Dear Mr. Wedaa:

Thank you for the July 23, 2001, letter expressing your agreement with remarks made by Secretary Abraham during a recent visit to California, and urging a revision of the National Energy Policy Report to add greater emphasis on the need to exploit diverse energy technologies, such as distributed energy, fuel cells and hydrogen.

The National Energy Policy Report does place considerable emphasis on the importance of new and diverse energy technologies and sources. The critical role of these technologies has been further emphasized by the actions of the Department and other agencies to implement the report’s recommendations. While there are no plans to revise the National Energy Policy Report in the near future, we hope that misconceptions regarding the intent of the Administration’s energy policy will lessen as we develop and implement the specific actions recommended.

Thank you for writing.

Regards,

Vicky A. Bailey
Assistant Secretary
Office of Policy and International Affairs
September 4, 2001

Secretary of Energy Spencer Abraham
Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Secretary of Energy Abraham:

An excellent article that appeared in the Providence Journal is enclosed with this letter. The commentary was written by Makubin Thomas Owens, Professor of Strategy and Planning at the U. S. Naval War College. He formerly worked for the U. S. Department of Energy.

Sincerely,

Peter Lombardi, Jr.
Executive Director

1395 Atwood Avenue
Suite 209A
Johnston, RI 02919-493
(401) 464-8000 - phone
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Obtained and made public by the Natural Resources Defense Council, May 2002
Toward a comprehensive energy policy
MACKUBIN THOMAS OWENS

IT IS UNDENIABLE that a major factor contributing to U.S. prosperity is affordable access to energy. Indeed, economic growth and energy growth track each other. But energy production is not keeping pace with consumption, and herein lies a major problem.

As Federal Reserve Chairman Alan Greenspan said earlier this year in testimony before the Senate Finance Committee, looming energy shortages have "emerged as a very significant question" concerning the future performance of the U.S. economy.

Before Congress's August recess, the House passed legislation designed to provide a comprehensive energy policy for the United States. The Senate will take up this legislation after the recess. Those who think that continued U.S. economic growth is a good thing must hope that the House bill passes the Senate with little change.

According to the Energy Information Administration (EIA) of the Department of Energy, U.S. energy production has grown only 14 percent since 1970 while energy use has risen by 30 percent. Things will only get tighter over the next two decades. The EIA predicts that total energy consumption in the United States will increase 32 percent by 2020, petroleum 33 percent, natural gas 62 percent, coal 22 percent, electricity 45 percent, and renewable energy 26 percent.

In addition, the dependence of the United States on foreign petroleum is growing. In 1973, the U.S. imported 36 percent of its oil. Currently, imports account for 56 of America's petroleum consumption. By 2020, more than 65 percent will be imported. There is no question that conservation and improved energy efficiency can help to curtail demand, but they can help only so much. According to the EIA, energy efficiency is projected to improve by 1.6 percent a year by 2020. More than half of the nation's increased energy requirements through 2020 are expected to be met through gains in energy efficiency. Nonetheless, the United States will still need an additional 30 quadrillion BTUs (British thermal units) to support economic growth through 2020.

But providing this additional energy will be impossible if investment in energy infrastructure continues to lag demand for energy. To have enough energy to keep pace with future economic growth, the United States needs to expand and modernize its energy infrastructure. Without comprehensive action, the U.S. will continue to pit fuel type against fuel type, conservation against production, and energy "have" against energy "have-nots."

California's recent power crisis is merely one instance of the sort of growing imbalance between supply and demand that may afflict Americans unless shortfalls in production and bottlenecks in delivery infrastructure are fixed. Here are some ways that energy infrastructure problems can be rectified.

- Crude oil. While U.S. production of crude oil has declined from 9.6 million barrels a day (bpd) to 5.8 million bpd since 1970, consumption has jumped from 14.7 million bpd to 20 million bpd. The number of operating U.S. refineries has declined from 315 in 1981 to 155 in 2000. A new refinery has not been built in the U.S. in over two decades. Domestic sites, including the Alaska National Wildlife Refuge (ANWR), should be opened to exploration and drilling and new refineries must be built.

- Natural Gas. To meet the projected increase in natural gas demand, pipeline transmission and distribution line mileage must be increased. According to the EIA, pipeline capacity needs to increase by 30 percent to meet the demand forecast for 2020.

- Nuclear power. In 1999, nuclear-power plants produced a record-high 727.9 billion kilowatt-hours of electricity. The efficiency of nuclear power has improved 16 percent since 1990, the equivalent of adding over 23 1,000-megawatt power plants. Yet no new nuclear plants have been ordered since 1979. This situation should be rectified by relicensing nuclear plants now in operation and moving ahead with a new generation of advanced nuclear plants. - Generation of electricity. The EIA projects a requirement of 1,310 new power plants capable of producing 393 gigawatts of power by 2020 to meet growing demand and to offset retirements of existing plants. Many of the new plants will need to make use of coal, the nation's primary fuel for producing electricity. Wider use of clean-coal technology, particularly systems that convert coal into synthetic gas, will help make coal more acceptable.

- Transmission of electricity. At the same time, transmission capacity is not keeping pace with demand. The

Obtained and made public by the Natural Resources Defense Council, May 2002
System faces significant increases in congestion, especially during hours of peak demand. According to a study conducted by the Electric Power Research Institute, power outages caused by the aging power grid cost the U.S. economy more than $119 billion annually. These problems can be remedied only by modernizing and expanding the transmission infrastructure.

Critics will argue that such policy prescriptions favor energy suppliers and neglect the environment. But energy suppliers provide the means for economic growth, to the benefit of all. And energy can be produced and transmitted to consumers in ways that protect the environment. Environmental concerns have become a centerpiece of the U.S. political economy, but they must be balanced against the requirement for affordable energy. The comprehensive approach embodied by the House legislation is the best way to balance the two.

Mackubin Thomas Owens, a monthly contributor, is a professor of strategy and force planning at the U.S. Naval War College. He worked for the Department of Energy during the Reagan administration. He can be reached by e-mail at owensnw@nwc.navy.mil.
Department of Energy  
Washington, DC 20585  
September 5, 2001  

The Honorable Phil Gramm  
2323 Bryan Street #2150  
Dallas, Texas  75201

Dear Senator Gramm:

Thank you for providing me with a letter from your constituent A.F. Delaloye, addressing declining oil reserves in the United States and the need for energy conservation as part of our National Energy Policy. I hope the following information will be useful to A.F. Delaloye.

Your constituent is correct in noting the changing apparent distribution of oil reserves, as America’s fields mature and exploration has taken place in the rest of the world. The United States is still a major oil producer in the global market (at the same time, the U.S. is the greatest oil consumer in the world). With advanced technology, some of which is being developed here at the Department of Energy, it is now possible to recover a greater proportion of the oil and natural gas from a reservoir in a more environmentally sound fashion than ever before.

Your constituent states that the National Energy Policy (NEP) should place greater emphasis on conservation. Despite some reporting on the predominance of supply options in the report, about one half of the recommendations in the report pertain to energy efficiency and conservation. These recommendations include attention to automobile energy efficiency, building standards, and development of advanced technology to improve end use in all sectors of our economy. The Federal Government is taking the lead by further incorporating conservation and efficiency measures in reducing energy use in its transportation fleet and buildings. The NEP also includes incentives for utilization of these technologies.

We believe that a National Energy Policy must incorporate a broad portfolio of actions to address the energy needs of our country. The NEP presents a comprehensive set of recommendations that does not emphasize one technology or resource over another. This balance helps to enhance energy security and protect against system upsets.

The enclosed article is an interesting one that mirrors the Administration’s interest in advanced technology to address our energy situation. The Department of Energy has been involved in development of many technologies recommended in the article, including automotive hybrid technologies in the transportation technology program, fuel cells, and use of hydrogen. For example, on August 8th
a major announcement was made about research funds awarded in our fuel cell
program.

I would encourage your constituent to visit the DOE website to answer many of
the questions in the letter. In particular, http://www.energy.gov/scitech/
index.html, will display many of the interesting things the Federal government is
doing through the Department of Energy to develop the variety of advanced
energy technologies we will need in the near future. This will include
information on the variety of clean coal projects underway and the environmental
performance of those technologies.

I hope that this information is helpful in responding to your constituent.
Should you have additional questions please have your staff contact
Mr. Dan R. Brouillette, Director, Office of Congressional and Intergovernmental
Affairs, at (202) 586-5450.

Regards,

Vicky A. Bailey
Assistant Secretary
Office of Policy and International Affairs

28666

Obtained and made public by the Natural Resources Defense Council, May 2002
The Secretary of Energy
Washington, DC 20585
September 5, 2001

The Honorable Harry Reid
United States Senate
Washington, D.C. 20510

Dear Senator Reid:

Thank you for your recent letter to President Bush in which you and other members of the Nevada Congressional Delegation expressed your concern that the nuclear energy recommendations of the National Energy Policy could influence future decisions on the suitability of the Yucca Mountain site in Nevada for a geological repository.

Our National Energy Policy is based on the principle that all Americans should have affordable and reliable energy. The Administration has developed a balanced approach to electricity supply, an approach that includes the use of traditional sources of electricity supply such as nuclear energy. Nuclear energy provides about 20 percent of the Nation’s electricity supply without producing harmful air emissions and nuclear power plants are among the most reliable and efficient electricity sources available on the grid today. For these reasons, we believe that nuclear energy is an important element of tomorrow’s energy supply. Industry and the Nuclear Regulatory Commission are successfully moving forward with relicensing of existing nuclear plants, and we expect that nearly all of the 103 existing plants in this country will operate beyond their original licenses. For the first time in decades, industry is also examining business cases for new nuclear plant construction in the United States.

Regardless of the future of nuclear energy in the United States, the Federal Government must meet its obligations under the Nuclear Waste Policy Act. We must address the existing legacy of high-level radioactive waste, and to meet this objective, we believe that a geologic repository is required. At present, there are over 40,000 metric tons of spent fuel from nuclear power generation plus significant quantities of Department of Energy and Navy spent fuel, surplus plutonium, and vitrified high-level waste resulting from national security and environmental cleanup missions that must be safely managed. Regardless of whether new nuclear plants are built, renewal of the Price Anderson Act is needed to enable the Department to meet its environmental cleanup obligations and operate our facilities safely.

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28667

Obtained and made public by the Natural Resources Defense Council, May 2002
The Department has conducted an extensive program of investigative science at Yucca Mountain, and the scientific analysis is still underway. My decision on whether to recommend Yucca Mountain for development as a repository will follow the processes outlined by the law and will be based on sound science. I will not prejudge the outcome. I, too, want to ensure that health and safety concerns of the people of Nevada have been fully addressed.

This Administration is committed to working closely with Congress as we move forward implementing an integrated and comprehensive National Energy Policy. If you have further questions, please feel free to contact me or Mr. Dan Brouillette, Director, Office of Congressional and Intergovernmental Affairs, on (202) 586-5450.

Sincerely,

Spencer Abraham

Spencer Abraham

Obtained and made public by the Natural Resources Defense Council, May 2002
The Secretary of Energy
Washington, DC 20585
September 5, 2001

The Honorable John Ensign
United States Senate
Washington, D.C. 20510

Dear Senator Ensign:

Thank you for your recent letter to President Bush in which you and other members of the Nevada Congressional Delegation expressed your concern that the nuclear energy recommendations of the National Energy Policy could influence future decisions on the suitability of the Yucca Mountain site in Nevada for a geological repository.

Our National Energy Policy is based on the principle that all Americans should have affordable and reliable energy. The Administration has developed a balanced approach to electricity supply, an approach that includes the use of traditional sources of electricity supply such as nuclear energy. Nuclear energy provides about 20 percent of the Nation’s electricity supply without producing harmful air emissions and nuclear power plants are among the most reliable and efficient electricity sources available on the grid today. For these reasons, we believe that nuclear energy is an important element of tomorrow’s energy supply. Industry and the Nuclear Regulatory Commission are successfully moving forward with relicensing of existing nuclear plants, and we expect that nearly all of the 103 existing plants in this country will operate beyond their original licenses. For the first time in decades, industry is also examining business cases for new nuclear plant construction in the United States.

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This Administration is committed to working closely with Congress as we move forward implementing an integrated and comprehensive National Energy Policy. If you have further questions, please feel free to contact me or Mr. Dan Brouillette, Director, Office of Congressional and Intergovernmental Affairs, on (202) 586-5450.

Sincerely,

[Signature]

Spencer Abraham
The Secretary of Energy  
Washington, DC 20585  
September 5, 2001

The Honorable Shelley Berkley  
U.S. House of Representatives  
Washington, D.C. 20515

Dear Representative Berkley:

Thank you for your recent letter to President Bush in which you and other members of the Nevada Congressional Delegation expressed your concern that the nuclear energy recommendations of the National Energy Policy could influence future decisions on the suitability of the Yucca Mountain site in Nevada for a geological repository.

Our National Energy Policy is based on the principle that all Americans should have affordable and reliable energy. The Administration has developed a balanced approach to electricity supply, an approach that includes the use of traditional sources of electricity supply such as nuclear energy. Nuclear energy provides about 20 percent of the Nation's electricity supply without producing harmful air emissions and nuclear power plants are among the most reliable and efficient electricity sources available on the grid today. For these reasons, we believe that nuclear energy is an important element of tomorrow's energy supply. Industry and the Nuclear Regulatory Commission are successfully moving forward with relicensing of existing nuclear plants, and we expect that nearly all of the 103 existing plants in this country will operate beyond their original licenses. For the first time in decades, industry is also examining business cases for new nuclear plant construction in the United States.

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This Administration is committed to working closely with Congress as we move forward implementing an integrated and comprehensive National Energy Policy. If you have further questions, please feel free to contact me or Mr. Dan Brouillette, Director, Office of Congressional and Intergovernmental Affairs, on (202) 586-5450.

Sincerely,

Spencer Abraham
The Secretary of Energy  
Washington, DC 20585  
September 5, 2001

The Honorable Jim Gibbons  
U. S. House of Representatives  
Washington, D.C. 20515

Dear Representative Gibbons:

Thank you for your recent letter to President Bush in which you and other members of the Nevada Congressional Delegation expressed your concern that the nuclear energy recommendations of the National Energy Policy could influence future decisions on the suitability of the Yucca Mountain site in Nevada for a geological repository.

Our National Energy Policy is based on the principle that all Americans should have affordable and reliable energy. The Administration has developed a balanced approach to electricity supply, an approach that includes the use of traditional sources of electricity supply such as nuclear energy. Nuclear energy provides about 20 percent of the Nation’s electricity supply without producing harmful air emissions and nuclear power plants are among the most reliable and efficient electricity sources available on the grid today. For these reasons, we believe that nuclear energy is an important element of tomorrow’s energy supply. Industry and the Nuclear Regulatory Commission are successfully moving forward with relicensing of existing nuclear plants, and we expect that nearly all of the 103 existing plants in this country will operate beyond their original licenses. For the first time in decades, industry is also examining business cases for new nuclear plant construction in the United States.

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28673

Obtained and made public by the Natural Resources Defense Council, May 2002
The Department has conducted an extensive program of investigative science at Yucca Mountain, and the scientific analysis is still underway. My decision on whether to recommend Yucca Mountain for development as a repository will follow the processes outlined by the law and will be based on sound science. I will not prejudge the outcome. I, too, want to ensure that health and safety concerns of the people of Nevada have been fully addressed.

This Administration is committed to working closely with Congress as we move forward implementing an integrated and comprehensive National Energy Policy. If you have further questions, please feel free to contact me or Mr. Dan Brouillette, Director, Office of Congressional and Intergovernmental Affairs, on (202) 586-5450.

Sincerely,

[Signature]
Spencer Abraham
September 7, 2001

Hon. Frank Blake
Deputy Secretary
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Deputy Secretary Blake:

On behalf of the Electric Power Supply Association (EPSA), I would like to invite you to be the keynote luncheon speaker at the 2001 EPSA Fall Membership Meeting to discuss the Administration’s energy policy. This lunch will be held on Tuesday, October 23rd at 12:00 p.m. at The Monarch Hotel in Washington, D.C.

As you may know, EPSA is the national trade association representing competitive power suppliers, including independent power producers, merchant generators and power marketers. The competitive power supply industry owns at least 33% of the U.S. installed generating capacity and have announced plans to build over 300,000 MWs of new generation. EPSA’s members also provide reliable, competitively priced electricity from environmentally responsible facilities in global power markets.

We anticipate approximately 100 business leaders in the competitive power supply industry to be present at our meeting, including power project developers, marketers, major fuel and equipment suppliers, lenders and investors. We would like you to take the podium for approximately 15-20 minutes, followed by a brief question and answer period.

I hope that your busy schedule will allow you to join us. We will contact your office soon to ascertain your availability. In the meantime, thank you for your consideration.

Sincerely,

Lynne H. Church
President
Dr. Craig Reed  
Senior Policy Advisor  
Office of the Secretary  
U.S. Department of Energy  
Room 7B-222  
1000 Independence Ave SW  
Washington, D.C. 20585

Dear Dr. Reed:

My District Director, Clarke Scanlon, tells me that he had a nice chat with you in Nevada, Iowa at the Power Supply Forum. Your remarks about the DOE and President Bush’s Energy Plan were appreciated. Clarke has shared your insights with me.

Thank you again for taking the time to visit with Clarke. If you have opinions or concerns that you would like me to know, please feel free to call or write me.

Sincerely,

Greg Ganske  
Member of Congress

JGG:cs
Mr. Newal K. Agnihotri  
799 Roosevelt Road  
Building 6, Suite 208  
Glen Ellyn, IL 60137

Dear Mr. Agnihotri:

Thank you for your letter of August 10, 2001, to Secretary of Energy Spencer Abraham with your response to the recommendation in the National Energy Policy (NEP) for developing an educational campaign that communicates the benefits of alternative forms of energy.

There is a great deal of information on the Internet for educating the public about alternative energy and we believe some of the best sites available for that purpose are sponsored by the Department of Energy (DOE). For information purposes, you might wish to acquaint yourself with them and the links they provide. I would suggest visiting www.energy.gov, as well as DOE’s Energy Efficiency and Renewable Energy Network at www.eren.doe.gov and exploring many of the links that you can reach from those sites. Additionally, each home page has a webmaster that can be contacted with specific concerns. Since you mentioned hydrogen and fusion, I am including a print-out of both those home pages with this letter. An education campaign recommended in the NEP, however, has not yet been put in place.

As for funding our work, DOE programs, like most government programs, receive annual appropriations for specific research and development activities. Some of the activities are implemented at National Laboratories, some through contracts and financial assistance. To the maximum extent feasible, competitive solicitations are issued when contracts and financial assistance instruments are used. In order to receive best value, we encourage all interested parties to submit proposals for our competitive solicitations. To help with that process, I have included information
and contacts for finding information about solicitations and other sources of funding. I hope the material assists you.

Thank you again for your letter and good luck in the future.

Sincerely,

[Signature]

Patricia M. Pickering
Office of Power Technologies
Office of Energy Efficiency and Renewable Energy

Enclosures
The Honorable Jim Nussle
Chairman
Committee on Budget
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Enclosed is the edited transcript of the June 20, 2001, testimony of Francis S. Blake, Deputy Secretary of Energy, regarding the Economic and Budgetary Effects of National Energy Policy.

Also enclosed are five inserts for the record requested by Representatives Capuano, Culberson and Honda. The one remaining insert is being prepared and will be forwarded to you as soon as possible.

If we can be of further assistance, please have your staff contact our congressional Hearing Coordinator, Lillian Owen, at (202) 586-2031.

Sincerely,

[Signature]

Dan R. Brouillette
Assistant Secretary
Congressional and Intergovernmental Affairs

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

STATEMENTS OF FRANCIS S. BLAKE, DEPUTY SECRETARY, DEPARTMENT OF ENERGY; AND R. GLENN HUBBARD, Ph.D., CHAIRMAN, COUNCIL OF ECONOMIC ADVISERS

STATEMENT OF FRANCIS S. BLAKE

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 just to go 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 just 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 1970s and 1980s, 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 difficult, in siting nuclear plants and the like. But part of the reason may be attributed to how we have deregulated electricity generation and the emphasis that 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 on why natural gas is 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. and 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 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 uptake there as well. We have yet to determine what the numbers will be obviously for the rest of this year. On the next chart this goes to 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. So you can see very small replacement rates over the last several years as the industry has had to face—is faced with the uncertainty of deregulation in cost recoveries, including net removals of capacity in 1998 and now we are starting to see substantial pickup in capacity additions in 1999, 2000 and projected to increase 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 detained, unfortunately, his testimony outlines the broad macroeconomic impacts of this on GDP.
inflation, downstream industries, the residential consumer, and there are impacts 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 volatility have been 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 saw, that could have boosted GDP by 2/10ths of a point from 4.1 percent to 4.3 percent. So that is a substantial impact on the economy just from a reduction in the volatility. That doesn't even address the question of if you were removing some of the pressure on the increased price—what that would have on GDP.

There are obviously as well some more qualitative impacts of fuel volatility and high prices. They impact business decisions where they site plants, what kinds of investments they make. And I would 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...
is 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
recharging, the power used for recharging, the power used for
the various wireless towers, 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 9s or six 9s of power, a high
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
Just from my own perspective, coming to DOE from industry just in the last 2 weeks, the comment that I would make is a lot of it seems to me 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, I think 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:]

******** INSERT 1-1 ********