2 shows the employment side of the output growth. The civilian labor force increases by a small amount the first 6 months following the price decline (about 2,000 jobs) before bounding up to 205,000 new jobs above baseline at the end of the

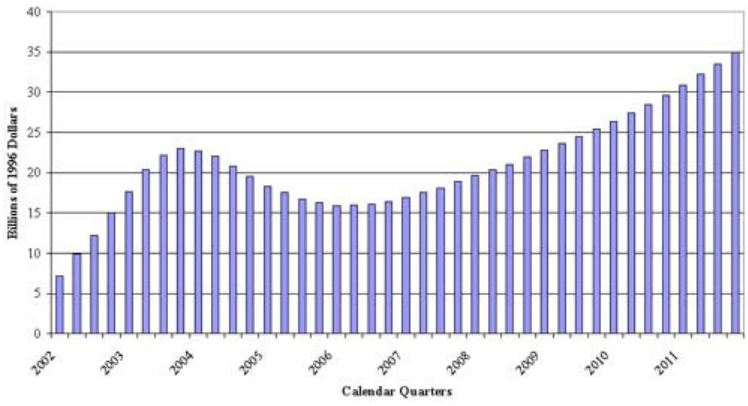
second year. Productivity gains keep the unemployment rate below the baseline forecast throughout the 10-year period.

Chart 2
Increase in Civilian Employment



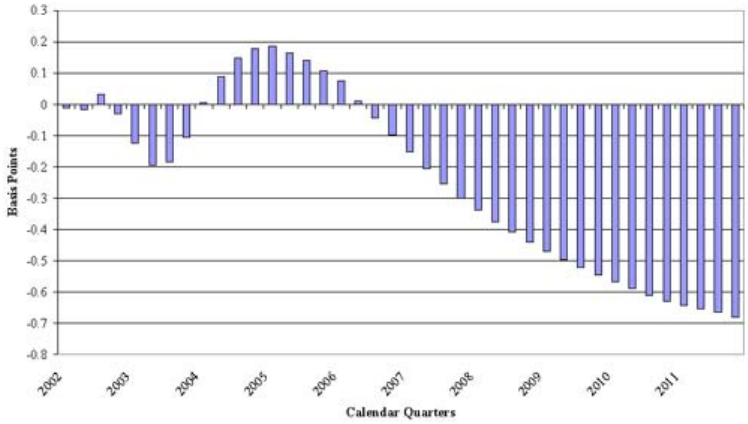
• As Chart 3 shows, fixed investment adjusted for inflation increases by a total of $202 billion over the 10-year period, and the annual rate of investment is nearly 1 percent higher than baseline.

Chart 3
Additional Fixed Investment
(After Inflation)



One important reason for the growth in fixed investment (investment in plant and equipment) is the forecasted lower cost of capital. Chart 4 shows the pattern of capital cost changes. At the end of the period, the user cost of capital is about 70 basis points below baseline.

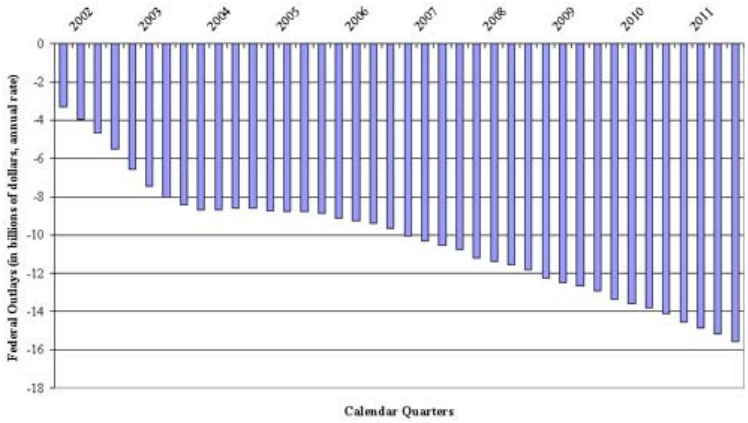
Chart 4
Capital Costs Fall



• The effect of greater economic activity modestly increases Federal revenues and produces significantly lower expenditures.

As Chart 5 shows, lower energy costs reduces Federal outlays. Some observers of the Federal budget process need to be reminded that the surplus frequently changes for non-revenue reasons. The enormous attention paid to tax policy change over the past several months likely has obscured the fact the that the general fund surplus is affected by changes in outlays more often than it is affected by revenue variation.

Chart 5
Change in Federal Outlays

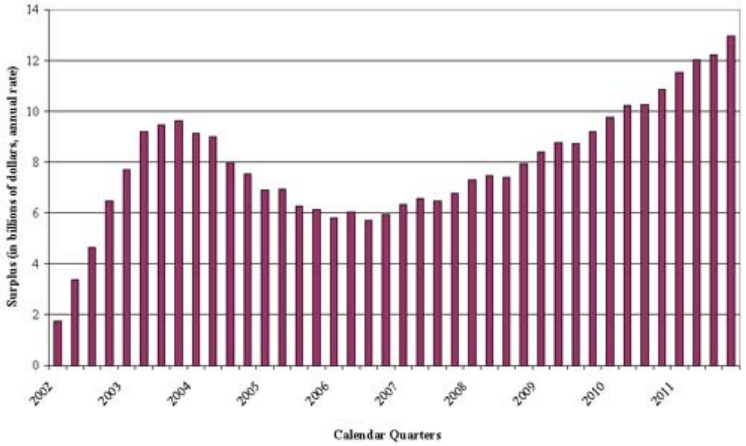


Our analysis indicates that this small change in petroleum prices would produce a total of about $100 billion in outlay savings to the Federal Government over this 10-year period.

The reduction in energy prices results in a modest drop in inflation. While this decrease in the CPI affects the budget positively, it results in small decreases in revenues when compared with baseline.

• As Chart 6 shows, the net effect of revenue and outlay changes adds a total of $76 billion to unified budget surpluses over this 10-year period, of which the greatest part is attributable to the general fund.

Chart 6
Addtional Federal Surplus from 10 Percent Lower Petroleum Prices



Considering that the crude oil policy changes (largely enhanced U.S. exploration and drilling combined with foreign policy moves toward OPEC) constitutes a small portion of the President's plan, it is doubtless safe to assert that the results of a comprehensive modeling of this initiative will show much larger budget results. That modeling effort now is underway in the Center for Data Analysis.

Chairman NUSSLE. Mr. Bradley.

STATEMENT OF JUSTIN D. BRADLEY

Mr. JUSTIN BRADLEY. Thank you, Mr. Chairman. I am Justin D. Bradley, and I am the energy director for the Silicon Valley Manufacturing Group, and actually with two Bradleys on and a Beach, perhaps we get a 3-D look at this issue and get a tan while doing it.

With that said, what I would like to do is talk a bit about the manufacturing group and what we are doing.

Manufacturing Group is a public policy trade association that was founded 22 years ago by David Packard of Hewlett-Packard ironically to address this very issue, the energy crisis of the late 1970's, and today represents over 190 of the most respected high-tech employers and supporting industries. And collectively we employ more than 270,000 workers in Silicon Valley alone, representing 1 in 4 of the private sector work force. And all together, the Silicon Valley economy generates a gross annual regional product

of $106 billion, with a Bay area economy at $350 billion, or one-third of California's economy.

And one additional fact for those of you who invest is that one-third of the Nation's venture capital goes to that little region. So there is a lot at stake when we talk about energy policy for California, for the Western region and for the Nation when we talk about these matters.

Some perspective first. It was about 1 year ago that I testified before the House Commerce Committee about energy, and I was on a panel with quite a few folks who were testifying about the high price of gasoline in the Midwest, and there was a lot of motion around that topic. Prices bring that kind of attention, I believe, because of the immediate understanding and impact on people who consume those products.

After I had finished, there was not a single question about energy, in part because it hadn't really reached the national consciousness yet. It was only days before that we had our first blackout in the Bay area because of a regional heat wave. Since then California has endured numerous blackouts, is over $20 billion in debt from utility and State undercollections. And the market and customer choice is apparently dead, and we are still struggling to find a solution. The issue has become theatrical, and in other means, to polarize and create additional economic uncertainty.

I wish to enter into the record a report on California's energy crisis and its impact on the Bay area economy, coauthored by the Bay Area Economic Forum, and I believe you have a copy with you right now. I am not going to go into detail on this. I am just going to highlight a few points in there, and then I can take some questions.

First, the energy crisis in California and the west coast is a crisis of inadequate infrastructure to meet growing demand. The perfect storm of unprecedented economic growth, lack of adequate rainfall in the West, unusually high summer temperatures, unscheduled outages from aging generation facilities exposed our lack of local generation, transmission line and natural gas pipeline bottlenecks.

The Bay area economy grew at an average rate of 9 percent per year from 1995 to 1999, compared to 4 percent for the rest of the U.S. During the same period. However, growth of the energy intensity did not follow that in the business sector, although it did in the residential. In fact, there is also a crisis building in natural gas. Because of transmission constraints and increasing reliance on natural gas to make power, California faces the risk of fully depleting storage late this winter. When the gas is issued in short supply, power plants are the first to have delivery curtailed; thus a winter shortage could mean more blackouts.

Second, it is a crisis of inadequate market models. California's deregulation model undercut the development of direct access from customer to supplier and forced the market to rely artificially on the spot market. When opportunities for adjustments came, particularly last summer, in the form of long-term contracts, regulatory authorities did not respond adequately. The legislative solution that finally arrived in early 2001 put the State in the sole role of procuring power, killing direct access for customers and a competitive market.

Third, the lack of reliable energy is the greatest threat to the economy. Although many business sectors with low margins are highly rate-sensitive, such as bioscientists, heavy manufacturing and resource extraction, and high rates are devastating to them, the impact of unreliable power, blackouts, is many times that of the rising cost of power. And in this document you will see many factors of analysis that illustrate how it does affect the various business sectors, and you can get a sense for where the greatest impact is in terms of rate and in terms of unreliability.

But the impact of unreliable power is many times that of the rising cost of power. The value of lost power is, for the residential customer, about 30 times the price of the power had it been available. For businesses it is much higher, ranging from $11 to $53 a kilowatt hour. Another way to express it is that each megawatt hour of power that goes undelivered represents about $16,000 of lost California economic output. The economic impact to Bay area business customers, a 50 percent rate hike would cost 500- to 600 million. A modest number of blackouts this summer would cost the Bay area economy from 1- to 5 billion, reducing growth rate by up to 1 percent. Worst case weather projections could make that impact grow to 20 billion.

Recommendations: First of all, resolving the crisis today should not come at the cost or expense of the long-term competitiveness of the economy. National energy policy can do much to help stabilize the energy situation in the Western United States. We are already working strongly on conservation, load management and energy efficiency. There has been a steep drop in the use of electricity over the past year, some estimates over 10 percent, so we are doing our part.

We also have programs that incentivize energy conservation and load management that are beginning to be understood better, but it is so complex that oftentimes information needs to get in the hands of those who may use these programs so they can understand how they can benefit.

But perhaps the single most important element to restoring and ensuring that customers can obtain direct access to energy contracts in the transmission system, and, in fact, this is an issue of great importance this month because the California Public Utilities Commission is going to decide whether or not to close the door permanently on direct access on the 28th of June. Customer choice is essential to this, and it is the best way to bring the most power at the lowest prices to the State and the Western region.

Immediate and expedited investment in power and natural gas transmission capability; otherwise we may be seeing a much larger crisis in the coming years.

Support funding for the National Energy Reliability Initiative in the fiscal 2002 budget. It is a joint public/private partnership to fund research and development in on-site power generation, transmission distribution, natural gas infrastructure, advance power controls to meet the energy needs of the digital economy.

Employ probabilistic modeling tools to break decision gridlock.

Accelerate commitment of capital in the public and private sector. This can help companies decide whether to invest and distribute generation or employ real-time pricing as a strategy. And I

bring this up because oftentimes there are so many mutually dependent, complicated variables that do nothing is the option that is selected rather than taking something that has an objective financial benefit.

And finally, employ a cooperative approach between Federal and State authorities. Energy policy must be based primarily on sound economic principles. We need strong Federal leadership that takes the high road, understanding this is a very complex issue, defining simple short-term fixes and requiring healthy cooperation and good faith.

And on behalf of the Silicon Valley Manufacturing Group, thank you for the opportunity to comment.

Chairman NUSSLE. Thank you very much.

[The information referred to follows:]

PREPARED STATEMENT OF JUSTIN D. BRADLEY, DIRECTOR OF ENERGY PROGRAMS, SILICON VALLEY MANUFACTURING GROUP

Mr. Chairman and members of the Committee, my name is Justin D. Bradley. I am the Director of Energy Programs for the Silicon Valley Manufacturing Group ("Manufacturing Group"). Thank you for providing the Manufacturing Group the opportunity to testify before this Committee on the economic and budgetary effects of national energy policy. The Manufacturing Group is a public policy trade association that was founded 22 years ago by David Packard of Hewlett Packard in response to the energy crisis of the late 70's. Today, it represents over 190 of the most respected high-tech employers and supporting industries. Collectively, we employ more than 275,000 workers in Silicon Valley alone representing one in four of the private sector workforce. Altogether, the Silicon Valley economy generates a gross annual regional product of over $106 billion, with the Bay Area economy at $350 billion or one third of California's output. In addition, one third of the nation's venture capital ($13.5 Billion) was invested in the region in 2000.

PERSPECTIVE

One year ago I testified before the House Commerce Committee warning on the impacts of a looming energy crisis on California, and it's economic impact on the state and the U.S. After I finished, there was not a single question. All the attention was on the matter of the cost of gasoline in the Midwest. Not only was there little interest in this issue, I was later challenged as being out of touch with the issue. Since then California has endured numerous blackouts, is over $20 billion in debt, the market and customer choice apparently dead, and is struggling to find a solution. The issue has become low theater, and another means to polarize and create additional economic uncertainty.

I wish to enter into the record a report on California's energy crisis and its impact on the Bay Area economy authored by the Bay Area Economic Forum (a partnership of the Bay Area Council and Association of Bay Area Governments—of which SVMG was a contributing member). The report was released at SVMG's Energy Tools conference at Oracle Corporation on April 20, 2001 and is entitled "The Bay Area—A Knowledge Economy Needs Power." The results show the tremendous economic impact of unreliable power on the information economy. I would like to take the time to highlight just a few of the key results of the research and then follow with recommendations.

First, the energy crisis in California is a crisis of inadequate infrastructure to meet growing demand. The perfect storm of unprecedented economic growth, lack of adequate rainfall in the west, unusually high summer temperatures, unscheduled outages from aging generation facilities exposed our lack of local generation, transmission line and natural gas pipeline bottlenecks. The Bay Area Economy grew at an average rate of 9 percent per year from 1995-1999 compared to 4 percent for the U.S. during the same period. However, growth of energy intensity was most prominent among residential users.

In fact, there is also a quiet crisis building in natural gas. Because of transmission constraints and an increasing reliance on natural gas to make power, California faces the risk of fully depleted storage late in this winter. When the gas is in short supply, power plants are the first to have delivery curtailed. Thus a winter shortage could mean more blackouts.

Second, it is a crisis of inadequate market models. California's "deregulation" model undercut the development of direct access from customer to supplier and forced the market to rely artificially on the spot market. When opportunities for adjustment came, particularly last summer in the form of long-term contracts, regulatory authorities did not respond. The legislative solution that finally arrived in early 2001 put the state in the sole role of procuring power, killed direct access for customers and a competitive market.

Third, Lack of reliability is the greatest threat to the economy. Many business sectors are highly rate sensitive such as biosciences, heavy manufacturing and resource extraction, and high rates are devastating to them. But the impact of unreliable power (blackouts) is many times that of rising cost of power. The value of lost power is for the residential consumer is about 30 times the price of the power had it been available. For business it is much higher, ranging from $11 to $53/kWh. Another way to express it is that each megawatt hour of power that goes undelivered represents about $16,000 of lost California economic output. The economic impact to Bay Area Business customers of a 50 percent rate hike will cost $500-600 million. A modest number of blackouts this summer would cost the Bay Area economy from $1-5 billion reducing the growth rate by up to 1 percent. Worst-case weather projections could make that impact grow to $20 billion.

RECOMMENDATIONS

What must be done? National energy policy can do much to help stabilize the energy situation in the western United States.

• Perhaps the single most important element is restoring and ensuring that customers can obtain direct access to energy contracts and the transmission system. A functioning and competitive wholesale and retail power market is the best way to bring the most power at the lowest prices to the state and western region.

• Immediate and expedited investment in power and natural gas transmission capability, otherwise we may be seeing a much larger crisis in coming years.

• Support funding for the National Energy Reliability Initiative in fiscal year 2002 budget. NERI is a joint public/private partnership to fund research and development in on-site power generation, transmission and distribution, natural gas infrastructure, advanced power control to meet the energy needs of the digital economy.

• Employ probablistic modeling tools to break decision gridlock and accelerate commitment of capital in the public and private sector. This can help companies decide whether to invest in distributed generation or employ of real time pricing.

• Employ a cooperative approach between Federal and state authorities. Energy policy must be based primarily on sound economic principles, not clever sound bites that appeal to voters. We need strong Federal leadership that takes the high road, understanding this is a very complex and difficult issue defying simple short-term fixes and requiring healthy cooperation and good faith.

On behalf of the Silicon Valley Manufacturing Group, thank you for giving me this opportunity to provide these comments.

Chairman NUSSLE. First, you had the opportunity to listen to much of the testimony today, and there has been a lot of so-called experts who don't live in California coming, obviously other than Representative Filner, that have been trying to tell us and give us the advice of what has been going on in California. Do you take any exception with their testimony? Do you have anything to add as far as lessons learned as we move forward? I mean, your analysis, and I haven't had a chance to read the whole thing, but I think you touch on a number of similar items, but is there anything you want to add to what they have suggested, or subtract or take issue with in their analysis of what has been happening in California?

Mr. JUSTIN BRADLEY. I guess I just want to highlight again my main point is that it is very easy to talk about price because it is something everyone understands, and it is a very important issue and affects many of our member companies deeply and can cause them to shift their operations out of State, perhaps to another country. It is much more difficult to talk about reliability or the availability of power because people don't get the concept quite as

well, but the multiplied impact on the economy of the lack of available power is something that must be understood and responded to. It is somewhere between four and eight times as big an impact as is price. Price is important, but we must do the kinds of short- and long-term strategies that help ensure that we have reliable power.

Chairman NUSSLE. So as we look at this impact on the overall budget, as we look at strategies, long-term strategies, to take into consideration all of the different angles, what you are highlighting today is the premise that has been made on both of the former panels, that volatility in supply and volatility in price is as important as any other factor that we need to look at? That is basically what you are telling us?

Mr. JUSTIN BRADLEY. Well, certainly volatility is a sign that the market and its regulating mechanisms are not responding the way they should. It is much like what happens with Hansen's disease. If you can't feel the stimulus and respond to it quickly, then there is damage that happens, and a healthy market needs to have those kinds of stimuli restored to it so that it works. And volatility tends to tell us that those signals are not reaching the proper end point so we can make those kind of adjustments.

Chairman NUSSLE. Thank you.

Mr. Beach, I just want to understand why you decided, maybe you said this and I just didn't catch it, why did you decide to assume a 10-percent drop in petroleum prices at a time when most of us are experiencing increases? I mean, why do you use that as your modeling example?

Mr. BEACH. There was a couple of reasons for that, Mr. Chairman. The scope of work that I had laid out for me today was to give you an illustration of what it would mean if energy prices were to fall. It is a matter of historical record that we have had 10 percent drops and increases in oil prices. As a consequence of that, I have a model that has all those price volatility items in it, and it is, of course—a very good thing if you are going to measure something in this model. It had happened in the past.

Thirdly, the President's plan would easily produce, we think, over the course of time a 10 percent drop in west Texas intermediate crude, probably even more than that, and if you combine that with the new source review extensions and redefinitions that is recommended, that is refining power distribution companies would not have to comply as quickly and as greatly with the nitrogen oxide and sulfur dioxide and other kinds of volatile organic compound requirements, if you say, well, look, that is going to happen, you have a tremendous jump in energy in the short run such that it is altogether possible that that will drop the price of natural gas below its exploration break-even point.

We chose the simplest possible path today to illustrate to you what it would mean to the budget, and we can supply your staff with even greater detail just on this simple simulation.

In inflation drops, for example, when inflation drops, your wage and salary tax base doesn't grow as rapidly, so you don't have that revenue bump that you might think that you get with a stronger economic growth if you have lower inflation. So most of your benefits come off on the spending side. So there were a lot of reasons that militated against a complex simulation.

I guess the last reason, Mr. Chairman, is that we are doing it right now, and when it is complete, we would be happy to send it to you.

Chairman NUSSLE. And just so I am clear, the record is clear, in order for this model to be correct, when are you assuming enactment of the national energy strategy?

Mr. BEACH. Well, if by some miracle it were enacted by the end of this year, that is how this particular model works. Now, we could enact it at the end of next year, and results would be just moved out 1 year in your budget year, approximately the same results, not approximately the same numbers.

Models are really good. I am a big advocate of dynamic scoring. I will be working with many committees on that over the next year. They are a very good tool for giving you as the decisionmaker insight of what it means if we take a certain policy change, because they bring an enormously complex constellation of issues and concerns together much more than the human mind can even think about at any one particular point in time and solves those for you in a systematic way. And I think this was a very interesting set of results.

I should say we ought to seriously moving forward with some sort of energy plan in the expectation that the surplus might, in fact, pay for some key parts of it.

Chairman NUSSLE. And then my last question is only have you had the ability to test this model? It is great to have a model, it is great to have forecast, but if you didn't predict last Sunday's weather correctly, and you spoiled my picnic with my family, I am not going to trust you much in the future. So have you had a chance to test this model in any way, shape or form so we know how much we can rely upon the data that you are providing for us?

Mr. BEACH. Right. All models are inherently inaccurate to a certain extent because they are forecast, and you can't shoot the arrow with the same degree of precision each time. However, we used the oldest commercially available model around. It was developed now over 40 years ago at the University of Pennsylvania by a Nobel Prize winner and his team. It has been used, and it is best to say it has been used by Ford and GM and many, many large companies to do their business forecasting. I think it is the best credential, and we have been very comfortable with it. It was accurate in forecasting our budget surpluses over the last several years within $20 billion, and it has done a nice job for us. There are times when it doesn't predict things like the Asian financial crisis, et cetera, but we have used it reliably.

Chairman NUSSLE. Thank you.

Mr. Spratt.

Mr. SPRATT. David Bradley, appreciate your coming and testifying and your patience and perseverance this morning.

What is the current level of funding for the LIHEAP program?

Mr. DAVID BRADLEY. Currently, $2.25 billion, and for this fiscal year, the House Appropriations Committee has added $300 million in a supplemental, the administration requested $150 million supplemental.

Mr. SPRATT. $300 million in the pending supplemental?

Mr. DAVID BRADLEY. Pending supplemental, and there will probably be a floor amendment for $600 million.

Mr. SPRATT. So that takes the program to 2.5 billion.

Mr. DAVID BRADLEY. At a minimum.

Mr. SPRATT. In the current fiscal year.

If you divide that by the number of beneficiaries, people who actually get a LIHEAP grant, what is the average per beneficiary?

Mr. DAVID BRADLEY. It is 4.1 million people being served by LIHEAP right now. I can get it for you maybe for the record.

Mr. SPRATT. I simply knew from my own experience dealing with community action agencies in my district, they were averaging around $150. Is that in the ballpark?

Mr. DAVID BRADLEY. Yes, in the South.

Mr. SPRATT. That is not very much money at today's price levels. What does that buy the average consumer? How many days?

Mr. DAVID BRADLEY. Well, it will sometimes give them the difference in the course of a month—literally between eating, heating and food or medicine. It makes a real difference in the quality of life that they have. The average beneficiary family is earning under $10,000 a year in income.

Mr. SPRATT. What was the Bush administration's request for fiscal 2002?

Mr. DAVID BRADLEY. $1.4 billion plus $300 million contingency, they—there was some hope, some hope—I think Secretary Thompson is supportive of LIHEAP. It is very important in Wisconsin. I think he is generally supportive. There was some hope that they would come in at $2.25 billion.

Mr. SPRATT. But you say in your testimony that at today's price levels, natural gas and other fuels, $2.5 billion itself is not adequate.

Mr. DAVID BRADLEY. The authorizing committees that look at LIHEAP, as well as the energy committees, and, I might add, even now Minority Leader Lott is looking at $3 to $3.4 billion for LIHEAP as pretty much stopgap. That is a guess, meaning need probably is much higher, but they recognize that $3.4 billion beats $2.25 billion or $1.4 billion plus $300 million. There is a recognition of an increased need on that program.

Mr. SPRATT. Do you have any data about low-income consumers' accounts unpaid, delinquent accounts with utility firms?

Mr. DAVID BRADLEY. Yes. I'd like to provide some for the record. Yes, we have, in many, many of the Members' districts. We have got stories on those that are doing without.

Mr. SPRATT. Well, I appreciate your adding this dimension to the hearing, because a lot of the testimony has been to the effect that if we bear with it, the market will self-correct, it will work these problems out, maybe even optimize the result, and that the shock as a whole that we have experienced can probably be absorbed by the economy. But that is in the aggregate, and there are certainly people out there, lots of people, who can't absorb it, and it makes a major difference in their lives.

Mr. DAVID BRADLEY. And connected with this is the low-income weatherization program. I thought the administration really was quite on target when candidate Bush and President Bush and Secretary Abraham continued to talk about energy conservation, and

particularly the low-income weatherization program, as a central part of their energy policy. It made a lot of sense and certainly sent a good signal to low-income energy consumers.

The reality is that the first step out of the box, we have run into trouble on House Interior Appropriations even though it was a bipartisan coalition supporting it. If you are looking at the administration's 10-year forecast for supporting the program, the very first step out they are falling short of what they promised, and that, clearly, at least in the community I work with, clearly sends mixed signals about whether low-income energy consumers are going to be remembered during this long debate.

Mr. SPRATT. Thank you again for your testimony. If you will submit that for the record, we would appreciate having it.

[The information referred to follows:]

MR. DAVID BRADLEY'S REPLY TO MR. SPRATT'S QUESTION ABOUT LOW-INCOME CONSUMERS DELINQUENT ACCOUNTS WITH UTILITY FIRMS

The State government directors of LIHEAP report to their national association, the National Energy Assistance Directors Association (NEADA), such figures as they may be given by energy vendors. The recent compilation shows mounting terminations of gas and electric service to homes. Even if families find the wherewithal to pay the balance owed, they face stiff reconnection charges and penalties—costs that only add to the sacrifices they will have to make to get the lights back on and keep the heat going next winter.

NCAF believes that the failure of state utility regulators or the FERC to require timely disclosure of the number and location of households who lose service is a major failure of emergency management. Reports rely on informal, even anecdotal evidence. As the rules grow looser to accommodate the market, we can neither track the need by learning how many have remained without utility service for an extended period of time (a sure symptom of inability to pay and impending family crisis) nor identify the current or former LIHEAP participants who may be at life-threatening risk in order to reach out with additional assistance.

The Committee should be aware that not only are LIHEAP payments very limited, but that they are not made available to those facing utility termination unless the amount is adequate to satisfy the collections department of the utility. Along with lack of funds, it's a reason many eligible people are being turned away.

Chairman NUSSLE. Mr. Honda.

Mr. HONDA. Thank you, Mr. Chairman, and I appreciate the witnesses today on the panel.

To Mr. Bradley, the LIHEAP program, I agree, is a good program. I have met with some providers of weatherization, also providers of LIHEAP programs. They are telling me that in a couple of months they are going to be running out of money. So the increase that we are looking at in our budget is probably the $150 million that you sort of quoted soft figure, probably even less than that, because I think there will be an increase of the number of people that will want to participate in this.

So I think we are going to fall further short of that, and if I remember a lot of the stories that I have, people I have met who are homeless not because they didn't want to work, but because of a paycheck that couldn't keep up with the cost of living, my sense that homelessness will increase among working people because they can't keep up with the increase in the cost of energy and things like that.

I was wondering very quickly if you had any thoughts about the affordable housing portion that HUD is responsible for, because I understand that they have a fixed dollar amount that they can provide for those who are involved in the housing program, and with

the increase that will have to come out of the persons who will be a beneficiary of the programs.

Mr. DAVID BRADLEY. We are actually taking a look at some HUD programs now because the Financial Services Committee asked us to do some things. I will be happy to provide something for the record that is literally in development this week.

[The information referred to follows:]

MR. DAVID BRADLEY'S REPLY TO MR. HONDA'S QUESTION ABOUT THE AFFORDABLE HOUSING PORTION THAT IS HUD'S RESPONSIBILITY

In response to Mr. Honda's interest in the problem of keeping rents affordable, I am submitting recent comments on proposed HUD rules regarding calculation of shelter costs when determining the amount of rent payment a tenant of HUD subsidized housing will pay out of pocket. The author, Roger Colton Esq. Is renowned in our low-income advocacy community for his expertise on the many ways housing and utility regulations affect the low-income consumer.

To put too simply the matters his testimony explains in depth, when the energy costs included in the rent rise dramatically, as has been the case for two consecutive winters, the recoverable total costs for the owner or for the subsidy program rise beyond planned outlays—and the cost of keeping the rent contribution at the 30 percent of income standards a problem not factored into HUD budgeting; but, as is more common, when fuel costs are paid by the renter on the basis of individually metered usage, the previously established rent contribution plus the energy costs which are also shelter costs add up to a lot more than is either allowed or than has been budgeted by the tenant. Contributions are not adjusted in short order, and the means for calculating the base on which they are established is faulty. Mr. Colton's recommendations deal with fixing the HUD procedures for income and shelter cost determination in periods of high and/or rapidly changing energy costs. However, we think this Committee should consider establishing reserve funds for subsidized housing programs, as well as for LIHEA,P to enable struggling families and housing projects alike to cushion the impact of these volatile energy markets.

At the time of the hearing we were hopeful that at least a short-term solution involving more changes to HUD procedures would have been adopted or mandated; I regret to report we do not have such news to report to the Committee at this time.

Mr. HONDA. I think budgetwise it will be helpful for us. And to Mr. Bradley, the other Bradley, Manufacturing Group has been an interesting and a welcome organization in Santa Clara County, Silicon Valley, because they have taken on issues that I think most people historically would never have guessed that would be important to you guys. But you have really taken on issues like infrastructure, transportation, housing, education, homelessness, quality-of-life issues that are important to all people there, and the folks had developed initiatives on those areas. Energy was not part of it because it hadn't become prominent when you developed the initiatives.

What is the impact on those initiatives that Manufacturing Group have set out for themselves in light of the energy crisis?

Mr. JUSTIN BRADLEY. I am not sure if I understand. What is the impact financially on Silicon Valley or——

Mr. HONDA. On the initiatives that Manufacturing Group has.

Mr. JUSTIN BRADLEY. Let me tell you a little bit about what we are doing. One of our goals is to make sure that both employers who are members of the manufacturing group, their employees and their families have tools to be successful with their own personal energy policy. Many organizations don't have energy experts they can turn to to look for strategy and tactical matters to be successful, particularly in the matters of energy efficiency, conservation and load management, smart load management. So what we do is

we have those kinds of resources, and we are able to leverage them not just inside the organization, but beyond our borders.

One of the tools we use, in fact, is the Internet. The Internet has a Website that we have put together in partnership with the NRDC, the Natural Resource Defense Council, partnership to provide information about all of the incentive programs that the State and regional agencies provide so that organizations and individuals can take advantage of them. We also as an organization have joined with dozens of other private organizations to commit to 20 percent conservation over the next couple of years through a host of different measures to do that, and we go around and meet with various municipal authorities during the summertime, we have our local government days, and in each case we are going to meet with the city managers and mayors. We exchange information about what we are doing, and what we find is they are responsive to create partnerships to make these kinds of things happen.

So what we try to be is a broker with information and a connector of people so that we can be more successful. That is just a sense for what we are doing.

Mr. HONDA. I take it further. Not only a broker, but being proactive in looking at making some steps that will help your employees be able to survive this crisis. And I have to compliment the group that conservation did play a large part in our ability to meet the crisis, and I think stats are that you are able to realize a 10 percent savings because of that.

The conservation effort, is there any discussions that you might have between conservation efforts and the volatility issues that you had mentioned? I wasn't here for all of your testimony.

Mr. JUSTIN BRADLEY. I think perhaps someone on this panel, I can't recall who, mentioned the leverage for every 1 percent you conserve, you affect the price tenfold in a positive direction, and that, for instance, San Diego, when they had price signals stream, were able to conserve 5 or 10 because they felt immediately the real cost of power. And if the State, for instance, had 5 percent more available power, then we would have avoided a good part of the blackouts that we have had in the last several months.

Mr. HONDA. So would it be fair to say that Manufacturing Group would support a policy, conservation policy, as part of our energy, national energy policy nationwide?

Mr. JUSTIN BRADLEY. We already do, and we very much support that notion, yes.

Mr. HONDA. Thank you.

Chairman NUSSLE. Thank you, Mr. Honda.

Mr. Justin Bradley and Mr. David Bradley, we appreciate your testimony, and we thank you for the opportunity to question you about a number of items. I think we learned today, and I think Mr. Honda, who has obviously a unique perspective on this, as well, and many others who testified today, that there is not only an energy challenge for the entire country, not just for the west coast, but that it has very important economic impact for the country, and on our budget and the decisions that will be made in this room in days, months, years to come. And so we appreciate the chance to explore that. Hopefully we will have the opportunity to do that again in the future.

And with that, we thank the witnesses for their testimony, and this hearing is adjourned.

[Whereupon, at 1:47 p.m., the committee was adjourned.]

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