

ENHANCING AMERICA'S ENERGY SECURITY

OVERSIGHT HEARING

BEFORE THE

COMMITTEE ON RESOURCES
U.S. HOUSE OF REPRESENTATIVES

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OVERSIGHT HEARING ON ENHANCING AMERICA'S ENERGY SECURITY

**Wednesday, March 19, 2003
U.S. House of Representatives
Committee on Resources
Washington, DC**

The Committee met, pursuant to notice, at 10:04 a.m., in room 1324, Longworth House Office Building, Hon. Richard Pombo (Chairman of the Committee) presiding.

Present: Representatives Pombo, Tauzin, Gallegly, Duncan, Gilchrest, Cubin, Gibbons, Osborne, Rehberg, Renzi, Pearce, Nunes, Rahall, Kildee, Kind, Udall of New Mexico, Acevedo-Vila, Grijalva, Cardoza, Bordallo, Hinojosa, Rodriguez and Baca.

STATEMENT OF THE HON. RICHARD W. POMBO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

The CHAIRMAN. The hearing will come to order. Good morning.

In the last Congress, the House Committee on Resources approved a comprehensive energy bill. The legislation was later wrapped into H.R. 4 and approved by the whole House before dying on the vine in conference. It is my intention to see to it that this does not happen again.

Few doubt the need for a national energy policy. Today we are facing a daunting challenge and the supply and demand picture has only gotten worse. The price that consumers are paying for a gallon of gasoline is topping two dollars a gallon in many parts of the country. Just as an aside to that, I paid \$2.39 yesterday for gas in California.

Energy supply and price have a direct impact on the economy. It should come as no surprise that every recession since World War II has followed a period of increased energy prices. The high oil and resulting jet fuel prices are having a devastating impact on an already suffering airline industry and could help break the back of one of our Nation's premier carriers.

While most agree that America needs to be more energy independent, we are currently moving in the opposite direction. We now import about 60 percent of the crude oil we use in this country, and much of that oil comes from nations that are hostile to us. We need to begin to reverse that pattern.

America has abundant energy resources and an even greater sense of ingenuity. Our ability to efficiently and cleanly develop

those resources, using technology to harness them to create wealth, has made our economy the envy of the world. Unfortunately, well-intended policies developed in Washington sometimes seem to work against the Nation's well-being. Statutes that were intended to protect the environment, while allowing for responsible development of energy resources on Federal lands, have been misinterpreted and implemented in a way that is preventing energy development in many promising areas.

We have the ability to develop our natural resources in an environmentally friendly manner. Modern three and four dimensional seismic, directional drilling methods and extended reach technology are significantly reducing the footprint associated with exploration and development. We need to recognize both our abilities and our limitations and enact policies that strike a proper balance between conservation and responsible development.

Federal lands also hold enormous potential for renewable resource development and policies should be developed to facilitate the use of these energy sources as well. We need to pass a common sense energy bill and deliver it to the President this year.

I thank the witnesses for coming and look forward to their testimony.

[The prepared statement of Chairman Pombo follows:]

**Statement of The Honorable Richard Pombo, Chairman,
Committee on Resources**

During the 107th Congress this Committee and the Nation as a whole engaged in a healthy and spirited debate over energy policy and energy security. At the time, the U.S. had gone through a period of high energy prices that were adversely affecting our economy and our national security. We passed comprehensive energy legislation through this Committee and through the House. A bill was assembled and passed on the Senate floor and we proceeded to Conference where a national energy policy died on the vine.

While there were disagreements two years ago about the path we should take to achieve greater energy security, few doubted the need for a national energy policy. Today, we are facing an even more dire challenge and the supply and demand picture has only gotten worse. The price consumers are paying for a gallon of gasoline is topping two dollars a gallon in many parts of the country. Last month natural gas prices reached an all time high at over \$19.00 per thousand cubic feet.

Globally, conditions are putting pressures on all energy markets. World oil prices have approached forty dollars per barrel. An eminent war in Iraq and instability in the Middle East is putting pressure on global oil markets. Political unrest in Venezuela, the fourth largest supplier of oil to the U.S., is further driving up the price of gasoline, heating oil and diesel fuel. Weather has also played a major role this year. A cold winter on the East Coast put further pressure on oil and natural gas. High natural gas prices have hurt small and large consumers alike. Residential natural gas users are seeing their monthly bills rise. Commercial and industrial gas consumers are suffering as well. High natural gas prices are hurting the profitability of businesses large and small. Family farms have been particularly hard hit as the prices of propane and fertilizer increase. Chemical companies that rely on natural gas, both an energy source and chemical feedstock are suffering and jobs are likely to be lost as a result.

Energy supply and price have a direct impact on the economy. It should come as no surprise that every recession since World War II has followed a period of increased energy prices. The high oil and resulting jet fuel prices are having a devastating impact on an already suffering airline industry and could help break the back of one or more of our Nation's carriers.

While most agree that America needs to be more energy independent, we are currently moving in the opposite direction. We now import about 60 percent of the crude oil we use in this country. And much of that oil comes from nations that are hostile to us. We need to begin to reverse that pattern.

America has abundant energy resources and an even greater sense of ingenuity. Our ability to efficiently develop those resources, using technology to harness them

to create wealth, has made our economy the envy of the world. Unfortunately, policies developed in Washington sometimes, though well intended, seem to work against the Nation's well being. That is what is occurring right now with our energy and resource development policies. Statutes that were intended to protect the environment, while allowing for responsible development of energy resources on Federal lands, have been misinterpreted and implemented in a way that is preventing energy development in many promising areas.

Because production of much of the conventional energy resources on private lands is declining, Federal lands provide the greatest promise for future development of domestic energy resources. This is true for oil, natural gas, coal and renewable energy resources. We know that we have abundant resources on Federal lands that can fuel our economy for generations to come. Natural gas, a clean burning domestic resource, is taking on a greater role on our Nation's energy portfolio as more natural gas-fired power plants come on line. But in order for the U.S. to meet its future natural gas demand, it is imperative that energy producers have access to Federal lands in the Rocky Mountains. A combination of factors are preventing energy producers from developing sufficient resources from the region. First, significant resources in the region are currently off limits to oil and gas leasing and development. Many of those resources that are available are subject to stringent leasing stipulations that make production technically or economically prohibitive. Finally, a number of post-leasing hurdles are preventing producers from accessing those energy supplies. Delays in permitting projects on Bureau of Land Management and U.S. Forest Service lands are essentially killing some of the most promising domestic energy development projects. As we are seeing all too often in the West, just because a lease is issued doesn't mean that energy gets produced.

We have the ability to develop our natural resources in an environmentally friendly manner. Modern three and four dimensional seismic, directional drilling methods and extended reach technology are significantly reducing the footprint associated with exploration and development. We need to recognize both our abilities and our limitations and enact policies that strike a proper balance between conservation and responsible development.

Currently there are inherent flaws in the system that not only affect traditional oil, gas and coal development, but also clean, renewable energy development. While twelve western states have a combined high temperature geothermal resource potential of 22,000 megawatts of power, only 2,800 megawatts are currently being produced in the region. Given the need for more electricity generation in the West, we need to develop policies that encourage development of this renewable resource. Likewise Federal lands, both onshore and offshore, hold enormous promise for wind, biomass and solar energy. I understand that the Interior and Energy Departments are working to encourage and facilitate this develop and I am anxious to hear what more needs to be done.

The energy titles that passed this Committee last Congress would have done much to address the problems we are now facing in developing our vast energy resources on Federal lands. The bill contained over thirty provisions that would have had a direct positive affect on our growing energy supply and demand imbalance. As we face a war in the Middle East and a sputtering economy at home, it is imperative that we act now to fix a system that has been broken for many years. We need to pass a common sense energy bill and deliver it to the President this year so that we can begin to address the energy security concerns we have neglected for so long.

The CHAIRMAN. I will recognize Mr. Rahall.

STATEMENT OF THE HON. NICK J. RAHALL II, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WEST VIRGINIA

Mr. RAHALL. Thank you, Mr. Chairman.

Mr. Chairman, I recognize the price of gasoline is higher in your State of California. The average price for regular grade gasoline in this country, as we all know, is currently \$1.71 per gallon. That price is only a tenth of a cent below the highest national average price on record, without even adjustment for inflation. Meanwhile, many Americans, with some justification, are convinced that price gouging is taking place at the gas pump. In fact, I would venture to say that many Americans also believe that, if Exxon produced

wine, we would probably be going to war with France rather than Iraq.

I make these observations out of a concern that this Committee might, as it did in the last Congress, once again respond to the energy crises with legislation that provides a great deal in the way of unwarranted relief for oil and gas producers and little in the way of promoting domestic energy security. The bill reported by this Committee last Congress contained \$8 billion worth of royalty relief, a "royalty holiday", if you will, for the Exxons and Royal Dutch Shells of the world to drill in the Gulf of Mexico. That would have been \$8 billion in unnecessary drilling incentives and \$8 billion that would have been lost to the U.S. Treasury.

Indeed, at the time, even the Secretary of the Interior testified that sufficient administrative authority already exists if drilling incentives are necessary; a mandate to provide them, however, was not necessary. That particular provision was just one of a long laundry list of giveaways in the bill, none of which, in my view, would have contributed one iota to enhancing America's energy security.

For instance, drilling in environmentally sensitive areas and having the taxpayer foot the bill for corporate environmental compliance were part and parcel of the energy legislation the majority herded through this Committee in the last Congress. What kind of message does that send to the average American who is shelling out an ever-increasing percentage of his or her household income to fill up their vehicle, or to heat their homes?

News flash, folks: Big oil is just out there licking its chops once again, with skyrocketing gas prices, record profits, a beleaguered American public, and a chance to rip into areas they've been hankering after for many years. What more could any self-respecting, multinational energy conglomerate want? What more would they ever want?

I hope, Mr. Chairman, I really do hope that this is not the course we'll be pursuing under your leadership. At this time, when America's sons and daughters are faced with the prospect of being in harm's way in the oil fields of Iraq, we owe it to them. We owe it to all Americans to devise a prudent national energy policy that balances the needs for energy security with the social and environmental consequences that comes with energy production.

Thank you, Mr. Chairman, and thank you for having these hearings today.

[The prepared statement of Mr. Rahall follows:]

**Statement of The Honorable Nick J. Rahall, II, Ranking Democrat,
Committee on Resources**

Mr. Chairman, the average price for regular grade gasoline in this country is currently at \$1.71 per gallon. That price is only a tenth of a cent below the highest national average price on record without even adjusting for inflation.

Meanwhile, many Americans with some justification are convinced that price gouging is taking place at the gas pump.

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Skyrocketing gas prices. Record profits. A beleaguered American public. And the chance to rip into areas they have been hankering after for many years.

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The GIBBONS. [Presiding.] Thank you, Mr. Rahall.

Let me state that, in an effort to get to our witnesses today, to make sure these panels are fully heard, we would ask that anybody who wants to make an opening statement may do so, and it would be preferred to present it in writing, but there may be someone who wishes to make a verbal statement.

Mr. Kind.

STATEMENT OF THE HON. RON KIND, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WISCONSIN

Mr. KIND. Thank you, Mr. Chairman. I will try to be brief.

As Ranking Member of the Energy and Minerals Subcommittee, I, too, want to thank the witnesses for your presence and testimony here today.

Mr. Chairman, in all likelihood, by this weekend our country will be at war with Saddam Hussein's regime in Iraq, a part of the world that gave rise to September 11th, the terrorist threats that we now face emanating from that region. But it also a part of the world that we have a large investment and a large presence in, mainly because of one reason: our Nation's dependence on the oil that they have plenty of in that region. The question is, when the dust settles with this war in Iraq, what will our Nation do about that fundamental fact?

Over the last thousand years we have seen a half a degree increase in Celsius due to global warming. Most scientists today believe that, over the next 100 years, we're going to see a two degree increase Celsius due to global warming. The question is, what are we, as a nation, going to do about it, because the rest of the world sees us as an eminent threat to their national security interests as well. But instead of us working collaboratively with the inter-

national community on it and trying to revise the difficult provisions of Kyoto, we instead sent the message to the world that “no thanks, we’re not interested.” We turned our back and said, “Don’t bother us. We’re going to continue to drive our low mileage SUVs and Humvees. We are the United States of America and you can’t tell us how we’re going to behave.” That is a serious problem that we have.

I don’t know how many of you had a chance to read the Wall Street article yesterday. It’s titled, “Why the U.S. is Still Hooked on Oil Imports.” I would like unanimous consent to have this inserted in the record at this time.

Let me just quote briefly from this article. It says, “The U.S. remains hooked on foreign oil for two reasons: the Organization of Petroleum Exporting Countries, especially Saudi Arabia and its neighbors, are skillful in its management of oil prices to maintain America’s dependence, and the U.S. lacks the political will to do what is necessary to weaken the cartel or reduce the American appetite for oil. The primary issue is price. OPEC manages production to try to keep prices higher than they would be if set in the free market, but low enough to make alternative fuels and technologies uncompetitive.”

[The Wall Street Journal article follows:]

BAD HABIT: WHY THE U.S. IS STILL HOOKED ON OIL IMPORTS

BY BOB DAVIS IN WASHINGTON AND BHUSHAN BAHREE IN PARIS

THE WALL STREET JOURNAL -- MARCH 18, 2003

All seven presidents of the past 30 years, Democrat and Republican alike, have tried to wean the U.S. off imported oil. All have failed.

In 1973, President Nixon pledged to end oil imports by 1980 through Project Independence. The U.S. imported 40% of its oil that year. In 1979, President Carter said imports wouldn’t ever rise again. They did. Today, with the U.S. importing 60% of its oil, President Bush says hydrogen power will lead to energy independence.

Mr. Bush is almost certain to be proved wrong, at least in the next couple of decades.

Despite an increasingly energy-efficient economy, the U.S. remains hooked on foreign oil for two reasons. The Organization of Petroleum Exporting Countries, especially Saudi Arabia and its neighbors, is skillful in its management of oil prices to maintain America’s dependence. And the U.S. lacks the political will to do what’s necessary to weaken the cartel or reduce the American appetite for oil.

With American troops poised for war in the Persian Gulf, which dominates oil exports and has two-thirds of global reserves, the consequences of oil dependency are starker than ever. The U.S. relies on some of the world’s most volatile countries to supply a component that is critical to American society. Political turmoil in the region, in 1973 and 1979, produced oil-price jumps that ravaged the U.S. economy. In 1991, the U.S. sent 500,000 troops to the region to expel Saddam Hussein from Kuwait to ensure that he didn’t grab an even-larger share of Gulf oil.

The primary issue is price. OPEC manages production to try to keep prices higher than they would be if set in a free market, but low enough to make alternative fuels and technologies uncompetitive.

“If we force Western countries to invest heavily in finding alternative sources of energy, they will,” Saudi Arabia’s influential oil minister, Sheik Ahmed Zaki Yamani, said in a 1981 speech at a Saudi petroleum university. “This will take them no more than seven to 10 years and will result in their reduced dependence on oil as a source of energy to a point which will jeopardize Saudi Arabia’s interests.”

The U.S. could make rules to force Americans to use less oil or achieve the same end by raising the price through tariffs or taxes. Of the 19.5 million barrels of oil Americans consume every day, about 11.5 million are imported. Roughly half the oil consumed in the U.S. goes for cars and trucks.

Some economists are reviving old proposals to boost the gasoline tax. Others are crafting new ones. One of President Bush’s favorite economists, Harvard Univer-

sity's Martin Feldstein, suggests that the government cap overall gasoline sales and distribute fuel vouchers electronically. Owners of gas guzzlers would buy vouchers from owners of fuel-efficient cars, creating an incentive to use less gasoline and develop fuel-efficient technologies without pumping money into the government's pockets.

But neither the White House nor the Democratic opposition is interested. Cheap oil benefits the U.S. The lowest gasoline prices in the industrialized world boost auto sales, tourism and suburban construction. Lower diesel prices reduce trucking costs and help businesses along the supply chain.

"If you let the price of oil go artificially high, it will hurt our economy," says Commerce Secretary Don Evans, a former Texas oil-patch executive.

At the same time, reliance on imported oil makes the U.S. vulnerable to instability in Venezuela and the Middle East, and leaves a key economic lever in the hands of a foreign cartel. Every recession since 1973 has been preceded by a big run-up in oil prices. And while only about 20% of U.S. oil imports comes directly from Persian Gulf members of OPEC, the Gulf effectively sets prices because it produces the lowest-priced oil and has 90% of the world's extra capacity.

The only time in the past three decades that U.S. oil imports have declined substantially was between 1979 and 1983, when they fell by 40%. One reason was the deepest recession since the Great Depression, which cut demand for energy. Another was the almost-simultaneous rise both in oil prices after the Iranian revolution of 1979—when fears rose again of a cut-off in oil—and in the fuel efficiency of American autos between 1979 and 1983, as the U.S. began enforcing new fuel-efficiency standards. Many Americans dumped gas guzzlers for smaller cars. President Reagan ended oil-price controls, setting off a boom in domestic drilling and arresting, through the mid-1980s, the downward spiral in U.S. oil output.

Prices hit \$40 a barrel in 1979—\$100 a barrel at today's prices, after accounting for inflation—and were expected to double during subsequent years. Saudi Arabia worried that high prices would backfire. And to reduce U.S. imports, President Carter championed an \$88 billion plan to develop synthetic oil from abundant U.S. reserves of coal and shale.

So Saudi Arabia started selling oil at prices several dollars a barrel lower than the OPEC \$34-a-barrel standard. Then, in 1985, as the cartel was facing increasing competition from Alaskan and North Sea oil fields, Saudi Arabia and Kuwait engineered a price crash. After a meeting in which OPEC decided to go after market share rather than prop up prices, Sheik Yamani, the Saudi oil minister, said to several reporters: Let's see how the North Sea can produce oil when prices are at \$5 a barrel. At low prices, the Persian Gulf countries have an unbeatable edge. In the mid-1980s, it cost them a couple of dollars a barrel to produce oil. It cost about \$15 to produce a barrel off the coast of Britain and Norway or in the U.S.

The move was a warning to the U.S.: Forget about energy independence. Besides being the world's largest consumer and importer of oil, the U.S. is also one of the largest producers. The price decline, to about \$12 a barrel, was so devastating to the economies of Texas, Louisiana and other oil-rich states that then-Vice President George H.W. Bush toured the Persian Gulf in 1986, urging countries to rein in their output and raise prices.

"Isn't that what you wanted? A free price in oil," OPEC's president, Rilwanu Lukman of Nigeria, goaded Mr. Bush when the two met in Kuwait. Mr. Bush eventually reached an understanding with Saudi Arabia's King Fahd, to limit production and seek a 50% rise in oil prices to a target price of \$18 a barrel (or \$30 in today's dollars). Over the years, OPEC has adjusted its target range and now generally aims for between \$22 and \$28 a barrel.

OPEC's strategy has largely worked. Since the mid-1980s, the U.S. thirst for oil has increased. President Carter's synthetic-fuel program couldn't compete with the new OPEC prices and was ridiculed for its massive, money-losing projects.

The U.S. is far more energy-efficient than it was in 1973, when Arab nations cut off oil exports to the U.S. because of America's support for Israel during the October war. It takes about half as many barrels of oil to produce each \$1 of economic output today as it did 30 years ago, according to Cambridge Energy Research Associates, a consulting firm.

But most of the gains in fuel efficiency came in the early 1980s when oil prices were high. Electric utilities and other large customers switched to natural gas, which was seen as a cheaper and cleaner alternative, and less vulnerable to disruption because it was produced in the U.S. and Canada. In 1979, 13.5% of electricity was produced by oil; that figure dropped to 4.1% in 1985 and about 3% today. Home heating went through a similar transformation, from oil to natural gas.

When oil prices declined after 1985, the pace of energy efficiency slowed. The U.S. became somewhat less dependent on oil mostly because of long-term changes in the

structure of the economy, not because of energy-saving technology. Nine energy-intensive industries—aluminum, agriculture, chemicals, forest products, glass, metal casting, mining, steel and petroleum—account for 80% of industrial energy use. Many of those industries are in decline. Newer ascendant ones, such as software and communications, don't use as much energy. Petroleum accounts for 40% of total U.S. energy consumption, down from 50% in 1973.

In the 1990s, gasoline prices fell lower than they had been since the oil embargo of 1973, taking inflation into account. OPEC was determined to keep prices relatively low to retain market share and scare off rigs in other regions. The American government didn't require further increases in automobile fuel efficiency. With the economy surging, consumers flocked to minivans, SUVs and other fuel hogs.

To lessen dependence on oil, economists say, the U.S. would have to raise the price of gasoline substantially. It would take an additional \$1-per-gallon tax, on top of the average current tax of 41 cents, to reduce gasoline consumption by about one-fourth, according to Congressional Budget Office estimates.

Europe and Japan have especially high gas taxes—\$3.16 a gallon in Britain; \$1.75 in Japan—so drivers there overwhelmingly choose smaller, fuel-efficient vehicles. “To reduce oil consumption, the most obvious thing to do is to tax gasoline and make fuel economy a desirable feature,” says Loren Beard, a senior manager for energy planning at DaimlerChrysler AG in Detroit.

Overall, Germany, France and Japan need only half as much oil as the U.S. to produce the same amount of economic growth. Given the higher gasoline prices in Europe and Japan, the International Energy Agency in Paris expects their oil imports to grow more slowly in coming decades than those of the U.S.

But even small gasoline-tax increases are political poison in the U.S. The first President Bush agreed to a five-cent-a-gallon tax increase in 1990 despite his famous “no new taxes” pledge. Partly because of that, he lost his re-election bid. President Clinton pressed for a broad energy tax in 1993, but settled for a modest 4.3-cents-a-gallon levy. Officials in the current Bush administration say they considered higher gas taxes when they put together their first energy plan in 2001, but quickly rejected them in any form.

A tax increase by itself wouldn't solve the oil-import problem. Higher gas-pump prices would lessen demand for oil, which could lead to a glut and lower wholesale oil prices. OPEC could cut back on production, to boost prices, as it did when oil prices slumped in 1998. If OPEC encouraged prices to sink, the U.S. and other consuming countries would have to consider soaking up extra supply—by greatly expanding the reserves of oil they maintain for emergency use—in order to prop up prices and prevent OPEC from gaining an even-stronger hand in controlling supply.

Boosting supplies of oil outside the Persian Gulf would also help make the U.S. less dependent on OPEC. But the Bush administration hasn't been able to persuade Congress to start drilling in the Alaska National Wildlife Reserve, and environmental regulations have put much of the Rockies, along with the Atlantic and Pacific coasts, off-limits for new rigs. Oil companies are using technology to extend the lives in old fields, but domestic supply continues its long swoon to about 5.8 million barrels a day, one-third less than when President Nixon set his energy-independence goal in 1973.

Elsewhere, Russia, central Asia and Africa are expected to broadly expand production over the coming decades. Even when taken together, however, these oil regions don't have the reserves to affect U.S. reliance on the Persian Gulf, which has the bulk of the world's reserves in cheap, easy-to-tap fields. OPEC nations “are back in charge,” says Vito Stagliano, an energy official in the first Bush administration.

Rep. Charles Rangel of New York, the top Democrat on the House Ways and Means Committee, says the U.S. may be able to use its military might to change the oil balance of power. If the U.S. seizes Iraq's oil fields during a war and turns Baghdad into a reliable ally, that could reduce the concerns about U.S. reliance on Persian Gulf oil. “If we control all that oil,” Mr. Rangel says, “we don't need a damn gasoline tax.” But the political consequences of the war are hard to foretell, especially if Saddam Hussein destroys Iraq's oil wells, or if other Gulf oil fields become terrorist targets. A democratic Iraq is also likely to see the economic virtues of strengthening OPEC, not weakening it.

President Bush is looking for a technological fix. He has seized on the technology of hydrogen-powered fuel cells, budgeting \$1.7 billion over the next five years to try to produce hydrogen-powered cars and trucks. But the challenges are daunting. Hydrogen now costs four times as much as gasoline, fuel cells are clunky and expensive, and the U.S. lacks an infrastructure of hydrogen pumps to match the nation's gasoline stations.

And OPEC is ever vigilant to the possibility that the U.S. could kick its oil habit. In the late 1980s, Kuwait's oil minister shooed away a businessman who approached

him at a bar in a London Hotel. Sheik Ali Khalifa al-Sabah explained that the man “wanted to sell me on an engine that works on water. If I thought it worked, I would have bought it and killed it.”

Mr. KIND. This is a serious problem, and I think the President has recognized it. I was struck that during his State of the Union address he spent 15 minutes talking about the environment and alternative energy supplies for our country. That indicates two things to me. One, there is a growing recognition even in the Administration that this is a serious problem that we need to address, but two, that they’re in a difficult position politically on this issue. We have an opportunity, as we move forward in developing a new energy plan—because I think the current energy plan that’s before us is too status quo, too “some old/same old” around here—that we can change the paradigm in regards to our energy needs and do it in a growth-oriented fashion.

The Administration just announced that they’re going to be importing a lot more liquified natural gas in the future, mainly from Nigeria. The problem is that Nigeria is a part of OPEC, and if we’re not careful, we’re going to be in the same position we are with our natural gas needs dealing with OPEC as we currently are with our oil needs in dealing with OPEC.

We can try changing this paradigm through a couple of options. We can increase the energy consumption tax in this country to reduce demand—which isn’t all that popular and I certainly wouldn’t support—or another option is we can change the energy dynamic through increased investment in R&D in developing the new technologies that I feel are necessary in order for us to make the transition from a fossil fuel consumption society to an alternative renewable and especially hydrogen-powered society.

That’s really the question and the challenge that’s before us in this Committee. Hopefully, as we move forward with the advice and the expertise from panel experts that we have here today, but especially among our colleagues, that we will find a way to be able to work together, to think through the long-term ramifications of what we’re about to see in the next few days in a country like Iraq, and how we’re going to wean ourselves off from that politically unsustainable position.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Kind follows:]

Statement of The Honorable Ron Kind, a Representative in Congress from the State of Wisconsin

In all likelihood, by this weekend our country will be at war with Saddam Hussein’s regime in Iraq, a part of the world that gave rise to the tragedies of September 11th and the terrorist threats that we now face emanating from that region. However, it is also a part of the world in which we have a large investment and presence, mainly because of one reason: our Nation’s dependence on the vast oil resources of the Middle East. The question is: when the dust settles with the war in Iraq, what will our Nation do about that fundamental fact?

Over the last thousand years we have seen a half degree Celsius increase in average global temperature due to global warming. Most scientists today believe that, over the next 100 years, we are going to see a two degree Celsius increase in world temperature due to global warming.

What, then, are we to do about this problem? I believe we have a considerable problem if the rest of the world considers the United States as an eminent threat

to their national security interests because our contribution to this trend is so significant.

But instead of working collaboratively with the international community on this issue and trying to revise the difficult provisions of Kyoto, we instead sent the message to the world that “no thanks, we are not interested.” We turned our back and said, “Do not bother us. We are going to continue to drive our low mileage SUVs and Humvees. We are the United States of America and you cannot tell us how we are going to behave.” This type of rationale is a serious problem of ours.

If any of you had a chance to read the Wall Street article yesterday, you might have read a story entitled, “Why the U.S. is Still Hooked on Oil Imports.” I would like unanimous consent to have this inserted in the record at this time.

I will quote briefly from this article. “The U.S. remains hooked on foreign oil for two reasons: the Organization of Petroleum Exporting Countries, especially Saudi Arabia and its neighbors, is skillful in its management of oil prices to maintain America’s dependence, and the U.S. lacks the political will to do what is necessary to weaken the cartel or reduce the American appetite for oil. The primary issue is price. OPEC manages production to try to keep prices higher than they would be if set in the free market, but low enough to make alternative fuels and technologies uncompetitive.”

The OPEC issue is a serious problem, and I sense the President has recognized it. I was struck that, during his State of the Union address, he spent 15 minutes speaking about the environment and alternative energy supplies for our country. This indicates two things to me. One, there is a growing recognition, even in the Administration, that this is a serious problem that we need to address, but two, that they are in a difficult position politically on this issue. We have an opportunity, as we move forward in developing a new energy plan—because I think the current energy plan that is before us is too status quo, too “some old/same old” around here”, to change the paradigm in regards to our energy needs and do so in a growth-oriented fashion.

The Administration recently announced that they are going to be importing far more liquified natural gas in the future, primarily from Nigeria. The problem here is that Nigeria is a part of OPEC, and if we are not careful, we will be in the same position with our natural gas needs as we are with our oil needs in dealing with OPEC.

We can attempt to change this paradigm in a variety of ways. We can increase the energy consumption tax in this country to reduce demand—which is not very popular and I certainly would not support—or change the energy dynamic through increased investment in research and development, forming new technologies that I feel are necessary in order for America to make the transition from a fossil fuel consumption society to an alternative, renewable, and hydrogen-powered society.

This issue is our primary responsibility and the challenge that we face in this Committee. Hopefully, as we move forward with the advice and the expertise from the panels of experts that we have here today, but especially among our colleagues, we will find a way to be able to work together, think through the long-term ramifications of what we are about to see in the next few days in Iraq and its surrounding nations, and how we plan to wean ourselves from the resources of a politically unsustainable region.

Mr. GIBBONS. Thank you very much, Mr. Kind.

Does anyone else have a burning desire in their bosom to make an opening remark? Mr. Gilchrest.

STATEMENT OF THE HON. WAYNE T. GILCHREST, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MARYLAND

Mr. GILCHREST. Mr. Chairman, I wasn’t going to make a remark, but you said does anyone have a burning desire—and I do.

I just want to buttress Mr. Kind’s statement about the future energy policy of this country. I would say that if we could put a man on the moon in just a few years after a statement was made, and developed the Manhattan Project, we can, within 20 years, develop an alternative to fossil fuel which would improve dramatically environmental concerns and realities that would make us not only

energy independent but increase our security by a thousand percent of this Nation so that we're not dependent on a volatile region of the world.

Thanks for the opportunity, Mr. Chairman.

Mr. GIBBONS. Thank you, Mr. Gilchrest.

At this point in time, with no one else wishing to make an opening statement, let me introduce our first panel. It is Rebecca Watson, Assistant Secretary for Land and Minerals Management, U.S. Department of Interior, and Carl Michael Smith, Assistant Secretary for Fossil Energy, U.S. Department of Energy.

Let me first begin by swearing in our witnesses. We believe that is an important point that we do in this Committee. If you will please rise.

[Witnesses sworn.]

Mr. GIBBONS. Let the record show that both witnesses indicated that they agree. Miss Watson, I believe you will be the opening speaker.

If you will notice, we have three lights in front of you. They are limited to 5 minutes. The green light is "go", the yellow is to sort of wrap it up, and when the red light comes on, we would hope you would be finishing up your remarks.

If you wish to submit your full and complete testimony for the record, we can do that, and you can make a summary of your statement as well.

Miss Watson.

STATEMENT OF REBECCA WATSON, ASSISTANT SECRETARY FOR LAND AND MINERALS MANAGEMENT, U.S. DEPARTMENT OF THE INTERIOR

Ms. WATSON. Good morning, Mr. Chairman, and thank you for the opportunity to appear here today to discuss enhancing America's energy security. I would like to discuss the key role the Department of the Interior has in meeting the Nation's energy needs.

America faces an energy challenge. Energy use sustains our economy and it sustains our quality of life, but we have a fundamental imbalance between our energy consumption and our domestic energy production. As policymakers, as Congressman, we need to work together to narrow the gap between the amount of energy that we use and the amount of energy we produce. We must also continue to diversify our sources of energy.

President Bush's National Energy Policy report laid out a comprehensive, long-term energy strategy for securing America's energy future. The Department of Interior plays a key role in implementing many of the tasks identified in the President's energy policy. Today, the Department of Interior public lands and public resources supply over 30 percent of our country's national energy. I think today, given the debate that's going on in the Senate over ANWR, I would be remiss if I didn't mention that, as we look toward war with Iraq.

Right now, Alaska supplies a considerable amount of the oil that our country uses. The Secretary of Interior testified last week about the important role of ANWR in that supply. Many have said that ANWR is a short term, speculative supply of oil. I don't think they can say that any more after the Secretary's testimony about

the 10.4 billion barrels of oil and the potential that the daily production from ANWR is larger than the current daily unfilled oil production of the lower 48 states.

I think it is significant, given some of the remarks this morning, that the oil that could be produced from ANWR is double, more than double what we are important from Iraq. This is a way to provide real energy security. This is the right time to open ANWR.

Most media attention has focused on traditional oil and gas production components of the President's National Energy Policy, but there is a strong focus on other components as well. Energy conservation and renewable resources are also key components of that plan.

The report identified the remarkable progress that our American industry has made in continuing to improve productivity but lower the amount of energy consumed to produce that productivity. We are producing more but using less energy to do that. The NEP believes that small businesses and individuals, which are huge consumers of energy, can also play a similar role in conservation and reducing demand, which also contributes to our energy security.

On alternative and renewable energy, we think there is good potential in that area and we are taking steps to improve the contribution of renewable energy. Some of those that we're focusing on are geothermal, wind, solar and biomass. One of the tasks that we had in the National Energy Plan was to go out on to the public lands and work together with DOE's National Renewable Energy Lab to identify the best places on the public lands to produce particular types of energy, and we rolled that report out at NRL in Golden, CO on February 17th. We think that is going to provide a useful tool to industry to focus their efforts on areas where renewables would be best produced.

We are also very interested in how the biomass energy under the President's National Energy Plan can fit together with the President's Healthy Forest Initiative. We think there's a good potential there as we get a more assured supply of materials off the public lands that we could then support a biomass industry based on that security. Investment in biomass plans takes a considerable sum, at least \$50,000. They need some certainty of supply. We think the Healthy Forest Initiative could help provide that certainty.

I think one of the main things we're concerned about, besides oil, is natural gas. Increasingly, natural gas runs our economy, our high-tech economy. We have turned to natural gas because it has clear environmental advantages, and we have abundant domestic supplies of natural gas. Right now, we're supplying 86 percent of our natural gas demand.

But right now we're in a shortage. Last year, I testified to the Energy Subcommittee of the House Resources Committee about the potential for short-term natural gas shortages and steps that we needed to take to anticipate that. Well, we are facing the brunt of those prices right now. I just want to tick through some of the things that we're doing as part of the President's National Energy Plan to address the natural gas supply issue. I want to talk first about offshore, and then I'll talk a little about on shore.

Offshore, on the Outer Continental Shelf, there is approximately 1.76 billion acres, but over 600 million of those acres are currently

off limits to oil and gas production. Nonetheless, the central and western portions of the Gulf and Alaska supply oil and gas to our country.

Potential long-term opportunities are in the deep water areas off the Gulf of Mexico, but these are technically very challenging. You're drilling down through some 7,000 to 8,000 and even more feet of water before you even hit the seabed, and then drill down yet further to the oil or gas potential. This is a high capital investment and many of our large major companies have to come together in joint partnerships to even begin to do this exploration. There is a lot of interest and a lot of potential out there, but it is more in the long term.

In the short term, we believe the shallow waters of the Gulf of Mexico hold opportunity. Those basins are maturing and are rapidly declining, but there is a new potential, which would be in the deep gas of the shallow water. We're looking at how we can encourage the production of deep gas from the shallow water because that is natural gas that can be brought on quickly in the short term because we have the pipelines and infrastructure to support it.

We also are pleased to report there are 19 new projects in the deep water off the Gulf of Mexico that are scheduled to come on line in 2003. We think that will boost the off-shore contribution from 30 percent to close to 40 percent. There are also two new pipeline projects that are bringing an additional one million or more barrels per day, again in the year 2005.

Today, March 19th, we are holding a lease sale in New Orleans, and we are really pleased at the competitive, intense bidding interest in the central Gulf of Mexico province. We have 793 bids, with 66 different companies bidding on it, and so we think there's a good potential there.

Finally, with the encouragement of Representative Gibbons up there, I just want to mention quickly about coalbed natural gas. This is the most readily available, short-term supply of natural gas to meet our energy demands. This is from the area from Montana down to New Mexico. This is an area that the Bureau of Land Management is focusing on through the land use plan. It is critical to our natural gas supply.

Thank you.

[The prepared statement of Ms. Watson follows:]

**Statement of Rebecca W. Watson, Assistant Secretary,
U.S. Department of the Interior**

Mr. Chairman and Members of the Committee, thank you for the opportunity to appear here today to discuss enhancing America's energy security. I would like to discuss the key role the Department of the Interior has in meeting the nation's energy needs.

OUR ENERGY FUTURE

America faces an energy challenge. Energy use sustains our economy and our quality of life, but a fundamental imbalance exists between our energy consumption and domestic energy production. We must look ays to narrow the gap between the amount of energy we use and the amount we produce. There is no one single solution. Achieving the goal of secure, affordable and environmentally sound energy will require diligent, concerted efforts on many fronts on both the supply and demand sides of the energy equation.

President Bush's National Energy Policy report laid out a comprehensive, long-term energy strategy for securing America's energy future. That strategy recognizes

that to reduce our rising dependence on oil and gas, we must also increase domestic production. The President proposes to open a small portion of the Arctic National Wildlife Refuge (ANWR) to environmentally responsible oil and gas exploration using newly available, environmentally friendly technology. ANWR is by far the largest untapped source of domestic petroleum and would equal nearly 60 years of imports from Iraq.

In 1998, a United States Geological Survey assessment of petroleum resources of the 1002 region of ANWR estimated the expected mean volume of technically recoverable oil beneath the 1002 area to be 10.4 billion barrels. For comparison, the U.S. currently consumes about 7 billion barrels per year. Of this, the U.S. imports about 4 billion barrels and produces about 3 billion barrels.

Most media coverage focuses on the parts of the National Energy Policy that discuss production of traditional energy, but increased energy conservation and alternative and renewable sources are also critical components of the President's balanced, comprehensive policy. Good stewardship of resources dictates that we use energy efficiently and conserve resources. Thus, fossil fuel development is only a part of the solution to our Nation's energy issues. Americans have already made great strides in using energy more efficiently. Since 1973, the United States economy has grown nearly three times faster than energy use, in part due to more efficient use of energy. Had we continued to use energy as intensely as in the 1970's, the United States would have consumed about 177 quadrillion BTUs of energy in 2001, compared to actual consumption of approximately 97 quadrillion BTUs. To put that in perspective, the 80 quadrillion BTUs saved is more than the total amount of energy produced in the United States from all sources—oil, gas, coal, nuclear, renewable—in the year 2000. Simple conservation actions by individuals and small business can yield impressive results in demand reduction.

ALTERNATIVE AND RENEWABLE ENERGY

Alternative and renewable sources of energy can also play an important role in helping meet our increased energy needs. To this end, the National Energy Policy encourages development of a cleaner, more diverse portfolio of domestic energy supplies. The Policy includes measures to aid in the development and expansion of renewable energy technologies in use today, including geothermal, wind, solar, and biomass, as well as continued research into using hydrogen as an alternative energy carrier. Such diversity helps to ensure that Americans will continue to have access to the energy they need.

Between 1975 and 2000, total renewable energy production in the United States increased from about 4.8 to 6.8 quadrillion BTUs, supplying about seven percent of the Nation's energy consumption in 2000. By 2020, renewable energy production is forecast to rise to about 8.6 quadrillion BTUs, but still will account for only about seven percent of consumption.

Thus, for the present and as far as the future can be reasonably forecast, renewable energy is likely to remain an incremental source of supply supplementing fossil fuels as our primary source of energy. Renewable and alternative energy sources can be an important component to a diversified domestic energy portfolio especially for addressing distributed energy and peak demand needs. At the Department of the Interior, Secretary Norton has convened two conferences focused on the renewable resource industry. These conferences have generated ideas and action.

The Department is also supportive of efforts to increase the use of biomass. The President's National Energy Policy directed the Department to evaluate ways to increase the use of biomass as a renewable resource. We are particularly encouraged by the possibility of linking biomass energy production with our efforts on hazardous fuel reduction in the national forests and rangelands. The National Fire Plan's hazardous fuels reduction program has the potential to produce a steady supply of non-commercial grade organic matter that could be utilized as a valuable renewable energy source.

As part of its efforts to advance the President's National Energy Policy, the BLM recently released a joint report with the Department of Energy that identifies and evaluates renewable energy resources on public lands. It highlights the best places on public lands for particular renewable resource development. The BLM will use the report's findings to prioritize land-use planning activities, and to increase the development and use of renewable energy resources on public lands.

ENERGY PRODUCTION FROM FEDERAL RESOURCES

As the Assistant Secretary for Land and Minerals Management I have administrative and managerial responsibility for the Bureau of Land Management (BLM), the Minerals Management Service (MMS), and the Office of Surface Mining Rec-

lamation and Enforcement (OSMRE). All of these bureaus are undertaking significant initiatives to fulfill the President's National Energy Policy, and are working diligently to promote environmentally sound production of our Nation's energy resources. The BLM has authority to offer lands under their jurisdiction to produce mineral and energy (renewable and non-renewable) resources, and the MMS has the authority to offer Outer Continental Shelf (OCS) lands under their jurisdiction to produce oil, natural gas, and mineral resources, consistent with environmental protection goals. The Administration is seeking enactment of legislation, of which I will speak of later, to expand the Secretary's authority offshore to include renewable resources and other energy-related activities.

The Department of the Interior manages approximately 500 million surface acres of land, with the BLM managing 262 million surface acres and more than 700 million subsurface acres of Federal mineral estate. MMS manages approximately 1.76 billion acres of offshore Federal mineral estate. These lands and resources currently account for 30% of total domestic energy production—including 48% of geothermal production, 35% of natural gas production (25% offshore and 10% onshore), 35% of coal production, 35% of oil production (30% offshore and 5% onshore), 20% of wind power, and 17% of hydropower production.

To address the Nation's growing energy needs, the Department believes we must optimize leasing opportunities on Federal lands. Orphan wells continue to be a major concern for the Department. The BLM has approximately 250 orphan wells, the majority of which are in Alaska, California, and Wyoming. The Department supports the idea of working with lessees to help address this problem, and reclaim orphan wells on public lands.

The Secretary continues to seek out advice and counsel from our stakeholders on a myriad of issues affecting the Department's mission and operations. Resource advisory councils established by the Department provide advice, counsel and recommendations on issues within the special areas designated in their charters. The BLM works actively with its Citizen Resource Advisory Councils. The Department also continually looks for ways to improve its business practices for the benefit of industry and other land use groups. Improving business functions and utilizing best management practices allows the Department to make timely and informed decisions using the best available information and science. This benefits all interested parties by limiting uncertainties, delivering better services and reducing costs. The Department is committed to making public input into decision making the cornerstone of its process by practicing the Secretary's 4-C's—consultation, cooperation, and communication all in the service of conservation. These efforts have cultivated a community-based conservation, citizen-centered stewardship of the public lands that has benefited all public land users.

New Energy Resources

Deepwater areas of the Gulf of Mexico are expected to provide substantial volumes of new natural gas production, but it may be several years before that area reaches its potential. The shallow waters of the Gulf of Mexico hold the greatest promise for new resources of natural gas from deep wells to meet the Nation's near-term gas needs. The Department continues to look at appropriate royalty relief incentives to encourage exploration and production of oil and gas in the deep waters of the Gulf of Mexico and to extend production on marginal leases that are still producing but approaching abandonment. Beginning in 2002, MMS started providing royalty relief as part of OCS lease sale terms to encourage production from wells on new leases drilled to deep horizons (greater than 15,000 feet total depth). This deep gas play, expected to hold between 5 and 20 trillion cubic feet (Tcf) of gas, can be developed quickly due to existing infrastructure in the shallow waters of the Gulf. MMS also issued a final rule in July 2002 that allows companies to apply for lease suspensions for exploration of subsalt resources.

Coalbed natural gas, also known as coalbed methane, accounts for about 9.6% of the total natural gas reserves in the United States. The Interior West States of New Mexico, Utah, Colorado, Wyoming, and Montana hold an estimated 30 to 48 Tcf of undiscovered natural gas resources associated with coal. This represents the second largest gas resource in the United States behind the Gulf of Mexico. While many areas of the United States are experiencing declining natural gas reserves, the Interior West resources are largely untapped and the amount of newly discovered gas in the area is increasing on a daily basis.

The majority of the coalbed natural gas is in the Federal mineral estate. Some of the surfaces overlying Federal minerals is, however, in private ownership. As good stewards of these domestic natural gas reserves and consistent with the National Energy Policy directive to facilitate our domestic energy supplies, we should develop these resources in an environmentally-responsible manner to sustain our

Nation's quality of life in the face of our increasing demand for natural gas. The BLM believes in being a good neighbor to adjacent landowners and expects Federal lessees to meet their obligations to private surface owners.

Coalbed natural gas from public lands can and should play a role in meeting increasing energy demands. Congress established a policy of multiple use for much of the Federal lands, which the Department strongly supports. Multiple use is critical for the health and well-being for the citizens of our public land states. Many uses, including access for energy development, can co-exist on public lands, if properly managed. We do not believe the public lands and resources should be put off limits to development. Today the Nation meets over 50% of demand for petroleum products with imports. Many of these imports are vulnerable to disruptions resulting from instabilities in exporting Nations or regimes. Thirty percent of our total domestic energy production comes from Federal lands and resources. Without the contribution of public resources, the country's energy supply would be even more dependent on foreign sources. And, of significance for the public lands states that are anywhere from 30% to 80% Federally-managed, the development of these resources can help western rural economies by creating jobs, new wealth, and tax revenue.

The EPCA Inventory

In January 2003, BLM delivered to Congress the first Energy Policy Conservation Act (EPCA) inventory of 59.4 million acres managed by Federal agencies in five study areas in the West. The areas contain the bulk of the known natural gas and much of the known oil resources under public management in the onshore United States. This initial EPCA inventory provides an estimate of undiscovered technically recoverable resources and proved reserves of oil and gas beneath the five basins and an inventory of the extent and nature of limitations to their development. The Department is working to complete the full assessment of onshore oil and natural gas resources on Federal lands beyond the five initial basins, not including Alaska. We anticipate this process will take approximately two years. All information gathered as a result of the EPCA effort will be integrated into the BLM's ongoing land use planning efforts are a cornerstone for future energy production from public lands. We would note that the EPCA inventory does not include information relating to the Federal OCS, which will play a big part in America's energy future.

Energy Rights-of-Way

Federal lands are important to the rights-of-way needs of the energy industry and utilities, especially in the western United States. BLM estimates that 90% of the oil and natural gas pipeline and electric transmission rights-of-way in the western U.S. cross Federal lands. The BLM alone administers approximately 85,000 rights-of-way, including approximately 23,000 for oil and gas pipelines.

Our challenge is to improve and expand the existing network of pipelines and transmission lines to meet the increased demand for energy. One way to meet that challenge is to identify and designate right-of-way utility corridors on public lands in a collaborative manner. The Department has been working with the Western Governors' Association and the Western Utility Group to do just that. The designation of utility corridors through BLM land use plans provides an important tool in the planning and location of future pipelines and assists in the processing of rights-of-way applications on the public lands. In addition, the Department is committed to working with our stakeholders and Congress to ensure that rights-of-way (ROW) rental fees on public lands are appropriate and fair, and that there is certainty in ROW rental fee valuation.

Offshore Resources

As you may know, Federal offshore lands on the OCS encompass 1.76 billion acres. However, of this total, about 600 million acres are currently off-limits to oil and gas leasing. This action has been extended by Presidential directive through 2012. Nevertheless, industry activities on the remaining areas available for development, particularly the 40 million acres currently under lease, make the OCS an essential part of ensuring the energy and economic security of the United States.

At the end of December 2002, the Department estimated that Federal offshore lands produce about 1.7 million barrels of oil each day, accounting for 30 percent of the oil produced in the United States. This makes the OCS the largest single source of oil for the U.S. economy (larger than Saudi Arabia or our neighbor to the north, Canada). In addition to oil, the OCS is also a major source of the Nation's natural gas, making a contribution of about 13 billion cubic feet per day, or about 25 percent of the Nation's domestic production. More than 90 percent of these resources come from the Gulf of Mexico OCS, with the rest coming from leases offshore California and the Beaufort Sea offshore Alaska.

With major projects slated to come online in the next few years (including Thunder Horse, the largest discovery in the U.S. in the past 30 years), we project that OCS production could easily reach 2 million barrels per day in the next few years and account for over a third of domestic crude oil production. Natural gas production is expected to remain at its current level, or increase slightly.

At the Department, we are taking steps to ensure that the OCS remains a solid contributor to our Nation's energy and economic security by holding sales in available areas on schedule. The OCS 5-Year Oil and Gas Leasing Program for 2002–2007, which was approved in July 2002, calls for 20 lease sales in the Gulf of Mexico and certain areas offshore Alaska during that timeframe. We estimate that these areas could contain economically recoverable resources of up to 22 billion barrels of oil and 61 trillion cubic feet of natural gas.

In 2002, the Department's Minerals Management Service held the 128th and 129th competitive oil and gas lease sale since OCS leasing began in 1954. For these two Gulf of Mexico sales alone, MMS leased over 800 tracts, bringing in more than \$500 million in revenue from high bids for the American people. Today, March 19, 2003, the Department is holding the 130th lease sale in the program. Since 1953, more than \$140 billion has been brought into the U.S. Treasury from OCS lease sales.

In addition to holding the lease sales outlined in the 2002–2007 program, MMS has developed a series of economic incentives to encourage industry to explore "frontier areas" where business risks are very high, and to facilitate getting the most production possible from available OCS acreage. The MMS continues to offer a royalty incentive program for deepwater leases in the Gulf of Mexico, and has expanded the incentives to promote development of natural gas from deep horizons in shallow waters. These leasing incentives come in the form of a royalty suspension for specified amounts of production from these areas. Currently, MMS is considering extending the shallow water, deep gas royalty relief provisions to leases purchased before 2002. MMS has also offered lease extensions for certain qualifying exploration activities that focus on reservoir targets that occur beneath subsurface salt sheets.

For offshore areas of Alaska, MMS is considering various incentives in addition to changes in suspension policies that will allow more time for exploration activity to occur. Additionally, MMS is evaluating its business processes program-wide to take advantage of opportunities to make the permitting process for drilling wells more efficient.

The Department would also like to see permanent authority for the Royalty-in-Kind (RIK) program, including authority to pay for the administration costs directly related to the President's initiative to fill the Strategic Petroleum Reserve with RIK oil.

OFFSHORE ALTERNATIVE ENERGY PROPOSAL

For the past 50 years, the Department has leased the OCS for oil, gas, and other minerals under the mandates of the OCS Lands Act. However, in recent years we have seen a growing interest by the private sector in developing alternative energy projects located on the OCS, such as renewable energy production from currents, wind and waves, and floating supply bases and other facilities that would directly support OCS oil and gas development.

In an effort to facilitate these innovative projects and to ensure that the Federal Government's economic and land use interests are fully protected, the Administration submitted legislation to Congress in June 2002 that would set up a statutory framework for reviewing and permitting such activities that are not otherwise covered by statute. It was developed in close collaboration with other Federal agencies with permitting authority on the OCS and would provide the Department with a full suite of regulatory tools necessary to comprehensively manage non-traditional OCS energy and related activities.

Mrs. Cubin introduced the legislation during the 107th Congress and again on February 13, 2003 as H.R. 793. The Administration continues to strongly support enactment of such legislation and looks forward to working closely with Congress on this important issue. We firmly believe that we must encourage new and innovative technologies to help us meet our increasing energy needs. Enactment of this legislation will be one important step in helping us meet those needs.

CONCLUSION

We will continue to operate under Secretary Norton's leadership and vision for managing the public resources—through communication, cooperation, and consultation in the service of conservation. The essence of this goal is to continue to forge new and stronger partnerships with other Federal and state agencies, Tribal govern-

ments, and all of our stakeholders—including Congress—to create greater opportunities for the responsible development of energy resources on Federal lands.

In summary, the following actions have been implemented or are being considered to facilitate the President's National Energy Policy:

- The BLM has recently released a joint report with the Department of Energy that identifies and evaluates renewable energy resources on public lands. The BLM will use the report's findings to prioritize land-use planning activities, and to increase the development and use of renewable energy resources.
- To ensure that the OCS remains a solid contributor to our Nation's energy and economic security by holding sales in available areas on schedule, we approved a 5-year Oil and Gas Leasing Program in July 2002 that calls for 20 lease sales in the Gulf of Mexico and certain areas offshore Alaska during that timeframe. We estimate that these areas could contain economically recoverable resources of up to 22 billion barrels of oil and 61 trillion cubic feet of natural gas.
- MMS is acting to increase energy production in promising, shallow waters of the Gulf of Mexico by providing royalty relief in OCS lease sale terms to encourage production from new wells drilled to deep horizons (greater than 15,000 feet total depth). This area of the Gulf of Mexico is expected to hold between 5 and 20 trillion cubic feet (TCF) of gas and can be developed quickly due to existing infrastructure in the shallow waters of the Gulf.
- MMS is considering providing similar shallow water, deep gas royalty relief to leases purchased before 2002.
- MMS issued a final rule in July 2002 that allows companies to apply for lease term extensions that will provide additional time to analyze complex geophysical data in area under salt sheets. Vast resources of oil and natural gas may underlie sheets of salt in the OCS, which makes it difficult to obtain a clear image of the subsalt geology. This will help identify and define drilling targets and accelerate discovery and production of deep natural gas as well as foster new technology.
- The Department completed the EPCA inventory this year. The EPCA inventory provides an estimate of undiscovered technically recoverable resources and proved reserves of oil and gas beneath the five Interior West basins and an inventory of the extent and nature of limitations to their development.
- BLM is completing the necessary land management planning for the two major coalbed natural gas basins in the United States: San Juan and Powder River Basin. BLM's completion of these plans may result in additional drilling of Federal minerals, which will increase the production of natural gas from coalbed natural gas. BLM is developing policies to streamline its processing of applications for permits to drill, which will include the development of an approved methodology ("best management practices") for drilling permit approval. BLM is also working on guidance to improve BLM and its lessees coordination and consultation with surface land owners. In addition, BLM is improving the necessary coordination and consultation with State and other Federal agencies to address the concerns that have been raised and to make the process more efficient.
- The BLM has prioritized a number of land-use planning efforts that have major oil and gas components. The public process, once completed, will expedite the development of natural gas and oil.
- The Department is working with State and local governments as well as with industry (e.g., the Western Governors' Association and the Western Utility Group) to identify and designate right-of-way utility corridors on public lands.
- The Department is taking steps to ensure that the OCS remains a solid contributor to our Nation's energy and economic security by holding sales in available areas on schedule. In past years, scheduled sales in several areas were either delayed, cancelled or put under moratoria even though they appear on a 5-year schedule. This did not provide industry with the certainty it needs to make long-term investments in the OCS.
- In support of the President's goal of streamlining permitting of energy projects, MMS has initiated a multi-year effort designed to increase our efficiency in processing applications to permit drilling of OCS wells.
- The Administration submitted legislation to Congress in June 2002 that would set up a statutory framework for reviewing and permitting alternative energy and energy-related activities not otherwise explicitly covered by statute. This legislation will include renewable energy projects, such as wind, wave or solar energy; and energy-related projects that are ancillary to OCS oil and gas development, such as offshore staging facilities and emergency medical facilities.

Thank you for the opportunity to testify before you today. I welcome any questions the Committee may have.

Mr. GIBBONS. Thank you very much, Madam Secretary. I do want to assure everyone that their full and complete testimony will be placed in the records of this Committee in an effort, as I have said, to keep the panel going. We would hope you would summarize.

With that, let me turn it over to Secretary Smith. Your opportunity is now available for you to address the body. We welcome you and the floor is yours.

STATEMENT OF CARL MICHAEL SMITH, ASSISTANT SECRETARY FOR FOSSIL ENERGY, U.S. DEPARTMENT OF ENERGY

Mr. SMITH. Thank you, Mr. Chairman, and members of the Committee. I am pleased to join my colleague, Assistant Secretary Watson, in discussing the energy potential of our Federal lands and the importance of new technology in developing these energy resources in the most environmentally responsible manner.

Much of our Nation's attention again is focused on the security of global energy supplies. And while that focus is there, it is important for us to remember that we remain an energy-rich country. Our Nation has rich deposits of coal, oil and natural gas. We have more energy in our domestic coal reserves than the rest of the world has in recoverable oil. Our natural gas deposits are extensive, with resources ranging from the shales of Appalachia to the tight sandstones of the Rockies, to the hydrates of the Gulf of Mexico and the Arctic. And even though we currently produce less than half the oil we consume, we remain the world's third largest oil producing nation.

Today, fossil energy resources supply 85 percent of the energy we consume, and over the next 20 years virtually all credible energy productions agree that these fuels will supply a similar if not larger share of our energy needs.

Because coal, oil and natural gas are the Nation's dominant fuels, when President Bush formulated his National Energy Policy, he recognized that we must look for ways to maximize the energy potential of these traditional resources. He also recognized that, to do this, we must look in large part to the resources that exist on Federal lands.

The Federal Government owns about 31 percent of our Nation's land. Public lands provide nearly 30 percent of annual energy production and contain a majority of the Nation's undiscovered domestic resources. The recent EPCA report, conducted by the Interior Department, estimated that there are 226 trillion cubic feet of natural gas and over six billion barrels of oil under these lands. Secretary Abraham requested that our Office of Fossil Energy work with our colleagues at Interior in making this inventory. Such inventories will be an invaluable tool for improving public policy decisions. Yet we must also recognize that new technology will likewise be important if we are to realize the full energy potential of our Federal lands.

The United States is one of the most mature oil and gas regions of the world. Most of what we produce today has come from shallow reserves with relatively easy access. The easy oil and gas has been produced. It will take improved technology if our energy industry

is to overcome the challenges of previously unrecoverable higher cost resources. These advances are occurring. Technological improvements have enabled oil and gas producers to access new frontiers, such as tight gas formations, ultra-deepwater, Arctic areas, and gas from coal seams, as Secretary Watson mentioned.

These advances are occurring as we speak. We are working through new technologies that are being developed, and they are activities that are bringing us much more efficient production of energy and in a more environmentally friendly way, with fewer dry holes drilled and fewer than half the wells needed to be drilled today to locate the same amount of reserves that we recovered 20 years ago. In short, we have learned how to produce oil and gas in a more efficient manner that is more environmentally friendly and gives better protection.

Through both technology developments and new operational techniques, domestic oil and gas production shows considerable improvement on the environment. Fewer wells add the same level of oil and gas reserves, lower volumes of produced water and other production fluids, and smaller footprints for oil and gas rig locations and field facilities.

I would like to give you an example of at least one of these technological advances that has recently been announced.

A new modular drilling rig has been deployed in Alaska as the platform for a methane hydrates well. This drilling rig is patterned after offshore jack-up rigs and sits above the tundra on stilts. It will allow drilling operations to have a virtually zero footprint. This is a dramatic leap forward in our ability to maintain and protect the environment while developing those resources that Secretary Watson mentioned that are on the North Slope of Alaska.

Another important new resource could be the methane hydrate resource, which this rig in Alaska is seeking to produce. On the North Slope alone, the USGS estimates that we have about 590 trillion cubic feet of potential gas hydrates available. For years, this gas that was trapped in the permafrost has really been a nuisance at best to drilling operations, and it was actually detrimental to production because we simply did not have the technology to produce it. Now we are working toward that technology, and as much as we have worked toward coalbed methane technology, this new technology really has a promise.

The coalbed methane that both Secretary Watson and I have mentioned is a prime example of our energy resource that we're going to need in the future. The San Juan Basin in Colorado and New Mexico is the top producer of coalbed methane. Yet the Powder River Basin in Wyoming really holds the most promise.

Mr. Chairman, I appreciate the opportunity to be with the Committee today and would be happy to answer any questions that at the appropriate time.

[The prepared statement of Mr. Smith follows:]

**Statement of Carl Michael Smith, Assistant Secretary for Fossil Energy,
U.S. Department of Energy**

Mr. Chairman and Members of the Committee:

I am pleased to join my colleague from the Department of the Interior in discussing the energy potential of our Federal lands and the importance new tech-

nology will play in permitting the nation to benefit fully from these energy resources in the most environmentally responsible manner.

With much of the nation's attention again focused on the security of global energy supplies, it is important to remember that we remain an energy-rich country. Our nation has rich deposits of coal, oil and natural gas. We have more energy in our domestic coal reserves, for example, than the rest of the world has in its recoverable oil. Our natural gas deposits are extensive with resources ranging from the shales of Appalachia to the tight sandstones of the Rocky Mountains to the ice-like hydrates of the Gulf of Mexico and the Arctic. And even though we currently produce less than half the oil we consume, we remain the world's third largest oil producing nation.

Today, fossil energy resources supply 85% of the energy we consume; over the next 20 years, virtually all credible energy projections agree that these fuels will supply a similar, if not larger, share of our energy needs.

Coal will continue to supply around 50% of our nation's electricity, and because of the growing demand for electric power, that will require nearly 1.4 billion tons of coal to be mined in 2020, 20% more than was mined last year. Similarly, by 2020, the United States will need about 50% more natural gas, largely because of increasing gas use for power generation. Moreover, demand for these fuels could increase even beyond current projections since both coal and natural gas could serve as major feedstocks for the "hydrogen economy" described by the President in his recent State-of-the-Union address. It is also projected that the nation's use of oil will increase by about a third over the next two decades.

Because coal, oil and natural gas are the dominant fuels in the U.S. economy, when President Bush formulated his National Energy Policy, he recognized that to be truly energy secure, we must look for ways to maximize the energy potential of these traditional energy resources even as we explore the possibilities of future energy resources such as renewables and fusion and improve efficiencies in the way we use energy.

The Importance of Federal Lands

The energy strength of our nation lies in the abundance and diversity of our energy resources, and many of these resources exist on Federal lands.

The Federal Government owns about 31 percent of our nation's land. Large portions of U.S. energy resources are contained in these Federal lands and offshore areas. Public lands provide nearly 30% of annual energy production and are estimated to contain a substantial majority of the nation's undiscovered domestic energy resources.

The Department of Energy supports the Department of the Interior's activities to effectively inventory these domestic resources vital to our nation's energy supplies and assess the consequences of restrictions to land access. We have worked closely with the Interior Department in conducting these inventories, and we stand ready to continue our close collaboration in future studies.

The Energy Policy and Conservation Act (EPCA) enacted in 2000 directed the Interior Department, in consultation with the Energy and Agriculture Departments, to conduct an inventory of energy resources beneath onshore Federal lands. The resulting report assessed five basins which have proven to contain some of the most significant amounts of natural gas and oil resources under onshore public lands: Powder River Basin (Montana and Wyoming), Montana Thrust Belt (Montana), Greater Green River Basin (Wyoming and northwestern Colorado), Uinta-Piceance Basin (Utah and western Colorado), and Paradox-San Juan Basin (Colorado and Utah). It also identified ten different categories of land accessibility through a process of mapping the surface of the public lands in conjunction with the underground resource. This method provides the ability to look at resource restriction as well as land surface restriction.

The key findings of the report indicate there are an estimated 226 trillion cubic feet (Tcf) of natural gas and 6.3 billion barrels of oil under these lands.

This report begins the process of identifying and making an inventory of these resources and I believe that this process will be an invaluable tool for improving public policy decision-making. With President Bush's comprehensive energy plan and this new Federal inventory we can meet the challenge of both providing energy for Americans and protecting our environment.

Responsible Domestic Production

The United States is one of the most mature oil and gas regions of the world. The vast majority of resources that have been developed have been from shallow reservoirs with relatively easy access. Maintaining a strong base of domestic production is a challenge to the industry, but we have continued to produce by implementing

constantly improved technology and operational practices. Because of our ability to develop resources more efficiently with smaller land disturbance, the U.S. remains the third largest producer in the world.

The President's National Energy Policy emphasizes that 21st century technology is the key to environmental protection and new energy production. The American oil and gas industry has made great strides in technology development and is one of the global leaders in the successful use of advanced technologies and best operational practices.

As technology and understanding of our Nation's resource potential advances, previously unrecoverable, higher cost resources become feasible, thereby providing a larger contribution to reliable and affordable energy supplies for America. Technological advances have enabled oil and gas producers to access new frontiers such as tight gas formations, ultra-deepwater, Arctic areas, and gas from coal seams. It also has made exploration and production activities much more efficient. Drilling success rates have doubled in the last two decades, resulting in fewer dry holes. Today, fewer than half as many wells must be drilled to locate the same amount of oil and gas reserves as two decades ago. Enhanced recovery now allows industry to produce a higher proportion of the hydrocarbons in discovered reservoirs, leaving less behind.

Not only have we learned how to produce oil and gas more efficiently, we also have been able to do so with a greater degree of environmental protection. Through both technology developments and new operational techniques, domestic oil and gas production shows considerable environmental improvements. Fewer wells to add the same level of oil and gas reserves, lower volumes of produced water and other production fluids, smaller footprints for oil and gas rigs and other field facilities; reduced air emissions; and an enhanced worker safety environment.

I would like to give you a perfect example of the ability of the domestic oil and gas industry to provide energy supplies while protecting the environment. Recently, a new modular drilling rig has been deployed in Alaska as the platform for a methane hydrates well.

This drilling rig is patterned after offshore jack-up rigs and sits above the tundra on stilts. Its use will allow drilling operations to have a virtually zero footprint. This is a dramatic leap forward in our ability to maintain and protect the environment while developing our essential resources.

In addition to its negligible environmental impact, this technology has the added benefit of allowing production to continue year-round. Currently, in Alaska, wells are only drilled in the winter when the ground is frozen and will support ice roads and ice drilling pads. When the ice melts, the rigs and associated equipment can sink; consequently the rigs and equipment must be removed prior to thawing. Ice roads will be unnecessary because all equipment for this new rig can be brought in on rollagons—vehicles specifically designed for Arctic travel—by land in the winter and by helicopters in the summer. This rig will also be able to fully contain any drilling fluid or potential spills.

It is technological improvements such as the virtually zero-footprint drill rig that give us confidence that oil and gas operations can be conducted on Alaska's North Slope, including in the 1002 Area of the Arctic National Wildlife Refuge, in a way that protects the character of the land and the quality of the Arctic environment. Continual improvements in the way the industry does business in the Arctic now open the possibility that we could achieve the 1002 Area's potential as the single most promising prospect in the United States. As we examine ways to secure the Nation's energy future, it is important to recognize that with advances in environmentally-sensitive oil field technology, production from ANWR could one day account for more than 20 percent of all U.S. oil production and could be equal to more than 60 years of current oil imports from Iraq.

In addition to the inherent environmental benefit of a virtually zero-impact drilling rig, new technologies will also enhance our ability to produce natural gas from potentially huge methane hydrate resources. We believe methane hydrates constitute one of the most significant long-term sources of natural gas in the world. On the North Slope of Alaska alone, the hydrate resource has been estimated at 590 TCF. For years, the discovery of natural gas hydrates beneath the permafrost during drilling operations has been considered a nuisance at best and at times, has been detrimental to production. However, technological advances are giving us the capability to extract natural gas from the hydrates.

Coalbed methane is another prime example of an energy resource the nation will need increasingly in the future. In 2000, about 1.4 Tcf of coalbed methane was produced in the United States, 7.5 percent of total annual domestic natural gas production. While the San Juan Basin in southwestern Colorado and northwestern New Mexico is the nation's top producer of coalbed methane and there are other large

coal seams, such as in Alabama, that produce natural gas, the Powder River Basin, located in northeastern Wyoming and southeastern Montana, is the fastest growing source of coalbed methane.

In the next 10 years, as many as 39,000 new coalbed methane wells could be drilled in the Powder River Basin. Nearly 24,000 of these will likely be on the Federal mineral estate.

The amount of natural gas that will be economically recoverable from these coal seams will depend largely on the clear definitions and consistency of regulations surrounding produced water. We recognize the importance of the safe disposal of produced water, and that is why we need a clear and consistent regulation. We are committed to working with Interior, EPA and other Federal and State agencies to make sure that we will have a regulatory process that is not only effective, but not unduly burdensome.

Other recent technological advancements that can help realize the energy potential of our Federal lands while protecting the environment include:

- Three and four-dimensional seismic technology now provide the capability for virtually “seeing” resource formations—including how the reservoir changes over time. This, in turn, allows better targeting of exploration prospects and improved recovery in discovered fields;
- Directional and multi-lateral drilling now enable industry to access oil and natural gas resources miles away from a drill rig. Multiple boreholes can now be drilled into different producing horizons from a single wellbore—again minimizing surface disturbance.
- New, high performance synthetic drilling fluids can be safely discharged without harm to the environment. These new fluids greatly improve the economics of drilling, allowing the pursuit of resources in complex geological settings.
- Developments in offshore platform technology now take advantage of advances in materials and computer-aided design. This has resulted in lower cost, modular production facilities that enable producers to pursue smaller prospects in deepwater settings.

When the President released his National Energy Policy almost two years ago, he gave us a blueprint for energy security. It is imperative that we have reliable and affordable supplies of energy, and we must improve our stewardship of the environment. It is through the use of best available technology and best operation practices like these that I have just described that allow us to responsibly develop large new domestic resource basins while improving the quality of environmental protection. These capabilities already exist and are being put into practice, from the coal seams of Alabama to the Rocky Mountains to the Alaskan Arctic.

Thank you Mr. Chairman.

Mr. GIBBONS. Thank you very much for your testimony. Both you and Secretary Watson have certainly provided us with information which I think is going to be very helpful to the Committee. Let me begin the questioning—and we will limit it to 5 minutes on each side—with Secretary Watson.

Secretary Watson, I am now going on my seventh year with this Committee. Each time we have heard producers and developers walk in here and talk about the difficulties they have had with regard to accessing, permitting, delays, et cetera. Let me ask a question.

Would you explain to us what you and the BLM are doing with regard to coordinating, lessee coordination, lessee consultation with surface owners, in order to improve the process by which companies access these energy fields.

Ms. WATSON. Well, we are doing a lot of things. I think your question has two parts. One, we are looking at our relationship between our lessees and the surface owners, particularly in that case where the surface owner does not own the mineral under the surface estate. We want to be sure that the letter of the law is followed, that our lessees consult with the land owner, work with them to reduce the impact to their property, and appropriately bond for the surface.

The other things we're trying to do are process applications for permit to drill in a more efficient way. Certain of our offices in the BLM have developed batching procedures, more efficient ways to process, because they've been faced with many more permits to have to process. So they have been creative and have come up with better methods. We want to transfer their success to other offices of the BLM and, to that end, we're developing best management practices along with our application for permit to drill processing procedures.

Mr. GIBBONS. Madam Secretary, as we all know, price is usually a component of supply and demand. America is becoming, as we have heard, increasingly dependent upon natural gas to provide electricity and heat for homes, and there is a supply and demand issue that has suddenly revealed a gap between the supply and the demand.

What do we need to do to ensure that that potential gap, or that existing gap, is diminished and that we end up with a stable supply of gas and energy sources to meet the anticipated huge demand that we see rising in the future, to avoid a gap which drives the price beyond the affordability of most Americans in this economy?

Ms. WATSON. I think we have to look at both the short term and the long term. In the short term, I think coalbed natural gas in the interior West is a key part of addressing the short-term demand. Also, development of deep gas in the shallow water off the Gulf of Mexico. Those are the two most readily available sources that can meet our short-term natural gas supply crunch.

In the long term, we need to look at where we're going to be getting our natural gas. We will be importing increasing amounts of natural gas. That means we need to build the infrastructure for liquified natural gas. We also need to look seriously at developing the natural gas in Alaska. That requires a huge capital investment in the way of a pipeline. The technical challenges of building such a structure are enormous. But in the long term, we need to take a look at that, to support both supplies from Alaska and frontier areas in Canada. So those would be two ideas that I have.

Mr. GIBBONS. Thank you.

Secretary Smith, let me ask just a general question. In your opinion, would more access to energy resources on government land, in view of the rising demand, actually lower energy bills for consumers?

Mr. SMITH. Mr. Chairman, that's a difficult question to answer. As Secretary Watson said, there is both a short term and a long term answer to that.

In the short term, it would not immediately lower bills, because you have to remember that, if you do have access, some geologist has to have an idea that there is natural gas there. Then that idea has to be sold and drilled and completed and put into the system. And even if it's a fairly shallow prospect, less than 5,000 feet—and coalbed methane mostly is—but even if it's fairly easy to drill, it still takes about a year to get it into the system. So if you started drilling today, it would be March of '04 before that gas is actually in the system.

But yes, access is one of the major challenges that the industry has. That is part of the EPCA report that I mentioned in my open-

ing comments, Mr. Chairman, that we, along with Interior, have looked at some of these challenges and have examined those resources in the Rockies in particular, to see where oil and gas exploration, using modern technology that safeguards the environment, is available for actual use. I think that, both in the short term—if you call a year a short term—and the long term, it certainly will add to our resources.

Mr. GIBBONS. I guess, in summary, the issue of access is one without access. The demands and the gap between supply and demand will always exceed what we have today.

Mr. SMITH. Yes, sir. I would say so.

Our energy information agency at the Department of Energy has estimated—just to give you an example—that by the year 2010, our Nation will be using about 30 trillion cubic feet of natural gas a year. We use about 23 trillion cubic feet today. So we are going to have to drill a lot of wells and find a lot of production just to run in place, if you will.

Mr. GIBBONS. Thank you very much.

Mr. Kildee.

Mr. KILDEE. I have no questions at this time, Mr. Chairman. Thank you very much.

Mr. GIBBONS. Mr. Duncan?

Mr. DUNCAN. I have no questions.

Mr. GIBBONS. Mr. Kind.

Mr. KIND. Thank you, Mr. Chairman. And thank you again for your testimony.

Secretary Watson, first of all, I am pleased to hear the Administration's support in regards to the national assessment on energy on Federal lands, especially as it relates to alternative renewable energy projects. I think there is a general consensus in this field, whether it's wind or solar or geothermal, biomass, that there is tremendous potential out there on the public lands in this country to develop further projects, but also for the feedback that I have been getting, a sense of frustration that, because of the overlapping jurisdictions that are involved, it's very hard to move forward on a lot of these projects. I look forward, as we delve into this, to being able to work with you and your office to explore the difficulties that many of them are encountering.

We just had a hearing on the Nantucket Sound wind project about a week ago, which could be a model of how or how not to actually move forward on these issues. Obviously, there is a lot of NIMBY issues involved in this, too. But again, I think with the Administration's cooperation, and with your help in particular, we might be able to think through some of these road blocks.

Also, I was very supportive in the last Congress in regard to having the Administration move forward on a national resource assessment, and in particular the geothermal assessment, on all public lands. I understand you are moving forward on the Great Basin assessment right now. The National Resource Council, too, has taken a look at it and says it is vital to get this assessment done as soon as possible so we can put the pieces of a long-term energy plan in place.

My question is, would it be helpful at all in getting some specific authorization from this Committee in regards to funding levels and

time period, to enable you to do the national scope, the national assessment, on these energy potentials?

Ms. WATSON. Well, I'm not sure I understand exactly what you're talking about, but I do know that we have a geothermal assessment that we will be rolling out this month. I think that has been eagerly awaited by the geothermal industry. It takes the report, the general assessment report that we have, and brings it down into sharper focus.

Ideally, we have been talking with the Department of Energy about partnering up and doing that for each of the renewable resources, particularly in the biomass area, where are the best areas on the public lands to develop biomass energy, and that would be a companion to the soon to be released geothermal report.

Mr. KIND. Let me ask you in regards to the geothermal report. Is that Great Basin specific, or is it nationwide in scope? It's my understanding that the assessment was limited to certain geography.

Ms. WATSON. It was my understanding that it would be larger in scope than just the Great Basin, but...[conferring]It's not the entire country because, of course—I think it's a look at public lands, but it is not narrowly focused on the Great Basin.

Mr. KIND. And this would be all public lands throughout the country that we're talking about the assessment being done on?

Ms. WATSON. I guess eventually it will be all public lands. This particular one is larger than the Great Basin but somewhat smaller than all public lands.

Mr. KIND. That's my question. I mean, do you need some further authorization, do you need some help, as far as the completion of the national assessment?

Ms. WATSON. Probably, but...[laughter.] We'll follow up. We always need your assistance, let's put it that way.

Mr. KIND. Finally, just one last question. We are anticipating hearing testimony from a couple of witnesses about some concerns arising out in Colorado in regards to a couple of BLM offices and how they have been quick to waive some of the environmental and recreational concerns in the area. I am wondering if you can today assure the hunters and fishermen in that area that the energy projects aren't taking precedence over their interests in this same area.

Ms. WATSON. Yes. I do want to assure them of that, because we want to work closely with the hunters and fishermen. We have been working with them in the Bureau of Land Management to address their concerns.

This issue came out when we rolled out the EPCA report. One of the contracts that was involved in preparing that made the point that many times the Department of Interior, the Bureau of Land Management, puts in wildlife stipulations that are broader than are necessary, so it is easier then to do planning. Part of the reason that the numbers of waivers are so high is a reflection of this ease of planning. I am asked to take a look into that because I think that creates misinformation for the public perhaps on what protections are there, what protections are truly necessary, and when they're waived, it raises concerns like you're hearing today.

I think that there is a very careful process in each of the BLM offices, where they go through what criteria have to be met before you can waive them.

Mr. KIND. We're hearing some complaints on a couple of specific BLM offices on that. Whether the perception is real or not, it's there. So again, I think we'll have to follow up and try to deal with this in light of the growing concerns and the questions that are being raised right now.

Ms. WATSON. OK.

Mr. KIND. Thank you.

Thank you, Mr. Chairman.

Mr. GIBBONS. Thank you, Mr. Kind.

Mr. Osborne.

Mr. OSBORNE. Thank you, Mr. Chairman, and thank you for being here.

I am somewhat interested in renewable fuels, particularly ethanol, biodiesel. Right now, that is one component of the energy bill. As you well know, one of the major obstacles to the passage of the energy bill is the controversy over ANWR. So I guess my question to you is this: Is it possible to find out what is there in ANWR without doing great damage to the area? In other words, just finding out the reserves that are present. Because you hear wild estimates that vary so much. Obviously, if it's a very small supply, it may not be worth the effort or whatever damage it might do to the environment.

Personally, I am pretty well convinced that it can be done without any major problem, but I would like to explore your thoughts on that because it seems to be holding up the whole renewable fuels portion of the energy bill and the energy bill in general. I think this is something we badly need to have passed for the security of the country.

Ms. WATSON. I think that this administration believes in a diverse supply of energy. Renewables is an important component of it, but right now, the demand in our country is for oil to run our vehicles. ANWR is the best opportunity to provide that oil domestically. It provides that diversity of supply component that we need. It takes us away from an overdependence on foreign countries because we have a diverse component of domestic energy in there.

I think the estimates on ANWR that our Secretary testified to last week are pretty firm on what is technically recoverable oil, and that over 10 billion barrels of oil. It more than the oil that is produced in Louisiana or Texas, and as I testified, it is more than double what we get from Iraq. I think that oil is an important part of our energy supply mix, and I think it can be done, as Assistant Secretary Smith testified to, in an environmentally sensitive way. So it is not an either/or proposition.

Mr. OSBORNE. I understand there are claims of 10 billion barrels, but I have also heard three and I have also heard 16. My question is, is there some way to get a clear ascertainment within a range of one or two billion barrels on what is actually there.

The reason I mention this is because I think you're concerned about fuels, but—for instance, in Brazil, 22 percent of their gasoline supply is ethanol. We have vehicles that can be run on 85 percent ethanol, so we're not talking about just a casual part of the

energy bill here. We think this is a very viable supplement to petroleum. To have this whole thing held up, we have ethanol plants being built with people not having any idea whether the energy bill is going to contain that element or not. It makes investment very risky.

So my point is that we're seeming to hold this whole thing up over ANWR. The question again I have, is there some way you can have a fairly hard number, other than just saying well, we estimate? Can you go there and do some limited drilling and find out what the reserves actually are, without actually doing some of the things that some folks in this room are concerned about?

Ms. WATSON. Well, I think there are new technologies, some of which were mentioned in opening statements, and 3-D seismic exploration on rollagons is one way that that type of information can be obtained. But the way you get estimates firmed up is through drilling, and drilling requires the very infrastructure that many people are concerned about. So I'm not sure that we could get to that point. But that is what would be necessary, seismic and drilling, to get that number more firm.

Mr. OSBORNE. So what you're saying is, to get an accurate portrayal will mean you will have to do whatever damage to the environment, if you want to use that term—I don't subscribe to it—that would be required to do major drilling and extract the oil anyway, is that what you're saying?

Ms. WATSON. Well, I think that the recent report that came out made it pretty clear that the technologies that are being used in the North Slope are minimal damage to the environment, but that the concern is over infrastructure and the change of an area that has little impact for man into one that has a greater impact for man. So I think to drill, to find out your reserve base, would bring that activity of man into this area, which I think many of the opponents of ANWR are opposed to.

I want to emphasize, having been to the North Slope twice, that the technologies that are used have made enormous progress. I think the oil and gas industry and the government have heard the concerns of the American people over how we produce oil and gas and have significantly modified their behavior so that the impact on the environment is significantly less. The size of drill pads has gone down some 80 percent over the last 10 to 20 years. Changes have been made.

Mr. OSBORNE. Thank you. My time has expired.

Mr. GIBBONS. Thank you very much, Mr. Osborne.

Mr. Udall.

Mr. UDALL OF NEW MEXICO. Thank you very much, Mr. Chairman, and thank you for having this hearing.

I think this is a very important issue for many of us, especially in the West, with energy development on our lands. As Secretary Smith mentioned, the top producer is the San Juan Basin, which is in my district in New Mexico, and we all know, as you have said, that coalbed methane is an important energy source. We need the energy and we need energy security. But I think the important point for me, too, is that when we do this development, we must do it reasonably and we must do it responsibly. I think there are some serious questions that have been raised by my constituents

and other people in the West as to whether or not the surface owners are being treated fairly in this whole process. I'm now talking about coalbed methane development, the complaints about putting low quality water on the land, doing little enforcement. There are a number of complaints that seem to be surfacing.

I'm just wondering how you're addressing those, because it was acknowledged in our area that enough enforcement wasn't being done. Late last year BLM Director Kathleen Clarke promised more inspectors at the Farmington field office. I think this was recognizing that in Farmington we were opening up so quickly that we weren't doing the enforcement side.

I'm wondering what has been done to beef up inspections out of the Farmington office, and are those inspectors now on the job that BLM Director Clarke promised.

Ms. WATSON. I believe that that office was increased with some 13 inspectors. That's the figure that comes to my mind, but I would want to get back to you on that to be sure my memory is correct.

Mr. UDALL OF NEW MEXICO. You believe they're there, on the ground, doing enforcement right now?

Ms. WATSON. That's what I believe I've been told, that there was an identified lack of inspectors in that office, and that the budget was provided and was increased by that number. Again, I'll get back to you to be sure that I'm accurate on that.

I think that we take very seriously the concerns of the surface owners, as I said in my testimony, and we are looking at our on shore order No. 1 to improve the relationship between our lessees and the surface owners. We want to be good neighbors. As managers of the public land, we want to be good neighbors to our neighbors. So we are looking for ways to establish a stronger relationship and make sure that our lessees live up to the law, which requires them to work with the lessees and to clean up after they're done. That's important to us and we're focusing on it.

Mr. UDALL OF NEW MEXICO. Secretary Watson, one of the ways you can do that is require surface agreements between lessees and landowners. I understand that BLM already requires waterwell mitigation agreements between oil and gas operators and landowners.

Why not expand this requirement to encompass surface use and damage agreements?

Ms. WATSON. Well, I would respectfully state that we do require surface agreements. That's part of the stock raising Homestead Act requirement, that you either have to have an agreement with your surface owner, and if you can't come to an agreement, you have to post a bond.

One of the things that we are going to be doing very shortly is sending out an instruction to our field office to emphasize the importance of obtaining a surface owner agreement before any application for permit to drill is issued, making sure that again our lessees work seriously with the surface owner and locate the facilities on their surface land in a least intrusive way. So we do require agreements, but we're going to emphasize in an instruction memorandum to the field that we're serious about it.

Mr. UDALL OF NEW MEXICO. And when are you expecting that instruction memorandum to be—

Ms. WATSON. I hope it to be issued by the end of this month.

Mr. UDALL OF NEW MEXICO. BLM Director Clarke also told landowners in Gillette, Wyoming, in April 2002 that “There will be some oil and gas bonding increases.” It is my understanding that BLM hasn’t taken any action up to this point. Why not, and do you plan to address oil and gas bonding issues?

Ms. WATSON. Yes, we also plan to address oil and gas bonding issues again in the same timeframe. Again, we want to make clear to people—One of the regulations that applies to surface owners indicates that if you have to bond on, if you fail to achieve agreement with your surface owner, that a bond must be posted at no less than \$1,000. Well, somehow it has turned into no more than \$1,000. We want to make it clear to our managers that the bond must be commensurate for the potential to damage and that the one thousand is a floor, not a ceiling.

We are also looking at the ability to bond particular facilities such as large stockwater ponds with a separate bond that is particular to that impact, rather than a nationwide or statewide bond. So that is an important issue and we are going to be addressing that.

Mr. UDALL OF NEW MEXICO. Thank you for those answers. Mr. Chairman, my time has expired. Thank you.

The CHAIRMAN. [Presiding.] Mr. Renzi.

Mr. RENZI. Thank you, Mr. Chairman.

Secretary Watson, I want to thank you for coming to Flagstaff, AZ, and also to our Chairman, for bringing Washington and our Subcommittee hearing to the people of Flagstaff. I found your testimony there to be compelling.

I think you probably saw first hand the conditions of our western forests, and in my district, which is almost 58,000 square miles, made up of some of the greatest Ponderosa pine forests in our Nation, if not the biggest. We have had policies in the past which have caused those forests to be now very vulnerable to catastrophic fire, unnaturally hot, burning fires, in which millions of acres are being burned. We have had policies in the past where we have suppressed all fires, including cool fires, and the kind of fires that go through grasslands that help to thin our forests. We have had judicially imposed environmentally extreme views, in my opinion, that have said no cutting at all, and we’ve lost our timber industry essentially in Arizona. We have one sawmill left in Flagstaff, AZ, a town that was built on the timber industry. Yet, we are reaching across and we’re finding compromise with our environmental friends on the use of biomass, small diameter fuels.

We are also on the verge of losing over a million acres to the bark beetle in northern Arizona. That wood will rot and be unused by our timber industry, by our real estate or by our building industry unless we’re able to go in and thin the forest.

The ability to use biomass, the ability to harvest small diameter woods, and use that as part of our energy, as part of producing electricity and getting it on the grid, and helping to stabilize the electrical use in the West, particularly in California—and Arizona does produce electricity and ship it to California—is something of a hope for us. We know that, without the commercial timber industry in Arizona, we’re going to lose our forests. We know we have

got to be able to reach across and be allowed to go back into our woods and thin.

What are your ideas, and what is your hope, on helping to increase the use of biomass and maybe the uses of small diameter wood, if you wouldn't mind?

Ms. WATSON. There is a great potential there. Out of all our renewable resources, we get most of our electricity from biomass, so it is already a good contributor. But it is still in its infancy. The State of California has begun to use biomass plants.

I think that the Healthy Forest Initiative, that initiative to go in and address the conditions of the forests which you just outlined, where we go in and thin small diameter wood, can contribute in a very significant way to increasing biomass as part of our energy mix.

Again, it gets back to the security of supply. An entrepreneur, a business person, will not invest in a biomass plant unless there is certainty that they have a supply coming off the public lands to feed that plant. If they have to go to the bank and borrow \$50,000 or \$100,000 for a biomass plant, they need to show the bank officer they have a supply for 10 years, twenty years, to supply their plant. So I think the President's Healthy Forest Initiative, coupled with the stewardship contracting authority that the Bureau of Land Management and the Forest Service just received out of the appropriations bill, give us some tools that we can use that have a really good synergistic effect, not just on the health of our forests but also on our energy dependency situation.

Mr. RENZI. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Grijalva.

Mr. GRIJALVA. Thank you, Mr. Chairman.

Madam Secretary, let me follow up on a point that you made in response to a question by Congressman Udall, having to do with the issuing of an instruction memorandum to field personnel. Let me just follow up on that a little bit.

Why are you issuing a memorandum as opposed to new regulations?

Ms. WATSON. Because we can get that direction out to the field more rapidly with an instruction memorandum. In order to publish a regulation, that takes time. But this would not be necessary to be done by regulation. The regulation already exists that provides for this.

What we have found is, through mythology or practice or whatever, certain bad practices have developed that fail to recognize the direction that the regulation already provides, so this guidance is simply reemphasizing what already is provided for in statute and regulation, as far as that relationship between the surface landowner and the lessee of the Federal mineral.

Mr. GRIJALVA. Being that it is a memorandum, will there be an opportunity prior to the release for public comment and public notification of the contents of the memorandum?

Ms. WATSON. We have been talking to people in the public, and will do so before we release it. But it won't be put out for a formal public comment period. Again, we want to get this out to our field. Again, it is simply restating what already is provided in regulation and has received public comment.

Mr. GRIJALVA. This instruction memorandum, if I may, Madam Secretary, will that require surface owner notification or surface use agreement, as we have been speaking to today?

Ms. WATSON. Yes. Again, that is already required by law.

Mr. GRIJALVA. One more question, if I may, Mr. Chairman. That has to do with the cost issue.

I think BLM has estimated there are approximately 12,000 shut in and abandoned oil and gas wells on the lands under the agency's supervision that have an attendant cost to them. If we go to the tens of thousands of new coalbed methane wells that are expected to be developed in the near future, there is an estimated cost of a billion dollars for reclamation costs related to the coalbed methane development in the Powder River Basin alone in Wyoming.

So my question is, what will Interior do to prevent taxpayers from being stuck with a potential clean-up bill of that magnitude?

Ms. WATSON. Well, we require that these wells be bonded, and also the states have requirements on abandonment and how you deal with that. The Secretary is adamant that the American taxpayer not be left cleaning up the environmental impacts left behind from natural resource development. So we will make sure that that does not happen.

Mr. GRIJALVA. Thank you, Madam Secretary, and thank you, Mr. Chairman.

The CHAIRMAN. Mr. Pearce.

Mr. PEARCE. Thank you, Mr. Chairman.

Mr. Smith, in your testimony you talked about the safe disposal of produced water and making sure that your commitment to the process of disposing of that water is well known and is effective.

Are you aware of any of the pilot projects in New Mexico that are actually trying to use that produced water, where in the West we have difficulties with access to water, that some of this water is fairly easy to be cleaned up? Is your Department aware of that and are you building that into the regulatory process, and is your Department doing anything to research the potential for use of waters that come under your control?

Mr. SMITH. Yes, sir, Congressman. We are doing extensive work on all coalbed methane issues, in cooperation with our colleagues at Interior, including produced water issues. I am vaguely familiar with the situation you mention in New Mexico. Of course, there are similar studies occurring in Wyoming and Montana and other parts of the Rockies involving produced water from coalbed methane.

Certainly, some of the water that is produced is very high quality. Some of it needs some treatment; some of it needs disposal. It varies on the formation from which it's produced and the area where it's produced. But yes, to answer your question, we are aware and we are working on those issues.

Certainly, water issues are extremely important all across the country, but they are critical in the Rockies.

Mr. PEARCE. Thank you, Mr. Chairman, and Secretary Watson. I, like everyone else, hold out the hope for alternatives, but having watched a brother work in the silver business for 20 years in Denver, and the realizations gradually come then that many of the expectations are not economic, that we don't have delivery processes,

that we don't have dependability, we don't have predictability in a lot of the alternative sources.

As I look at the price of natural gas, realizing the price of natural gas traditionally has been in approximately the two dollar range, but in the year of 2000 it spiked up to \$50 compared to two dollars, that this year, right now, it's approximately in the nine to ten dollar range, and in this very cold winter we have expended all of our resources, that our storage is almost depleted.

Given that your Department has a tremendous amount to do with the access to public lands, I wonder what your Department's exact position is with respect to access to the Otero Mesa, which some describe as a pristine wilderness, but Adam Klimer of the New York Times, flying with me from El Paso to Hobbs during the campaign, said, "This is the pristine wilderness that we're protecting?" He was not too impressed with that.

So what is the exact status of the Otero Mesa, the access to that?

Ms. WATSON. Well, I'm not prepared to answer that question today, since you're so precise, on the exact status. But I would say I would like to get back to you on that, to provide you an exact answer.

Mr. PEARCE. Thank you, Mr. Chairman.

I think an additional question then would be on policy. There was a previous question that dealt with sportsmen's access, so you have groups of individuals, maybe 100, maybe 500, maybe 1,000, maybe 10,000, who are wanting to access a particular area and don't want oil and gas there. Does your Department have any way to balance the price of natural gas with those competing demands? How do you rectify that maybe at the price of two dollars we could limit access, but if the price of natural gas is \$50, do we at some point say the consumer has maybe a greater need than this limited body of hunters? How do you, as a department, rationalize between those and balance between those competing needs?

Ms. WATSON. I think that's the constant challenge of the Bureau of Land Management. We are a multiple use land management agency. We are directed by Congress to manage those lands for recreation, oil and gas development, mining, grazing, forestry, alternative fuels, a lot of different uses. At the same time, we are also directed by Congress to comply with environmental protection laws, the protection of cultural resources, the protection of endangered species, the protection of clean water. So it is constantly a balance.

I would say that the President's recognition of the natural gas supply problem in the National Energy Plan is a good direction to us. We have put an increased focus on rebuilding our domestic production capacity. That is why we have continued to talk about ANWR. That is why we talk about natural gas development in the interior West and in our off-shore areas. We have a strong focus on that and are working across departments to increase our diversity of supply, both domestically and in the alternative area.

Mr. PEARCE. Thank you, Mr. Chairman.

I would observe that I was aware of the competing demands, but my question, more precisely, was is there some mechanism where, as the price of resources escalates to consumers, if we get into the \$50 range for natural gas, is there anything that your department

does to send out a message that we've got some very difficult circumstances facing the entire nation and we should begin to evaluate a little bit differently. That was my question.

Ms. WATSON. There is no particular mechanism, but my answer attempted to say that the President's National Energy Policy is a response to the recognition of this imbalance between our domestic supply and our domestic demand. That is a message that goes out, that says we need to focus on production, but law requires us to weigh those countervailing—there is no law that allows us to avoid the balancing act that we're required to do by Congress.

Mr. PEARCE. Thank you, Mr. Chairman.

The CHAIRMAN. Miss Bordallo.

Ms. BORDALLO. Thank you very much, Mr. Chairman, Secretary Watson, Mr. Smith.

What is the Administration proposing in terms of providing for a more secure and stable energy supply for the insular areas—Guam, American Samoa, the Virgin Islands—and will you support and work with me to provide Federal funding to harden our power infrastructure to resist typhoons? This has been a constant problem and the Federal Government has poured millions and millions of dollars into the territories just to put back the infrastructure. For example, would you authorize a grant program for the insular areas to bury their power lines?

Ms. WATSON. I am not prepared to discuss the particular concerns of the insular areas, but I will work with my colleague who represents the insular areas at the Department of Interior to provide a response to you on those particular questions.

Ms. BORDALLO. Who is that person?

Ms. WATSON. I knew you would ask me that. I can't recall his name. I can see his face, but I'm sorry.

Ms. BORDALLO. All right. We'll follow up on that, then. If you could provide my office with that name.

Ms. WATSON. It's David Cohen.

Ms. BORDALLO. Thank you.

The other question I have, Mr. Chairman—and maybe Mr. Smith could answer this, or Madam Secretary. Are there any plans now for ocean thermal energy? What are the latest developments in this area?

Ms. WATSON. I can tell a little bit about that. The Minerals Management Service has put a bill, or is supporting a bill, in this Congress, as they did in the last Congress. I think it's H.R. 763, or something like that. I'll find out.

Anyway, this is a bill to develop a permitting authority in the Minerals Management Service for alternative energy in the offshore area. That would include wind energy, wave energy, and the thermal energy you're talking about in the offshore area.

Right now, there is a permitting gap for some of these alternative energy fuels from offshore. We think MMS, with its experience in working offshore, would be the right agency to provide permitting, a place to go for companies that have already expressed interest in developing these alternative forms.

Ms. BORDALLO. Thank you very much. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Rodriguez.

Mr. RODRIGUEZ. Thank you, Mr. Chairman, and thank you for having me. This is my first day here in this Committee.

Madam Secretary, you mentioned a little bit in terms of liquified gas, and you mentioned the fact that we only have, I think, one or two installations in the country, something to that effect. You mentioned the importance of infrastructure in that area. I was wondering if we're actually looking at developing that infrastructure for getting the liquified gas, and second, if we do so, how does that compare in terms of cost of regular gas, in terms of liquified and the difference in the cost. I am asking this because I am completely naive about—You know, I know we can do storage and retrieval with water and with oil, and I'm not sure we can do that with gas. I was just wondering how do we store it, besides freezing it in the liquified form, and then the difference in cost.

Ms. WATSON. I'll answer your first question and then I will turn to Mike, because I think he could deal with the cost issues and the technical aspects of storing it.

Right now we have four liquified natural gas terminals in the country. I believe one of those was in mothballs and we're getting it up out of mothballs. I understand from colleagues at FERC and the Coast Guard who are more directly concerned with LNG that there are some other proposals out there. But again, those take time and capital investment to get those. So we are moving in that direction, because, again, the long-term outlook is that, like oil, we will have to begin importing natural gas from around the world. In order to move that gas, you liquify it, put it in ships, bring it here, off load it at the terminals, and then put it in the pipeline.

In addition to the LNG terminal itself, you need to have the pipeline to get that gas to the areas that need it. As our population is centered on the East and West Coasts, those are particular areas that will need to have the right infrastructure to deliver LNG.

I will turn the second half of your question over to Mike.

Mr. SMITH. I would just add, Congressman, that there are several LNG facilities that are being considered by the private sector, and they're in the various stages of implementation, the permitting process, the proposal process, if you will. It takes about 2 years to permit, on average, a new facility—and these would be new facilities—and then the construction time takes probably three to 4 years. So you're looking at quite a time line.

But LNG does have a future; there's no question about it. Our office at the Department of Energy is very involved in looking at LNG as a long-term addition to our energy portfolio. As Secretary Watson mentioned earlier, we are looking at all forms of energy, because America needs all forms. LNG has certainly potential.

Mr. RODRIGUEZ. Do we need to do some studies in terms of the cost variances between liquified gas and natural gas, to see the difference, to see if it's cost effective or not?

Mr. SMITH. Well, the industry is doing that, yes, sir. That's really what is driving the process. The private sector could probably speak better to that than I. But it appears, just from my observation, that the proposals that have been made are based on a long-term outlook. Again, there is some forecasting that has to be done, because if you start a plant today, it's six or 7 years before that plant is actually functioning and you're turning a profit. Again, you

have to look and see what you, as a business, think the long-term outlook would be.

We at the Department of Energy are encouraged by the technology of LNG and some of the proposals that have been one. We certainly think that in the future it will be part of our portfolio.

Mr. RODRIGUEZ. And the storage of it. Besides freezing it, do we know of any other way of storing it that might be more cost effective.

Mr. SMITH. Well, we're still looking at all of these technological issues. As Secretary Watson mentioned, not only is there storage but there's transportation and there is the infrastructure that you need to actually make it cost effective. But we're looking at all that technology within the Department of Energy.

Mr. RODRIGUEZ. In Texas, the only site available for that, for liquified gas, is the one in Galveston, around that area; am I correct on that?

Mr. SMITH. There is one at Lake Charles, Louisiana.

Mr. RODRIGUEZ. Any in Texas?

Mr. SMITH. There have been some proposed for Texas, but there aren't any currently in operation.

Mr. RODRIGUEZ. Thank you.

The CHAIRMAN. Mr. Baca.

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

I would like to follow up on a question that Representative Gibbons asked about supply and demand. What are the problems that we will encounter? If you look at short and long range in the areas of supply and demand in building the kind of plants, looking at the process in terms of the permitting process, taking approximately two to 5 years before that plant is in operation, what are the obstacles in building, once we've got the plant, the infrastructure that needs to be built as well, and what are the obstacles in making sure that the infrastructure is in place if, in fact, we're going to be cost effective and be able to supply the demands of the various entities?

Ms. WATSON. Well, I think the risk to the infrastructure—and I'm not an expert in this; again, this is in the area of FERC's expertise, and the Coast Guard. But it's like many projects that have to take place in the United States. It's the risk of capital and it's the regulatory uncertainty. Will people invest in building a pipeline? Do they have some certainty as to their ability to permit that?

I think Representative Kind spoke of the opposition that even an industry like wind energy is facing in siting. He mentioned "NIMBYism". I think that's an obstacle that I would identify to LNG terminal siting, to LNG pipeline construction, and conventional oil and gas. That creates uncertainty and that makes the business person unwilling to take that risk to borrow capital to build the project.

Mr. BACA. In terms of risk for us, as we become innovative and creative in looking at alternative energy, if, in fact, the infrastructure is not there, it has to be along the same lines of looking at supply and demand of energy. If it's not there, then we're wasting dollars in providing the assistance for someone when the infrastructure is not going to be done in order to make sure the

supply is there, because we're looking at long range and not short range as well.

Ms. WATSON. I think you have to look at both things. I think they go hand in hand. As you develop domestic resources, you need a way to deliver that product to the consumer. And you need it, whether it's renewable or nonrenewable. That's why it was important that we issue the renewable report as well as the EPCA report. It identifies those areas in the public lands that are very good for producing energy of both kinds. That then is a clue to energy companies and transportation companies as to where we need that infrastructure to take the energy developed from those two sources and deliver it to the ultimate consumer.

I think as companies that build infrastructure see some certainty of supply of product, that makes them encouraged. So I don't think it's one or the other. They have to work together to create the right environment to build the infrastructure to deliver our product.

Mr. BACA. Along those lines, we also need to have protection to make sure we don't have the gouging or the pricing that goes on, as well, as we look at supply and demand. California was gouged quite a lot this last time because of the lack of energy in that area. So hopefully you're looking at some kind of a structure so that there is a formula or some way of being able to determine what the actual price should be without overcharging our consumers as well.

Ms. WATSON. I don't believe that's in our bailiwick at the Department of Interior, but I know the Minerals Management Service pays close attention to oil and gas pricing as part of their duty and responsibility to pay royalties to the Federal treasury.

Mr. BACA. One final question. In looking at exploring alternative energy, looking at offshore drilling and some of the other areas, have we explored the possibility with Mexico? Mexico has a lot of oil in that area. Have we looked at building a pipeline or infrastructure in that area that could supply us, so that we're not dependent on foreign countries or others?

Ms. WATSON. I'm not that conversant with oil and gas production. I do know, in my discussion about natural gas, that Mexico has natural gas, but they are using all that they produce and would not be in a position to export natural gas to us. As to oil, I don't know. Maybe Mr. Smith does.

Mr. SMITH. Congressman, of course, Mexico is a very important trading partner, and good neighbor and friend of ours. It is one of our sources for imported oil, and will continue to be.

Natural gas is a part of the equation that's being developed in Mexico. Last spring, Secretary Abraham asked the National Petroleum Council to update the 1999 natural gas study. Part of that update includes looking at our trading partners, our neighbors, Canada and Mexico, to see how they fit into that equation.

Currently, Mexico supplies a very little amount of natural gas into the United States. But as that is developed, I think the report will show that Mexico will continue to be an important trading partner in that area. Also, of course, we export natural gas into Mexico, too. It goes both ways. But that report will be issued, we anticipate, some time late this summer, and it will have a comprehensive review of not only America's natural gas supply, de-

mand and infrastructure situation, but also our trading partners to the north and south.

As far as pipeline—I'm sorry, I misunderstood your question.

Mr. BACA. In reference to oil. You addressed natural gas, but what about oil, in terms of the ability to work with Mexico? At least the information I have gotten, and the research, there is plenty of oil in Mexico. But are we tapping Mexico in terms of them supplying to us, and then are we willing to build the infrastructure to make sure we have the supply as well?

Mr. SMITH. I think the answer is yes in both cases. Certainly oil moves on the world market, and oil produced in Mexico moves into that world market. We are a natural purchaser of that oil, a natural trading partner with Mexico, and that relationship has worked very well in the past and I think it will continue to.

Mr. BACA. Because in the long run it would be a savings to us. It would cost us less to import oil from Mexico than it would from other foreign countries, in terms of the barrels that are shipped over, versus from our neighboring country such as Canada on the one side and Mexico on the other side.

Mr. SMITH. Yes, sir.

Mr. BACA. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Mr. Smith, there have been news reports lately about Members of Congress, including Senators, calling for releases of oil from our Strategic Petroleum Reserve and more money to help folks pay for their high energy bills. It seems to me that those who get the most press about releasing oil from the SPR and increasing aid to the poor to cover energy expenses are the same people who oppose increasing home-grown energy in places like ANWR, and even off the coast with renewable energy, like windmills. It kind of reminds me of a teenager who wants to borrow your car and brings it back with no gas in it, and never wants to do anything to put more gas in the tank.

I was just wondering if you have any comment about this inconsistency in terms of policy that has come out of Congress in recent weeks.

Mr. SMITH. Mr. Chairman, I am hopeful that the new energy bill will solve a lot of these problems that you have enumerated, and can bring together for the first time, at least in my memory, probably in my adult lifetime, a true and comprehensive addressing of the energy problems that our country faces. I am convinced—and I see Chairman Tauzin to your right—that the bill that will emerge from the Congress will be balanced and comprehensive and will address our needs from a fossil fuel standpoint, a renewable fuel standpoint, conservation and environmental protection, all of these things that we visited about today. I think it's long overdue.

I applaud you and your colleagues, Mr. Chairman, for the hard work that you have done on that. I am always optimistic, and I'm optimistic that we will have a truly comprehensive bill.

The CHAIRMAN. Mr. Tauzin.

Mr. TAUZIN. Thank you, Mr. Chairman.

I wanted to give this Committee a report. As you know, the Energy Committee is beginning markup today on the comprehensive

energy package, and will rely very heavily upon the Resources Committee to supplement that package with a good set of recommendations for the wise and environmentally sensitive development of domestic energy resources to complement the work of the Energy Committee.

Chairman Barton has begun the markup this morning and has recessed for the security briefing, but will begin again at 12 noon. We hope, frankly, to finish that markup in Subcommittee by tomorrow.

I also wanted to report to the Committee on Resources, as I did in a "Dear Colleague" letter, that our oversight of the SPR indicates several things. One, it is nearly full to capacity, with 600 million barrels of the 700 million capacity. Second, it is in the flow mode; that is, it is prepared to flow if this country needs it to flow, if and when hostilities should break out and disruptions indicate that, at the President's call, we should start the flow. It is capable of flowing at 4.1 million barrels per day.

Indeed, if you recall back, Mr. Chairman, to 1991, President Bush the first actually called for release and there was a release on the first day of hostilities of the last Persian Gulf conflict, primarily as a signal to the traders not to get crazy and to bid up the future prices in a way they might find would hurt them. It was a correct signal then and it worked very well, and the President obviously has that option this week and the weeks to follow.

Thirdly, if you recall, there was a disruption that occurred from Venezuela that affected, at least temporarily, the conditions of the market. And while the SPR did not flow any oil into the marketplace when that disruption occurred, it did choose to stop taking oil that was due the SPR—that is, oil that was due to be filled into the Reserve from obligations previously entered into.

The result of simply not taking oil out of the market during that period had a good effect, I believe, upon the stability of crude oil supplies to refiners in this country. I think it was an appropriate and a very reasoned response by the SPR. So the SPR is ready to flow, if we need it, at the President's call.

I am told that the major refiners of the country tell us that they are well supplied for the next 40 days, at current levels, that while private supplies are in a state of flux because we're moving from winter production to summer driving production—we're in that particular cusp, if you will, between those two production streams, and that is probably why you're seeing some of the impacts upon the gasoline markets today—nevertheless, supplies are adequate. They're tight but adequate, and the President is keeping a very close eye upon any future disruptions.

I should make one further report, Mr. Chairman, that the President has negotiated, I think, an understanding with the Saudis that, should real disruptions occur in the course of any hostilities, that the Saudis have indicated they were prepared to increase production to world supplies to balance off any disruptions from Iraqi conditions.

On the ominous side, of course, we know that Saddam, from our intelligence sources, has loaded up the oil fields, some 1500 wells in Iraq, with explosives. That is one thing that our forces are going to have to deal with, hopefully effectively, or else we see some of

the conditions we saw in Kuwait, where 700 wells, you remember, were ignited in the course of the Iraqis retreating from Kuwait. So we're facing some rather tenuous times in the next few days.

But the good news is that the SPR is at near full capacity, it is prepared to flow, and according to our oversight of the management of the SPR, it is in prime condition to respond should the President call upon it to flow at any point if disruptions call for that for the Nation's good.

One final thought, Mr. Chairman. You're exactly right. There is an extraordinary—I'm going to use a strong word, but it's a correct word—hypocrisy in some of the policy that comes out of Washington, D.C., when it comes to securing our country from overdependence upon people who obviously we cannot depend upon, and sources we cannot depend upon. There is a certain amount of hypocrisy in policy that pushes us to alternative sources and then finds a convenient way to oppose those sources when we try to develop them.

What we will try to produce, as Mr. Smith has correctly indicated, is a balanced approach in the Energy Committee, and with the help of this great Committee, Mr. Pombo, we hope to have in it some reasoned and responsible new measures to make sure that, again, reasonable and environmentally sensitive production of resources available in this country have some favor in government policy, and that those who want to make the investment see some certainty in that policy as we move forward. That's a big challenge, but we're going to try to do that.

Mr. Chairman, I thank you for giving me this time, and I thank the two of you for your many contributions to the ongoing legislative effort that I hope will result in a very positive and comprehensive energy bill for the Nation and for the President to sign.

Senator Pete Dominici is as committed as I to a successful conference, which he will Chair, and I have every expectation that the Resources Committee will play a vital and important role in helping us develop that policy.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Tauzin. And as we have discussed in the past, it is the intention of this Committee to help you and your Subcommittee Chairman, Mr. Barton, to produce a balanced energy bill that effectively tries to deal with our energy needs today and into the future. So I thank you for your comments.

I would like to thank our panel. I know that you have had a lot of questions that have been thrown at you, but there are other questions that members have that they would like to ask and those will be submitted to you in writing, if you could answer those in a timely manner so that they may be included in the hearing record in writing as well. Those will be forwarded to you.

Thank you all very much for your testimony, and for your answers to all of the questions that were thrown at you. Again, thanks for your help in crafting this bill and trying to deal with one of our very real problems and challenges that we have in this country.

I would like to call up our second panel of witnesses: the Honorable Hunt Downer, Raj Gupta, David N. Parker, Mary Novak, and Robert Santistevan.

Before our witnesses get comfortable, if I could have you rise and raise your right hand. It is the policy of the Committee to swear in all of our witnesses.

[Witnesses Sworn.]

Let the record show they all answered in the affirmative.

Before I recognize our first witness, I would like to recognize Mr. Tauzin.

Mr. TAUZIN. Thank you, Mr. Chairman.

It is my extraordinary honor and privilege to introduce one of the witnesses who is here today to discuss with us the condition primarily of oil and gas developments in Federal lands, inside and outside the State of Louisiana.

He comes to us with an extraordinary background in public service. He has not only served as a State representative for many years, representing his home town of Homa, Louisiana, which is right adjacent to Thibodaux and Chackbay where I was born and raised, but his service in the State legislature was preceded by service in the State Senate for former State Senator Harvey Pelchie, Jr., whose father, by the way, was a law partner of Huey Long. Louisiana history is extraordinary, as you know, in its political ramifications.

But Mr. Downer, who I will present in just a minute, actually took my place as the assistant in the State Senate to then Senator Harvey Pelchie, so we go back as far as those early days of education at LSU law school and our work in the State Senate together for an extraordinary man, Harvey Pelchie, Jr.

As I said, he went on with election to the State House of Representatives, and even that wasn't enough for Mr. Downer. He went on to become later on the Speaker of the House of Louisiana, where he served with extraordinary honor and courage, I might add, through some difficult periods of Louisiana history.

What is also extraordinary about Mr. Downer that you should all know is that just recently the Senate approved his extraordinary achievement and he has since gone through the ceremony of pinning in Louisiana as he has been elevated to Brigadier General status of the Louisiana National Guard.

So we have before us a witness who not only has served many, many years in public service in the State Senate and Louisiana legislature, and Speaker of the House, but has also served his country and continues to serve his country in a period of great national need as a Brigadier General in the National Guard of the State of Louisiana, and as an officer who works with the National Guards of all our country. He has volunteered his time away from public service to serve the Guard in times of Guard relocation and service in other parts of the world.

He again brings to this Committee a great wealth of knowledge about the energy business of Louisiana, as he represents one of the core areas, the only offshore oil port loop of our State, and right next to Port Fourchon, which is the fastest growing offshore jumping off place, if you will, in the entire country, an area served by a two-lane highway that is often flooded as storms are increasingly moving in and the land is increasingly sinking.

As I said, Mr. Downer brings this wealth of information and I think will educate this Committee about the status of one of the most important oil and gas production regions of our country.

Mr. Downer, you have been my friend a long time. I know you also bring with you Representative Loulan Pitre who represents the area of Port Fourchon. I want to welcome you, Loulan, to this hearing as well. I know of your extraordinary interest in that port and the sad access we have to it and the efforts we're trying to do to change that.

I also wanted to let everyone in this room know that Hunt Downer was my room-mate when I served in the Louisiana State Legislature, and if ever there was an "odd couple", it was Hunt Downer and I. He was the neat one. He's an extraordinary individual, a great public servant, a great American, and a man I am proud and honored to call my friend. Welcome, indeed.

**STATEMENT OF HON. HUNT DOWNER,
LOUISIANA STATE REPRESENTATIVE**

Mr. DOWNER. Thank you, Congressman Tauzin.

Thank you, Mr. Chairman, for giving me that opportunity to testify here today. Of course, please don't hold against me my prior affiliation with Congressman Tauzin. Probably the greatest challenge I had in my early career in politics was to follow in his footsteps, and as the assistant to the late Senator Harvey Pelchie, to clean up what Billy had left behind.

[Laughter.]

Because the Congressman and I were truly the "odd couple". But we had a great time and he was a great mentor.

Mr. Chairman and members of the Committee, of course, my name is Hunt Downer. I am pleased to appear before you today to discuss America's energy security and our efforts to enhance that. I don't think at any time in our Nation's history have we faced a greater vulnerability to our critical energy infrastructure, and I applaud the Committee for looking into this and taking testimony.

I have submitted written testimony, which I would like to offer to the Committee at this time, and then speak from that, with your permission, Mr. Chairman.

The CHAIRMAN. The written testimony for all of the witnesses, in its entirety, will be included in the record. Your oral statements are limited to 5 minutes, but for your written testimony, the entire thing is included.

Mr. DOWNER. If you would just give me a high sign when I have about a minute to go, I'll do a fast wrap up, or if someone could do that.

The CHAIRMAN. In front of you, if you see the lights, the green light is when the 5 minutes begin, the yellow light is when you have 1 minute left, and then the red light comes on when your time has expired.

Mr. DOWNER. Thank you, sir.

By way of background—and Congressman Tauzin briefly touched on this—I have 27 years experience in the Louisiana Legislature, a Brigadier General in the Army National Guard, Assistant Adjutant General, and have served in the legislature, was former Speaker of the House, and I hail out of south Louisiana, where I

was born and raised. I worked my way through school in the oil fields of south Louisiana, offshore, roughneck, roust-about. So I have first hand experience in the industry, and as an attorney, have represented many of those oil and gas companies, and have family who still work in the oil and gas industry. It is the lifeblood of our economy in that area.

With my experience in the National Guard, almost 30 years service, some enlisted service and then direct commission as an engineer, later a JAG officer, a military policy background, and the Assistant Adjutant General. As such, I have been involved in our homeland security, which by the way I think you know—I just wrote my notes as we got our brief and it has now been dubbed, what we're now going through, as Operation Liberty Shield. So I have been involved in that. So it's very appropriate that at this time this Committee have hearings in the area of energy, energy security, and its impact on our national interests, our vital national interests.

With that, of course, we now know that, in particular—What I thought I would do is, with your permission, touch on the big picture of the oil and gas industry in the Gulf of Mexico, focus it to Louisiana and its coast, and then narrow it to what I call Port Fourchon, a vital limit to what I call one of the most significant oil and gas ports in the country.

The focal point, of course, of this hearing is the Federal Outer Continental Shelf, or the OCS, as we call it, as opposed to what we would call inland waters, which is one the shelf, and then within the boundaries of the State of Louisiana's water.

The area in particular that I refer to is Port Fourchon, which in my humble opinion—and I believe that of Congressman Tauzin, anyone who has seen it—is the area's and America's most significant energy port. And it's at the end of a winding, narrow, two-lane road.

Louisiana has embraced, unlike many other States, the offshore oil and gas industry, and we do it very well with very little fanfare. In fact, the Gulf of Mexico itself is the source of 30 percent of our Nation's domestic energy supply. For example, Tropical Storm Isadore, Hurricane Lilly, which I was activated for with the Guard because of the National Guard's response to those, during that time period, those 8 days that the oil and gas industry in the Gulf was shut down, this country lost a billion dollars of oil and gas that was not available for U.S. consumption—one billion dollars in 8 days. That shows you the significance.

Now, those storms came through the heart of the oil and gas industry, and that heart was Port Fourchon. That interrupted all services, not just domestic production, but right near Port Fourchon, of course, is LOOP, Louisiana Offshore Oil Port, which handles about 13, 15, 18 percent of the Nation's imported oil for this country's consumption.

On the other end of the State which was also interrupted is a place called the hub, which has about 40 percent of the Nation's natural gas coming in from offshore through Louisiana and its coast. For example, in 1997, there were 16 deepwater projects. By the end of 2002, this past year, there were 64 deepwater projects. What an increase. Between 1995 and 2001, oil production was 500

percent increased, gas production up 550 percent. We are now relying more and more on our own. And that's great. That eases the pressure on the other States, because we have embraced it. It is off of our coast and we have it out there.

Now, that also presents challenges. Operation Liberty Shield, securing our own homeland defense. Well, Port Fourchon, as a major port, has, guess what, terrorists. It has a risk of terrorism. As we all know, in any business, any industry, as we do with our own government infrastructure, we have to evaluate the risk and our vulnerabilities, and then we have to devise a plan for their security.

Well, there are two risks that Port Fourchon and our OCS oil and gas are exposed to. The first one is obvious, terrorism. We are addressing that as best we can, and I will touch on those.

Let me surprise you with the second risk that no one is really realizing. It's our delicate infrastructure, our inadequate infrastructure. To Port Fourchon is one narrow, winding, two-lane road of 17 miles, that goes underwater with high tide now because of our eroding coastline. So enhancing that risk and part of that second risk is our eroding coastline, our vulnerability, our loss of our greatest natural asset. The last time I checked, we were not manufacturing any new land. So we have to protect and preserve that which we've got.

Now, Port Fourchon was specifically designed to support the offshore—Oh, it says stop already? Boy, 5 minutes flies when you're having fun.

Let me just say this. We have a domestic threat. We're at the jugular. If you're a terrorist and you want to attack, 70 percent of the oil and gas industry is right off that coast, 600 rigs. Now, you can pinpoint each one of those rigs and take them out, but under a recent—Let me hurriedly read this. Some recent intelligence information in a threat warning said that we have to be watching our targets who are subject to attack, targets that offer the best combination of mass casualties, symbolism, economic damage, and psychological impact. They specifically mention ports and waterways.

Well, guess what? Six hundred individual rigs right in a 40-mile radius off the coast of Louisiana, each one is an individual target. But do you know what is a significant target of economic opportunity? Not one rig, but where they all come together at that port. It is subject to the risk of terrorist attack as well as the war against Mother Nature. Mother Nature is silently working against us, to knock us in by eroding us away, and we can't support it with that narrow, winding, in lane infrastructure.

Seven point eight billion dollars comes from Federal OCS lands nationwide. Five billion of that 7.8 billion comes off the coast of Louisiana. Do you know what our return is for that? Thirteen point four million dollars. The State of New Mexico got \$384 million, and it is not threatened by just terrorism, it does not have the erosion problems that we have in Louisiana, not the narrow, winding, two lanes.

Thank you, Mr. Chairman. Subject to your questions, I would like to invite you all to come and actually see it. As a good commander, you always invite your troops to come out and take a first-hand look, and you will see what we're talking about.

[The prepared statement of Mr. Downer follows:]

Statement of The Honorable Hunt Downer, Louisiana State Representative

Mr. Chairman and Members of the Committee, my name is Hunt Downer, and I am pleased to appear before you today to discuss Enhancing American's Energy Security. At no time in our Nation's history have we faced greater vulnerability to our critical infrastructure, and I applaud this Committee for taking the initiative to discuss this issue.

As a Louisiana state legislator for 27 years, former Louisiana Speaker of the House, Brigadier General in the Louisiana National Guard, rough-neck and roust-about in the oil and gas fields of South Louisiana, I have an understanding of the significant role Louisiana plays in helping to meet this Nation's energy needs, and the threats facing our energy supply. I would like to focus my remarks on a specific area in South Louisiana that has become the focal point of the Federal Outer Continental Shelf (OCS) leasing program.

That area is Port Fourchon, Louisiana. Far removed from the limelight of the California energy crisis or the ANWR drilling issues, this little dot on the map at the end of a winding two-lane road is now, by far, America's most significant energy port.

Unlike many states, Louisiana has embraced the offshore oil and gas industry, and we do it well and with very little fan-fare. The Gulf of Mexico is the source of 30% of our Nation's domestic energy supply. In fact, when the Gulf activity was shut down in the fall of 2002 for eight days due to Tropical Storm Isidore and Hurricane Lilly, 22.4 million barrels of domestic oil and 88.9 billion cubic feet of gas were not available for the U.S. market. This represents \$1 billion of oil and gas not available for U.S. consumption.

The path of these storms was roughly through the heart of the Gulf Oil Fields, the same area that relies on Port Fourchon for its services. A disruption of Port Fourchon's services would yield similar impacts.

The growth in the Gulf energy activity has been in Federal waters deeper than 1000 feet, in the Outer Continental Shelf. This dramatic increase was the direct result of the passage of the Deepwater Royalty Relief Act in 1995. The impact of this landmark legislation has been remarkable.

- In 1997, there were only 16 deepwater projects. By the end of 2002, there were 64;
- From 1995 to 2001, oil production was up 500%, and gas production was up 550%;
- The Minerals Management Services currently estimates deepwater reserves of 71 billion barrels with 56 billion barrels yet to be discovered;
- By contrast, the entire Continental Shelf has only 15 billion barrels left to be discovered. Clearly, the future of our Nation's energy needs rests largely on continued, efficient and cost effective energy exploration on the Outer Continental Shelf.

This domestic OCS activity is more important than ever before, with the threats in the Persian Gulf region, the troubles in Venezuela, and oil prices at an all time high.

Port Fourchon, the major port that services most of this activity, and the only port which can service this activity in a cost-effective and efficient manner, faces two primary categories of risks. The first risk will come as no surprise to this Committee—terrorism. The second risk will likely surprise you—an entirely inadequate highway infrastructure servicing Port Fourchon. Permit me to briefly address both topics.

Located on the mouth of Bayou Lafourche in Lafourche Parish, Port Fourchon is Louisiana's only port on the Gulf of Mexico. Port Fourchon is strategically located in the central portion of the Gulf, and due to its location and state-of-the-art facilities and equipment specifically designed and constructed to service offshore activity, it has become the focal point of deep-water oil and gas activities in the Gulf.

Within a 40-mile radius of Port Fourchon, there are 600 platforms. A staggering 75% of the deep-water drilling rigs working in the Gulf are supported by Port Fourchon. In a recent Environmental Impact Statement on offshore lease-sales, the Minerals Management Service identified Port Fourchon as a focal point of deep-water activity. It is estimated that Port Fourchon accommodates approximately 16 to 18% of the entire U.S. domestic crude oil, natural gas production, and 13% of the U.S. imported crude oil.

As these numbers reveal, and as numerous Federal agencies have documented, Port Fourchon is a vital link to our Nation's energy supply. And I am sure I do not need to remind this Committee of connection between our Nation's energy supply and National Security. While Port Fourchon's proximity to the Gulf and its some-

what remote location makes it an ideal place to service the vast majority of domestic and OCS activity in the Gulf, it also makes the Port's facilities and all of the service vessels vulnerable to terrorist attacks. To that end, the Port has been very diligent in working with local, state and Federal agencies to maintain a high level of security at the Port and its surrounding complex. Recently, the Port applied to the U.S. Maritime Administration for seaport security grants, for which Congress has twice provided funding. We are hopeful that MarAd will provide the necessary funding to enable the Port to install state-of-the-art surveillance and communication equipment to further enhance security measures already in place at the Port. If there was one message that I would leave with the Committee today, it would be to encourage you to continue to provide funding for seaport security, both in the form of grants directly to ports, and adequate funding for the Coast Guard, Transportation Security Administration and other Federal agencies involved with seaport security.

The next threat that Port Fourchon faces is domestic. Simply put, the highway infrastructure connecting Port Fourchon to the Interstate Highway System can be compared to that of a third-world country. The Port is connected to the mainland by a 17-mile stretch of winding road that runs through the most rapidly eroding estuary in the country. It is often inundated by flooding and subject to being washed out. This highway, appropriately named LA1, is the only land link to the Port that services 75% of this Nation's deepwater oil and gas activities. This same highway is the only means of access to this country's only offshore oil port (LOOP), which takes in 13% (one million barrels per day) of our imported crude oil and is connected to 35% of this nation's refinery capacity. In sum, the threat I speak of now is not from a rogue nation, but from this Nation's failure to address coastal impacts.

I have with me today, State Representative Loulan Pitre, whose district encompasses the port and the southern part of LA1. This highway has been identified as 1 of 44 "high priority corridors" by Congress—it is strategic to our energy supply, at risk, and there is no relief in sight.

There exists a tremendous inequity here of recognized but uncorrected impacts. This critical energy corridor and the communities that support it are faced with a deteriorating highway, with truck traffic increases of as much as 24% some years and twice as many deadly accidents as similar roads in the state. These impacts—and numerous others—are all to support the Federal leasing programs.

In 2002, MMS generated \$7.8 billion nationally. Over \$5 billion, more than 2/3, came from offshore Louisiana. Louisiana received \$13.4 million, or 1/4 of one percent of what was generated off its coast, while in contrast, New Mexico received \$387 million, or 50% of what it generated in its state!

To add insult to injury, 50% of the 13,000 workers that use this port to access their offshore jobs don't even live in Louisiana, and like the Federal Government they take their paychecks home with little benefit to the state.

This inequity must be cured if our landside infrastructure is to sustain the level of offshore leasing this country is demanding of us. MMS has identified huge impacts to this focal point area in its environmental impact statements for Federal lease sales in the Gulf—yet Congress has not provided a mechanism to mitigate these impacts and secure this nation's energy supply. For the past several years, Congress has attempted to pass legislation designed to help address these inequities. Regrettably, the Conservation and Reinvestment Act—"CARA"—has yet to be passed. I would encourage Members of this Committee to redouble your efforts to have meaningful legislation passed to enable the State of Louisiana and its coastal resources to benefit from the oil and gas activities off its coast, as does the rest of the Nation.

Finally, Congress has begun the process of reauthorizing the Nation's highway and transit program. The South Louisiana community I speak of today has dedicated significant time and local funding toward design and engineering of a replacement highway for LA 1. These plans for construction of the new highway include a significant amount of local funding via tolls and property tax. What is needed though, is Federal dollars as well. We began the process of seeking Federal dollars more than six years ago, at the time when TEA-21 was passed. We have had some success, and used these dollars wisely in developing our plans for the highway. Now, we are ready to go. During the drafting and deliberation of the TEA-21 Reauthorization legislation, you will likely hear about our efforts to construct this new highway. I would urge the Members of this Committee to support the funding for this highway, as it not only serves as the only intermodal link to 75% of this Nation's deepwater oil and gas activities, but also serves as the only evacuation route for thousands of residents and vacationers visiting this bountiful area of our State. If no action is taken, I'm afraid we are on a collision course with disaster, and this Nation's energy supply will be threatened like never before.

I again would like to thank the Members of this Committee for allowing me to appear before you today, and I would be pleased to answer any questions you might have.

The CHAIRMAN. Thank you for your testimony. Mr. Tauzin has taken me down into the area in the past. We took a Subcommittee hearing down into that area. He has talked, as I'm sure you're aware, quite a bit about the problems in the area.

Mr. Gupta.

STATEMENT OF RAJ GUPTA, CHAIRMAN AND CEO, ROHM AND HAAS COMPANY, ON BEHALF OF THE AMERICAN CHEMISTRY COUNCIL

Mr. GUPTA. Thank you, Mr. Chairman.

My name is Raj Gupta. I would like to begin by thanking the Committee for the opportunity to testify on the subject of energy security.

I am Chairman and CEO of Rohm and Haas Company. Rohm and Haas is a \$6 billion specialty chemical company, with 43 manufacturing sites and about 12,000 employees in the United States. But I am appearing here today in my role as Chairman of the Executive Committee of the American Chemistry Council. Therefore, I am testifying on behalf of 160 chemical companies, representing 90 percent of chemical manufacturing in the United States, \$460 billion in sales, and employing more one million Americans directly and another four million indirectly.

Mr. Chairman, we believe that the Nation faces another energy crisis, a crisis in the natural gas supplies. The U.S. chemical industry's survival depends on access to affordable supplies of natural gas, because in addition to the energy use, we are also a major user of natural gas as a critical building block for chemicals. We operate in a global marketplace. We compete with producers from Asia, the Middle East and Europe. Current natural gas prices have turned the U.S. chemical industry into the world's high cost producer, and, in fact, from being the largest exporter to a significant importer. It is not an exaggeration to say that an economic disaster is unfolding in this Nation because of dangerously volatile prices of natural gas today.

What we are facing is not a seasonal disturbance, but a fundamental structural imbalance in supply and demand for natural gas.

In the final analysis, the natural gas crisis is a political and public policy problem. Environmental policies are driving new demand for gas to generate electricity and heat homes, because it's a clean burning fuel. Other policies keep critically needed supplies out of reach. As a nation, we cannot have it both ways. We can't crave more and produce less.

The answer lies here in Washington. Companies like mine will not be able to prosper or invest in this country if natural gas prices remain at current levels. I know that sounds harsh, but it is reality that is staring at us every day. It is in everyone's interest to reconcile the supply and demand dilemma and restore a healthy balance to the natural gas market.

In our opinion, the Congress must take the following actions. First, conservation. The fastest, short-term solution to rebalance

natural gas is to curb demand. Congress could direct the Federal Government to immediately reduce its energy consumption and provide incentives for States and consumers to do the same.

However, in our view, this will not be enough. Increasing short-term supply. We simply must gain access to the most promising supply sources that are currently off limits. The best available supply source is in the area of the eastern Gulf of Mexico known as Lease 181. I believe that was referred to by the preceding panel. It is a rich source of gas and the transportation infrastructure is in place. As we heard, for many other sources it will take years before we get there. Congress can direct the Department of Interior to make all tracts within Lease 181 available for leasing. If Congress does act now, Lease 181 could be supplying new gas in time for heating houses this Christmas season.

Third is clearly increasing long-term production. In the longer term, Congress should consider suspending all existing statutory and administrative moratoria on oil and gas productions in the waters of the United States, including waters of the coast of North Carolina and California.

Congress could also direct the Department of Interior to make Federal lands in the Rockies available for development and encourage the development of the infrastructure to bring gas to the market.

Natural gas storage, as we heard earlier, is at historically low levels, more than 50 percent below what would be considered normal. If new gas is not put into storage by this fall, some Americans will not be able to heat their homes this winter. Factories will close and, in fact, a number of chemical plants are closing down because of the very high prices of natural gas today. Jobs will be lost.

I urge Congress to take the action needed to avoid a crisis. I appreciate the time and attention you have given us and our industry, and I would be happy to answer any questions.

[The prepared statement of Mr. Gupta follows:]

**Statement of Raj Gupta, Chairman and CEO, Rohm and Haas Company,
on behalf of the American Chemistry Council**

My name is Raj Gupta. I am Chairman and CEO of the Rohm and Haas Company, one of the world's largest manufacturers of specialty chemicals. We make technologically sophisticated materials that find their way into applications in a variety of major markets. Most Rohm and Haas products are never seen by consumers; rather, they are used by other industries to produce better-performing, high quality end-products and finished goods. The history of Rohm and Haas has been a series of innovative technical contributions to science and industry, usually taking place behind the scenes.

Rohm and Haas has more than 17,000 employees and annual sales of approximately \$5.7 billion. We operate more than 100 research and manufacturing locations in 25 countries. Our worldwide headquarters are located on historic Independence Mall in the heart of Philadelphia, Pennsylvania.

I am also here today on behalf of the American Chemistry Council (ACC), a locally based trade association that represents the nation's leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to produce innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care, common sense advocacy designed to address major public policy issues, and health and environmental research and product testing.

The \$460 billion business of chemistry is a key element of the nation's economy, providing the building block materials that the rest of the U.S. economy relies upon. It is the country's largest exporter, accounting for ten cents out of every dollar in U.S. exports. Chemistry companies invest more in research and development than

any other business sector. Safety and security have always been primary concerns of ACC members, and they have intensified their efforts, working closely with government agencies to improve security and to defend against any threat to the nation's critical infrastructure.

SUMMARY OF TESTIMONY

A hearing on enhancing the nation's energy security could not come at a better time. The nation is facing an energy crisis caused by runaway prices for natural gas. Unless Congress acts to increase domestic natural gas supplies our economy will continue to struggle and we will fall short of our goals for a cleaner environment.

A crisis of this magnitude poses a grave threat to America's economic and national security. Current energy prices are making it impossible for the U.S. chemical industry, and other critical industries, to compete in global markets. Because the business of chemistry produces the building block materials that the rest of our modern economy relies upon, we are somewhat of a "canary in the coalmine." As we go, so goes the rest of the nation.

In particular, the U.S. chemical industry's economic survival depends on having access to an abundant and affordable supply of natural gas. Natural gas is almost exclusively a domestic energy source, yet we all must operate in a global marketplace. We compete with producers from Asia, Europe, and the Middle East. Current natural gas prices have turned the U.S. chemical industry into the world's high-cost producer. From our perspective, it is not an exaggeration to say that an economic disaster is unfolding in this nation because of dangerously volatile prices in natural gas markets. Critical infrastructures like the chemical industry are extremely sensitive to wild swings in energy prices. Without a secure supply of energy, the industries that contribute to the nation's economic and national security are deeply compromised.

What we are facing is not a seasonal disturbance, but a fundamental structural imbalance in supply and demand for natural gas. America has developed a tremendous thirst for natural gas. It is clean. It is efficient. And until recently, it was abundant and cheap.

Consumers love it for heating their homes. Environmentalists love it because it is clean burning. Industries, including the chemical industry, love it because it is an excellent raw material that makes its way into thousands of products that everyone one of use, every day.

Because we love it, America is using more and more gas. Natural gas used to generate electricity has increased by 35 percent in the past five years and will nearly double in the next decade. Almost all new power generating capacity coming on line in the U.S. is gas fired. Half of new homes are now heated by gas. America is becoming an economy that runs on natural gas.

Unfortunately, the nation's current natural gas supply is running low. Production today is below where it was 30 years ago when Americans were consuming far less.

The paradox is that America has adequate reserves to meet current and future needs. Unfortunately, we can't access those reserves. The most promising—and desperately needed—sources are currently off-limits to development. Some of the most promising supply sources are in areas like the eastern Gulf of Mexico, the northern Rocky Mountains, and off the coasts of North Carolina and California.

In the final analysis, the natural gas crisis is a domestic political and public policy problem. Environmental policies are driving new demand for gas to generate electricity and heat homes. Other policies keep critically needed supplies out of reach. As a nation, we can't have it both ways. We can't crave more and make less.

Appropriate Federal policies are needed to ensure a better balance between the supply of and demand for natural gas, and to keep prices at a reasonable level.

Let me use my company as just a brief example of the impact higher natural gas costs can have. Rohm and Haas provides specialty materials that are used to help create products used by people every day—technology that enhances the performance of house paints, home insulation, food packaging, computer chips and electronic devices, laundry detergents, sunscreens, and much more. We are a global producer of specialty materials and chemistry, which last year reported sales of \$5.7 billion.

Rohm and Haas operates more than 100 manufacturing plants and research centers around the world—43 plants in the United States alone. Natural gas is the primary energy source used to keep these plants running. On average, Rohm and Haas consumes about 25 million mBtus of natural gas a year. Therefore, a \$1 increase in natural gas prices increases our costs by \$25 million, before hedging.

The prices we are paying for natural gas and raw materials are rising at such incredible rates—and expected to continue to increase significantly in coming months—that we have had no choice but to quickly raise product prices and impose

energy-related surcharges so that we can continue to provide customers with products they need and want.

Last week I had to send hand-carried letters directly to some of our most important customers, telling them of our overriding need to raise prices immediately and to institute energy-related surcharges where needed. Given the outlook for continued increased raw material and energy costs, it is likely Rohm and Haas will have to raise prices further in coming months. We regret having to pass on price increases and surcharges of this nature, but we have no other choice if we are to remain profitable.

THE BUSINESS OF CHEMISTRY IS HIGHLY DEPENDENT ON NATURAL GAS

The current price of natural gas is the chemical industry's number one economic issue. Natural gas is the lifeblood of the chemistry business in the U.S. Not only do we use natural gas as a fuel in our manufacturing processes, much like other industries, but we also use it as an ingredient, or feedstock, for many of the products we make.

Natural gas and natural gas liquids contain hydrocarbon molecules that are split apart during processing and then recombined into useful chemical products. These products include life-saving medicines, health improvement products, technology-enhanced agricultural products, more protective packaging materials, synthetic fibers and permanent press-clothing, longer-lasting paints, stronger adhesives, faster microprocessors, more durable and safer tires, lightweight automobile parts, and stronger composite materials for aircraft and spacecraft. The business of chemistry also makes many of the products that help save energy throughout the entire economy, including insulation, house wraps, lubricants, and high-strength light-weight materials, enabling American industries and consumers to be more energy efficient. The business of chemistry is the only part of the economy that adds value to these hydrocarbon molecules rather than combusting them for energy.

Natural gas accounts for nearly thirty-nine percent of all energy consumption by the business of chemistry. Natural gas liquids that are derived from natural gas or refinery operations account for another twenty-three percent. In total, more than half of the U.S. business of chemistry's energy needs come from natural gas.

On average, more than \$1 of every \$10 the industry spends on materials is for natural gas. For some petrochemical producers, natural gas represents nearly one-quarter of the cost of materials. And nitrogenous fertilizer producers spend \$9 of every \$10 for natural gas.

The U.S. business of chemistry has invested billions of dollars in facilities that make chemical products from natural gas and natural gas components. These facilities do not have the ability to switch to other inputs and produce these products. This infrastructure was built based on the competitive advantage the U.S. offered through its natural gas supply.

While the U.S. chemistry business is the nation's single largest manufacturing consumer of natural gas, we are extremely energy efficient in the use of that gas. Through the use of combined heat and power ("CHP") generation, our facilities create two forms of energy—electric energy and thermal energy or steam, and both are put to work. The efficiency rating of many of our CHP facilities is often twice that of traditional electric generators. This efficiency level is further enhanced because the generation is physically located close to where it is used, avoiding transmission line losses. Use of CHP technologies by the business of chemistry accounts for nearly a third of all CHP used in manufacturing. And through the use of CHP technology, the business of chemistry has reduced its total fuel and power energy consumption per unit of output by more than forty-three percent since 1974. Nonetheless, our industry's natural gas fuel needs remain substantial.

Because of our industry's dual use of natural gas, as well as our significant presence in the U.S., the business of chemistry today accounts for eleven percent of domestic natural gas consumption, second only to electric utilities. As a result, changes in the natural gas market, such as constricted supply and inflated prices, have a particularly severe impact. In order for the domestic business of chemistry to remain competitive in the global marketplace and to be able to continue to provide employment and other benefits here at home, it is essential that measures be taken to increase natural gas supplies and to make these supplies available at reasonable prices.

NATURAL GAS DEMAND IS INCREASING, SUPPLY IS SHORT, AND PRICES ARE HIGH

The recent history of natural gas prices is a study in commodity price volatility. On January 4, 2000, the average spot price of natural gas at the Henry Hub was \$2.15 per mmBtu. On January 5, 2001, the price had spiked up to \$9.82 per mmBtu.

On January 4, 2002, the price was \$2.36 per mmBtu and on February 26, 2003, the average spot price at the Henry Hub exceeded \$19 per mmBtu. While this extreme volatility is indicative of a very tight supply situation in general, the more worrisome aspect of the experience of the last three years is what it foretells for the long-term. Historically, when gas prices began an upward climb, producers responded to the higher prices by drilling more wells, which produced additional supply and consequently lowered the price.

Our experiences over the past few years have not followed this history. Although gas producers responded to the extraordinary high prices of 2001 by greatly increasing the number of wells drilled, this activity did not lead to a commensurate increase in supply. The supply of natural gas actually increased only marginally during 2001 despite record high levels of drilling rigs operating. The price decline from January 2001 to January 2002 was a result of what economists call "demand destruction," brought about by a mild spring and summer and, ominously, the closing or curtailment of manufacturing facilities. In other words prices dropped not because supply increased, but because demand decreased.

The reaction of producers during this most recent price run-up is much more cautious. Fewer new rigs are going into the fields and gas production has not responded to higher prices. This "Catch-22" response of producers not placing new rigs in service because they are fearful that prices will drop before they can recoup their costs only serves to keep the price high.

A disturbing reality of the U.S. natural gas market is that nearly 70% of it is price insensitive. This means that 70% of gas consumers have no option to either stop using energy or to use a different form of energy and must pay whatever the price is for the gas they need. The remaining 30% of demand, predominantly industrial manufacturers, can adjust to gas price swings by switching to more reasonably priced fuels or by ceasing to operate their manufacturing facilities. It is in this 30% that demand destruction occurs. In the past, this demand destruction generally has been temporary. Higher prices led to increased production and lesser demand, thereby increasing supply and moderating prices. Once prices returned to more economic levels, industrial consumers switched back to natural gas or restarted idled facilities.

In light of recent trends—record numbers of working drill rigs in 2001 did not increase supply; more stringent air quality regulations that limit or eliminate the ability to fuel switch; ever increasing demand for natural gas from price insensitive users—there is a significant risk that this historical pattern will not repeat itself. Rather, ACC is concerned that temporary demand destruction may become permanent demand destruction for many of its members.

THE IMPACT OF HIGH GAS PRICES

Restricted supplies and high prices for natural gas severely limit the ability of U.S. chemical manufacturers to remain competitive with foreign competitors. The business of chemistry in the U.S. is concentrated in the Gulf Coast region largely because of the region's proximity to a traditionally abundant, low cost supply of natural gas resources. While about seventy percent of U.S. petrochemicals production uses natural gas as a feedstock, the same percentage of producers in Western Europe and Asia use naphtha, a crude oil derivative. Unlike crude oil, the price of which is set by the global market, natural gas is not as broadly traded, with the result that price increases for natural gas in North America are felt only in North America. For many years, the U.S. business of chemistry enjoyed the benefit of relatively low cost feedstocks relative to our foreign competitors, enabling the industry to become the global leader in chemical products. A tightened natural gas market and soaring natural gas prices, however, put this position in jeopardy. For the business of chemistry, experience shows that, although this number fluctuates depending on the price of crude oil, the price for natural gas at which we become unable to compete in global markets is between \$3.25 and \$4.00. Current prices are hovering around \$6.00.

High natural gas prices significantly cut into our industry's profitability. For every one-dollar increase in the price of natural gas, over the course of a year, our industry incurs approximately \$4.2 billion in additional costs. Yet, because we compete in a global market, U.S. companies are unable to pass these added costs for natural gas along to their customers if our products are to remain competitively priced with those produced by our foreign competitors. In 1999, when the price of natural gas averaged \$2.27, the operating margin for basic chemical companies was 6.8%. In 2001, when the price of natural gas rose to an average of \$4.27, the operating margin dropped to 0.6%.

High natural gas prices also negatively impact productivity and employment in our industry. In any industry, a company faced with declining profitability must

evaluate whether or not to continue operations. During the 2000–2001 “spike” in natural gas prices, many companies idled their operations. About fifty percent of the industry’s methanol capacity and fifteen percent of the industry’s ethylene capacity were simply shut down during this time. Many workers were sent home. As natural gas prices came down plants reopened. These relatively short-term increases in natural gas prices led to relatively short-term shutdowns. However, there are serious questions regarding how these companies will respond over the long-term if faced with a business environment with sustained conditions of tightened natural gas supply and high natural gas prices. For our employees, demand destruction sooner or later becomes job destruction.

As the largest industrial consumer of natural gas in the United States, the business of chemistry has been severely affected by these steep increases in natural gas prices. Prior to the run-up in gas prices in 2000 and 2001, the business of chemistry, America’s largest export industry, contributed one of the nation’s highest positive trade balances. Today, after two years of high gas prices, our industry is facing a negative trade balance for the first time ever. High U.S. manufacturing costs, tied to inflated natural gas prices, allow foreign competitors, who do not face the same elevated energy and feedstock prices, to become low cost producers and capture market share at our expense. This has resulted in thousands of jobs lost and plants shut down, and the movement of investment capital overseas.

Here are some specific examples of the dramatic effect that the 2001 spike in natural gas prices had on companies in the business of chemistry:

- Almost one-half of the nation’s methanol capacity and one-third of its ammonia capacity were shut down. Five years ago, the U.S. was relatively self-sufficient for its methanol needs. Now, we import about the same amount of methanol as we do crude oil.
- Ethylene capacity dropped between ten and fifteen percent, with at least five percent of this drop due to plant shutdowns. Net trade in ethylene was at one-fifth of the 1997 level in 2001.
- The Gulf Coast region’s economy, where most of the U.S. petrochemical industry is located, was hit particularly hard with widespread job losses due to plant shutdowns. In Louisiana alone, for example, over 2,000 jobs have been lost over the last four years just in the ammonia industry.
- Historically, ethylene production based on U.S. ethane (from natural gas) has had the lowest cost per pound after the Middle East, which has abundant inexpensive natural gas resources. However, in 2002, that low cost position was eroded. In 2002, ethylene production costs rose globally as the price of oil also rose above historic levels. Natural gas experienced higher price increases relative to oil, however, with the result that U.S. ethane-based production lost its clear low cost position.

The recent price run-up in prices has resulted in similar problems for the industry which is still struggling to recover from 2000–2001. The Dow Chemical Company moved 1.4 billion pounds of production from the U.S. to Germany in large part because of high energy costs. For the first time in the history of our industry, energy costs in Europe are substantially below those in the U.S., leaving domestic industries at a disadvantage. Many other manufacturers are curtailing or shutting down production because they cannot manufacture products at a price that would be competitive with imports from nations with lower feedstock prices.

Although the impact on our business is felt particularly hard, the chemical industry is not alone. For example, the U.S. fertilizer industry is similarly dependent upon natural gas and similarly affected, as are its customers, America’s farmers. Imports of nitrogen and ammonia from Russia and elsewhere are gaining increasing market share as U.S. producers of these agricultural commodities are bested on price.

As more and more U.S. manufacturers shut down and production moves overseas, not only does our nation lose those jobs, but we also become increasingly reliant upon other nations for the materials upon which we have built our modern economy, our agricultural base and our national defense. Further down stream, U.S. consumers also are negatively impacted in everything from increased home heating and electricity costs to higher prices on consumer goods as production costs rise. Those at the lower end of the income scale are particularly hard hit where their choices often are between heating their homes or purchasing food and needed medicine.

POLICY RECOMMENDATIONS

The U.S. economy, especially the manufacturing sector, is in the midst of the “other energy crisis,” brought on by dangerously volatile natural gas prices. The nation’s chemical industry, as the largest industrial user, is particularly hard-hit, with plants being closed and jobs being lost.

As the House Resources Committee prepares its part of the Comprehensive Energy Bill, it should consider these three solutions:

- Increase Production Now—It's unarguable that the country is facing a fundamental structural imbalance in supply and demand for natural gas. For example, natural gas use to generate electricity has increased by 35 percent the past five years and will nearly double in the next decade. Production, on the other hand, is below levels of 30 years ago when we were using much less. We need more gas and the most promising supply source is in the area in the eastern Gulf of Mexico known as Lease Sale 181. The gas is there and the transportation structure is in place. Congress should direct the Department of Interior to make available for leasing all tracts within Lease 181. Gas from the area could be flowing to homes and manufacturing plants within 18 months and have a significant downward impact on today's high prices.
- Provide for Long-Term Production—Congress should suspend all existing statutory and administrative moratoria on oil and gas production in the waters of the United States, including waters off the East and West Coasts. In addition, the Department of Interior should be directed to make Federal lands in the Rockies available for development as soon as possible and Congress should take the appropriate steps to encourage the construction of infrastructure needed to bring that gas to market.
- Conservation—Natural Gas storage levels are at an all-time low. If the water supply was at a comparable level, a drought would be declared and use restrictions would be put in place. The fastest short-term solution to re-balance natural gas and to fill the reserve that's needed for next winter is to curb demand. Congress should direct the Federal Government immediately reduce its energy consumption and provide incentives for states and consumers to do the same.
- Energy Diversity—Natural gas is an excellent fuel source, but our over reliance in the absence of adequate supplies set us the course that resulted in last months record high prices. America must utilize its resources strengths and continue to make responsible use of all available energy sources including coal, nuclear and renewable energy.

For the U.S. chemical industry, economic survival depends on having access to an abundant and affordable supply of natural gas. Every recession since World War II has been preceded by a steep increase in energy prices. In the past it's been the cost of oil. This time, it may be natural gas, the "other" fuel and the hidden energy crisis.

The time has come to pay the piper. The nation can't have it both ways—if we want to use more natural gas for environmental and other socially responsible reasons, we need to produce more. This is not a usual supply and demand problem that will be fixed by market forces. Congress created the problem, and is the only body that can solve it.

Thank you again for giving us the opportunity to present our views and concerns. We stand ready to discuss these issues and potential legislation, and to assist the Committee in any way we can.

The CHAIRMAN. Thank you.

Mr. Tauzin.

Mr. TAUZIN. I apologize, Mr. Chairman. I have been notified the Subcommittee is about to go back into markup and I will be needed to make the votes. I understand Mr. Waxman has an amendment and I probably need to go over there and protect the Committee against that amendment. So I have to take my leave.

I simply wanted to thank you all again in advance of hearing your oral testimony. Again, I thank Mr. Downer. Hunt, I don't know if you knew it, but there has been a recent report that the road to Fourchon you talked about has now dropped one foot; that is, it sunk one foot. Dr. Gagliano has reported that that process is continuing along the coast. The damage and danger to that resource is enlarging rather than diminishing. I think you have made a strong case for increased attention to more protection and security, not only for that port but for that entire infrastructure. I thank you for that.

I beg my leave of this Committee. Again, I want you all to know that I am counting, and I know the Congress is counting, on the leadership of Chairman Pombo to deliver from this great Committee a major portion of the comprehensive energy package that we're producing in the other Committee. I want to thank Chairman Pombo in advance for what I know will be a great product.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Tauzin.

Mr. Parker.

**STATEMENT OF DAVID N. PARKER, PRESIDENT AND CHIEF
EXECUTIVE OFFICER, AMERICAN GAS ASSOCIATION**

Mr. PARKER. Thank you, Mr. Chairman.

I am David Parker, the president of the American Gas Association. The American Gas Association represents 191 natural gas utilities that deliver 83 percent of the natural gas that goes to the 64 million homes and businesses in America. Roughly speaking, 175 million Americans depend on natural gas.

Let me also emphasize that, as my remarks will show, the interest of the natural gas utility and the American consumer are almost perfectly aligned. High natural gas prices have an adverse effect on both the consumer and the utility. You should know that the utility buys natural gas for its customers, but only makes money through the delivery of natural gas. Utilities make no money on the commodity itself. They only make money when they flow the natural gas through their gas lines.

High gas prices hurt our residential customers. High gas prices hurt commercial and industrial customers, making their products uncompetitive. High prices have forced some industrial plants to shut down, and in some cases, move overseas, taking their jobs with them. And high gas prices also hurt the local utilities, because we make no money on the commodity. High prices do not increase our profits. On the contrary, high prices dampen demand which negatively affects our bottom line. High prices decrease our profits because many customers can't pay. Uncollectibles go up.

High prices affect the utility's reputation for service, and when prices go up, our customers, our regulators, our elected representatives, all complain directly to us.

Price volatility hurts consumers as well as the utilities. Today, supply and demand are now in balance, but it is a tight tightrope that we're talking about. The gas bubble no longer exists. Today, 25 percent of the U.S. energy needs are currently being met by natural gas. Demand will increase 50 percent over the next 20 years.

I would like to make mention, too, that great credit needs to go to the American residential customer. Our records show that the residential home, the average residential home in America, between 1990 and the year 2000 reduced their consumption of natural gas by 16 percent. So great credit needs to go to the American consumer for doing their part for energy conservation.

Are we concerned? You can certainly bet we are. Existing sources of supply are not enough to meet future demand. Producers must have access to new areas of supply, many of which are currently off limits or have severe Federal regulation.

You may think it's unusual for the natural gas utility retailers to get involved in the supply issues, but the growing mismatch between supply and demand is an increasing concern for the gas utilities and the consumers that we represent. New technologies, which in the past have allowed us to keep up with demand, are no longer the magic bullet because most of the existing natural gas fields today are mature and are playing out. Unless new areas of supply are opened for exploration and development, the production needed to meet the projected demand will be gone by the year 2015.

So what must we do? The large areas of the West under public ownership—that is, the nonparklands—that are closed or severely restricted must be looked at. Productive areas must be opened up for exploration and development if we are to meet America's future energy needs with affordable natural gas.

One of the best things is we can thank today's technologies, that we can explore for and produce natural gas without the negative environmental impacts that we had with earlier drilling technologies. How ironic it is that so many of our laws and policies in place that promote the use of natural gas for environmental reasons are also the similar laws that restrict the areas that we have for the production of natural gas.

So what should we do and when should we do it, you may ask. The answer is now. We are running out of time. To meet demand in the future, we need you to ease the ability to produce natural gas from the prolific fields that are known but untouched at this time. Lead times are long in the exploration and production business, as are the lead times to construct the infrastructure to get the gas to the consumer.

We all know that energy is the lifeblood of the American economy, and now it is time to ensure that that is available in the future.

Mr. Chairman, I would like to enter both my full statement as well as two recent studies by the American Gas Foundation into the record. That concludes my remarks.

[The prepared statement of Mr. Parker follows:]

**Statement of David N. Parker, President and Chief Executive Officer,
American Gas Association, Washington, D.C.**

Executive Summary

The American Gas Association represents the nation's local gas utilities. AGA member companies acquire gas supply for, and distribute it to, their residential and commercial customers. As a result, the availability of adequate supplies of competitively priced natural gas is of critical importance to AGA and its member companies.

The natural gas industry is currently at a critical crossroads. The "gas bubble" of the 1980s and 1990s disappeared prior to the winter of 2000–2001. Supply and demand is now in balance. The industry today no longer basks in prodigious supply; rather, it treads a supply tightrope, bringing with it often unpredictable economic and political consequences—most importantly high prices and higher price volatility. Both consequences harm natural gas consumers—residential, commercial, and industrial.

Energy is the lifeblood of our economy. High, volatile natural gas prices put America at a competitive disadvantage, cause plant closings, and idle workers. Government must take prompt and appropriate steps to ensure the nation of adequate supplies of natural gas at reasonable prices. Moreover, it is expected that natural gas demand will increase by 50 percent over the next two decades. This growth will occur because natural gas is the most environmentally friendly fossil fuel and

because natural gas is an economic and reliable source of energy. It is in the national interest that natural gas be available to serve the demands of the market.

Many of the fields from which natural gas is currently produced are mature. Over the last two decades, technological advances have greatly enhanced the ability to find natural gas as well as to produce the maximum amount possible from a field. However, if America's needs for energy are to be met, there is no choice except for exploration and production activity to migrate into new areas. The nation's natural gas resource base is rich and diverse. It is simply a matter of taking exploration and production (E&P) activity to the many known areas where natural gas is found or thought to exist. Regrettably, many of these areas are either totally closed to exploration and development or are subject to so many restrictions that timely and economic development is not possible. The E&P business is, as a result of technological improvements, enormously more environmentally sensitive today than it was 25 years ago. As a result, current restrictions on land access need to be reevaluated given the nation's energy needs.

The most important step Congress can take to address these issues is to ensure that lands where natural gas is believed to exist are available for environmentally sound exploration and development. Additionally, it is appropriate to create incentives to seek and produce this natural gas.

Testimony

Good morning. I am David N. Parker, President and Chief Executive Officer of the American Gas Association ("AGA"). AGA is grateful for the opportunity to share its views with you on the critical importance to the nation of ensuring ample natural gas supplies at competitive prices. Doing so is necessary for the nation, both to protect consumers and to address the energy and economic situations we currently face.

AGA is composed of 191 natural gas distribution companies, which deliver gas throughout the United States. Local gas utilities deliver gas to more than 64 million customers nationwide. AGA members deliver approximately 83 percent of this gas.

Our members are charged with the responsibility, under local law or regulation, of acquiring natural gas for the majority of their customers. Having available adequate supplies of natural gas at reasonable prices is thus a critical issue for AGA and its members. Accordingly, AGA members and the consumers they serve share both an interest and a perspective on this subject.

I would like to make clear that the bread and butter business of AGA members is acquiring and delivering natural gas to residential, commercial, and industrial consumers across America. Our members remain economically viable by delivering natural gas to consumers at the lowest reasonable price, which we do by operating our systems—over a million miles of distribution lines—as efficiently as possible. Exploring for and producing natural gas is the business of our energy-industry colleagues in the oil and gas business, whether they are major, independent, or "Mom and Pop" operators. We are not here to speak for them today, but their continued success in providing natural gas to America's consumers is of great importance to us as well.

AGA is encouraged that Congress is coming to grips with this important issue. Adequate natural gas supply is crucial to all of America for a number of reasons. It is imperative that government take significant action in the very near term to assure the continued economic growth, environmental protection, and national security of our nation. The tumultuous events in energy markets over the last two years serve to underscore the importance of adequate and reliable supplies of reasonably priced natural gas to consumers, to the economy, and to national security.

The natural gas industry is presently at a critical crossroads. For the past three years gas production has had to operate full-tilt to meet consumer demand. The "surplus deliverability—or "gas bubble" of the late 1980's and 1990's is simply gone. No longer is demand met while unneeded production facilities sit idle. No longer can new demand be met by simply opening the valve a few turns. The valves are wide open.

The supply tightrope has brought with it several inexorable and unpleasant consequences—prices in the wholesale market have gone up and that market has become much more volatile. During the 2000–2001 heating season, for example, gas prices moved from the \$2 level to approximately \$10 and back again to nearly \$2. Such volatility hurts consumers, puts domestic industry at a competitive disadvantage, closes plants, and idles workers. The winter of 2000–2001 made it abundantly clear to us (and to you as well) that consumers do not like these price increases and they do not like the market volatility that is now an everyday norm. Unless significant actions are taken on the supply side, gas markets will remain tumultuous, and 64 million gas customers will suffer the consequences. As gas utilities, we have a

number of programs in place to insulate consumers, to some extent, from the full impact of wholesale price volatility, but consumers must still ultimately pay the price.

The demand for natural gas in the U.S. is expected to increase 50 percent by 2015–2020. Growth seems inevitable because gas is a clean, economic, domestic source of available energy. It does not face the environmental hurdles of coal and nuclear energy, the economic and technological drawbacks of most renewable energy forms, or the national security problems associated with imported oil.

The challenge for both government and industry is quite straightforward: to ensure that the current need for natural gas is met and that the future need for natural gas will be met at reasonable and economic prices. There can be no responsible question that facilitating this result is sound public policy. Natural gas is abundant domestically, and natural gas is the environmentally friendly fuel of choice. Ensuring adequate natural gas supply will lead to reasonable prices for consumers, will dampen the unacceptable volatility of wholesale natural gas markets, will help keep the economy growing, and will help protect the environment.

America has a large and diverse natural gas resource; producing it, however, can be a challenge. Providing the natural gas that the economy requires will necessitate: (1) providing incentives to bring the plentiful reserves of North American natural gas to production and, hence, to market; (2) making available for exploration and production the lands where natural gas is already known to exist so gas can be produced on an economic and timely basis; (3) ensuring that the new infrastructure that will be needed to serve the market is in place in timely and economic fashion.

Natural gas—our cleanest fossil fuel—is found in abundance throughout both North America and the world. It currently meets one-fourth of the United States' energy needs. Unlike oil, about 99 percent of the natural gas supplied to U.S. consumers originates in the United States or Canada.

The natural gas resource base in the U.S. has increased over the last several decades. In fact we now believe that we have more natural gas in the U.S. than we estimated twenty years ago, notwithstanding the production of between 300 and 400 trillion cubic feet of gas in the interim. This is true in part because new sources of gas, such as coalbed methane, have become an important part of the resource base.

Natural gas production is sustained and grows only by drilling in currently productive areas or by exploring in new areas. Over the past two decades, a number of technological revolutions have swept across our industry. We are able today to drill for gas with dramatically greater success and with significantly reduced environmental impact than we did twenty years ago. We are also much more efficient in producing the maximum amount of natural gas from a given area of land. A host of technological advances allows producers to identify and extract natural gas deeper, smarter, and more efficiently. For example, the drilling success rate for wells deeper than 15,000 feet has improved dramatically. In addition, gas trapped in coal seams, tight sands or shale is no longer out of reach.

While further improvements in this regard can be expected, they will not be sufficient to meet growing demand unless they are coupled with other measures. Regrettably, technology alone cannot indefinitely extend the production life of mature producing areas. New areas and sources of gas will be necessary.

Notwithstanding the dramatic impact of innovation upon our business, the inevitable fact today is that we have reached a point of rapidly diminishing returns with many existing natural gas fields. This is almost entirely a product of the laws of petroleum geology. The first ten wells in a field may ultimately produce 60 percent of the gas in that field, while it may take forty more to produce the balance. In many of the natural gas fields in America today, we are long past those first ten wells and are well into those forty wells in the field. In other words, the low-hanging fruit have already been picked in the orchards that are open for business.

Drilling activity in the U.S. has moved over time, from onshore Kansas, Oklahoma and Arkansas to offshore Texas and Louisiana, and then to the Rocky Mountains. Historically, we have been quite dependent on fields in the Gulf of Mexico. But recent production declines in the shallow waters of the Gulf of Mexico have necessitated migration of activity to deeper waters to offset this decline. These newer, more expensive, deepwater fields also tend to have short lives and significantly more rapid rates of decline in production than is the case with onshore wells.

In short, America's natural gas fields are mature—in fact, many are well into their golden years. There is no new technology on the horizon that will permit us to pull a rabbit out of a hat in these fields. These simple, and incontrovertible, facts explain why we are today walking a supply tightrope and why the winter of 2000–2001 may become a regular occurrence, particularly at the point the economy returns to its full vigor. Having the winter of 2000–2001 return every year will un-

doubtedly put a brake on the economy, once again causing lost output, idle productive capacity, and lost jobs.

If we are to continue to meet the energy demands of America and its citizens and if we are to meet the demands that they will make upon us in the next two decades, we must change course. It will not be enough to make a slight adjustment of the tiller or to wait three or four more years to push it over full. Rather, we must come full about, and we must do it in the very near future. Lead times are long in our business, and meeting demand years down the road requires that we begin work today.

We have several reasonable and practical options. And, as I hope you do understand, continuing to do what we have been doing is simply not enough.

First, and most importantly, we must look to new frontiers within the United States. Further growth in production from this resource base is jeopardized by limitations currently placed on access to it. For example, the natural gas resource base off the East and West Coasts of the U.S. is off-limits to development, while much of the Eastern Gulf of Mexico is currently closed to any exploration and production activity. Moreover, access to large portions of the Rocky Mountains is severely restricted. The potential for increased production of natural gas is severely constrained so long as these restrictions remain in place.

In this vein, the Rocky Mountain region is expected to be a growing supplier of natural gas, but only if access to key prospects is not unduly impeded by stipulations and restrictions. Two separate studies by the National Petroleum Council and the U.S. Department of the Interior reached a similar conclusion—that nearly 40 percent of the gas resource base in the Rockies was restricted from development to some degree, some partially and some totally. On this issue the Department of the Interior noted that there are nearly 1,000 different stipulations that can impede resource development on Federal lands.

One of the most significant new gas discoveries in North America in the past ten years is located just north of the US/Canada border in eastern Canada coastal waters on the Scotian Shelf. Natural gas discoveries have been made at Sable Island and Deep Panuke. Gas production from Sable Island already serves Canada's Maritimes Provinces and New England through an offshore and land-based pipeline system. This has been done with positive economic benefits to the region and without environmental degradation. This experience provides an important example for the United States, where we believe the offshore Atlantic area to have similar geology.

In some areas we appear to be marching backward. The buy-back of Federal leases where discoveries had already been made in the Destin Dome area (offshore Florida) of the eastern Gulf of Mexico was a step back in terms of satisfying consumer gas demand. This action was contrary to what needs to be done to meet America's energy needs.

Geographic expansion of gas exploration and drilling activity has for the entirety of the last century been essential to sustaining growth in natural gas production. Future migration, to new frontiers, to new fields, in both the U.S. and Canada will also be critical. Without production from geographic areas that are currently subject to access restrictions, it is not at all likely that producers will be able to continue to provide increased amounts of natural gas from the lower-48 states to customers for longer than 10 or 15 years. We believe that the same is true in Canada as well.

Quite simply, we do not believe that there is any way other than exploring for natural gas in new geographic areas to meet America's anticipated demand for natural gas unless we turn increasingly to sources located outside North America.

We do not advance this thesis lightly. Over the past two years, both the American Gas Association and the American Gas Foundation have studied this important issue vigorously. We believe it is necessary for policy makers to embrace this thesis so that natural gas can continue to be—as it has been for nearly a century—a safe and reliable form of energy that is America's best energy value and its most environmentally benign fossil fuel.

When the first energy shock transpired in the early 1970s, the nation learned, quite painfully, the price of dependency upon foreign sources of crude oil. We also learned, through long gasoline lines and shuttered factories, that energy is the lifeblood of our economy. Yet thirty years later we are even more dependent upon foreign oil than we were in 1970. Regrettably, the nation has since failed to make the policy choices that would have brought us freedom from undue dependence on foreign-source energy supplies. We hope that the nation can reflect upon that thirty-year experience and today make the correct policy choices with regard to its future natural gas supply. We can blame some of the past energy problems on a lack of foresight, understanding, and experience. We will not be permitted to do so again.

Meeting our nation's ever-increasing demand for energy has an impact on the environment, regardless of the energy source. The challenge, therefore, is to balance these competing policy objectives realistically. Even with dramatic improvements in the efficient use of energy, U.S. energy demand has increased more than 25 percent since 1973, and significant continued growth is almost certain. Satisfying this energy demand will continue to affect air, land and water. A great American success story is that, with but five percent of the world's population, we produce nearly one-third of the planet's economic output. And energy is an essential—indeed critical—input for that success story to both continue and grow.

It is imperative that energy needs be balanced with environmental impacts and that this evaluation be complete and up-to-date. There is no doubt that growing usage of natural gas harmonizes both objectives. Finding and producing natural gas is today accomplished through sophisticated technologies and methodologies that are cleaner, more efficient and much more environmentally sound than those used in the 1970s. It is unfortunate that many restrictions on natural gas production have simply not taken account of the important technological developments of the preceding thirty years. The result has been policies that deter and forestall increased usage of natural gas, which is, after all, the nation's most environmentally benign and cost-effective energy source.

Natural gas consumers enjoyed stable prices from the mid-1980s to 2000, with prices that actually fell when adjusted for inflation. Today, however, the balance between supply and demand has become extremely tight, creating the tightrope effect. Even small changes in weather, economic activity, and world energy trends result in wholesale natural gas price fluctuations. We saw this most dramatically in the winter of 2000–2001. In the 1980s and '90s, when the wholesale (wellhead) price of traditional natural gas sources was around \$2 per million British thermal units, natural gas from deep waters and Alaska, as well as LNG, may not have been price competitive. However, most analysts suggest that these sources are competitive when gas is in a \$3.00 to \$4.00 price environment. Increased volumes of natural gas from a wider mix of sources will be vital to meeting consumer demand and to ensuring that natural gas remains affordable.

Increasing natural gas supplies will boost economic development and will promote environmental protection, while ensuring more stable prices for natural gas customers. Most importantly, increasing natural gas supplies will give customers—ours and yours—what they seek—reasonable prices, greater price stability, and fuel for our vibrant economy. However, without policy changes with regard to natural gas supply, as well as expansion of production, pipeline, and local delivery infrastructure for natural gas, the natural gas industry will have difficulty meeting the anticipated 50 percent increase in market demand. Price increases, price volatility, and a brake on the economy will be inevitable.

Second, we can increase our focus on non-traditional sources, such as liquefied natural gas (LNG). Reliance upon LNG has been modest to date, but it is clear that increases will be necessary to meet growing market demand. Today, roughly 99 percent of the U.S. gas supply comes from traditional land-based and offshore supply areas in North America. But, during the next two decades, non-traditional supply sources such as LNG will likely account for a significantly larger share of the supply mix. LNG has become increasingly economic. It is a commonly used worldwide technology that allows natural gas produced in one part of the world to be liquefied through a chilling process, transported via tanker and then re-gasified and injected into the pipeline system of the receiving country. Although LNG currently supplies less than 1 percent of the gas consumed in the U.S., it represents nearly 100 percent of the gas consumed in Japan. LNG has proven to be safe, economical, and consistent with environmental quality. Due to constraints on other forms of gas supply and increasingly favorable LNG economics, LNG is likely to be a more significant contributor to U.S. gas markets in the future. It will certainly not be as large a contributor as imported oil (nearly 60 percent of U.S. oil consumption), but it could account for 10–15 percent of domestic gas consumption 15–20 years from now if pursued aggressively and if impediments are reduced.

Third, we can tap the huge potential of Alaska. Alaska is estimated to contain more than 250 trillion cubic feet—enough to satisfy U.S. natural gas demand by itself for more than a decade. Authorizations were granted twenty-five years ago to move gas from the North Slope to the Lower-48, yet no gas is flowing today nor is any transportation system yet under construction. Indeed, every day the North Slope produces approximately 8 billion cubic feet of natural gas that is re-injected because it has no way to market. Alaskan gas has the potential to be the single largest source of price and volatility relief for U.S. gas consumers. Deliveries from the North Slope would not only put downward pressure on gas prices, but they

would also spur the development of other gas sources in the state as well as in northern Canada.

Fourth, we can look to our neighbors to the north. Canadian gas supply has grown dramatically over the last decade in terms of the portion of the U.S. market that it has captured. At present, Canada supplies approximately 15 percent of the United States' needs. We should continue to rely upon Canadian gas, but it may not be realistic to expect the U.S. market share for Canadian gas to continue to grow as it has in the past or to rely upon Canadian new frontier gas to meet the bulk of the increased demand that lay ahead in the United States.

Recommendations

To promote meeting consumer needs, economic vitality, and sound environmental stewardship, the American Gas Association urges the Congress as follows:

- Current restrictions on access to new sources of natural gas supply must be re-evaluated in light of technological improvements that have made natural gas exploration and production more environmentally sensitive.
- Federal and state officials must take the lead in overcoming the pervasive “not in my backyard” attitude toward energy infrastructure development, including gas production.
- Interagency activity directed specifically toward expediting environmental review and permitting of natural gas pipelines and drilling programs is necessary, and agencies must be held responsible for not meeting time stipulations on lease, lease review, and permitting procedures.
- Federal lands must continue to be leased for multi-purpose use, including oil and gas extraction and infrastructure construction.
- Tax provisions such as percentage depletion, expensing geological and geophysical costs in the year incurred, Section 29 credits, and other credits encourage investment in drilling programs, and such provisions are often necessary, particularly in areas faced with increasing costs due to environmental and other stipulations.
- Economic viability must be considered along with environmental and technology standards in an effort to develop a “least impact” approach to exploration and development but not a “zero impact”.
- The geologic conditions for oil and gas discovery similar to that in eastern Canada extend to the U.S. mid-Atlantic area.
 - * Although some prospects have been previously tested, new evaluations of Atlantic oil and gas potential should be completed using today’s technology—in contrast to that of 20 to 30 years ago.
 - * The Federal Government should facilitate this activity by lifting or modifying the current moratoria regarding drilling and other activities in the Atlantic Offshore to ensure that adequate geological and geophysical evaluations can be made and that exploratory drilling can proceed.
 - * The Federal Government must work with the Atlantic Coast states to assist—not impede—the process of moving natural gas supplies to nearby markets should gas resources be discovered in commercial quantities. Federal agencies and states must work together to ensure the quality of the environment but they must also ensure that infrastructure (such as landing an offshore pipeline) is permitted and not held up by multi-jurisdictional roadblocks.
- The Federal Government should continue to permit royalty relief where appropriate to change the risk profile for companies trying to manage the technical and regulatory risks of operations in deepwater.
- Coastal Zone Management (CZMA) is being used to threaten or thwart offshore natural gas production and the pipeline infrastructure necessary to deliver natural gas to markets in ways not originally intended. Companies face this impediment even though leases to be developed may be 100 miles offshore. These impediments must be eliminated or at least managed within a context of making safe, secure delivery of natural gas to market a reality.
- The U.S. government should work closely with Canadian and Mexican officials to address the challenges of supplying North America with competitively priced natural gas in an environmentally sound manner.
- Renewable forms of energy should play a greater role in meeting U.S. energy needs, but government officials and customers must realize that all forms of energy have environmental impacts.
- Construction of an Alaskan natural gas pipeline must begin as quickly as possible.
 - * Construction of this pipeline is possible with acceptable levels of environmental impact.

- * The pipeline project would be the largest private sector investment in history, and it would pose a huge financial risk to project sponsors.
- * The project will not be undertaken without some form of Federal support—loan guarantee, accelerated depreciation, investment tax credit and/or marginal well tax credit.
- * These forms of support are not unprecedented and they would reduce project risk thereby reducing transportation charges that are ultimately borne by the consumer.
- The Federal Energy Regulatory Commission (FERC) announced in a new policy in December of 2002 that it would not require LNG terminals to be “open access” (that is, common carriers) at the point where tankers offload LNG. This policy will spur LNG development because it reduces project uncertainty and risk. Other Federal and state agencies should review any regulations that impede LNG projects and act similarly to reduce or eliminate these impediments.
- The siting of LNG offloading terminals (currently four operable are in the U.S.) is generally the most time consuming roadblock for new LNG projects. Federal agencies should take the lead in demonstrating the need for timely approval of proposed offloading terminals, and state officials must begin to view such projects as a means to satisfy supply and price concerns of residential, commercial, and industrial customers.

The CHAIRMAN. Thank you, Mr. Parker.
Miss Novak.

**STATEMENT OF MARY H. NOVAK, MANAGING DIRECTOR,
ENERGY SERVICES, GLOBAL INSIGHT, INC.**

Ms. NOVAK. Good morning. My name is Mary Novak, and I am the managing director of Global Insight. Global Insight is the new name of the merger of Data Resources International and WEFA, Wharton Econometric Forecasting Associates, long time forecasters of both energy and the economy. I am here today to discuss our outlook for natural gas.

I want to briefly summarize my remarks. But just to put it in a little context here, natural gas prices have recently reached new highs, after experiencing extreme volatility over the last few years. Henry Hub cash prices have soared from less than \$2.50 per million Btu in January of 2000 to over \$9 in January of 2001, and fell back below \$2.50 in January of 2002. They have since recovered to the \$3.50 to \$4 range for the remainder of 2002, and exceed that at this moment.

The volatility of the last few years reflect traditional short-term influences on prices, including drilling and pipeline capacity, which affect deliverability, and fluctuations in weather and the economy, which influence demand. However—and this is a very significant “however”—the recent rise in prices reflects a more fundamental tightening of deliverability that was masked by short-term factors over the last few years. It is those short-term factors masking the long-term supply picture that is of critical concern to this Committee.

The power sector has been expanding its use of natural gas dramatically over the last 10 to 15 years. We have chosen a path of using natural gas in power generation as one of the means to meet our environmental goals. However, about one-third of natural gas is still used by our industrial sector. In fact, it is about six major energy intensive industries that use more than 85 percent of that industrial demand for natural gas. And it is those industries that are now at risk because of the high price of natural gas that is expected to be sustained over the next 20 years.

So while we have experienced over the last three or 4 years an extreme volatility of prices, moving from \$2 up to \$4 and back to \$2 again, our long-term outlook is that prices will now settle in at somewhere between \$3.25 and \$3.75 per million Btu.

The energy-intensive industries within the United States, which are critical to long-term economic growth, are suffering extreme price pressure when we compare those domestic natural gas prices to prices of other gas-rich economies. For example, Trinidad and Tobago, right across the Gulf from us, has very low natural gas prices and is attracting much of the industrial chemical industry away from the United States.

Why is that of concern to us as economists? Well, we might say there are primary chemical suppliers here in the United States that could move to Trinidad and Tobago. However, we also know that within a short period of time, within the next 10 to 15 years, all the derivative chemical manufacturers will also move offshore. So a brief, short-term loss of some chemical producers is going to lead us into a period of long-term movement of our entire chemical industry offshore.

So can we sustain somewhat lower gas prices, should we sustain that? The question is our access to domestic supplies. For the last 15 years, we have been basically living off of the supplies that were put in place in the 1980's. But within my testimony I have some pictures that show we have actually achieved 95 percent deliverability off of that supply base. So we are now looking at developing new supplies to try to even maintain our current natural gas supply picture, or to increase it. And to do that, we really need to go to new areas. Our forecast is saying we're going to have to go to deep offshore and into the Rockies and develop the Alaskan gas and develop the pipeline to maintain gas at 20 to 22 TCF of natural gas. We're going to have to continue to call upon our neighbors, Canada, to develop its McKenzie Delta gas, and build facilities to help us sustain our gas.

So, to meet both the needs of our industrial base and to meet the needs of our power generation requirements, to meet our environmental goals, we are going to have to continue to search for ways to make sure the natural gas supply is there at a fairly reasonable price.

With that, I would like to conclude my remarks.

[The prepared statement of Ms. Novak follows:]

Statement of Mary H. Novak, Managing Director, Energy Services

Introduction

Natural gas prices have recently reached new highs after experiencing extreme volatility over the last few years. Henry Hub cash prices soared from less than \$2.50 per million Btu in January 2000 to over \$9.00 in January 2001, fell back below \$2.50 by January 2002, and then recovered to the \$3.50-\$4.00 range for the remainder of 2002. The volatility of the last few years reflected traditional short-term influences on prices including drilling and pipeline capacity, which affect deliverability, and fluctuations in weather and the economy, which influence demand. However, the recent rise in prices reflects a more fundamental tightening of deliverability that was masked by short-term factors over the last few years.

A look at the underlying forces of supply and demand suggests that the pressures for price increases will be much stronger in the future than during the last decade. Key factors in long-term natural gas price trends include the size and nature of the gas resource base, technological change, and the pace of natural gas demand growth. Accelerating decline rates and shrinking reservoir sizes, on the supply side,

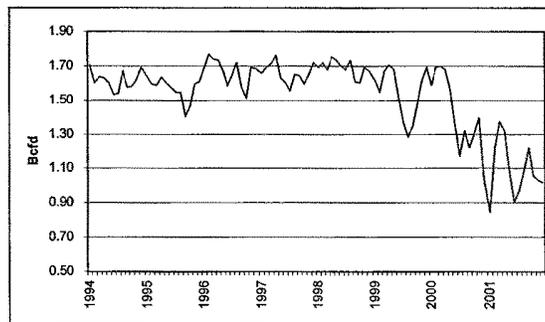
and a strong rate of growth in gas demand, especially from the power generating sector, are expected to maintain real gas prices in the \$3.00–3.50 range over the next 20 years. This represents some downward correction from recent levels, which are being affected by cold weather and lags in supply response, but a significantly higher level of prices than was experienced through most of the 1990s.

Power Sector Is Key to Strong Demand Growth

Natural gas consumption is expected to surpass 30 trillion cubic feet (tcf) by 2020, about 9 tcf above recent levels. This increase represents an average growth rate of nearly 2% per year. Nearly half of the expected increase will result from strong growth in the power generation sector, where a large proportion of new generating plants will be fueled by natural gas. The rest will result from steady but slow growth in the residential and commercial sectors. Growth in these traditional gas-consuming sectors, where gas already possesses high market shares, will be limited by modest expected increases in population.

Natural gas is used in the industrial sector both as a feedstock and as a fuel for direct heat, steam and power generation. As a feedstock, gas is used primarily in the production of ammonia, with hydrogen and methanol accounting for smaller shares. Approximately 50% of industrial natural gas consumption is included in the chemicals and petroleum products industries. Six industries account for 85% of total industrial consumption. Excluding natural gas used for power generation, industrial natural gas consumption was approximately 29% of total consumption.

Natural Gas Consumption for Ammonia Production, Bcfd



Natural gas demand in the near term is being subdued by weakness in key industries and tough competition with residual fuel. Growth in natural gas demand is expected to average 1.5% per year between 2001 and 2020. The low rate of growth of industrial gas consumption is due to improved efficiency and the move of gas-intensive industries to countries with low-cost indigenous industries. There is over 2 billion cubic feet per day (Bcfd) of gas consumption in industries that already face competition from other countries. Approximately 1.6 Bcfd of natural gas is used for the production of ammonia hydrate. If gas prices stay high long enough, much of the fertilizer industry in the United States could be shuttered. There is also increased potential for more applications of combined heat and power in natural gas-consuming industries. Production of power by industry would reduce the need for power generation because of lower transmission losses, and waste heat recovery would improve combined efficiency of fuel use. Lost industrial consumption could amount to more than 2.5% of total current U.S. natural gas consumption over the next decade, if these responses to high gas prices take place.

The strong growth in natural gas use for power generation is driven by the low capital cost, relative speed of development and construction, and the attractive environmental qualities of natural gas generation. Nevertheless, the rate of future growth is highly uncertain. Because gas will be the marginal fuel for power generation, gas consumption will be highly sensitive to slight changes in the growth rate for electricity demand, as well as to developments in coal and nuclear generation. On the one hand, refurbishment of existing coal-fired plants could increase utilization of those plants. On the other hand, tighter environmental regulations could force the closure of several coal stations, depending upon the shape of future regulations and legislation, significantly increasing the power sectors demand for natural gas.

Gas Resources Are Adequate, But More Effort is Needed to Exploit Them

Natural gas deliverability has been declining for over a decade. Most U.S. production growth has occurred from increasing the utilization of excess deliverability that was developed during the early 1980s. This is no longer possible as deliverability is at its maximum level. Consequently, increasing production will require substantially greater effort in the future than in the past. Also, many gas fields are maturing, implying that new reservoirs are smaller. With discoveries likely to average smaller, more exploration efforts will be required to increase gas production capacity. Moreover, the productive capacity of wells has been declining faster; decline rates have risen steadily from 14% in 1990 to 28% in 2001.

The natural gas resource base of the United States is large enough to meet projected demand growth. The question is whether prices will be adequate to attract the level of drilling needed to exploit the resources at the required rate. Drilling activity depends on how confident exploration and production companies are of the expected price level; concerns about downward volatility can inhibit activity. The reference case gas price is expected to be high enough to attract sufficient drilling and supplemental gas imports, but there is a risk that exploration and development of the supplies may be inhibited by price volatility or restrictions on access to new supplies.

The long-term outlook for natural gas supply depends on the coordination of many facets of the industry. A constraint in one of the links in the supply chain can restrict total production. The following questions summarize the supply outlook:

Are there adequate resources to meet demand growth?

Yes. The natural gas resource base of the United States exceeds 1000 Tcf, or nearly 50 years of supply at current rates of consumption. Many of these resources are in areas closed to development. Nevertheless, an accelerated leasing program and the creation of an Alaskan gas transportation system to bring gas to the Lower 48 would allow a large share of the resources to be developed. Leasing is important to the level of drilling as the quality of prospects has decreased.

What are the required production trends and how do they differ from recent history?

A multitude of recent data—EIA production data, Texas onshore gas well production, drilling activity, information from company reports, spending plans—all point to a significant domestic gas production decline in the last half of 2002 that is most likely continuing well into 2003. All of the major producing states are reporting decreases in production, with the exception of Wyoming—where pipeline construction is failing to keep up with supply development. Over the next decade, these trends are projected to turn around in key regions—Gulf offshore, Rocky Mountains, coal seams—as demand rises. Recent evidence, however, highlights the risk to this outlook if greater efforts to develop supplies are not made.

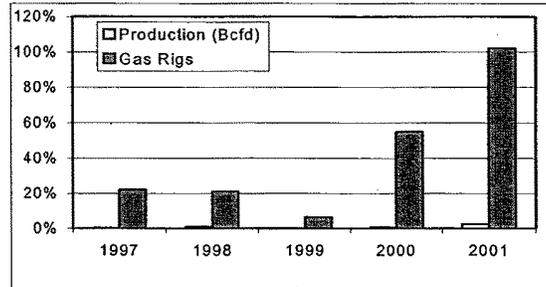
Where will imports be sourced from and at what price and volume?

LNG will add numerous new suppliers to the United States with an expansion up to 5% of U.S. demand in the Reference Case by 2020. Imports from Canada are expected to increase, particularly with development of the East Coast and Arctic gas supplies. The U.S. is becoming a major exporter to Mexico but this could be reversed with extensive drilling in the Burgos basin and as LNG terminals are added in the Baja, Altamira and west coast regions of Mexico. Alaskan and Canadian arctic gas are included in the long-term forecast, but are by no means assured.

What Will It Take To Grow Domestic Supply?

The U.S. production responded to the extremely high prices of over \$4 per MMBtu in 2000 and 2001 by growing by only 1.7%, and much of that growth was from in-fill drilling. The reserves are small and the first year decline rate on many of these wells will be over 50%. As the graph below shows, the effort required to increase U.S. production has increased sharply. The annual growth rate in U.S. production over the last five years has only been 0.5%, while the rig count has grown an average annual rate of 38%.

Cumulative Percent Change in Natural Gas Production versus Natural Gas Rig Count



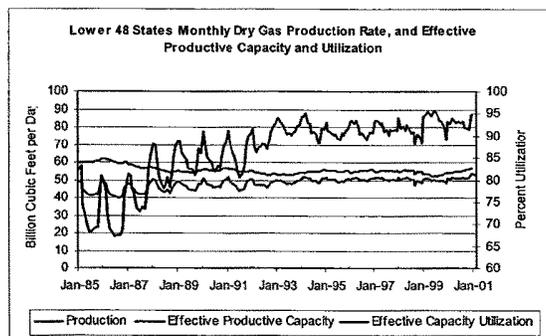
In part a surge of in-fill drilling and a focus on shallow wells caused the poor response of production to an increase in the rig count. However, U.S. production has shown little growth since 1995. This slow growth in production reflects:

- The excess productive capacity developed in the 1980s is now fully utilized.
- Fields in the U.S. and Canada are more mature and, consequently, require much more drilling activity to increase natural gas supply.
- There are insufficient prospects for development drilling.

One reason for the greater activity required to grow U.S. gas production is that during the last decade most U.S. production growth came from increasing the utilization of existing productive capacity that was developed during the early 1980s. This is no longer possible as deliverability is at its maximum level.

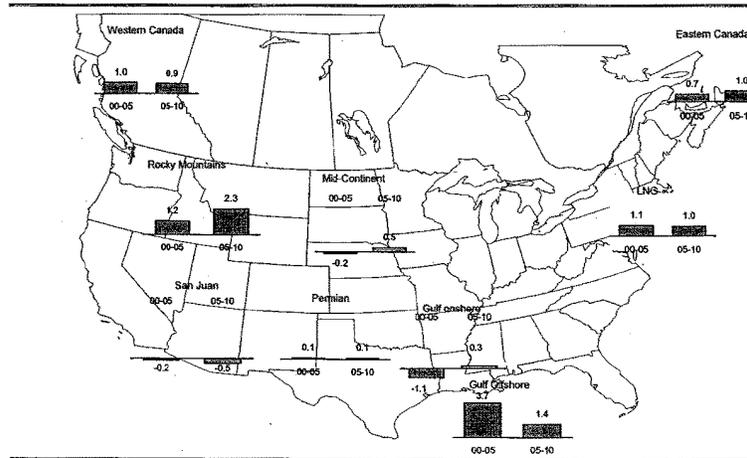
Another force that will make it difficult to grow natural gas production is that many gas fields are maturing. Consequently, reservoirs are smaller. The smaller reservoirs means that gas wells' initial productive capacities are smaller and their productive capacity declines faster than large reservoirs.

Another factor in aggregate production statistics is the increasing share of coalbed methane wells. Powder River Basin wells produce at rates of about 0.050 mmcf/day—or a small fraction of the average new conventional well. There are nearly 10,000 of these coalbed methane wells already producing in Wyoming. Also, the large discoveries in the deep Gulf of Mexico may take several years to bring on-line. The Thunder Horse discovery, reportedly the largest in Gulf of Mexico history, may not begin production until 2005. In other regions such as the Rockies, pipeline capacity is lagging production.



In the year 2001, the U.S. had to replace 28% of its productive capacity. This compares to 14% in 1990. Consequently growing U.S. production will require substantially greater effort and access to more prospects in the future than in the past.

Sources of Natural Gas Production



The chart above shows where Global Insight expects new natural gas supplies to come from. The major areas for domestic supply growth are the Gulf Offshore and the Rocky Mountains, offsetting declines in the Gulf onshore region. If offshore success fails to live up to high expectations as development moves into deeper, costlier zones, then demand for coalbed and conventional gas in the West will be even greater, testing the limits of existing regulatory access to these supplies. Imported gas, from Eastern and Western Canada and LNG, is also expected to increase. It is assumed that 1 Bcf/d of production comes from the McKenzie Delta in 2010. In the reference case, it is also assumed that 2 Bcf/d of gas of Alaskan gas supply is piped to the Lower 48 by 2011, and 4 Bcf/d by 2013.

The CHAIRMAN. Thank you.
Mr. Santistevan.

STATEMENT OF ROBERT SANTISTEVAN, EXECUTIVE DIRECTOR, SOUTHERN UTE INDIAN TRIBE GROWTH FUND

Mr. SANTISTEVAN. Thank you. My name is Robert Santistevan. I'm the Executive Director of the Southern Ute Indian Tribe's Growth Fund. I would like to testify about the importance of the natural gas industry to the Southern Ute Indian Tribe.

The Southern Ute Indian Tribe has worked aggressively to maximize the benefits that its members derive from this non-renewable resource since 1980. Today, the tribe is reaping the benefits of a long-term energy program that has been carefully planned and developed from the beginning. The tribe has distributed over \$90 million in direct cash benefits to its membership since the adoption of the tribe's financial plan in March 1999. Almost all of these funds came from the tribe's energy resources. In addition, most of the profits of the tribe's energy businesses have been reinvested in order to ensure the future economic health of the tribe.

The tribe's energy strategy has four parts. First, the tribe developed a comprehensive data base of all activity and all available technical data on the reservation to monitor the operations of the operators on the reservation in order to ensure that they were prudently developing the tribe's resources and that they were living up to all of their contractual obligations. This effort started in 1980

and has resulted in improved royalty and severance tax payments due to its improved operations on the reservation. This is one of the reasons that over 40 percent of the royalties and royalty related revenues collected on all Indian lands in Fiscal Year 2002 were paid to the Southern Utes. The tribe's Department of Energy is responsible for this continuing effort.

Second, the tribe works actively with the Minerals Management Service to ensure full payment of the royalty obligations of the operators. Under a contractual agreement with the MMS, the tribe's staff actually performs the audits of the energy companies and works with the MMS to collect the audit findings. We have generated \$119 million in collections and audit findings since signing a cooperative audit agreement with the MMS in 1982. The tribe's department of energy accounting manages this effort.

Third, the tribe developed and implemented business plans to buy energy assets on the reservation as they became available. We have several companies that buy these assets at market value and increase their value through an aggressive program of reinvestment and optimization. We have earned an average rate of return of over 40 percent per year on this investment program since its inception in 1992.

Red Willow Production Company is the tribe's wholly owned exploration and production company. Red Willow started buying back these leases in January 1993, and now owns nearly a half-trillion cubic feet of gas, with a market value of a half-billion dollars in the ground.

Red Cedar Gathering Company is a joint venture, which the tribe owns 51 percent of, that was started in 1994 to gather, compress, treat and transport natural gas on the reservation. Red Cedar now gathers more than 730 million cubic feet of gas per day and generates \$50 million per year in earnings.

Fourth, as part of its financial plan, the tribe began purchasing energy assets outside the reservation. Our experience on the reservation convinced us that our management and technical expertise are superior to that of the majority of energy companies. We can outcompete them outside our reservation.

Our long-term investment philosophy also gives us a huge competitive advantage over public companies that must sacrifice good management practices to satisfy stock analysts. Red Willow is investing in exploration and production opportunities in coalbed methane in Canada and northwestern Colorado, the Barnett shale of east Texas, and a 3-D seismic oil play on a neighboring Indian reservation, and in the Offshore Continental Shelf in the Gulf of Mexico.

A new, wholly owned subsidiary, Aka Energy, is purchasing and building midstream energy assets throughout the Rockies. Aka now owns a gathering system in the Denver Julesberg Basin and is contracted or negotiating to build several gathering systems in western Colorado.

The Southern Ute Indian Tribe has taken control of the management of its resources and finances in order to ensure the financial future of its membership. While this has not happened overnight, the results show that the tribes can successfully manage their energy resources. At the end of Fiscal Year 2001, the tribe's net

worth, excluding trust assets, was \$1.44 billion. Both Fitch and Standard and Poor's have issued a bond rating of AAA for the tribe.

Thank you.

[The prepared statement of Mr. Santistevan follows:]

**Statement of Robert Santistevan, Executive Director,
Southern Ute Indian Tribe Growth Fund**

Mr. Chairman and members of the Committee:

For many decades, the Southern Ute Indian Tribe has worked aggressively to maximize the benefits that its members derive from the Tribe's non renewable energy resources. Today the Tribe is reaping the benefits of a long term energy program that has been carefully planned. Since adoption of the Tribe's Financial Plan, in March of 1999, the Tribe has distributed over \$90 million to its members through a variety of programs, including: scholarship and education funds, retirement benefits, per capita distributions, and dividends on investments. Almost all of distributions are associated with energy activities. In addition, most of the profits of the Tribe's energy businesses have been reinvested in order to ensure the future economic health of the Tribe.

The Southern Ute's energy strategy has four parts:

First, the Tribe developed a comprehensive database of all activity and all available technical data on the reservation to monitor the operations of the operators on the reservation in order to ensure that they were prudently developing the Tribe's resources and that they were living up to their contractual obligations. This effort started in 1980 and has resulted in improved royalty and severance tax payments due to improved operations on the reservation. This is one of the reasons that over 40% of the royalties and royalty related revenues collected on all Indian Lands in Fiscal Year 2002 were paid to the Southern Utes. The Tribe's Department of Energy is responsible for this continuing effort.

Second, the Tribe actively works with the Minerals Management Service (MMS) to ensure full payment of the royalty obligations of the operators. Under a contractual arrangement with the MMS, the Tribe's staff actually performs the audits of the energy companies and works with the MMS to collect the audit findings. We have generated \$119 million in collections and audit findings since signing a cooperative audit agreement with the MMS in 1982. The Tribe's department of Energy Accounting manages this effort.

Third, the Tribe developed and implemented business plans to buy energy assets on the reservation as they became available. We have several companies that buy these assets at market value and increase their value through an aggressive program of reinvestment and optimization. We have earned an average rate of return of over 40% per year on this investment program since its inception in 1992. Red Willow Production Company is the Tribe's wholly owned exploration and production company. Red Willow started buying back leases in January of 1993 and now owns nearly half a trillion cubic feet of gas with a market value of half a billion dollars in the ground. Red Cedar Gathering Company is a joint venture (the Tribe owns 51%) that was started in 1994 to gather, compress, treat, and transport natural gas on the reservation. Red Cedar now gathers more than 730 million cubic feet of gas per day and generates \$50 million per year in earnings (EBITDA).

Fourth, as part of its financial plan, the Tribe formed subsidiaries that began purchasing energy assets outside the reservation. Our experience on the reservation convinced us that our management and technical expertise are superior to that of the majority of energy companies, and our subsidiaries compete directly with other companies off "reservation. Our long term investment philosophy gives us an advantage over public companies that must sacrifice good management practices to pander to stock analysts. The tribe has invested in exploration and production opportunities in coalbed methane in Canada and northwestern Colorado, in the Barnett Shale in East Texas, in a 3D seismic oil play on a neighboring Indian reservation, and in the Offshore Continental Shelf in the Gulf of Mexico. A new, wholly owned subsidiary, Aka Energy, is purchasing and building mid stream energy assets throughout the Rockies. Aka now owns a gathering system in the Denver Julesberg basin and is contracted or negotiating to build several gathering systems in western Colorado.

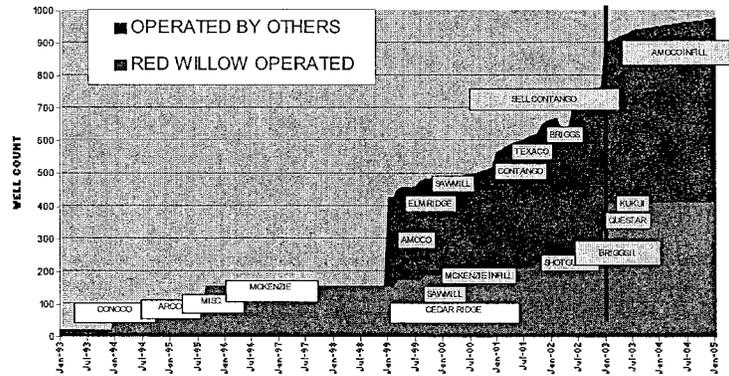
The Southern Ute Indian Tribe has taken control of the management of its resources and finances in order to ensure the financial future of its membership. While this has not happened overnight, the results show that Tribes can success-

fully manage their energy resources. At the end of Fiscal Year 2001 the Tribe's net worth, excluding trust assets, was \$1.44 billion. Both Fitch and Standard and Poor's have issued a bond rating of AAA for the Tribe.

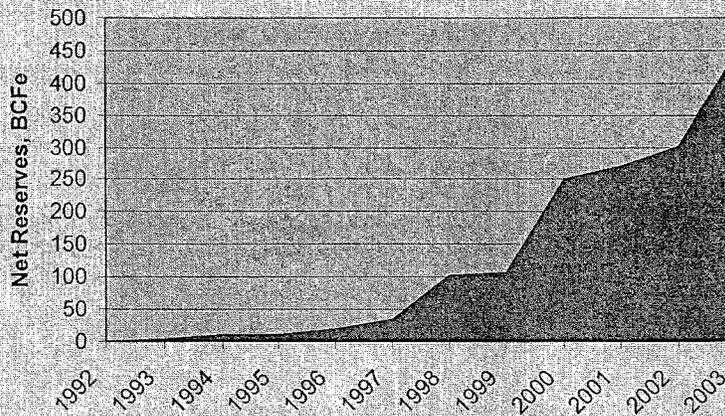
[The graphs listed below and attached to Mr. Santistevan's statement follow:]

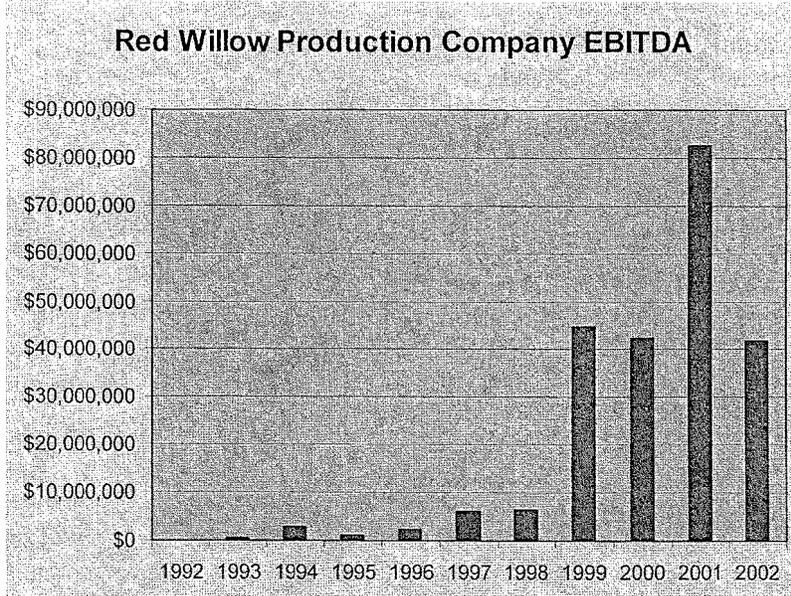
- RWPC well count
- RWPC reserve growth
- RWPC EBITDA (annual)
- RWPC EBITDA (cumulative)
- Red Cedar EBITDA (annual)
- Red Cedar EBITDA (cumulative)

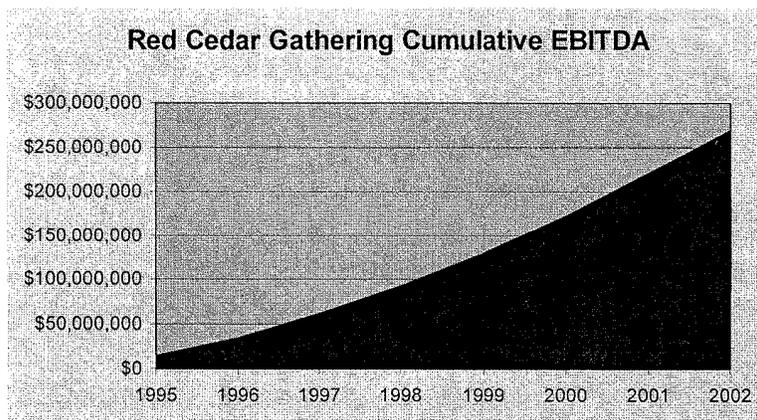
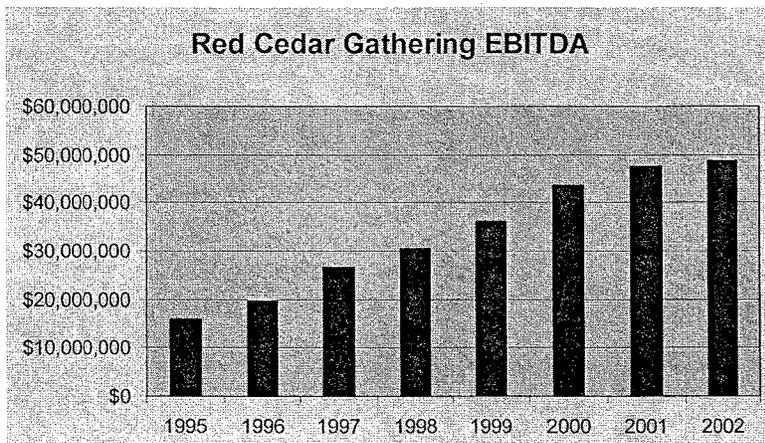
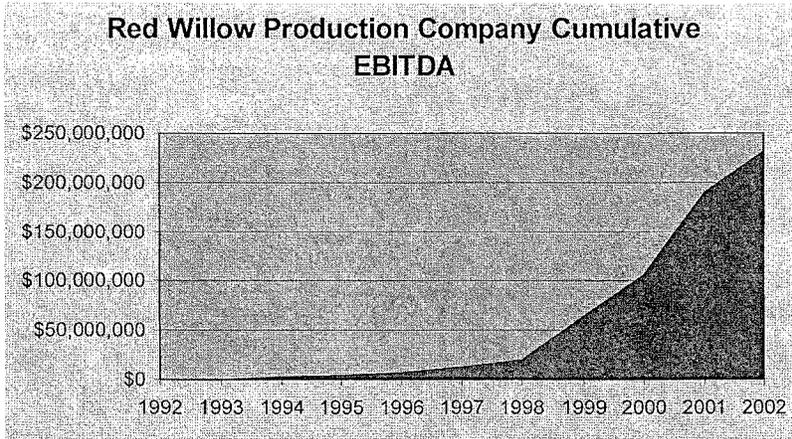
RED WILLOW GROSS WELL COUNT



Red Willow Production Company
NET RESERVE GROWTH - Jan 92 thru Dec 02







[Mr. Santistevan's response to questions submitted for the record follow:]

Attention: Nancy Laheeb
 Deputy Chief Clerk
 Committee on Resources
 United States House of Representatives
 1324 Longworth House Office Building
 Washington, D.C. 20515

Re: Additional Committee Questions; Oversight Hearing on Enhancing America's Energy Security

Dear Ms. Laheeb:

Following my testimony before the Committee on March 19, 2003, I received a total of seven additional questions, five from the Committee without an attributed source and two from Congressman Nick J. Rahall, II. My answers to each of those questions is provided below:

QUESTIONS FROM THE COMMITTEE:

1. What recommendations would you make to the Committee to improve opportunities for tribes to develop non-renewable energy resources in Indian Country?

First, I recommend eliminating those legislative and regulatory obstacles that impede the development of tribal non-renewable energy resources by those tribes that desire to develop them. Second, I recommend that Congress lend financial support to programs that permit tribes to evaluate their non-renewable energy resources from a technical perspective. Third, I recommend legislative assistance in addressing problems that have grown over long periods of time in Indian Country that complicate the development of tribal non-renewable energy resources. Fourth, I recommend that Congress reform tax policies in a manner that eliminates disincentives to development of tribal resources and encourages that development. Each of these recommendations requires additional explanation.

My initial recommendation involves legislative and regulatory revision. Under existing law, an Indian tribe may lease its minerals for development only if in conformity with several leasing statutes. The general prohibition against such leasing without congressional authorization is found in the Nonintercourse Act (25 U.S.C. § 177), and the two most significant leasing statutes are the Indian Mineral Leasing Act of 1938 (25 U.S.C. § 496a-g) and the Indian Mineral Development Act of 1982 (25 U.S.C. §§ 2101, et seq.) ("IMDA"). Both leasing acts call for substantial Federal supervision and approval as conditions to valid leasing. By far the more flexible of the enactments is IMDA, which permits tribes to negotiate leasing contracts, joint ventures, or other forms of development agreements directly with industry, subject to ultimate Federal approval.

The process of IMDA review and approval often results in inordinate delays between the completion of contract preparation and the actual date of approval. Statutorily, such review is supposed to take no longer than 180 days following submission to the Secretary. Even then, however, favorable review does not result in immediate approval because IMDA also includes an additional 30-day cooling off period between the date of notification of the Secretary's intent to approve and the actual date of approval. The 30-day cooling off period serves no apparent purpose other than to add delay and to create contract uncertainty. All of these time periods are subject to additional extension because IMDA also mandates an evaluation by the Bureau of Indian Affairs (BIA) under the National Environmental Policy Act (NEPA) as to whether the Federal approval of the tribe's contract is or is not a major Federal action. If the approval is not a major Federal action, then approval of the contract may proceed with somewhat streamlined evaluation of the impacts and alternatives to the contract (Environmental Assessment). If the approval is deemed a major Federal action, then contract approval will require public notification, comments, and the development of an elaborate evaluation of the proposed contract, its impacts and alternatives (Environmental Impact Statement). It should be noted that public review or evaluation of a tribe's IMDA contract appears fundamentally at odds with other IMDA provisions designed to maintain strict confidentiality protections regarding IMDA contract terms and related information (25 U.S.C. § 2103(c)). The NEPA compliance provisions of IMDA can effectively convert the Federal Government's review and approval of a tribal resource decision from one that takes months to one that takes years. Correspondingly, an adjacent non-Indian landowner could complete the contract negotiation and signature process in a matter of days or weeks.

Perhaps some tribes gain some comfort or a sense of protection from the lengthy approval process. We have no desire to impose a faster or more efficient process on those tribes that may want to retain the lengthy statutory approval processes. How-

ever, for those tribes with a demonstrated record of success and proficiency in commercial energy transactions there should be a mechanism for opting-out of the Secretarial approval process, if the tribe is willing to assume principal responsibility for its business decisions. If Federal approval is not involved, then the procedural delays associated with NEPA would also fall by the wayside; however, we also recognize that tribes and their contractors would still have to comply with the substantive provisions of environmental laws of general application. Proposed legislative language regarding this suggestion is included in my response at page 10, below.

The Committee should also evaluate how the recent restructuring of the Bureau of Indian Affairs will affect delays in contract approval in Indian Country. We are very concerned that the creation of a new, central trust asset office, will result in the nullification of delegations of authority to local BIA agencies to make decisions regarding tribal resource development. The centralization of such decisions will simply add more delay to any already inefficient system of approval.

The second phase of improvements involves the critical need for tribes to know more about their resources in making leasing and development decisions. Between 1974 and 1984, the Southern Ute Indian Tribe self-imposed a moratorium on mineral leasing. During that time period, they spent thousands of hours and hundreds of thousands of dollars collecting historic lease and geological information about their lands and minerals. They hired highly-qualified experts to assist in evaluating their resource potential and in building data and mapping systems. When the tribe resumed leasing, under the more flexible provisions of IMDA, it did so from a point of knowledge that was far greater than most tribes. Further, new lease provisions required the transfer to the tribe (under mutually acceptable confidentiality protections) of both raw and interpretive data generated from new operations. Based on our experience, we cannot stress enough the importance of constant review by tribes of data and information regarding their resources. Tribes generally lack the financial strength and the internal expertise to perform this invaluable aspect of resource management. We would urge the Committee to consider effective ways to supplement existing tribal resource evaluation programs so that tribes can learn more about the extent and potential of their resources.

The third element of my recommendations relates to several specific conditions that have arisen over time in Indian Country that complicate the way in which third parties can conduct business with tribes. We believe that Congress can provide ways to improve those situations while also being sensitive to tribal sovereignty. One problem relates to the land records system in Indian Country. The Bureau of Indian Affairs maintains Land Titles and Records Offices in accordance with Part 150 of the Code of Federal Regulations. These offices are recording offices in the sense that they serve as depositories of records that evidence transactions that affect title to or the encumbrance of interests in Indian lands. There are no clear directives on how one might record a document in this system; however, practice in our region generally requires that the document be accompanied by a written recording request signed by a representative of the local BIA agency. Additionally, the effect of recording or not recording is not clear, particularly with respect to the establishment or perfection of commercial security interests. The absence of clearly defined effects of recording complicate everything from the processing of commercial loans by tribes and third parties in Indian Country to priorities in bankruptcy proceedings. Further, access to recorded information is limited, and, particularly given the confidentiality protections on IMDA agreements imposed by 25 U.S.C. § 2103(c), a third party may have great difficulty gaining access to the records offices in order to determine the status of title. This difficulty further discourages potential interaction with a tribe or another leasehold interest holder about potential transactions. Finally, there is no integration of the Federal recording system with the state or local recording systems. We believe that there may be large potential cost savings and improved efficiencies associated with integration of the recording systems of the BIA with those of local clerk and recorder offices. We further believe that the Committee should investigate the possibility of permitting individual tribes to elect to merge such systems by encouraging the negotiation of intergovernmental agreements and by considering ways in which funding for such programs could be accomplished.

Another difficulty in Indian Country relates to the way that Congress, the courts, tribes and third parties approach the efficacy of tribal courts to resolve disputes in Indian country. Congress has consistently embraced a policy that encourages tribes to establish and improve tribal court systems in Indian country. Federal and many state courts have deferred to tribal courts, at least initially, in determining the scope of their civil jurisdiction involving disputes occurring in Indian Country and in deciding such cases. The Supreme Court has issued a number of recent rulings

undercutting the authority of tribal courts to hear cases involving non-members. Many third parties, including commercial institutions, energy companies, and others, perhaps fearing that tribal courts lack sophistication or fairness, refuse to conduct business with tribes unless exhaustion of tribal court remedies is waived. Tribes generally believe that the development of effective court systems with jurisdiction over most matters occurring in Indian Country is a critical aspect of sovereignty. These conditions have left the tribal courts in a state of limbo, have slowed the process of legitimizing tribal courts, and, correspondingly, have delayed the improvement of tribal court systems.

Unless Congress intervenes legislatively, we doubt that tribal courts will ever evolve into the significant and effective institutions that they could be. Such legislative intervention must involve a respect for the individual decisions of each affected tribe, and, thus, should be an optional program. Tribes must accept the reality, however, that, unless tribal court decisions are subject to appeal within the Federal judicial system, institutional third parties (e.g., banks, energy companies, utility companies) will oppose using tribal courts as judicial forums. If, however, Congress established a system of Federal judicial review of tribal court decisions, would it not also be advisable to discourage avoidance of tribal courts as the forums for initial resolution of disputes in Indian Country? I believe that the Committee, in conjunction with other Committees of jurisdiction, should evaluate the status of tribal courts and should explore ways to strengthen them while also providing options for independent appellate review of tribal court decisions.

The fourth aspect of my recommendations relates to Federal tax policy. The principal tool employed by Congress to encourage investment on Indian reservations has been the acceleration of Federal income tax depreciation that a third party may claim for interests in facilities located in Indian Country. At the same time, as a result of the Supreme Court decision in *Cotton Petroleum*, energy companies operating on tribal lands are subject to dual taxation by tribes and states associated with the severance of tribal minerals. Congress should act to mitigate the adverse impacts of the *Cotton Petroleum* decision in Indian Country. On a prospective basis, we believe that Congress should prohibit states from taxing non-Indians conducting business in Indian Country, unless an intergovernmental taxation compact has been entered into between the tribe and the state. Such intergovernmental agreements could set forth the services that would flow from states to tribes associated with the taxation of production from tribal lands. For example, funding from that source might well help defray the costs of integration of real property recording systems.

Further, we believe that Congress should explore granting tax incentives to those who produce minerals in Indian Country. The effectiveness of tax credit programs under Section 29 of the Internal Revenue Code has been well documented with respect to non-conventional resource development for tight sands and coal seam gas. Inclusion of development of Indian minerals as a category of non-conventional resource development, and extension of the Section 29 tax credit program for such development would be an effective way to encourage such development.

In conclusion, we hope these suggestions assist the Committee in considering ways to improve development of tribal energy resources.

2. *You stated in your testimony that your "management and technical expertise are superior to that of the majority of energy companies." Will you please explain to the Committee how your experience has brought you to that conclusion?*

Gladly. My statement is based on results. The simple fact is that the Southern Ute Indian Tribe's energy enterprises have earned an average investor's rate of return in excess of 30% for over ten years. Only a tiny minority of energy companies have surpassed that economic performance. Our success has not been the result of a series of lucky breaks. Rather those achievements are attributable to the tribe's management and the technical ability of the tribe's staff.

Tribal management has consistently improved the performance of energy assets acquired by the tribe from prior operators. For example, in 1995 we took over the operation of 54 coalbed methane wells located on the Southern Ute Indian Reservation as part of a bankruptcy workout. Within nine months we had nearly quadrupled the production rate of those wells to nearly 80 million cubic feet of gas per day. We improved that well performance by thoroughly understanding the physical characteristics of the complex coalbed methane reservoir and by aggressively investing in improvements designed to maximize economic return from the reservoir. We corrected improper well completions, redesigned and rebuilt surface production facilities, and upgraded transportation and compression systems.

In 1992, the tribe invested \$8 million in Red Willow Production Company, its wholly owned exploration and production company. It was a startup, with one employee and no energy assets. Today, after a long series of successful acquisitions,

Red Willow owns nearly 500 billion cubic feet of natural gas with a market value of approximately \$500 million (in ground). Red Willow generates annual earnings approaching \$100 million and is free from debt. During the same period that Red Willow was successfully expanding, thousands of independent oil companies went out of business.

In 1995, the tribe invested \$11 million in a joint venture to buy a small gathering and treating company on the Reservation, which became known as Red Cedar Gathering Company. Since that acquisition, the amount of coalbed methane volumes treated through Red Cedar has increased from 125 million cubic feet per day to 750 million cubic feet per day. The tribe's 51% share of that joint venture is currently worth approximately \$200 million. Red Cedar's operating improvements have caused operator/customers to shift their business from less aggressive competitors to Red Cedar.

Recently we formed a new venture called Aka Energy. Its mission is to evaluate, acquire and operate underperforming mid-stream energy transportation and treating assets in the Rockies outside the Reservation. We have found almost limitless opportunities to do this. The well-publicized mismanagement of industry giants has created extraordinary opportunities for Aka Energy. When those large companies quit focusing on their core businesses, stranded natural gas producers desperately needed an aggressive, well-managed gathering company to treat and transport their gas. We intend to oblige them.

In sum, over many years, we have monitored the performance of scores of companies on tribal lands within the Reservation. Some were good at raising money, others were good at acquiring assets, and others had an aptitude for befuddling stock analysts, but very few were good at getting gas out of the ground. Our success has been achieved in part by our having consistently witnessed crucial technical or operational errors by other companies. For example, the short-term budgetary considerations of major companies often result in poor resource management decisions. Our view is a longer view, and we have consistently out-performed our competition. We would be happy to host any representatives of the Committee on a field tour of our operations, which are now among the finest in the industry.

3. *Why do you believe that a tribe that takes control of the management of its resources and finances is better able to ensure the financial future of its membership?*

The assumption by tribes of management control by itself does not guarantee financial success; however, prudent and disciplined management by tribes will almost certainly improve their financial performance. Although there are dedicated employees of Federal agencies that currently manage the resources of many tribes, their incentive for generating success is less immediate than that of tribal personnel managing a tribe's resources. In our experience, the risks of failure and the potential fruits of success drove us to secure the services of highly qualified individuals to assist in making sound decisions and in instituting effective management systems. Our tribe's leaders were convinced that, armed with quality information and advice, tribal management would outperform Federal Governmental management, and those tribal leaders withstood the internal political heat that resulted from hiring that outside expertise. Their wisdom in this regard is being constantly confirmed and reconfirmed; however, there is also no question that the existence of valuable resources under our tribe's lands (a favorable condition not shared by all tribes) provided a springboard to the opportunities that the tribe has realized.

4. *In your testimony you mentioned that the tribe has been able to distribute over \$90 million to its members through a variety of programs. Will you please explain further how the success of the tribe's energy resource development has made the tribe self-sufficient?*

The tribe's goal is been to become economically self-sufficient, and, while we are well on the way to meeting that goal, we still have many challenges before us. The development of the tribe's energy resources has been the most significant aspect of its success. In that regard, the tribe realized that its non-renewable energy resources were, by definition, finite. Each molecule of gas leaving the Reservation was gone forever, and only if the tribe took advantage of multiple opportunities to extract value from that molecule would the tribe be able to maximize the value of that resource. It is for that reason that the tribe expanded from simply owning a passive royalty interest, to imposing its own tax on the severance of the resource, to acquiring working interests in tribal leases, to performing well operations with regard to its leases, to investing in gathering and treating businesses, and engaging in marketing activities. The success of the tribe, even in these somewhat diversified areas, was nonetheless tied to that finite universe of depleting molecules.

After extensive review of that situation, the tribe's leaders came to realize that the only way to assure perpetual prosperity for the tribe was to take the surplus from successful on-Reservation energy development and diversify that investment into off-Reservation assets that are not depleting. The extensive process of developing asset allocation strategies and execution of sound investment decisions should be a never-ending process for the tribe.

Merely making money for money's sake, however, does not meet the needs of the tribe's members. The tribe's financial success must be felt directly by the members in order to maintain the system that has been developed. Without the return of some portion of the tribe's earnings to its members, the temptation to change the system and distribute all of the tribe's savings would be difficult to resist. The return of earnings to the tribe has manifested itself in several ways. First, the tribe has invested millions of dollars in improved community infrastructure, including: a regional waste water treatment plant, a tribal school, a state-of-the-art recreational center, and a judicial complex, all of which positively affect the members and non-members who benefit from these facilities. Tribal housing programs, improved group life insurance and health coverage, and extensive scholarship programs also touch many of the members directly. Additionally, all tribal members either receive or are allocated per capita payments in an amount of approximately \$520 per month. Tribal members who are 60 years of age or older also receive tribal retirement payments of approximately \$54,000 per year. Tribal members between the ages of 26 and 59 receive dividend payments based upon the success of the tribe's investments. Those dividend payments have amounted to approximately \$14,000 per year.

The objective of the tribe, as evidenced in its financial plan, is to accumulate enough money so that the earnings from conservative investments will sustain the tribe's core government (current levels plus 3% inflation per year) and pay per capita payments at current levels, plus inflation, in perpetuity. Further, once that amount of capital has been accumulated, the business arms of the tribe will continue to invest significant percentages of the tribe's surpluses in aggressive, growth investments, the earnings from which fund retirement payments and dividends for individuals, as well as other discretionary programs.

The tribe's goals and the means for achieving those goals are reasonably well-defined. The tribe's financial plans and forecasting have been designed to be flexible enough, however, to adjust to changes, such as modifications in the blood quantum requirement for membership (currently 1/4 Southern Ute).

We believe we have demonstrated that prudent and disciplined management of resources by tribes can improve their economic condition. At some point in time, successful economic development may become financial self-sufficiency. That is certainly one of the tribe's goals.

5. *What, in your view, are some of the impediments to non-renewable resource development in Indian Country, and how do you propose that the Congress address them?*

Please see response to Question No. 1.

QUESTIONS FROM CONGRESSMAN NICK J. RAHALL, II

A. *The testimony states that in some cases the Tribe has added provisions to contracts which waive its sovereign immunity from suit. Would you please expand on this issue for us and tell me how well it has worked for you? Do you think we should include a requirement for Indian tribes to include similar provisions in contracts or should it be left up to the individual Indian tribe to decide?*

In many situations tribes possess relatively little bargaining power in the world of contracts and commercial transactions. As a tribe's need for services becomes more acute, or as the size (and, thus, alternatives) of the other party increases, contract negotiations include detailed discussions about sovereign immunity and dispute resolution mechanisms. Our tribe has long recognized that banks and major energy companies, for example, will not enter into contracts with tribes unless they can be assured that the agreements will be subject to effective enforcement. As everybody dealing with tribes knows or should know, under existing law, tribes, like state governments, may not be sued unless they expressly consent to such suits or unless Congress has expressly waived that aspect of tribal sovereignty. Our tribe has issued waivers of sovereign immunity from suit on countless occasions; however, such waivers are generally limited to the contracting party, its successors or assigns.

The more difficult question frequently involves the question of designation of the forum for dispute or the laws governing such a dispute. Many companies simply refuse to subject themselves to the jurisdiction of tribal courts, at least for purposes of contract dispute resolution. As mentioned above in my response to Question

No. 1, we believe that such reluctance is not justified and, in fact, frustrates the public policy of enhancing the vitality of tribal courts. Nonetheless, we also recognize that there may be a practical need for some independent Federal review of tribal court decisions before third parties with power or critical services will subject themselves to tribal court jurisdiction.

We definitely feel that the decision to waive or not waive sovereign immunity is one that each tribe has the right to make in light of the facts and circumstances. Legislation should not compel tribes to waive this critical aspect of sovereignty. Rather, that decision should be made by the individual tribe, through its governing body, in accordance with existing law. As indicated above, the decision to waive or not waive sovereign immunity from suit, is often only the starting point in contract negotiations regarding dispute resolution. Would Congress, also require, for example, that lawsuits brought against tribes must be brought in the first instance in tribal courts? Like the United States Government, some tribes may be willing to expose themselves for monetary damages, but only in accordance with their own laws or in their own courts. The careful balancing of individual tribal interests and needs inherent in such decisions is not one that easily lends itself to a simple legislative fix.

Some who advocate in favor of eliminating tribal sovereign immunity do so under the banner of "contract sanctity." We have found that some major companies who proudly raise the standard of contract sanctity are, in fact, the most litigious when it comes to avoiding their obligations to tribes and the Federal Government under mineral leases, especially with respect to royalty valuation, payment and reporting. Notions of contract sanctity involve considerably more than a desire to improve bargaining positions through legislation.

B. The success of the Southern Ute Tribe in managing and controlling its energy resources is very impressive. In the coming weeks Congress will be looking at legislation affecting energy development across the country. Can you tell the Committee, from your experience, what you think we can do to help Indian Tribes develop their energy resources and reap the financial benefits from such development?

We believe that the Committee should develop legislation that allows tribes to petition the Secretary for exemption from the current approval requirements contained in the Indian Mineral Leasing Act and IMDA. The suggested exemption would be granted only if the Secretary determined that a tribe were qualified to make such decisions in an informed and effective manner based, in part, on statutory criteria. We also recognize that a tribe obtaining such an exemption should be willing to assume principal responsibility for the business decisions it makes in entering into mineral development agreements without Secretarial approval. This result would, in our minds, be one of the factors a tribe would need to consider in seeking such an exemption. Suggested legislative language for this proposal is provided as follows:

SEC. . SECRETARIAL DETERMINATION OF MANAGEMENT CAPACITY

(A) Regulations and Application considerations. Within 180 days of enactment of this Act, the Secretary of the Interior shall adopt regulations permitting any Federally recognized Indian tribe to apply to the Secretary for a determination that the applying tribe has the capacity to enter into leases and other agreements, including any "Minerals Agreement" as defined in section 3(a) of the Act of December 22, 1982, Public Law 97-382, without the necessity of approval of such agreements by the Secretary of the Interior, the Assistant Secretary of the Interior for Indian Affairs, or their authorized delegates. Among other factors to be considered in making the determination of capacity, the Secretary shall consider:

(a) the historical experience of the tribe in entering into mineral leases and other related agreements;

(b) whether the tribe has established an internal department or division with designated responsibility to assist in the negotiation of or the monitoring of compliance with the provisions of mineral leases or other related agreements;

(c) the technical expertise of individuals appointed by or employed by the tribe in the internal department or division;

(d) the retention by the tribe of legal counsel with experience or expertise in matters involving mineral leasing;

(e) other factors identified by the Secretary indicative of the applying tribe's capacity to make prudent decisions with respect the development of its mineral resources.

(B) Application process. Following adoption of the regulations establishing the application process, those Indian tribes so choosing shall be permitted to submit applications described in this Section. Within ninety days of submission of any such an application, the Secretary shall issue a written determination to the applying tribe

either recognizing or not recognizing the capacity of the tribe to enter into mineral leases and other related agreements without the approval of the Secretary of the Interior. The Secretary shall provide written findings supporting either a positive or negative determination; however, the determination by the Secretary shall not be appealable or subject to judicial review. Between the date of receipt of a tribal application and the date of determination, the Secretary may request from an applying tribe such additional information in support of a favorable determination as deemed necessary by the Secretary. Receipt of a negative determination by a tribe shall not preclude that tribe from submitting subsequent applications seeking a positive determination.

SEC. __. EFFECT OF SECRETARIAL DETERMINATION

Any tribe receiving a favorable determination of capacity shall be authorized, subject to any limitation or provision contained in its constitution or charter, to enter into binding mineral leases or other related agreements without the necessity for additional review or approval by the Secretary. Such an Indian tribe may continue to seek advice, assistance, and information from the Secretary during and after the negotiation process, which shall be provided to the extent allowed by available resources.

(A) No Form Prescribed. Any such lease or other related agreement to which an Indian tribe is a party shall be in writing and, to the extent determined applicable by the parties thereto, shall address:

(1) the identity of the parties to the lease or agreement; the legal description of the lands, including, if applicable, rock intervals or thicknesses subject to the lease or agreement; and the purposes of the lease or agreement;

(2) the duration of the lease or agreement;

(3) indemnification of the Indian tribe and the United States from all claims, liabilities and causes of action that may be made by persons not a party to the lease or agreement;

(4) the obligations of the respective parties;

(5) methods for disposition of production;

(6) methods of payment and amount of compensation to be paid;

(7) accounting and mineral valuation procedures;

(8) operating and management procedures;

(9) limitations on assignment of interests, including preferential rights;

(10) bond requirements;

(11) insurance requirements;

(12) audit procedures;

(13) dispute resolution;

(14) force majeure matters;

(15) termination or suspension procedures;

(16) abandonment, reclamation and restoration activities;

(17) production and sales reporting requirements;

(18) unitization, communitization, and conservation and efficient utilization measures;

(19) drainage and diligence;

(20) record keeping;

(21) taxation.

In addition, the mineral lease or other agreement may incorporate regulations, including reporting, auditing and enforcement procedures, of the Bureau of Indian Affairs, the Bureau of Land Management, and the Minerals Management Service, or their successor agencies, to the same extent that such incorporation would otherwise be permissible under the Act of December 22, 1982, Public Law 97-382, and the regulations implementing that Act.

(B) Submission to Bureau of Indian Affairs. The executed mineral lease or agreement, together with a copy of the tribal governmental resolution authorizing tribal officers to execute the same, shall be forwarded by the tribe to the appropriate Superintendent of the Bureau of Indian Affairs, or in the absence of a Superintendent, to the Area Director, and shall be maintained as a record of that agency. Notwithstanding any other law, all projections, studies, data or other information possessed by the Department of the Interior regarding the terms and conditions of a mineral lease or other agreement entered into under the provisions of this Act, the financial return to the Indian tribe, or the extent, nature, value or disposition of the Indian mineral resources, or the production, products or proceeds thereof, shall be held by the Department of the Interior as privileged proprietary information of the affected Indian tribe.

(C) Nonliability of United States; continuing obligations. The United States shall not be liable for losses sustained by a tribe under any mineral lease or other related

agreement entered into pursuant to this Act; Provided, That the Secretary shall continue to have a trust responsibility to ensure that the rights of a tribe are protected in the event of a violation of the terms of any such lease or agreement by any other party to such lease or agreement; Provided further, That, except as otherwise provided herein, nothing in this Act shall absolve the United States from any responsibility to Indians, including those which derive from the trust relationship and from any treaties, Executive orders, or agreement between the United States and any Indian tribe.

(D) Regulations regarding duration of determination. The Secretary, after consultation with national and regional Indian organizations and tribes with expertise in mineral development, shall promulgate rules governing the conditions under which a determination of capacity may be reviewed and revoked. No revocation of a determination of capacity shall serve to invalidate a mineral lease or other agreement entered into pursuant to the provisions of this Act.

In conclusion, I hope that the information provided is helpful to the Committee. We are available to the Committee to answer additional comments or questions, and we renew our invitation to members of the Committee or the staffs to visit our facilities on the Southern Ute Indian Reservation.

Respectfully submitted,

Robert Santistevan
Executive Director

cc: Chairman Howard D. Richards, Sr.
Thomas H. Shippy, Esq.

The CHAIRMAN. Thank you. I thank the entire panel for your testimony.

Let me start with Miss Novak, if I could. One of the things that struck me in your testimony, you talked about the part of our business, the chemical business, is leaving and moving production to Trinidad Tobago because of gas prices.

Can you explain to the Committee why gas prices are so much cheaper there that it would make them competitive to move their business to that area?

Ms. NOVAK. Well, Trinidad and Tobago have large reserves. They have no domestic requirement, or little domestic requirement, for that gas. They have been investing in essentially ways to export natural gas. Typically, you can export natural gas through an LNG facility, liquify it, and then ship it to the United States or elsewhere where it's gasified.

But another way to do it is actually to turn it into a product and export that product. So, within the last 10 years, they have built a variety of industrial chemical facilities to essentially convert the gas into a saleable product. That way they not only get the value of the gas returned to them, but also the markup associated with selling a higher valued product.

This is a technology or a way of moving that. I mean, when you look at the recent discoveries in gutter, they are actually not only looking at expanding their petrochemical facilities, moving into higher derivatives, they are also liquefying natural gas. So all of the major natural gas resources throughout the world are looking at extending their way to transform that gas into a moveable product, saleable as a global commodity.

So the value of that gas to that country is virtually nil, but it has great value if it's transformable and transportable. So converting it to chemicals, converting it to LNG, are two of the ways that can happen.

The CHAIRMAN. Would the same not be true for the U.S., if we developed our gas fields and had a greater supply within our borders? Would not the economic impact be the same, where you would drive down the price and possibly keep some of those jobs and those companies in this country?

Mr. GUPTA. Mr. Chairman, could I answer that question?

I think, in addition to what Mary Novak spoke, there is also the big competition here from the Middle East, where gas has essentially flared at zero cost, so a lot of the petro-chemical complexes are moving there—including a country like Germany, that has a direct cheap gas pipeline with Russia as a cheap gas source. In fact, historically, when the gas prices were at \$2 or below, around the \$2 level, the U.S. chemical industry enjoyed a significant advantage and really built a major industry, a very competitive industry, on a global scale. When the price approaches over \$3.50, \$4 level, it clearly makes the U.S. industry, at best, marginally competitive relative to its peers, not only in the Middle East, but Trinidad/Tobago, and in a country like Germany, which has not been a preferred destination for chemical investment.

So I think there's really two issues here. One is the wide fluctuations of the gas prices, which really doesn't help us in terms of forecasting what to expect in the future, and the even longer term question clearly is adequate supply that will make the market mechanism work better.

The CHAIRMAN. I would then again restate my question. Would not it make us in a more competitive position if we were to develop our resources here in this country?

Go ahead, Mr. Downer. This is kind of your bailiwick here.

Mr. DOWNER. Yes, sir. And the supplies are on the OCS. They are definitely out there. What we need to do is improve the infrastructure that supports that continued exploration and increase it.

For example, I gave you those statistics of the growth between 1997, 1998, and the current time, a 500 percent increase. What is there physically in place, the physical infrastructure—for example, Port Fourchon, that road cannot handle any increased activity with any degree of efficiency. A 17-mile stretch of road, right now, winding, narrow, that is sinking and under water, subject to the ebb and flow of the tide, and with our coast eroding. Ten thousand vehicles a day travel that narrow, winding, two-lane road, a thousand trucks. To where? To Port Fourchon, to support the offshore oil and gas infrastructure. It is there. With increased lease sales on the OCS, we can expand that oil and gas production and afford the supply, the domestic supply.

Louisiana has the largest concentration of gas and oil pipeline off of its coast feeding the nation. At that hub that I referred to, 40 percent of the Nation's natural gas, domestic, comes through that hub. Now, with that, we have to have the infrastructure improvements. To do that, we need a partnership, some help with the Federal Government, in a partnership to improve that infrastructure.

We got back \$13.4 million last year. To replace that 17-mile stretch of road with a bridge, that is four lanes, would cost \$500 million. You can't do it with \$13 million. But we could if we had an increased revenue share. With an increased revenue share from the OCS royalties—which by the way, as you know, beyond the six-

mile limit, we get nothing off of the Federal lands. We would get 50 percent if it were Federal lands within our borders. However, each one of these people who testified today, their gas that supplies and fuels their plants, is with us.

Along the Mississippi River corridor in Louisiana is the greatest concentration of petro-chemical industries in the country. And yes, you could get a high value product, if we could get more gas in to convert that product. And what do we do when we do that? We stimulate our economy. But they're correct. By doing it overseas, they can't import natural gas as efficiently as they can oil, because it just doesn't tanker as easy. But if they can convert it to a product and they're sending us the product, we're losing.

If we don't pay attention to our infrastructure and help those States who are willing to explore for their oil and gas, who have the increased oil and gas off of our shares, we lose.

The CHAIRMAN. Obviously, Louisiana and the Gulf states have a tremendous resource, which is one of the reasons why this Committee believes that has to be part of our long-term energy solution. But I would also say that other states, like Alaska, have a huge resource that, for the most part, is going untapped. And then we have our other public lands as well as our tribal lands that have the possibility of helping to solve this problem over the long term. That's really why we're trying to move toward this.

Unfortunately, my time has expired. I will recognize the Subcommittee Chairman, Miss Cubin.

Ms. CUBIN. Thank you, Mr. Chairman.

I don't know whether the audience has been apprised, that the reason we have a Chairman and Subcommittee Chairman here is because today there was called a classified briefing on homeland security, so it isn't that Members aren't caring about what is going on here today. We care very much, but they are tied up doing that.

Speaking of security, in your testimony, Mr. Downer, you cautioned about security.

Mr. DOWNER. Yes, ma'am.

Ms. CUBIN. What resources are you most optimistic about producing in the Gulf over the coming years, and what resources might be the most difficult to develop?

Mr. DOWNER. I believe, if I recall, you have visited Port Fourchon in coastal Louisiana, so you are somewhat familiar with what you call a bird's eye view of the geography. As I mentioned, for example, within that 40 mile radius of Port Fourchon, having 600 of those offshore oil platforms dotting out there, we all know it is almost physically impossible to secure each one of them.

As you got your briefing on homeland security and what our country must do, we know they're going to look for targets of opportunity that have a significant economic impact, as well as a loss of lives. To target one of those 600 platforms would be very simple and very easy. It would be a simple and easy task to target. However, they do not get a significant impact from one rig or one platform with 599 still functioning. They're going to go for the jugular. The jugular is where all that comes together, at that port. That means enhanced security for the port and for its facilities.

But in addition to that, we are fighting, as you saw when you came down there in south Louisiana, a silent war. It's mother na-

ture. As we talk, we can have all of the security out there. We can have anti-aircraft missiles, we can have the Coast Guard, the Navy, with a circle around it, where nobody gets in and out. But they can't stop the erosion.

I was activated during and prior to the hurricane and tropical storm in the fall. I was the first one up in the air following that. The first thing we did, we had to check our oil and gas infrastructure, our coast. It was washing out. As the tide went out, it was taking Louisiana with it. We need help there, because that infrastructure, that domestic infrastructure, is what supports the oil and gas exploration on the Federal lands beyond the six mile limit. By enhancing and working in a partnership with the State and with private industry, we are able, or would be able to give the additional land-based, domestic infrastructure to bring in and support the additional offshore or OCS oil and gas exploration that the rest of the country so desperately needs.

Have I answered your question, or would you like more specifics?

Ms. CUBIN. No, you have exactly answered my question.

I, for one, am very committed to seeing that Louisiana gets some resources to shore up its shore, if you will. I was so appalled when I saw the road. I can't say "Port Fourchon" like you can. I just love the way people from Louisiana say that.

Mr. DOWNER. Thank you, ma'am.

Ms. CUBIN. I didn't go to see those platform.

Mr. DOWNER. You learn well. You're communicating with your hands, and that's also how we talk. So thank you.

[Laughter.]

Ms. CUBIN. Anyway, I am very committed to that. I was opposed to CARA because it did way too many things. But I will be working with the Louisiana delegation to do what we can.

Mr. DOWNER. Thank you, ma'am.

Ms. CUBIN. Because I see that absolutely as a national security problem, as well as what is fair to the State of Louisiana.

I am going to go on and ask Mr. Gupta, I want to ask about natural gas prices. Are high natural gas prices and other regulations moving the United States chemical industry offshore? I know a lot of other industries are moving offshore because of regulations, because of an unfriendly business environment. How much of an impact would you say the energy aspect is causing chemical companies to move offshore?

Mr. GUPTA. Well, I would say you have to almost separate the chemical industry from the building block industry and the downstream industry. The building block industry is really facing a major crisis, because for the building block industry, natural gas is not only a source of energy but it is also a source of raw material. When the gas prices were in the \$2 range, the U.S. chemical industry, especially what we call the ethylene chain, the large crackers, had a significant advantage vis-a-vis the rest of the world. Today, this advantage has not only disappeared but it has really turned negative. In fact, the balance of payments of our industry has really turned around. This used to be the largest exporting industry.

So that industry is definitely moving. In fact, a lot of capacity is being shut down in the United States, especially in Texas right

now. Whether it's temporary or permanent would very much depend on what we see as the trend for natural gas.

There is also the downstream industry. I would say the downstream industry is facing challenges not only with respect to regulation and raw materials and energy, but also relative to competing from other offshore production. So our objective, and our best defense, really, is to have a gas policy in the United States which is unique. I mean, gas is really unique to the United States. The rest of the world does not use natural gas as a building block. This is a domestic issue. We have ample availability of these raw materials, and if we really do our job here, with the help of the Congress, and the policy change, we could rebuild very quick the advantage for the U.S. chemical industry.

Ms. CUBIN. Do you have any idea, rough idea, on what percentage of businesses in your industry have moved offshore?

Mr. GUPTA. I would say—you know, the chemical industry in the U.S. has been a very powerful driver, and it's an industry which is truly a basic infrastructure industry. It serves every end use market you can imagine—from electronics, to chemical, to automobiles, detergents. It's a very, very widely used industry.

The migration of the U.S. chemical industry offshore is really driven by two things: either customers moving, or they are becoming much more competitive because of lower cost of energy and raw materials. So I would say the migration of the U.S. chemical industry is a slow process. What has happened and is happening today, it is accelerating because of the uncertainty of the natural gas pricing and the volatile nature of it and availability of it. This is accelerating today. It started probably, I would say, 2 years ago, when we had a big surge in the natural gas price in the fall of 2001, and it really is being questioned right now. Facilities are shutting down and jobs are being lost.

Ms. CUBIN. Thank you.

Mr. Parker, in your testimony you mentioned that inner-agency activity for directing the environmental review that everyone has to go through, pipelines and drilling programs, would be beneficial. Do you have any specific ideas about how that would work?

Mr. PARKER. Let me state that one of the problems that the producers tell us they have, in terms of accessing areas of supply—and let me state that there is ample supply of natural gas resources in the United States, both onshore and offshore. For example, over the last 10 years, 200 trillion cubic feet of natural gas has been used in the United States. Yet, our resource base has not diminished at all. As a matter of fact, our identifiable resource base has actually increased.

But the problem is in terms of the producers trying to access many of the Federal lands, whether they're OCS lands or whether they're onshore lands, they run into a myriad of regulations and legislation, both at the State level and at the Federal level, and getting through that permitting process and going through those environmental statements that need to be filed, takes longer than it does to secure the resources to actually do the drilling. We would suggest that the Congress has an obligation to really take a look at streamlining that process between agencies. To give you one ex-

ample, between the Department of Interior and the National Oceanographic agency at the Commerce Department.

Ms. CUBIN. And the Forest Service and the Park Service, and on and on and on. Thank you very much.

Miss Novak, without exploring in new basins, do you think we have a viable natural gas future in this country?

Ms. NOVAK. No.

Ms. CUBIN. In the lower 48, we just don't?

Ms. NOVAK. In the lower 48, the Gulf onshore, and the traditional areas that we have been working in, actually we were able to sustain for quite a while, the deliverability from those areas. However, since 1992-93, they have been on kind of a slow decline. And now what we're seeing over the last year-and-a-half, 2 years, is an increase in the rate of decline, so that we're actually going to be falling off pretty quickly.

So what the forecast is calling for is essentially filling in that gap with supplies from new areas, increasing volumes that are going to have to come from deep, the Gulf deep, and we're going to have to be increasing, significantly increasing—our forecast calls for very large increases in Rocky Mountain gas, coalbed methane.

We have been importing an increasing amount of our supplies from Canada's western sedimentary basin. That also is mature. It has also started a long-term decline. It's in a fairly—it's still in a shallow decline, but it is anticipated by the Canadian energy organizations to essentially hit a steeper decline in about 5 years. That is why we're looking to McKenzie Delta gas and our gas from the Alaska North Slope to come through the pipeline.

But, without deep gas, without significant increases in Rocky Mountain gas and coalbed methane, we're going to be in a very tight natural gas position to the point where not only is all of our gas-intensive industry going to have to move offshore, but we're going to have to pull back from some of our use of natural gas in the power sector, because the decline in our traditional areas is becoming quite significant.

Ms. CUBIN. So do you think we could, if we were able to produce where we know there are reserves, like in the Rocky Mountains, which would make my State treasury healthier and the Federal treasury healthier, and we would have lower gas prices and more business, do you think we could ever be gas independent?

Ms. NOVAK. As Mr. Parker just said, we have 50 years of supply, so it's not a question of not having the gas. It's a political will to develop that gas resource. So we have competing needs, competing goals, within the United States. It's really coming to some rationalization that, recognizing that some of the gas resources that we had very high expectations for and great hopes for, some of the shallow offshore that would play out better than it has played out. We are reaching the requirement to move into more environmentally sensitive areas—the Rockies, some of the northwest areas—much sooner. That's what it is really coming down to. We're at that point now where we're going to have to move into that.

Both our forecast and the one from the Energy Information Administration are basically saying we're going to need to be producing about 4 TCF of natural gas from those unconventional areas by the end of the decade.

Ms. CUBIN. Do they consider the Rocky Mountains unconventional areas?

Ms. NOVAK. Unconventional formations, yes. I mean, it's just a term.

Ms. CUBIN. It is so amazing to me why we have to fight for an energy policy that allows us to produce enough energy that we could be even semi-independent. People on the other side are always crying that we need renewable energy, you know, we need to conserve. There is a proposal for a wind farm off of Nantucket Sound which would be an excellent investment. I'll have a hearing out there. But at this point in time, it seems like it's a real good thing to do. You can't believe how the folks who have been complaining about fossil fuels are fighting that wind farm, because—you know, not in my back yard.

Ms. NOVAK. Well, I'm from Massachusetts, so I—

Ms. CUBIN. You understand.

Ms. NOVAK. I do want to clarify that we need it all.

Ms. CUBIN. We do need it all.

Ms. NOVAK. We need it all.

Ms. CUBIN. That's exactly right.

Ms. NOVAK. It's not a question at this point of being able to trade one against the other. We need it all.

Ms. CUBIN. Right. I think my point was that it seems to me sometimes that the people on the other side of this issue just want to make it an issue. They want to enjoy the benefits of energy, but they—never mind.

Mr. Santistevan, what recommendations would you make to the Committee to improve opportunities for tribes to develop nonrenewable energy resources?

Mr. SANTISTEVAN. I would say that probably an overhaul or a look at the Indian Minerals Development Act of 1982. The Southern Ute Indian Tribe at one point in time had the majority of all Indian agreements in the Indian country in the United States. We have been real successful at working under that Act and being able to produce gas. But I think there are provisions in that that need to be looked at, so that tribes can go out and develop that a little easier without all the hurdles that are imposed by that Act and previous acts that grant access to minerals on Indian reservations.

Ms. CUBIN. But you've had a good experience in dealing with them?

Mr. SANTISTEVAN. We have, because we've been involved in the oil and gas industry for such a long time. Gas was first discovered on our reservation like in the 1940's. We were passive royalty owners from the forties until the eighties, and it wasn't until we were allowed to negotiate directly with oil and gas companies through the Indian Minerals Development Act that we were able to kind of be involved in that process at all. I think that was a good thing for tribes, but I think that needs to be looked at to make it even easier.

Ms. CUBIN. Well, I surely agree with you. We have a reservation in Wyoming, a large reservation, with two tribes on it. You know, they are always trying to find a way to build their economic base. They are some of the poorest tribes in the country, and yet we have reason to believe that there is energy under their ground. We just

simply haven't been able to help them work through the morass of regulations and agencies and what not. I appreciate it. Maybe we can get in touch with you at a later time and get some suggestions on how I could help them work through that.

Mr. SANTISTEVAN. That would be great. We would make ourselves available for that.

Ms. CUBIN. Thank you.

Mr. Chairman, I have other questions but I will just submit them.

The CHAIRMAN. Thank you.

Before I dismiss this panel, I would just say there are a number of members who had hoped to make it back to the Committee before we adjourned this panel and excuse this panel. Because they were not able to make it, there will be questions that will be submitted to you in writing. I would ask that you answer those in writing so that they can be included as part of the hearing record.

I will say that there seemed to be general agreement amongst the panelists that, although improving and adding to our existing gas resources is extremely important, that the effort that is being made to have a balanced bill to go after all of the different energy resources is extremely important.

Mr. Santistevan, if you could provide for the Committee some of those suggestions and give us an opportunity to look at how we go in and look at some of the nonrenewable sources and how that can help, this is something of large concern to the Committee as a whole. So we would greatly appreciate any suggestions that you would have, or anything you could give the Committee on that.

Mr. SANTISTEVAN. I would be happy to submit those.

The CHAIRMAN. Thank you.

I am going to excuse the panel and thank you for your testimony and answers to the questions.

I will call up our third panel. We have Mr. Diemer True, Wayne Wood, Patrick Sweeney, and Karl Gawell. I would ask this panel to stand and raise your right hand.

[Witnesses sworn.]

Let the record show they answered in the affirmative.

I want to thank the panel for your patience in sticking with us. I'm going to recognize my Subcommittee Chairman to introduce our first witness.

Ms. CUBIN. Thank you, Mr. Chairman.

It is my honor today to introduce our first witness. I welcome him and his wife to Washington and to this hearing.

Diemer True and I grew up together in Casper. We have known each other and served on the student council together since junior high school, so we know each other very well. Diemer and I served in the Wyoming State legislature. He served 4 years in the House and then 16 years in the Senate, retiring as Senate President. I was just a rookie then, so even though we were in school at the same time, it's obvious he's a lot older than I am.

It is also obvious he's a lot older than I am because he has 14 grandchildren...?

Mr. TRUE. Fifteen.

Ms. CUBIN. Fifteen grandchildren, and I have none.

[Laughter.]

Anyway, Diemer is here today to testify on behalf of the Independent Petroleum Association of America. I welcome you and look forward to your testimony.

Mr. TRUE. Thank you.

The CHAIRMAN. You're welcome. If you're ready, you can begin.

**STATEMENT OF DIEMER TRUE, CHAIRMAN,
INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA**

Mr. TRUE. Thank you, Mr. Chairman. I have to admit that's the kindest introduction Mrs. Cubin has ever given me, so I appreciate that.

Ms. CUBIN. And don't forget it. It might be the last time.

[Laughter.]

Mr. TRUE. I am Diemer True, a partner in True Companies and Chairman of IPAA. Today I am testifying on behalf of nine national trade associations and 33 cooperating state and regional oil and gas associations.

The role of Federal lands in meeting future domestic oil and natural gas demand is a critical one. While access issues affect both oil and natural gas development, the North American nature of the natural gas market makes the consequences of access limitation more clear cut and definable for natural gas. The challenge facing natural gas producers is two-fold, and this is one of the key messages that I want to bring today to the Committee.

Maintaining existing natural gas supply is a problem in and of itself, in addition to increasing that supply to meet future demand. Over the past decade, producers have seen an average depletion rate climb to 28 percent per year. The significance of that, Mr. Chairman, is that producers must initiate new production equal to a quarter of existing production each year just to stay even. Most estimates now show that domestic production actually declined in 2002.

Not only must current rates of production be maintained, but the industry must also increase natural gas supply to meet the future increased demand. Natural gas consumption is projected to grow by 30 percent over the next 15 years. This cannot be done without access to and development of government controlled resources.

The western and central Gulf of Mexico has proven to be a world class area for natural gas, now accounting for over 25 percent of domestic natural gas production. Future production increases in these areas is essential to meet projected demand. However, future production increases will hinge on Federal offshore policies. The most significant of these relate to royalty policies; that is, creating incentives to encourage effective development in the areas.

Developing the substantial domestic natural gas resources in most of the eastern Gulf of Mexico, the Atlantic Ocean and offshore California is prohibited by moratoria. These policies are predicated on events that occurred 30 years ago. Federal policy needs to be re-considered and to be based on a sound understanding of today's technology.

Much of the onshore natural gas resource base is located in the Intermountain west, where both the National Petroleum Council and the recent Interior Department EPCA study have demonstrated that Federal policy limits access to natural gas resources.

There is no simple or single solution to this mosaic of regulatory limitations. What is required is a commitment to develop these access policies with a full recognition of the importance of developing the natural gas resource. Instead, the Intermountain west has become a battleground between producers and those who oppose development.

My written testimony addresses a number of the problems we now confront. However, I would like to discuss one that has drawn considerable attention recently, the so-called "split estate" problem. With energy development activity, there are always opportunities for differences between producers and landowners or land users. Oil and natural gas producers understand the need to address this important problem. Producers are actively initiating efforts in States like New Mexico, Colorado and Wyoming to develop better ways to address these relationships.

For example, during the last 18 months, the New Mexico Oil and Gas Association has had a working Committee with the ranching industry in the San Juan Basin. This Committee, which meets monthly, has been identifying problems and working on solutions of surface use issues. It has, to date, formed 13 separate road districts that are being individually addressed, along with other areas, including fencing and access roads, as well as the issue of erosion.

NMOGA has agreed to form a cooperative alliance with the New Mexico Cattle Growers Association. The purpose of this alliance is to work on identifying and implementing solutions to issues regarding split estate, ranching, and private landowners. We have a similar initiative moving forward in Wyoming called the Wyoming Split Estate Initiative.

The fundamental consistency between these efforts is the recognition by responsible producers that their working relationship with surface owners and users must be continually improved. Both parties have a right to reasonable access to the land, and both must find ways to accommodate these rights. But it is also clear that these tensions present opportunities for development opponents to try to drive a wedge between users of Federal lands. Congress needs to approach these issues cautiously. Legitimate issues are being intertwined with political agendas to thwart access to the natural gas resource base. Congress should certainly encourage resolution of legitimate conflicts, but it should avoid being pulled into the political use of these conflicts.

The question becomes what energy legislation can improve access to and development of Government controlled land, both onshore and submerged. In my written testimony I have summarized several of those issues which should be addressed.

Thank you very much, Mr. Chairman, for the opportunity to provide this testimony.

[The prepared statement of Mr. True follows:]

Statement of Diemer True, Chairman, Independent Petroleum Association of America, on behalf of the Independent Petroleum Association of America, the American Petroleum Institute, the Domestic Petroleum Council, the International Association of Drilling Contractors, the National Ocean Industries Association, the National Stripper Well Association, the Natural Gas Supply Association, the Petroleum Equipment Suppliers Association, the Us Oil and Gas Association, the Association of Energy Service Companies, and, California Independent Petroleum Association, Colorado Oil and Gas Association, East Texas Producers and Royalty Owners Association, Eastern Kansas Oil and Gas Association, Florida Independent Petroleum Association, Illinois Oil and Gas Association, Independent Oil and Gas Association of New York, Independent Oil and Gas Association of Pennsylvania, Independent Oil and Gas Association of West Virginia, Independent Oil Producers Association Tri-State, Independent Petroleum Association of Mountain States, Independent Petroleum Association of New Mexico, Indiana Oil and Gas Association, Kansas Independent Oil and Gas Association, Kentucky Oil and Gas Association, Louisiana Independent Oil and Gas Association, Michigan Oil and Gas Association, Mississippi Independent Producers and Royalty Association, Montana Oil and Gas Association, National Association of Royalty Owners, Nebraska Independent Oil and Gas Association, New Mexico Oil and Gas Association, New York State Oil Producers Association, Ohio Oil and Gas Association, Oklahoma Independent Petroleum Association, Panhandle Producers and Royalty Owners Association, Pennsylvania Oil and Gas Association, Permian Basin Petroleum Association, Petroleum Association of Wyoming, Tennessee Oil and Gas Association, Texas Alliance of Energy Producers, Texas Independent Producers and Royalty Owners, and Wyoming Independent Producers Association

Mister Chairman, members of the Committee, I am Diemer True, Chairman of the Independent Petroleum Association of America (IPAA). This testimony is submitted on behalf of the IPAA, the American Petroleum Institute (API), the Domestic Petroleum Council (DPC), the International Association of Drilling Contractors (IADC), the National Ocean Industries Association (NOIA), the National Stripper Well Association (NSWA), the Natural Gas Supply Association (NGSA), the Petroleum Equipment Suppliers Association (PESA), the U.S. Oil and Gas Association (USOGA), and 33 cooperating state and regional oil and gas associations. These organizations represent petroleum and natural gas producers, the segment of the industry that is affected the most when national energy policy does not recognize the importance of our own domestic resources.

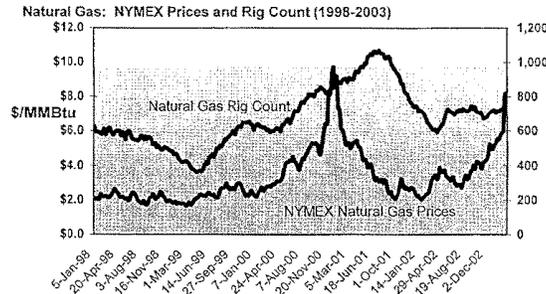
This hearing addresses the need for legislation to better manage Federally owned energy resources underlying Federal lands. For example, the role of Federal lands in meeting future oil and natural gas demand is a critical one and this hearing is a timely opportunity to address that role, the general issues surrounding oil and natural gas supply in the United States, and opportunities to improve the current processes.

Initially, it is important to put the current supply and demand situation in some perspective. The United States will remain principally dependent on oil and natural gas for the foreseeable future. Recent projections by the Energy Information Administration (EIA) show the oil and natural gas will provide for about 65 percent of domestic energy over the next several decades. Domestic import levels of oil continue to exceed 50 percent and remain a significant national security issue. While supply and demand of natural gas remains a largely North American market, without adequate access to the resource base, domestic natural gas will not be able to meet its potential. This testimony will primarily focus on the natural gas implications of the current supply, demand, and regulatory framework which affects its development. However, the access issues are the same for both oil and natural gas.

The Supply Challenge

Today's natural gas price and supply constraints are the consequences of past decisions. Going back to year-end 2000, we briefly saw the results of natural gas supply shortages. As storage dwindled, prices soared and consumers had to deal with the consequences. The initial phase of that supply-demand imbalance reflected the effects of low gas prices and unusually low oil prices in 1998-99 on capital availability to develop domestic natural gas supply. These historically low petroleum prices resulted in capital expenditure budget cuts for domestic producers exceeding 30 percent in 1999. The natural gas drilling rig count dropped by over 40 percent at its lowest point. In 1999, new wells failed to replace existing reserves.

The petroleum price recovery and the industry's recognition that future natural gas demand would increase led by more and more electricity generated by gas powered turbines triggered a robust rebound in drilling for natural gas. Rig counts went to record levels. But, the lag in new production caused by the low petroleum prices left a tight market by the end of 2000. Higher prices resulted in more drilling rigs searching for natural gas, but production still declined. U.S. natural gas production today is lower than it was five years ago.



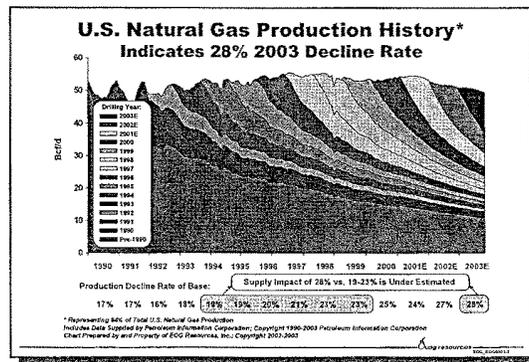
The higher prices also reduced short-term demand. In reality, the abatement of high natural gas prices resulted from significant demand decreases not from supply increases.

In the latter months of the 2001, prices had fallen to levels comparable to the first part of 1999 and rig counts began to fall as well. By year-end 2001 rig counts had fallen to April 2000 levels. While rig counts rose to around 700, they were well below the 1000 rate that was achieved in the fall of 2001. The implication of these lower rig counts was clear—supply levels would not be sustainable.

Now, in early 2003, the implication has become reality. Natural gas supplies have been stressed by a cold winter and natural gas prices are in the range of \$6.00 per thousand cubic feet. Natural gas drilling rig counts are in the range of 750. Estimates suggest that domestic natural gas production fell by around 2.8 percent in 2002. Clearly, the challenge facing natural gas producers is twofold—maintaining existing natural gas supply and increasing that supply to meet future demand. Access to Federal resources play a significant role in meeting this challenge as well as barriers to development, which also adversely affects production. This remains complicated and new events suggest a worsening situation.

Maintaining Existing Supplies

While analyses like the 1999 National Petroleum Council Natural Gas study and the newly released EPCA study by the Bureau of Land Management have focused on the resources that need to be developed to meet future demand—particularly with regard to Federal lands—the challenge of maintaining existing supply has not received the attention it deserves.



The first and perhaps most compelling challenge to maintaining existing supply is coping with increasing rates of depletion. Conventional natural gas wells begin to deplete as soon as they begin to produce. But over the past decade, producers

have seen average depletion rates climb from 16 percent per year to 28 percent per year. In somewhat simplified terms, this means that producers must initiate new production equal to over a quarter of existing production each year just to stay even. New technologies like 3-D seismic enable explorationists to find smaller reservoirs. Enhanced production technologies like horizontal drilling are allowing better and more environmentally effective development of reserves. But finding smaller reserves and producing them more effectively makes the challenge of maintaining existing natural gas supply more difficult.

Second, it is important to understand the extent of development of the existing resource base. Some opponents of accessing additional Federal lands suggest that the current resource base should be the first focus. In reality, it already is. Developing the current resource base for both conventional and unconventional natural gas is the source of existing supply. When the rig count grew to 1000, this is where it had to grow. But this resource base has supplied natural gas for the past 50 plus years. These mature reserves are harder and more costly to develop. New reserves in these areas are smaller and deplete faster or are deeper and more costly to develop. But, there is no doubt that these resources will continue to be developed as quickly as access is provided, natural gas prices justify development and capital is available to do so.

Policymakers need to understand these implications clearly. Lower rig counts and higher depletion are adversely affecting available supply. These are the conditions that are defining the current supply and demand balance. Not only must they be addressed, but the industry must also be capable of increasing natural gas supply to meet future increased demand.

Future Supply Challenges

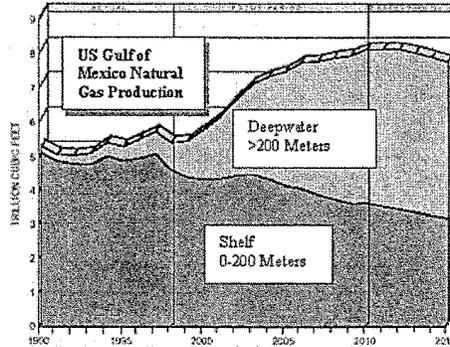
Despite the economic slowdown over the past year and despite the capital limitations that are devastating the merchant power industry that must invest in future electricity generation, natural gas demand will grow. Natural gas remains the most abundant and reliable clean burning fuel to meet national environmental objectives while enhancing the use of stable domestic fuel sources. National energy policy must recognize the importance of accessing the natural gas resource base. The National Petroleum Council (NPC) in transmitting its 1999 Natural Gas study concluded:

The estimated natural gas resource base is adequate to meet this increasing demand for many decades. However, realizing the full potential for natural gas use in the United States will require focus and action on certain critical factors.

Natural gas consumption is expected to grow by almost 50 percent by 2025. While recent events may have slowed the pace of this growth—an issue that is being assessed again by the National Petroleum Council—future natural gas consumption will likely grow at a pace that will require an energy policy that allows the full potential of natural gas to be developed. This cannot be done without more access to, and development of, government-controlled resources. However, development of these resources remains a substantial challenge.

Offshore—Western and Central Gulf of Mexico

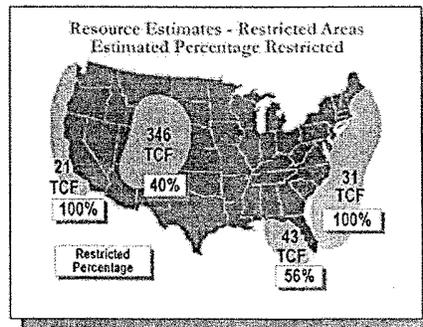
These portions of the Gulf of Mexico have proven to be a world-class area for natural gas as well as petroleum production, accounting for over 25 percent of domestic natural gas production. Production comes from the continental shelf, the deepwater, and the emerging ultra-deepwater. The NPC study projects that future production increases in these areas is essential to meet projected demand. However, future production increases will hinge on Federal offshore policies. The most significant of these in the Western and Central Gulf of Mexico relate to royalty policies. However, improvements to coastal zone management review policies could also help avoid costly delays in developing new supplies.



Offshore production is particularly suited for royalty-in-kind (RIK)—paying the royalty with production instead of dollars. It is a more economical and fairer approach. Recent actions to fill the Strategic Petroleum Reserve could utilize 80 percent of this offshore royalty oil. RIK should be encouraged for natural gas. Second, the 1995 Deepwater Royalty Relief Act was extremely successful promoting activity in the deepwater Gulf. However, the 1995 program expired. Since its expiration, the Minerals Management Service (MMS) has provided more limited, but useful, royalty incentives in recent lease sales. The National Energy Policy recognized that offshore regulatory policies could inhibit the sound development of these resources. Its recommendations should be implemented and further incentives for drilling in the deepwater, deep drilling for natural gas on the shelf (including drilling on existing leases), subsalt and highly deviated drilling should be examined.

Offshore—Eastern Gulf of Mexico, Atlantic Ocean, and California

Developing the substantial domestic natural gas resources in most of these three areas is prohibited by moratoria. President Clinton extended these moratoria for another ten years in 1998 saying, “First, it is clear we must save these shores from oil drilling.” This is a flawed argument ignoring the state of current technology; it results in these moratoria preventing natural gas development as well as oil. In fact, both the Eastern Gulf and the Atlantic resources are viewed as gas resource areas, not oil—those coasts are not at environmental risk. Too often, these policies are predicated on the events that occurred 30 years ago. For example, no Eastern Gulf of Mexico sale occurred from 1988 to 2001. The recent sale took place only under greatly reduced conditions.



However, this year another ominous step was taken when the Federal Government decided to purchase leases that have not been developed, primarily due to regulatory limitations, in the Eastern Gulf of Mexico. This action led to calls for similar purchases off the coast of California and on other government controlled land. While the merits of each case should be reviewed, following such a course also serves to limit the available resource base at a time when it needs to be expanded.

Federal policy needs to be reconsidered. It needs to be based on a sound understanding of today’s technology. When the NPC analyzed natural gas resources that

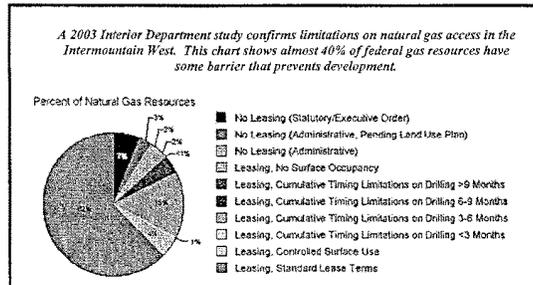
were being inhibited by regulation of these areas, it concluded that over 70 trillion cubic feet of natural gas in these areas are precluded from development.

Onshore Restrictions—A Mosaic of Regulations and Prohibitions

Much of the onshore natural gas resource base is located in the Intermountain West. Yet, much of this resource base is constrained. And, it is clear that this area is a critical battleground between those who seek to develop domestic natural gas and those who seek to prevent development. Not only must energy producers navigate through a mosaic of regulatory constraints, we must now deal with a series of strategic efforts to delay and prevent the necessary use of these national resources.

The regulatory framework to obtain permits to develop energy resources on Federal lands is layered with complex and sometimes conflicting requirements. Federal Land Managers must operate through Resource Management Plans (RMPs) that require extensive Environmental Impact Statements (EISs). These address a wide variety of impacts regarding the use of the land. Formulating these RMPs and EISs requires consultation and, in some cases, concurrence with other Federal agencies and the states. These agencies, such as the U.S. Fish and Wildlife Service, are tasked with implementing laws, like the Endangered Species Act (ESA), that do not consider the balance needed between their wildlife management objectives and national energy needs. Yet, the Federal Land Manager is developing a plan in most cases for multiple use Federal lands.

This process creates delay, confusion, and conflict. It produces a series of access and development limitations. Collectively, the effects are significant. The NPC's Natural Gas study estimated that access to 137 trillion cubic feet of natural gas in the Intermountain West was limited by regulation. Taking a different approach, the Bureau of Land Management (BLM) released its EPCA access report and reached a conclusion that roughly 40 percent of the natural gas resources in the Federal lands it studied was restricted. Moreover, these studies were largely focused on constraints that exist at the leasing phase of the process. Even in those areas where the EPCA study suggests that there are no stipulations, that assessment applies only at the leasing level. When Applications for Permits to Drill (APDs) are sought, stipulations can still be required. Such stipulations can be extensive. For example, at one southwestern Wyoming site that was analyzed, stipulations effectively limit operations to only about six weeks per year.



There are no simple answers to this issue or a single solution that will address the problems. What is required is a commitment to develop these access policies with a full recognition of the importance of developing the natural gas resource. The National Energy Policy recognized the magnitude of these limitations. Executive Orders to consider energy supply implications in Federal decision making and to convene a task force to improve permitting are important first steps in developing a response. These early efforts have resulted in specific tasks within various Executive Branch departments that should improve the permitting process.

A Mosaic of Seasonal Restrictions (Source: FHAS)

Wildlife Restrictions	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Big Game Winter Range	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
Sage Grouse Lek			██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
Sage Grouse Nesting				██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
Mountain Flower Breeding				██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
Mountain Flower Nesting				██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
Raptor Nesting				██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
Birding Call				██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
Archaeology Weather Restriction	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
Section 7 Prairie Dog Avoidance	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
Typical 6000 ft. Well	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
Typical Deep Horizontal Well	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████

Adequate agency funding and staffing is needed at the key field offices responsible for permitting and it needs to be directed toward the permitting process. Lack of funding has limited the ability of the agencies to permit, to monitor permits, and to enforce permit requirements—leading to consequences that encourage conflicts between the different users of Federal land. It has resulted in shifting the Federal responsibility for developing EISs and other National Environmental Policy Act (NEPA) requirements to private parties where it was never intended to reside.

But the direct permitting aspect of addressing these access issues is only one part of a much larger debate. Besides these issues, energy producers are also confronting broad and aggressive efforts to otherwise delay or prevent access—strategies of misdirection, of litigation, and of division. Congress needs to recognize these efforts for what they are and react accordingly.

Prior to the EPCA study, development opponents consistently used a strategy of misdirection. They alternated between suggesting that the issues of Federal land access were related to opening national monuments or that 95 percent of the Federal lands were open to permitting and there was no issue. The EPCA study has helped focus the debate on the real areas of concern—federal lands available for multiple use and the restrictive lease stipulations that inhibit their use. But, even with this new information, it is likely that development opponents will try to minimize the very significant issues associated with land use stipulations. Similarly, they will try to divert attention toward concepts such as the “viable resources” approach created by the RAND Corporation. Taken to its logical conclusion the RAND approach would vest in the Federal Government development decisions that are now—and properly so—a part of the Federal permitting process. The RAND approach should be rejected for what it is—a theoretical think tank white paper with little relevance to real world economic decisions. Congress needs to focus on the real issues and not allow these efforts at misdirection to confuse the debate.

It is equally clear that development opponents are undertaking an aggressive strategy of litigation to thwart access in the Intermountain West. When the EPCA study was released, the reaction was quick and certain:

“If you bid on a lease on public land, you can expect (environmental litigation).”—Peter Morton, The Wilderness Society, Dow-Jones Newswires, January 21, 2003

The Federal Government is now confronted with litigation threats and actions at every step in its process. Litigation has been filed to prevent exploration activities designed to identify possible resources. Litigation is filed over granting permits, challenging existing RMPs and opposing revisions to EISs. The primary result of this litigation is delay and more delay—and no new energy supplies. Delay is a key component of the strategy. Energy producers must invest capital, must replace and expand their production. If opponents to development can forestall access, it forces producers to shift their investment elsewhere. The longer producers are delayed, the higher the likelihood that they will give up on an area. This is the ultimate objective of this strategy of litigation, but it is ultimately a strategy that costs the nation domestic natural gas and impacts our energy security.

Producers are also confronted with a strategy of division—a strategy designed to build on the inherent conflicts that arise from different parties competing for the same space. One of these conflicts is the so-called “split estate” issue. This is clearly an issue in the Intermountain West. With increased energy development activity, there are more opportunities for differences between producers and landowners or land users. Oil and natural gas producers understand the need to address this important problem. Producers are actively initiating efforts in states like New Mexico, Colorado, and Wyoming to develop better ways to address these relationships. Dif-

ferent approaches are being identified that reflect the unique circumstances in each state.

New Mexico provides an excellent example of these efforts. For the past eighteen months, the New Mexico Oil and Gas Association (NMOGA) has had a working committee with the ranching industry in the San Juan Basin. This committee, that meets monthly, has been identifying problems and working on solutions of surface use issues. It has, to date, formed thirteen separate road districts that are being individually addressed, along with the other areas including fencing and access roads as well as erosion.

NMOGA has also agreed to form a cooperative alliance with the New Mexico Cattle Growers Association. The purpose of this alliance is to work on identifying and implementing solutions to issues regarding split estate, ranching and private landowners. First, a committee will be formed to address the issues of historic pits and locations. This committee will be charged with identifying solutions and to identify and apply for funding mechanisms. In addition, the alliance will form several subject specific committees that will have the same goals as mentioned above and address such areas as roads, habitat fragmentation, erosion and reseeding.

In Wyoming, the Petroleum Association of Wyoming (PAW) is finalizing plans for the "Wyoming Split Estate Initiative," which is designed to bring land owners and oil and gas producers together to facilitate cooperation and minimize disputes. PAW is working with the Wyoming Woolgrowers Association, Wyoming Farm Bureau and Wyoming Stockgrowers Association to find real solutions to this important issue. This localized initiative holds great promise to further promote cooperation between landowners and oil and gas operators and is another example of the efforts underway to address this matter.

The fundamental consistency between these efforts is the recognition by responsible producers that their working relationship with surface owners and users must continue to improve. Both parties have a right to reasonable access to the land and both must find ways to accommodate those rights. But, it is also clear that these tensions present opportunities for development opponents to try to drive a wedge between users of Federal lands. Congress needs to approach these issues cautiously. The Intermountain West has become a battleground over the framework for domestic energy development; it has become a "no holds barred" fight. Legitimate issues are being intertwined with political agendas to thwart access to the natural gas resource base. Congress should certainly encourage resolution of legitimate conflicts, but it should avoid being pulled into the political use of these conflicts.

Energy Legislation Before Congress

With these perspectives on the challenges to meet current and future demand for natural gas as a reference point, the question becomes what issues should be addressed in energy legislation. The House of Representatives passed a number of key provisions in its version of energy legislation in the 107th Congress. That legislation provides a sound framework to build upon. Legislation in the 108th Congress should include:

- Provisions for royalty incentives in the Western and Central Gulf of Mexico. It should parallel and extend the relief now being provided administratively in recent lease sales—those occurring after the House passed its bill.
- Provisions to address deep drilling for natural gas on existing leases
- Provisions to better assess the resource base in the offshore and possible mechanisms to access those resources.
- Provisions to improve the efficiency of state consistency reviews for Outer Continental Shelf plans under the Coastal Zone Management Act.
- Provisions for the Secretary of the Interior and the Secretary of Agriculture to jointly undertake a study of the impediments to efficient oil and gas leasing and operations on Federal onshore lands in order to identify means by which unnecessary impediments to the expeditious exploration and production of oil and natural gas on such lands can be removed. Such an analysis could provide policymakers with the information needed to address some of the key problems associated with the leasing process.
- Provisions to ensure timely action on leases and permits reflecting the importance of the resource base underlying these lands on national security.
- Provisions to create additional authority to develop RIK programs that will allow for more effective use of the highly desirable approach. RIK eliminates the complexities of determining the royalty value thereby saving both the government and the producer from the convoluted determinations that are now necessary and are frequently questioned—sometimes years after the sales occur.
- Provisions for royalty relief for marginal wells on both Federal onshore and offshore properties for both oil and natural gas. This relief encourages the contin-

ued production of these wells in times of low oil and/or natural gas prices. Retaining production from these wells is in the national interest and the provision should be included in the final bill.

- Provisions for the reimbursement through royalty credits when a private party pays for NEPA documents that are the responsibility of the Federal Government to prepare. Given the challenge of developing these key resources and the potential that adequate appropriations are not available, this is a common sense approach to meet the dual objectives of developing sound environmental documents and moving forward on permitting.

Collectively, these provisions would address many significant access and development issues. Final legislation needs to include them. Similarly, Congress needs to continue to work with the Administration to facilitate its efforts to improve the permitting process and to update its resource management plans. Money will be an important component of the Administration's efforts, but other authority may be necessary as well.

Thank you for the opportunity to provide this perspective on the challenges facing natural gas production in the United States.

The CHAIRMAN. Thank you.
Mr. Wood.

STATEMENT OF WAYNE WOOD, PRESIDENT, MICHIGAN FARM BUREAU, ON BEHALF OF THE AMERICAN FARM BUREAU FEDERATION

Mr. WOOD. Thank you, Mr. Chairman.

My name is Wayne Wood. I am president of the Michigan Farm Bureau, but today I am speaking to you on behalf of the 5.3 million member family of the American Farm Bureau Federation. In addition to the written statement before you, I would like to highlight some of the key components of that statement.

According to the Department of Energy, America currently imports 56 percent of its total oil needs. If we don't change our policy, that percentage will rise to 64 percent by 2020.

As has been said here many times, another key energy feedstock, which is natural gas, has a high level of importance to agriculture. The price spike that we have seen in natural gas futures in recent weeks would equate to paying over \$12 for a single gallon of milk, or over \$9 for a single loaf of bread.

The current price of diesel fuel is over 30 percent more when compared to this time last year. The cost of fertilizers will be up significantly as well. Overall, the U.S. agriculture sector is bracing to pay between one and two billion more this year than last to put the crop in the ground this spring.

These factors, as well as others, point to the need for a balanced approach as a means of reducing this country's need to import oil and energy feedstocks from foreign sources and for America to become more energy independent.

The American Farm Bureau urges the following actions to accomplish this needed balance. Congress must utilize the renewable energy sources. Renewable energy sources play a vital role in enhancing any energy future in America. The renewable fuel standard, as agreed upon by the Senate in the last Congress, over the life of the bill would displace some 66 billion gallons of crude oil from foreign sources, and replace it with clean-burning ethanol and biodiesel.

The environmental benefits of ethanol and biodiesel, as well as other renewable sources such as the wind farms, biomass, hydro-

electric and solar energy of electricity, cannot be overstated. In addition to those benefits, an aggressive RFS would also lower our dependence of foreign oil while serving as a significant rural economic stimulus.

Congress must also renew America's commitment to domestic oil and gas production. Energy rich repositories, such as the Arctic National Wildlife Refuge and the Outer Continental Shelf, must be reconsidered for oil and gas exploration and production immediately. The environmentally sound domestic production in ANWR, coupled with the lifting of moratoriums in the Outer Continental Shelf and Gulf of Mexico, would help in stabilizing the energy crisis of the future.

This Congress must also continue to provide incentives for energy use efficiency. Through proper incentives, further economically viable efficiencies can and will be made both in the public and private sector. While efficiencies alone will not displace this country's need for the development of new domestic energy sources, they would complement the above-mentioned strategies in lowering our dependence on foreign sources.

In conclusion, this Congress must take proactive steps to add balance to the U.S. energy equation. By acting this year, this Congress can strike a balance of increasing domestic production of conventional energy sources with the development of renewable energy sources, and this action certainly will lower our reliance on those foreign sources and create a more self-sufficient, independent energy source for future generations.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Wood follows:]

**Statement of Wayne Wood, President, Michigan Farm Bureau, on behalf of
The American Farm Bureau Federation**

On behalf of the American Farm Bureau Federation (AFBF), we appreciate this opportunity to express to this Committee how vitally important reliable and affordable energy is to American agriculture. AFBF also appreciates the opportunity to share our vision as to how the 108th Congress can and should enhance America's energy security.

Agriculture, along with numerous other industries, is more energy efficient than ever before. From the tractors used to work the fields and raise the crops to the industries responsible for refining raw commodities into the final products consumed by the public, energy input has decreased dramatically. More than ever before, America's industrial engine is producing more and more economic benefit with less and less energy. While these energy savings have been realized throughout the agricultural and industrial sectors, the U.S. economy and population will need more energy security in the years and decades to come.

According to the Department of Energy, America currently imports 56 percent of its total oil needs. If dramatic change is not made to our current policy, the percent the U.S. imports will increase to 64 percent by 2020. The U.S. is dependent on foreign sources for our energy needs and a single event such as a labor strike in Venezuela or a conflict in the Middle East can have a dramatic effect on this country's energy prices.

Another key energy feedstock, which is very important to agriculture and associated industries, is natural gas. The price spike seen in natural gas futures in recent weeks would equate to paying over \$12 for a single gallon of milk and over \$9 for a single loaf of bread. While prices have moderated somewhat in the last three weeks the current price of \$6 per mcf for natural gas is three times the historical cost average of \$2. Like the current high gasoline prices, the natural gas crisis is another example of the failure of today's U.S. energy policy. Congress along with several Federal agencies and programs have rightfully encouraged, via incentives, expanding the use of natural gas as the environmentally friendly alternative feedstock for electrical generation, home heating and industrial manufacturing. At the

same time, the Federal Government has increased the regulatory burden on domestic natural gas exploration, drilling and production and placed moratoriums on many energy-rich areas such as the Outer Continental Shelf (OCS), the Gulf of Mexico and the Arctic National Wildlife Refuge (ANWR). If left unchanged, the U.S. energy policy toward natural gas today will certainly result in the loss of even more of our energy independence.

The current price increases have increased the cost of diesel fuel by over 30 percent when compared to this time last year. The cost of fertilizers will be up significantly as well. According to a Kansas State University study, a one-dollar increase in the price of natural gas prices will increase the cost of nitrogen fertilizer by as much as \$2 to \$3 per ton. Overall, the U.S. agricultural sector is bracing to pay anywhere from \$1-2 billion more than last year just to get a crop in the ground this spring.

AFBF submits the following balanced approach as a means of reducing this country's need to import oil and energy feedstocks from foreign sources and as one way this Congress could make logical advancements in enhancing America's energy security.

Renew America's Commitment to Domestic Oil and Gas Production.

Energy rich repositories such as ANWR and the OCS must be reconsidered for oil and gas exploration and production immediately. The advancements made in oil and gas-drilling technology will make it the most environmentally sound and responsible for the capturing of energy feedstocks ever conducted.

The 2,000 acres being considered for exploration in ANWR represents less than one 1/100th of one percent of the 19 million acre reserve and would be within a portion of ANWR known as the 1002 area. The 1002 area was set aside in 1980 by then President Carter and Congress for future oil and gas exploration. Conservative estimates are that by using environmentally sound, advanced drilling technologies, upwards of 10.4 billion barrels of oil and 50 trillion cubic feet of natural gas are recoverable from this small acreage. In terms of oil production, ANWR potentially represents 1.3 million gallons per day (nearly the same amount currently imported from Saudi Arabia) deliverable to the lower 48 states for 25 or more years. Domestic production in ANWR coupled with lifting the moratoriums in the Outer Continental Shelf and Gulf of Mexico would assist in stabilizing the energy prices of the future.

Encourage the Utilization of Renewable Energy Sources.

Renewable energy sources must play a vital role in securing America's energy future. As with drilling techniques, many advancements have occurred in the area of utilizing renewable energy sources such as ethanol, biodiesel, wind and biomass.

The Renewable Fuels Standard (RFS), as agreed upon by the Senate in the last Congress, would have displaced some 66 billion gallons of crude oil from foreign sources and replaced it with clean-burning ethanol and biodiesel. The environmental benefits of ethanol and biodiesel cannot be overstated. Ethanol, made from renewable feedstocks, can be used to obtain compliance for clean air standards and will be used to replace Methyl Tertiary-Butyl Ether as it is being phased out on a state-by-state basis. Biodiesel made from vegetable oils and animal byproducts, is nearly sulfur-free and can reduce the amount of poly-aromatic hydrocarbons currently found in diesel fuel by up to 90 percent. In addition to the benefits of renewable fuels in meeting numerous clean air standards, an aggressive RFS would also lower our dependence on foreign oil while serving as a significant rural economic stimulus.

Other renewable sources such as wind farms, biomass generation, hydropower and solar must also be encouraged by this Congress in a comprehensive energy policy. All these forms of renewable energy show great promise and will further reduce our reliance on conventional energy and foreign sources.

Continued Incentives for Energy Use Efficiency

This Congress must provide further incentives to the public, private and industrial sectors to encourage even more economically viable energy efficiencies than what have been accomplished thus far. Through proper incentives, further efficiencies can and will be made in energy use. While efficiencies alone will not displace this country's need for the development of new domestic energy sources, further efficiencies via incentives and new technology would complement the above-mentioned strategies in lowering our dependence of foreign sources for America's energy needs.

This Congress should take proactive steps to add balance to the U.S. energy equation. By acting this year, the 108th Congress can strike a balance of increasing the domestic production of conventional energy sources with the development of renewable energy sources. This action will result in lowering our reliance on foreign

sources for our energy needs today and contribute to America's energy independence for future generations.

The CHAIRMAN. Thank you.
Mr. Sweeney.

**STATEMENT OF PATRICK SWEENEY, EXECUTIVE DIRECTOR,
WESTERN ORGANIZATION OF RESOURCE COUNCILS, ON
BEHALF OF ERIC BARLOW**

Mr. SWEENEY. Mr. Chairman, my name is Pat Sweeney. I am the Director of WORC, the Western Organization of Resource Councils. I live in Billings, MT. I appreciate the opportunity to submit the statement of Eric Barlow on behalf of WORC and the Powder River Basin Resource Council.

Mr. Barlow, a rancher, a veterinarian from northeast Wyoming, was unable to attend today because of a major snow storm in the State of Wyoming. We pray for rain and snow, and we got it. But it kept Mr. Barlow home, and I appreciate the opportunity to present his statement. I know it will be submitted for the record. He certainly wanted to me give his regrets, but also to make sure this Committee heard his concerns about the future of his ranch and his family.

As landowners and cattle ranchers, we want to talk about what it will take for the oil and gas and coalbed methane industries to do it right. Mr. Chairman, I want you to know that the organizations that we represent here today support responsible oil and gas and coalbed methane development. For several years now, we have been asking industry and government agencies and the Congress to do it right, and the results have often been lots of rhetoric but little action.

The sheer scale and magnitude of coalbed methane development alone proposed for our neighborhood is unprecedented. The recent final environmental impact statements on Wyoming and Montana coalbed methane development called for over 80,000 new coalbed methane wells in our country in the next 10 years. In Montana alone, that will mean the pumping of 480 billion gallons of water for this coalbed methane. Without meaningful government oversight, the industry has no incentive to operate responsibly.

Thousands of landowners in the West face the growing threat to their livelihoods and quality of life from this kind of development, not to mention the damage that can be done to our air, land and water resources. These include the reduction in their property values, the loss of income, impairment of water quality and quantity, seepage of methane into drinking water wells under people's homes, the introduction and spread of noxious weeds, noise from compressor stations, generators, traffic, soil damage, contamination, erosion, and harm to wildlife.

I know you are concerned as others about private property rights. There are thousands of surface owners in the West who do not own the minerals under their land, the "split estate" lands that you heard about today. The most common split estate situation involves Federally owned minerals under private surface. About 58 million acres of privately owned land in the United States are estimated to overlie Federal minerals, with most of that acreage in the

West. In the Wyoming portion of the Powder River Basin, private property owners hold 75 percent of the surface, about six million acres, and the Federal Government owns approximately 63 percent of the minerals under this surface.

Because mineral owners have the legal right to retrieve their minerals, landowners who don't own the minerals are largely powerless in many cases to stop or correct irresponsible development. The best way to ensure responsible oil and gas development is to empower landowners to have their real say in the course of mineral development on their land.

Congress can help landowners protect their properties by taking several, straightforward steps in our mind: require mandatory surface use and damage agreements. Such agreements would level the playing field and allow the landowner to be informed and engage in the development process. By negotiating an agreement, the landowner can more accurately assess the ramification to his or her property and participate in the planning process.

Requiring mandatory surface use agreements will not prevent the development of the mineral estate, but simply empower surface owners to have a real say in the course of their mineral development.

Improved notification. Many surface owners are unaware that the Federal minerals have been leased under their land, nor do they have any knowledge of their input into modifications. To correct this injustice, the BLM needs to notify surface owners. We heard today that that notification is happening, but we have a recent letter from Director Clarke, in which she states they would not notify surface owners before they lease the mineral estate, because it would be too expensive to know who these owners are. In the issuance of coal leases, they have to notify surface owners, and I would be glad to submit the letter for the record.

There are two other critical issues that need to be briefly mentioned relating to coalbed methane development: protecting our water resources and ensuring sites are cleaned up. These are addressed in detail in our statement, but I would like to just mention that, whether it is dewatering involved in methane production or fracturing, water resources are being impacted in the west. Congress must raise the bar when it comes to protecting our water resources by acting to replace water supplies affected by oil and gas, re-injector treat coalbed methane produced water, and require water management plans.

The groundwater and surface waters of this Nation are a precious and life-sustaining resource. In the future, water will be far more valuable than the precious metals and fossil fuels that they produce. Water is truly more precious in some cases than coalbed methane.

Mr. Chairman, in addition, we would like to see the industry held more accountable for the clean-up costs and damages, and we have provided in our statement some recommendations that include initiating a program to clean up idled, abandoned, and orphaned wells, which we think would be useful, and provide jobs, as well as cleaning up, requiring detailed reclamation plans, increasing bonds for the projects, to ensure that reclamation happens, and last, making sure that we have adequate funds in the BLM to do

inspections and enforcement as we also expand the oil and gas industry in the west.

Thank you for the opportunity to testify. I would be glad to answer questions.

[The prepared statement of Mr. Barlow follows:]

Statement of Eric Barlow, on behalf of the Western Organization of Resource Councils and Powder River Basin Resource Council

Mr. Chairman, my name is Eric Barlow. I am a cattle rancher from northeast Wyoming and a veterinarian, and my family has been in the ranching business for over a century. Thank you for the opportunity to present my views to this Committee regarding the nation's energy future. As a landowner and cattle rancher, I want to share with you what is happening on the ground in Wyoming and in other parts of the West, and talk about what it will take for the oil and gas industry to "Do It Right."

I am here today representing two non-profit organizations that have fought for responsible energy development in the West for more than 30 years—the Western Organization of Resource Councils (WORC) and the Powder River Basin Resource Council (PRBRC). WORC is a network of grassroots organizations from seven western states that include 8,250 members and 46 local community groups. About a third of WORC's members are family farmers and ranchers, many of whom are directly impacted by oil and gas development. PRBRC is a grassroots organization dedicated to good stewardship of Wyoming's natural resources, and the preservation of the state's agricultural heritage.

There have been numerous changes in our ranching operation over the years just as there have been in the nation and world. Our ranch is blessed with a multiplicity of resources, and my family's goal is to be good stewards of the resources available to us. The soil, water, air and sunlight provide our fundamental resources. These combine to produce forage which livestock can utilize and convert into a marketable product. The stewardship we provide determines the health of the resources and their ability to provide a sustainable future.

But our ability to be good stewards of the land and earn a living is threatened by irresponsible oil and gas development. Mr. Chairman, I want you to know that the organizations I represent here today support responsible oil and gas development. For several years now we've been asking industry, Federal agencies and Congress to "Do It Right," and the result has been lots of rhetoric and little action. For example, we've asked that:

- surface owners be given more say in the course of mineral development on their land, but we've been stonewalled,
- the BLM strengthen its oil and gas bonding requirements, but draft rules have languished since January 2001,
- coal bed methane development be phased-in and the best technology employed, but the attitude seems to be full steam ahead.

The sheer scale and magnitude of coal bed methane development alone is unprecedented. Without meaningful government oversight, the industry has no incentive to operate responsibly and, to no one's surprise, is not doing so.

Thousands of landowners in the West face a growing threat to their livelihoods and quality of life from oil and gas development, not to mention the damage that could be done to air, land and water resources. Some of the damage that can occur to private surface owners from the development of the oil and gas estate includes:

- reduction in property values,
- loss of income,
- impairment of water quality and quantity,
- seepage of methane into drinking water wells and under people's homes,
- the introduction and spread of noxious weeds,
- noise from compressor stations, generators, traffic and drilling,
- soil damage, contamination and erosion, and
- harm to wildlife species and habitat.

My first-hand experience is that the current direction of energy development is resulting in the degradation and ruination of many vital resources and private property rights. And it is my contention that if these areas are not addressed by Congress, proactively and aggressively, that any energy policy brought forward will neither enhance nor secure this nation's energy future.

I believe it is safe to say that agriculture faces a myriad of challenges, and ranching in Wyoming and throughout the West faces an ever-increasing onslaught. Oil

and gas development is now reaching an unprecedented crescendo and the health and security of our vital resources are being placed in grave jeopardy.

DEFEND PRIVATE PROPERTY RIGHTS

Mr. Chairman, I know you are concerned about private property rights. The West's agricultural economy is based on strong protections for private property rights and water rights. Individual landowners steward their own land and water with a view toward long term productivity, which benefits the whole region. Oil and gas development, especially coal bed methane production, threatens this careful balance if not done right.

In fact, there are thousands of surface owners in the West who do not own the minerals under their own land (known as a "split estate"). The most common split estate situation involves Federally owned minerals under private surface. About 58 million acres of privately owned land in the United States are estimated to overlie Federal minerals with most of this acreage in the West.

In the Wyoming portion of the Powder River Basin private property owners hold 75% of the surface land (about 6 million acres), and the Federal Government owns approximately 63% of the mineral rights under the surface. A similar percentage of split-estate lands occur in the Montana portion of the Powder River Basin.

Because mineral owners have a legal right to retrieve their minerals, landowners who don't own the minerals are largely powerless to stop irresponsible development on their land. Meanwhile, mineral owners have little incentive to develop responsibly because, unlike landowners, they will not have to live with the long-term implications of destroyed soils, degraded water, and dried up aquifers.

The reality is that the lessee of Federal minerals has dominance over the surface estate. The property rights of the surface owner, their hopes and dreams, and the values they place on their property are immediately and unequivocally superceded when a mineral lessee chooses to exercise their right. I can think of no other case where an innocent citizen's rights can be so abruptly stripped away. Nearly 80% of the private land on our ranch is in a split estate situation. We have been told several times by oil and gas companies that they can and will use as much of our surface as they want, while at the same time they purport to be our neighbors.

The best way to ensure responsible oil and gas development is to empower landowners to have a real say in the course of mineral development on their land. Congress can help landowners protect their property rights by taking three straight-forward, proactive steps.

1. Obtain the consent to lease of the surface owner

Surface owner consent must be sought before Federal leases are issued for oil and gas resources underlying private lands. This idea parallels an existing provision in the Surface Mining Control and Reclamation Act. The coal industry has operated under this requirement for twenty years and appears to be very healthy. There is no reason the oil and gas industry couldn't do so as well.

2. Require mandatory surface use and damage agreements

Additional measures are needed to provide a degree of relief to landowners. One such measure is to require mandatory surface use agreements between landowners and oil and gas operators prior to oil and gas development, with standardized terms which offer a minimum and consistent level of protection.

Such agreements would level the playing field and allow the landowner to be informed and engaged in the development process. By negotiating an agreement the landowner can more accurately assess the ramifications to his/her property and participate in the planning process to minimize the potential adverse impacts to the use and enjoyment of her/his property. Agreements between landowners and companies are fairly common practice, but they are only as good as the company will allow. Companies have publicly described these agreements as "voluntary," "unnecessary" and for "public relations" purposes.

Requiring mandatory surface use and damage agreements will not prevent the development of the mineral estate, but simply empower surface owners to have a real say in the course of mineral development on their lands. It also represents true local control because it places power and authority in the hands of oil and gas operators and surface owners.

3. Improve notification to landowners regarding lease sales and drilling applications

Many surface owners are unaware that Federal minerals have been leased under their land, nor do they have any knowledge of or input into lease requirements, lease modifications and drilling permits. To correct this injustice, the BLM needs to notify surface owners in writing:

- (a) at least 45 days in advance of lease sales and, once leases are issued, about who has leased the minerals under their property,
- (b) about any decisions regarding the lease (such as modifying or waiving stipulations, approving rights of way, etc.), and
- (c) within five working days after an Application Permit to Drill (APD) is submitted to the BLM, and immediately after the BLM has issued the APD.

A recent report prepared by the U.S. Institute for Environmental Conflict Resolution (IECR) on split estate issues in the Powder River Basin states that "many of those interviewed, especially state and local government officials, acknowledged that additional notice, public outreach and education to landowners would serve a valuable purpose and could reduce conflict." Among other recommendations, the authors of the report recommend that surface estate owners be given notice when the minerals under their land have been leased, and when permits related to CBM development are applied for (pgs. 53–54; emphasis added).

Without the three steps described above, I am left with little or nothing when the government's lessee comes a-knocking. A friend and rancher recently questioned the sensibility of anyone who owns their land but not the underlying minerals. It seemed to him that there are only two privileges that accompany land ownership. The first is the privilege to pay property taxes, and the second is to provide a doormat for the mineral lessee. I share that sentiment.

PROTECT OUR CLEAN WATER

If it were not enough for the land to be placed under duress, our clean water is also under attack. Many of the oil and gas extraction processes place at great peril the water resources of this nation and certainly our region. Both the quality and quantity of our water is being adversely affected. Whether it is the dewatering involved in coal bed methane production or the hydraulic fracturing of formations to enhance oil and gas production, our water resources are being irretrievably affected. This is another example of one resource being developed at the expense of another and another property right being victimized.

Congress must raise the bar when it comes to protecting water resources by amending the Federal Onshore Oil and Gas Leasing Reform Act of 1987, P.L. 100–203, 30 U.S.C. 226 to: (a) replace water supplies affected by oil and gas operations, (b) reinject and treat coal bed methane produced water, and (c) require a water management plan.

The ground water and surface waters of this nation are a precious and life-sustaining resource that must be protected and used prudently. In the future, water will prove to be far more valuable than all the precious metals and fossil fuels this nation has produced in its history.

HOLD INDUSTRY ACCOUNTABLE FOR CLEAN-UP COSTS AND DAMAGES

Another critical issue that must be addressed by Congress is that of industry accountability for clean-up costs and damages. The exploration for and extraction of minerals can and often does cause damage to the land and other resources. There must be a functional and timely system in place which ensures that mitigation and reclamation occurs. This is necessary to correct the physical manifestations of the damage and to make whole the rights of the affected parties. Too often there is procrastination or the turning of a blind eye to the problems. This leads to a backlog and, in time, a compounding effect that is overwhelming. We are all taught from a young age to clean-up our messes, and that is all we are asking the oil and gas industry to do.

We have been striving to achieve proper reclamation on our ranch for over twenty years. Whether it is ruts created in muddy conditions, leaking pipelines, idle wells or numerous other items, there is a continual need to identify and correct the shortcomings. It is my belief that while the BLM generally desires to appropriately address these issues, it is unable to do so effectively. This is partly because the agency has an inadequate number of inspectors and partly because it lacks the regulatory fortitude to ensure industry compliance. Instead, the BLM relies on the good faith efforts of the industry and an out of sight, out of mind mentality. For example, the BLM has allowed three oil wells to remain idle for over a decade on our ranch without proper reclamation.

We have what I would characterize as a working relationship with our local BLM field office. However, it seems to us that it is only at our request that any effort is undertaken to deal with failures in industry performance. On the other hand, when the industry wants to drill more wells, the agency seems all too eager to expedite and streamline the permitting process.

As a general principle, we believe that oil and gas operators must be required to restore the affected land to a condition capable of supporting the uses it could support before oil and gas activity began, or to higher and better uses, and establish a permanent vegetative cover in the area, using native vegetation. More specifically, we support the following three oil and gas reclamation initiatives.

1. Institute a program to clean-up idled, abandoned and orphaned wells

We ask Congress to include a provision in Federal energy legislation that requires the Secretary of Interior to establish a program to clean-up idled, abandoned and orphaned wells, and authorize \$10 million over two years to implement it.

2. Require detailed reclamation plans and complete and timely reclamation

Congress needs to amend the Federal Onshore Oil and Gas Leasing Reform Act of 1987, P.L. 100-203, 30 U.S.C. 226 to ensure complete and timely reclamation.

3. Add oil and gas to the list of minerals covered under subsections (b) through (o) of the Stock Raising Homestead Act

Many of the private lands in the West were acquired under the Stock Raising Homestead Act (SRHA) of 1916. The people who homesteaded this land received ownership of the surface, while the Federal Government retained ownership of the minerals. Subsections (b) through (o) of the SRHA place additional requirements on mineral developers for bonding, filing a plan of operation, assuring contemporaneous reclamation, and allowing surface owners to request an inspection. Unfortunately, minerals subject to disposition under the Mineral Leasing Act (in other words, oil and gas) are not covered under subsections (b) through (o). It is time for Congress to rectify this omission by amending the Stock Raising Homestead Act.

Another area of accountability that is sorely lacking is current bonding requirements. The financial level of bonding is inadequate. The current bonding levels have no relation to the extent of the activities a company undertakes or the costs associated with plugging and abandoning a single well (much less multiple wells). Additionally, most wells are supported by numerous ancillary facilities and any reclamation of these sites as guaranteed by current bonding is unimaginable.

Oil and gas bonding requirements must be strengthened, and the oil and gas industry must shoulder the burden of liability created by its activities, not affected landowners or taxpayers. We ask Congress to support one of the following approaches aimed at strengthening oil and gas bonding requirements.

1. Require bonds for entire fields or project areas

Congress needs to amend the Federal Onshore Oil and Gas Leasing Reform Act so that a bond covers a specific oil and gas field or project area (such as the CX Field in Montana or the Lower Prairie Dog Project Area in Wyoming). As additional fields or project areas are developed, the operator would post additional bonds with the regulatory authority.

Bonds must cover not only wells, but also all other associated facilities. The amount of the bond required for each field or project area would depend on the type and intensity of oil and gas operations, and reflect the probable difficulty of reclamation considering such factors as topography, geology, hydrology, vegetation, wildlife populations, and so on. The amount of the bond would be determined by the regulatory authority, and must be sufficient to ensure the completion of the reclamation plan if the work had to be performed by the regulatory authority in the event of forfeiture. The regulatory authority could adjust the amount of the bond as affected land acreages increase or decrease, or where the cost of future reclamation changes. The bond must be based on the worst-case scenario. Citizens would have the right to participate in bond release proceedings, attend an on-site inspection during bond release proceedings, and file written objections to a proposed bond release.

2. Impose a per well bond of \$20,000

In lieu of the first approach outlined above, Congress could amend the Federal Onshore Oil and Gas Leasing Reform Act to require companies to post a \$20,000 per well bond. Such bonds must cover not only the costs of plugging the well and restoring the site around the well, but the costs of reclaiming roads, compressor station sites, produced water containment ponds, and all other associated facilities and impacts for which a bond is not otherwise provided.

Finally, Congress needs to rectify the chronic lack of adequate funds for the BLM's Inspection and Enforcement Program. Inspection and enforcement is a critical component of the Federal oil and gas program. Yet, in the past, the BLM has suffered from a chronic lack of adequate funds for these activities. The Farmington (NM) Field Office, for example, conducted a technical and procedural review of its I & E program in July 2000 and found numerous problems, including inadequate

personnel and failures to reclaim after resource extraction was complete. It took Senator Bingaman going directly to BLM Director Kathleen Clarke before new inspectors for this field office and for the rest of the state were authorized. With the Bush Administration pushing for expanded leasing and production from the public lands, it is essential that this problem not be perpetuated. We recommend adoption of the following statutory language:

By October 1 of each year the Secretary of Interior shall certify to Congress that available staff and budgets are adequate to meet quantified inspection and enforcement needs of the Federal oil and gas program. The required certification shall be provided for each field office of the Bureau of Land Management that is managing valid Federal oil and gas leases as well as each field office that intends to issue such leases in the fiscal year. The Secretary shall make all such certifications, including the budgetary and other documentation on which they were based, publicly available. In the event such certification cannot be issued for a given field office, that field office shall not issue or approve any new leases, new project level or full-field development projects or applications for permit to drill, unless and until the required certification is provided.

Mr. Chairman, in summary I have the following recommendations for this Committee based on my personal experience as a cattle rancher and as someone who has been intimately involved with oil and gas development issues for many years.

Defend private property rights by:

- obtaining the consent to lease of the surface owner,
- requiring mandatory surface use and damage agreements, and
- improving notification to landowners.

Hold the oil and gas industry accountable for clean-up costs and damages by:

- instituting a program to clean-up idled, abandoned and orphaned wells,
- requiring detailed reclamation plans and complete and timely reclamation,
- adding oil and gas to the list of minerals covered under subsections (b) through (o) of the Stock Raising Homestead Act,
- requiring bonds for entire fields or project areas or imposing a per well bond of \$20,000, and
- addressing BLM's chronic lack of adequate funds for its Inspection and Enforcement Program.

Protect our clean water by requiring:

- the replacement of water supplies affected by oil and gas operations,
- reinjection and treatment of coal bed methane produced water, and
- a water management plan.

This leads me to my final point, which is that there has not been a meaningful acknowledgment that we must move beyond nonrenewable sources of energy. It is time for this nation to be a world leader and transform our energy paradigm. True security for this nation will be based, in part, on clean and sustainable sources of energy. It is reasonable to expect that fossil fuels will have a role to play, but it must be one of transition and not reliance. The costs to our resources and security are far too great to continue as we are.

Attachments:

1. Western Energy Agenda
2. New Mexico Cattle Growers' Association Oil and Gas Position Paper

BIODIVERSITY CONSERVATION ALLIANCE * CALUWILD * CENTER FOR NATIVE ECOSYSTEMS COLORADO ENVIRONMENTAL COALITION COPIRG * DAKOTA RESOURCE COUNCIL * DEFENDERS OF WILDLIFE * GREATER YELLOWSTONE COALITION * HIGH COUNTRY CITIZENS' ALLIANCE * LAND AND WATER FUND OF THE ROCKIES * NATIONAL WILDLIFE FEDERATION * NATURAL RESOURCES DEFENSE COUNCIL * NEW MEXICO WILDERNESS ALLIANCE * NORTHERN PLAINS RESOURCE COUNCIL * OIL AND GAS ACCOUNTABILITY PROJECT * POWDER RIVER BASIN RESOURCE COUNCIL * SAN JUAN CITIZENS ALLIANCE * SIERRA CLUB * SOUTHERN UTAH WILDERNESS ALLIANCE * SOUTHWEST ENVIRONMENTAL CENTER * THE WILDERNESS SOCIETY * U.S. PIRG * WESTERN COLORADO CONGRESS * WESTERN ORGANIZATION OF RESOURCE COUNCILS * WESTERN SLOPE ENVIRONMENTAL RESOURCE COUNCIL * WYOMING OUTDOOR COUNCIL

WESTERN ENERGY AGENDA

Defend Private Property Rights from Oil and Gas Impacts

On 58 million acres across the West, ranchers and other landowners have little say over whether and how the Federal minerals under their lands are extracted, and little recourse from the impacts this development can have on their drinking water, livelihoods and quality of life. Legislation should ensure basic private property rights for the surface owners of these “split estate” lands, while not precluding the authority of state and local governments to adopt stronger protections.

- Ensure Surface Owner Consent. Require surface owner consent prior to Federal oil and gas leasing, similar to the requirements of the Surface Mining Control and Reclamation Act (SMCRA) that provides for surface owner consent prior to Federal coal leasing.
- Require Surface Use Agreements. Require mandatory surface use agreements between landowners and oil and gas operators prior to oil and gas development. These should have standardized terms that offer a minimum and consistent level of protection. As much of the Federal oil and gas estate has already been leased (for example, 99 percent in the Wyoming portion of the Powder River Basin), surface owner consent for leasing is not sufficient to protect property rights on split estate lands. Surface use agreements will not prevent the development of the mineral estate, but will give surface owners a real say in the course of mineral development on their land.
- Ensure Adequate Notification of Surface Owners. Improve notification to surface owners regarding lease sales and drilling applications. Many surface owners are unaware that Federal minerals have been leased under their land, and do not have any input into lease stipulations. The BLM must notify surface owners in writing: a) at least 45 days in advance of lease sales and, once leases are issued, about who owns the minerals under their property; b) about any subsequent decisions regarding the lease, such as modification of or exception from stipulations or approval of rights of way; and c) within five working days after an Application Permit to Drill is submitted to the BLM.

Safeguard America's Special Public Lands

The majority of Federal oil and gas resources on western public lands are open for energy production. A recent report by the Bush Administration indicates that 85 percent of the “technically recoverable” oil and 88 percent of the “technically recoverable” natural gas on Federal lands in the Rocky Mountain West are currently available for leasing and development. Oil and gas exploration, drilling, production, and transportation can have enormous impacts on land, air and water quality, and wildlife. While care should be taken anywhere public minerals are extracted, some public land areas have unique natural values that should be safeguarded from all impacts of energy development.

- Protect special categories of public lands from oil and gas development. Bar new leasing or re-leasing in National Monuments, National Wildlife Refuges, National Forest roadless areas, citizen proposed wilderness areas on Bureau of Land Management lands (while an agency review for wilderness qualities is pending), Research Natural Areas, Wild and Scenic Rivers (including recreational, scenic, and study rivers and those designated as eligible by an agency), and sacred sites. The lands in these categories have special resource values that are incompatible with the impacts of oil and gas development.
- Review the suitability of energy development on other public lands. Require the Federal land management agencies to perform a suitability review before mak-

ing lands available for leasing, similar to section 522 of the Surface Mining Control and Reclamation Act of 1977, and in keeping with recommendations made by the National Academy of Sciences in its 1989 study of Federal oil and gas leasing. This would provide protection for other public land areas, such as wetlands, Areas of Critical Environmental Concern, habitat for threatened and endangered species, unstable soils, steep slopes, and historic sites where oil and gas development would be inconsistent with protection of surface resources.

Hold Industry Accountable for Clean-up Costs and Damages

Current law has proven insufficient to protect public lands and private property interests from the many damages caused by oil and gas development. Legislation is needed to provide for bonding levels that reflect the real liabilities associated with energy extraction, to clean up past oil and gas development activity, improve reclamation standards, and strengthen inspection and enforcement activities.

- Ensure Adequate Bonding. Amend the Mineral Leasing Act to require that companies post a minimum \$20,000 bond per well, and eliminate authority for statewide and nationwide bonding. To be adequate, bonds must cover not only the costs of plugging the well and restoring the site around the well, but the costs of reclaiming roads, compressor station sites, produced water containment ponds, and all other associated facilities and impacts.
- Clean Up Orphaned, Abandoned and Idled Wells. Require the Secretary to establish a program to address abandoned, orphaned and idled oil and gas wells. Authorize \$10 million over two years to implement the program, as provided for in last year's draft energy conference report. Such a program is necessary to address the pervasive problem of abandoned, orphaned and idled oil and gas wells that currently litter the western landscape and are causing ongoing contamination.
- Strengthen Reclamation Standards. Strengthen reclamation standards and ensure adequate staff and funds to enforce them. Operators must include in their plans of operations a reclamation plan that describes in detail the methods and practices that will be used to ensure complete and timely restoration of all lands affected by oil and gas activities to the condition that existed prior to surface disturbing activities. Such reclamation plans should be made public, and require the operator to conduct reclamation concurrently with their operations.
- Ensure Adequate Inspection and Enforcement Resources. Address BLM's chronic lack of adequate funds for its Inspection and Enforcement Program by requiring the Department to halt new leasing and development activities unless it has provided sufficient funds for adequate numbers of qualified inspection personnel, adequate support to properly document inspection activities, and ensure improved program oversight and management involvement. To achieve this objective and remedy this serious problem, require the Interior Secretary, by October 1 of each year, to certify to Congress that available staff and budgets are adequate to meet quantified inspection and enforcement needs of the Federal oil and gas program. The required certification should be made public and provided for each BLM field office that is either managing valid Federal oil and gas leases or intending to issue leases that year. If certification cannot be issued, that field office shall not approve any new leases, new project level or full-field development projects or applications for permit to drill, unless and until certification is provided.

Protect our Clean Water

The rivers, streams, groundwater aquifers, and drinking water supplies of the West should be protected from the contamination and degradation that can be caused by oil and gas drilling, particularly coalbed methane development.

- Ensure Adequate Regulation of the Practice of Hydraulic Fracturing: Hydraulic fracturing involves the high-pressure injection of water, sand, and toxic fluids into a rock or coal formation to enhance oil and gas production. This practice has the potential to contaminate underground sources of drinking water. Congress and/or the U.S. Environmental Protection Agency must act to:
 - a) Require the use of non-toxic, water-based products as a substitute for diesel fuel and other hazardous materials in the hydraulic fracturing process;
 - b) Require oil and gas operators to prove that hydraulic fracturing fluids are safe prior to use and that they will not endanger underground sources of drinking water;
 - c) Until all toxic components of fracturing fluids can be phased out, report annually the individual hazardous components used in hydraulic frac-

- turing fluids in the EPA's Toxic Release Inventory without a reporting threshold volume or weight; and
- d) Adopt additional regulations under the Federal Safe Drinking Water Act by a date certain to control hydraulic fracturing. Until such regulation is in place, congress and the EPA should, at a minimum, ensure that current regulation of hydraulic fracturing through the Underground Injection Control Program is maintained. Any efforts to exempt hydraulic fracturing from regulation under the Safe Drinking Water Act should be opposed.
 - Regulate Coalbed Methane Development's Impacts on Water. Adopt the reclamation standards to address the unique impacts that coalbed methane development has on water resources. Specifically, require operators to submit proposed water management plans with their permit applications. Each water management plan must be approved by the regulatory agency, and shall ensure:
 - a) the quality of surface and ground water systems, both on-site and off-site, from adverse effects of the development and reclamation process;
 - b) the rights of present users to such water; and
 - c) the quantity of surface and ground water systems, both on-site and off-site, from adverse effects of the development and reclamation process or to provide alternative sources of water where such protection of quantity cannot be assured. In addition, each water management plan must:
 - i) Require operators to replace the water supply of a water user who obtains all or part of her or his supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source that has been affected by contamination, diminution, or interruption proximately resulting from their operations; and
 - ii) Require operators to treat produced water from coalbed methane drilling and re-inject it in an aquifer of similar water quality. Any remaining produced water that has not been re-injected must be treated before discharge. In-channel disposal ponds for the storage of water produced by coalbed methane are disallowed.

End Environmentally Harmful Energy Subsidies

We oppose costly and unnecessary economic incentives that harm the environment, especially the Section 29 tax credit for non-conventional sources such as coalbed methane. This provision has led to a coalbed methane boom that has caused incredible damages to the lands, water resources, and communities of the West. Industry representatives and analysts indicate that the Section 29 tax credit is not needed to promote and sustain coalbed methane development. Section 29 is an unnecessary boondoggle that is bad for the environment and squanders scarce taxpayer dollars on an already profitable industry.

NEW MEXICO CATTLE GROWERS' ASSOCIATION

OIL AND GAS POSITION PAPER

FEBRUARY 1, 2003

Impacts of Oil and Gas exploration, development and production have an obvious and sometimes intense impact on ranchers. The impacts are a source of conflict between oil and gas operators and ranchers on private land, State Lands and Federal lands. The New Mexico Cattle Growers' Association (NMCGA) is not anti oil and gas production and, in fact, understands and supports the need for domestic production. We see ourselves as logical allies of the oil and gas industry. However, the present situation coupled with some unsatisfactory history has created the need to make improvements. For that purpose NMCGA has a committee working on defining the problems and recommending solutions. The purpose of this position paper is to define the problem area and request practical solutions.

The solutions will require cooperation and attention by Congress, the Bureau of Land Management (BLM), the New Mexico State Land Office (SLO), the New Mexico Oil Conservation Division (OCD), oil and gas lessees and operators, contract and service personnel as well as ranchers. We believe that the situation is serious enough to require aggressive attention and action. NMCGA believes that domestic production, exploration and operations can be improved and must be conducted in a manner that minimizes damages to the surface, aquifers and air regardless of ownership.

Priority Problem Issues:

1. Excessive surface damages and disturbance
2. Inadequate compensation and restitution for damages and adverse impacts
3. Inadequate protection of watersheds and aquifers
4. Inadequate reclamation, repairs, maintenance, clean up and mitigation
5. Lack of communication with and responsiveness to landowners and lessees
6. Lack of full consideration of both physical and mental health, safety and security issues
7. Lack of inspection, enforcement and compliance by authorities having jurisdiction
8. Worsening situation with noxious weeds and brush species invasion

We believe that there are creative new ways to address all of these problems while not stopping domestic exploration and production. By finding ways to fund clean up, repairs and reclamation and ways to minimize damages, we can both produce oil and gas and protect the environment. In a time of more enlightened management surely we can do better than the existing situation.

Solutions:

The following specific items should be addressed as solutions to the problems identified:

Surface Damages:

- Use existing roads, pads and corridors, directional drilling, aggressively reduce, close and/or reclaim existing pads, roads and pipelines
- Initiate aggressive project to clean up and repair historical and existing damages while preventing similar situation in all new development.
- Reducing the number of miles of road and reclaiming the unneeded roads
- Implementation of new specifications as to the size of pads and pits, tank battery sites and sizes, width of roads and pipeline right-of-ways due to new technology and equipment in use in the oil field

Compensation and Restitution:

- The entire process of damage payments must be revised, the procedure that allows the oil and gas lessee to proceed without settling damages is biased against the multi-use concept with the surface owner or lessee suffering the greatest consequences
- The involvement of and approval of the landowner and/or surface lessee prior to the approval and issuance of a permit to drill will improve this
- The entire standing of the surface as subordinate to the subsurface should be redefined to make them equal in status, the subsurface can no longer be the dominant estate
- Compensation, Damage Payments and Restitution must be based on the full value of personal property and the replacement cost or cumulative reduction in value of the real or leasehold property or the full cost of the adverse effects on the ranch operations
- There is not enough history in arid areas such as New Mexico, even after 70 or more years, to fully understand how much time will be necessary for the rehabilitation of the land, not to mention the heretofore uncompensated impacts to human health, both physical and mental

Protection of Watersheds and Aquifers:

- Surface Casing should be set and cemented continuously and through the deepest fresh water aquifer
- Wells and pipelines with leaks and other equipment failures must be corrected immediately
- Plugging and abandonment of non-producing and problem wells along with clean up of tank batteries, cement foundations, heater treaters, pipe connections, iron and cable, etc.
- Increased monitoring of surface and fresh water aquifers must be initiated and maintained
- Surface spills and leaks must be cleaned, repaired and reclaimed immediately
- Roads, pads and pipelines that are accelerating erosion and runoff must be repaired and reclaimed (entire watersheds are now at risk)

Reclamation, Repairs, Maintenance, Clean Up and Mitigation:

- Funding sources must be developed to supplement what the oil and gas operators must do
- Fund trial projects on sub watersheds through the BLM District Offices, the SLO and the OCD

- Increase enforcement and compliance staffing for BLM, the SLO and the OCD to improve the problem areas
- Agencies must place new priority on assuring and achieving compliance with surface stipulations by meaningful fines and/or production penalties
- Agencies must quantify and consider the cumulative affects of existing damages and then initiate the necessary work to bring the leases into compliance with existing requirements
- The actual work of achieving compliance must be on a fast track to prevent further damages
- Rewriting and updating the “Gold Book” of surface management requirements to reflect more contemporary expectations should be initiated with the advice and consultation of landowners and surface lessees

Communication and Responsiveness:

- Response time to problems is too slow and must be improved— immediate mandatory compliance with severe penalties imposed must be considered
- Agencies should develop a rapid response team and direct follow up action
- Landowners and Lessees must be included in the process of permit approval, lease changes, development of plans of operation, damage resolution plans, unit spacing changes and any other lease activities that affect the surface, private or leased
- Other production activities often affect the surface after drilling, involvement of the landowners and lessees must be established and agency reviews should include coordination and consultation with the landowners and lessees prior to approval

Health, Safety and Security:

- Issues of noise and emissions are intensifying and adverse affects must now be considered on the land and residents, agencies and producers must have an obligation to do no harm
- Design and placement of roads, pipelines, production equipment and well sites must now consider the safety of the residents, landowners, lessees and other users, prior to approval
- Oil and gas operators have an obligation to protect the safety and security of the landowners and not interfere with their operations and peaceful enjoyment of their land and rightful uses of their land, therefore, the agencies as lessors and the Oil and Gas operators as lessees must have an obligation to limit and control access to private land by maintaining control of keys and other means of access and being fully liable for the actions of their employees, agents and contractors. If they do not do so, they must face both financial and rehabilitative penalties.

Inspection, Enforcement and Compliance:

- BLM, the SLO and the OCD must receive adequate funding to increase staffing to do the needed inspections and if necessary the enforcement to achieve compliance
- Voluntary compliance is not working and the lack of staff is hindering adequate action on behalf of the BLM to protect the surface or initiate meaningful response to existing problems
- Other regulatory agencies may need to be included in a more comprehensive approach
- Our preference is to develop a non-punitive effort to assure results but also believe that if sanctions, fines and lease cancellation can be applied to grazing leases then they can also be applied to oil and gas leases

Noxious Weeds and Brush Invasion:

- The mobility and movement of equipment and vehicle traffic is one of the primary vectors for movement of seed, appropriate control and management of the problem must become part of lease operation requirements and strictly enforced
- Disturbed sites and damaged sites are fertile ground for the establishment of weeds and brush and must be managed to eliminate and control invasion
- Oil and Gas operators and lessees must be responsible for control and treatment of weeds and brush along roads, pipelines, well pads and other equipment sites
- Revegetation of the pad surface and pipeline rights of way with native grasses is one of the best prevention methods and should be a requirement not an option in consultation with the surface owner or lessee

Conclusion:

We believe that dramatic improvements can and must be made quickly. We believe there are responsible oil and gas producers that are willing to work cooperatively with the agencies, landowners, lessees and others to improve the situation. Many of the critical problems are the result of poor operations and lack of controls in the past and to that extent some of the cost should be paid by public funding. One of the critical needs is to find a funding source to address the existing problems on a large scale. Some have suggested super fund designation, we prefer some more positive approach such as designating funds from the Reclamation Fund or other Federal sources as a vehicle to share the cost and get work actually started. Better communication between all of the agencies having jurisdiction and the landowners, surface lessees and the oil and gas producers is necessary to initiate real improvement.

We believe there are many new methods that can and should be applied to exploration, drilling, development and production that can minimize damages and reduce surface disturbance while producing more energy. Noble Energy has produced a report in conjunction with the Domestic Petroleum Council entitled "Oil and Gas Exploration and Production Technology Update" dated November 14, 2002. The report describes changes that can be made that will help accomplish some of our suggestions.

Also, we fear that if improvements and changes are not made quickly that the alternative we can anticipate is imminent adversarial citizen lawsuits. We caution that no actual immediate improvements will be made by litigation and, in fact, scarce resources will be used in court that should have been used on the ground. If the agencies, lawmakers, landowners, surface lessees, Oil and Gas lessees and other interested parties will work at this in a cooperative non-partisan manner much can be accomplished quickly. If they cannot or do not then we believe the situation will move into the realm of the courts within the near future.

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The CHAIRMAN. Thank you.
Mr. Gawell.

**STATEMENT OF KARL GAWELL, EXECUTIVE DIRECTOR,
GEOTHERMAL ENERGY ASSOCIATION**

Mr. GAWELL. Thank you, Mr. Chairman.

My name is Karl Gawell and I'm the Executive Director of the Geothermal Energy Association, which is an association of about 60 companies and numerous individuals that represent sort of a wide range of companies, from Henry Vizotti, which is a one person engineering and consulting firm, to our largest company is probably Mid-American Energy, which is owned by Berkshire Hathaway and, obviously, Warren Buffet, the second richest person in America. So he obviously finds value in geothermal energy. I appreciate knowing my statement will be put in the record, so I'm not going to try to cover that ground.

I want to thank you, Mr. Chairman. I want to thank Mrs. Cubin and Mr. Wise for their continuing interest in geothermal energy. I think it was 2 years ago when we started the last energy bill process, we held some hearings looking at the issues involving geothermal energy, and this Committee included provisions in the energy bill last year to address that.

But I think many people have to understand that the issues we faced 2 years ago are all still here. When we started the energy bill, when the House started the energy bill, it was in response to the California energy crisis. I understand today the California Energy Commission is still looking at supply shortages this summer and down the road. Then 9/11 then interrupted that, and I don't think I need to say much about where we're at since 9/11, given what may be happening in the next 24 hours.

The problem is there. The problem is getting worse. I think this Committee is doing its best to try to address the situation and to adopt a national energy policy. It's a high priority amongst my companies and we support what you're doing.

All the benefits of geothermal energy—I should give you the advertisement, but instead I will quote from my friends at the Department of Energy, who say “Geothermal resources across the western U.S. are amongst the best sources of clean, reliable, domestic energy available to us today. To date, these resources have largely gone untapped.”

That's really where we're at. We produce about 6 percent of the electricity in California. We produce a large amount of electricity, or a significant amount, in only four States. But we have resources in almost all the western States, everything west of the Mississippi, from the Dakotas through Texas to California and Alaska.

But there have been some real impediments to getting these resources developed. Obviously, some of those relate to the market, some of those relate to the roller coaster rides we all face in the energy business. But a good number of them relates to what happens on the public lands.

I want to say we greatly appreciate the efforts of both Secretary Norton and Secretary Abraham to begin to address these problems. We have seen a lot of positive changes moving forward at the Interior Department and Department of Energy, but particularly at the Interior Department, and we have seen new leasing rounds in Nevada. We have seen things start to break loose. We've seen even some resources applied to addressing the administrative hurdles which BLM has to cross over in dealing with leasing and permitting. But it is still not enough.

It is quite clear that—We have leases in several States, particularly on Forest Service lands that are involved, that have been waiting over 10 years to even being leased based upon a pending application. With a business which is even riskier and more expensive up front than oil and gas, people don't invest money without some sense that they're going to have some legal rights to developing or some legal rights to capitalize on their investment that they put in the ground. So these are critical issues to be addressed by this Congress.

Also, with your staff, with both the Democratic staff and the Senate, we have come to appreciate how much the Geothermal Steam Act itself is part of the problem. I know that in this last Congress we had some very active discussions in the Senate as we approached the conference Committee, and I think people began to realize that the Geothermal Steam Act was written at a time where—it's the type of law that thought the government knew everything, a U.S. Government that was supposed to designate where

the high value resources were and, in its wisdom, it would figure out where the best places to develop were. The whole law was sort of written with that theory behind it.

It has never happened. We don't have that knowledge and we don't have those resources. I think my testimony outlines several ways to update it, which frankly really tracks a lot of the changes made in oil and gas leasing laws in the Eighties and Nineties, which moved more to a market-driven mechanism, where the government had clear roles, what their roles and responsibilities were, and better relied upon industry to help drive the process and move things forward.

I want to thank the Subcommittee, Mrs. Cubin and Mr. Wise, for their interest, and the full Committee, for moving this bill forward. I would say we hope to work with you and your efforts and interest in seeing geothermal energy meet its potential in the public lands.

[The prepared statement of Mr. Gawell follows:]

**Statement of Karl Gawell, Executive Director,
Geothermal Energy Association**

Thank you for the opportunity to present the views of members of the Geothermal Energy Association (GEA) regarding geothermal energy potential on public lands and the obstacles to developing this important national energy resource. GEA is a trade association that represents 60 companies and organizations involved in the U.S. geothermal industry, from power plant owners and operators to small drilling and exploration companies.

Geothermal Energy's Potential

Geothermal energy provides a significant amount of the energy and electricity consumed in the Western U.S. Geothermal heat supplies energy for direct uses in commercial, industrial and residential settings in 26 states. Geothermal resources furnish substantial amounts of electricity in California, Nevada, Utah and Hawaii. Indeed, 6 percent of California's electricity comes from geothermal energy.

There has been renewed interest in geothermal power. A small-scale power facility has started operation in New Mexico, and the BLM reports that there is an active interest in leasing and permitting in eleven western states. In part this is due to the adoption in many states of renewable production standards to ensure a market for new renewable power. We believe it is also due to the interest shown in the Congress in expanding the Section 45 production tax credit to include geothermal energy through, for example, legislation introduced in the Senate by Senators Grassley, Domenici, Baucus and Bingaman, S. 597, as well as legislation introduced in the House by Representatives Duncan Hunter (R-CA) and Mark Udall (D-CO), H.R. 991.

But needless to say, financial incentives and market portfolios can only go so far if companies interested in developing geothermal resources are unable to obtain leases and secure the permits necessary for development in a timely manner and under reasonable conditions. The high-level of interest shown in expediting the processing of geothermal leases and permits by this Committee and Federal and state governments has been a major contributor to renewed interest in tapping the undeveloped geothermal resources of our Nation. Discussions about amending and updating the Geothermal Steam Act have been received with excitement by many in the geothermal industry.

Expanded use of geothermal resources will provide additional clean, reliable energy to the West. Thousands of megawatts of new geothermal power, and an equal amount of direct-use energy, could be developed in the immediate future; however, obstacles created by public land agencies must be removed.

Geothermal energy contributes directly to both state and local economies and to the national Treasury. To date, geothermal electricity producers have paid over \$600 million in rentals, bonus bids and royalties to the Federal Government. Moreover, according to an analysis performed by Princeton Economic Research, it would be reasonable to estimate that the geothermal industry has paid more than 6 times

that amount in Federal income tax, for a combined total of over \$4 billion.¹ If the economic multiplier effects were considered, the total contributions of geothermal energy to the local and national economy would be substantially greater.

What is the potential for geothermal energy on public lands? What are the benefits of developing these resources? These questions are difficult to answer, in part because the efforts of the U.S. Geological Survey (“USGS”) and the Department of Energy to define the U.S. resource base have not been funded for many years. In fact, as the USGS pointed out in its testimony before the Energy Subcommittee in May, its last assessment was undertaken roughly 30 years ago.

In order to produce a more current picture of the near-term potential of the geothermal resource base, GEA Executive Director Karl Gawell together with Dr. Marshall Reed of DOE and Dr. Michael Wright of the Energy and Geosciences Institute at the University of Utah, conducted a systematic survey of known geothermal experts from business, academia and government in 1999. The results of this survey were assessed and a brief report was released in April of that year entitled “Preliminary Report: Geothermal Energy: The Potential for Clean Power from the Earth.”

That report concluded that the U.S. geothermal resource base could support significantly increased production. U.S. geothermal electric capacity, now at about 2,600 MW, could triple and, with expected improvements in technology, could reach nearly 20,000 MW in 20 years.

These figures would appear to be fairly consistent with the estimates presented to the Subcommittee on Energy and Minerals by the U.S. Geological Survey. Their testimony indicated a potential for 22,290 MW of geothermal electricity production (see Attachment 1). As GEA’s Executive Director testified before the Energy and Minerals Subcommittee, these figures also concur with the results of the planning workshop that helped produce the current DOE Strategic Plan—an effort that brought together many of the leading experts from industry, laboratories and academia. At that workshop, there was a consensus that, with market support, as much as 10,000 MW of electric capacity could be brought on-line in the West by 2010 by expanding existing resource production and developing new facilities.²

Achieving this additional geothermal production would have substantial economic and environmental benefits in the western United States. If the goal of the DOE Strategic Plan could be reached, the cumulative Federal royalties from the new power plants would reach over \$7 billion by 2050, and estimated income tax revenues would exceed \$52 billion in nominal dollars.³ The state share in these royalties alone would result in an additional investment of \$3.5 billion in schools and local government facilities in the western states.

Expanded use of geothermal resources can also contribute to the President’s goal of a hydrogen future. Using geothermal resources to drive catalytic processes is ideal for generating hydrogen. In fact, Iceland is expected to be the first country in the world to make a significant transition to hydrogen fuels, which it will achieve by using its geothermal and hydropower resources.

Recent Efforts To Address Barriers To Geothermal Energy Use

We were very pleased by the Administration’s interest in enhancing the use of renewable resources on public lands. Vice President Cheney, Secretary Norton, and Secretary Abraham have all shown a strong interest in promoting renewable energy use, and addressing the problems the geothermal industry has experienced.

Vice President Cheney met with leaders of the renewable energy industry. The National Energy Policy release in May of 2001 by the National Energy Policy Development Group included several key recommendations. The NEPDG recommended that the Secretaries of Interior and Energy re-evaluate access limitations to Federal lands in order to increase renewable energy production. It also recommended that the Secretary of the Interior determine ways to reduce the delays in geothermal lease processing and permitting.

Twelve days after the release of the Vice President’s report, the President signed Executive order 13212—Actions to Expedite Energy-Related Projects. This order established the White House Task Force on Energy Project Streamlining to ensure interagency collaboration.

In response to the Vice president’s report, the Secretaries of Interior and Energy convened at a conference entitled “Opportunities to Expand Renewable Energy on Public Lands” in November 2001. This meeting brought together over 200 senior ex-

¹ Princeton Economic Research, Inc., Review of Federal Geothermal Royalties and Taxes, December 15, 1998. (Figures expressed in 1998 dollars.)

² U.S. Department of Energy, Office of Geothermal Technologies, Strategic Plan for the Geothermal Energy Program, June 1998, page 21.

³ Princeton Energy Research Inc, Op. Cit., Volume I, page 17.

ecutives from industry with state and Federal agency representatives as well as a wide range of other interested groups.

This interest and initiative from the Administration has been supported by Congressional action. The House Resources Committee and its Energy Subcommittee have held hearings on renewable energy development on public lands, and specifically on geothermal energy issues. The Congress has included funding for key activities by the Bureau of Land Management, U.S. Geologic Survey and Department of Energy.

We appreciate the interest and attention of the Senate Energy Committee, and hope that these hearings will build upon the progress being made. We are pleased to say that there is progress being made, although we must report that there are still problems and obstacles to overcome.

Geothermal Energy on Public Lands

Whether and when the economic benefits of further geothermal development are realized will greatly depend upon the action, or inaction, of the Federal land management agencies. Today, about 75% of U.S. geothermal electricity production takes place on Federal public lands since that is where most of the resource is located. If we expect to see significant increases in geothermal energy production in the United States, we will have to access resources yet to be developed on public lands.

New geothermal development requires the timely and reasonable oversight of Federal leasing, permitting, and rights-of-way and environmental reviews by public land management agencies. Unfortunately, the previous administration's management of Federal geothermal resources was marked by bureaucratic delay and indecision by public land agencies; as a result, there has been a rapid decline in new geothermal energy development.

To understand the impact that delays can have, it is important to recognize that all of the estimates discussed earlier are nothing more than that—estimates. A company interested in developing a geothermal resource will have to invest millions of dollars in defining the resource before construction of a power plant can even begin. Unfortunately, there are few reliable surface exploration techniques for geothermal energy that can provide any degree of confidence. Confirmation and definition of the resource involves drilling, which means the investment risk is high and may remain high until after several wells have been drilled.

Geothermal wells are more expensive to drill than oil and gas wells, and if successful have a payback period substantially longer than oil and gas wells. They are drilled in hot, hard, fractured, abrasive rocks where problems are frequent and expensive. For "green field" development, resource definition work may account for as much as 40% of the cost of the project, and that considerable expense must be borne before the resource is sufficiently confirmed in order to secure financing for a project—making the risk to the developer even greater.

Companies will not take on such a considerable expense and risk without assurance that if they are successful they will be able to develop a power plant. To begin with, they need a lease to ensure their rights to develop the particular resource identified.

This brings us to bureaucratic problem number one: tens of thousands of acres of geothermal leases were applied for in the West, to which Federal agencies failed to respond. Lease applications languished, often for years.

Because this Administration has made renewable energy development on public lands a priority, and with Congress support, we have seen some progress. The de facto moratorium on geothermal development on public lands appears to be lifting. Last year, BLM was able to make substantial inroads on the lease backlog in Nevada, and the Secretary of Interior has committed the agency to eliminating the backlog entirely.

But while progress is made in some areas, BLM clearly still lacks the resources to eliminate the problem. In addition to a lack of resources to complete lease processing, and the necessary land-use planning and environmental reviews, BLM is still seeking the active cooperation of other agencies, particularly the Forest Service. Lease applications that have been pending for years, some for as long as a decade, still await action in Washington and other states. We understand that persistent pressure from the BLM has resulted in some progress being made on pending lease applications on Forest Service lands, but still, new leases are not being issued.

If you wonder why there are not more geothermal projects being developed in the West, these delays are a big part of the answer. If a company cannot obtain a lease, it will not spend millions of dollars on the exploration needed to determine whether or not there are adequate subsurface geothermal resources to support a geothermal power project.

Furthermore, once a company obtains a lease, the administrative processing of permit applications and environmental reviews can be expected to take years. As GEA testified before the House Resources Committee's Energy Subcommittee, it has been our members' experience that "environmental reviews have been unnecessarily extensive, costly, and repetitive; and in areas where an EIS has been completed, decisions by Federal agencies have been subject to years of delay and appeal."

During the House Resources Energy Subcommittee hearing in May of 2001, an official from Calpine Corporation, the largest geothermal energy company in the United States, testified about his company's experience in trying to develop geothermal resources on Forest Service land in Northern California. The area in question was leased by BLM in the 1980s, with the approval of the Forest Service, for geothermal development. In fact, the area is situated in the Medicine Lake Known Geothermal Resources Area, one of the first KGRAs to be designated after the Geothermal Steam Act was passed in 1970.

Despite the fact that BLM and the Forest Service encouraged development in this area for more than two decades, and the Bonneville Power Administration supported the project and agreed to buy the electric power, it took over seven years to complete the initial permitting and EIS on the project. The project was approved with some of the most extensive and onerous conditions ever imposed on a geothermal project. Despite approval of the project, the Calpine official declared in his statement before the Subcommittee "...if Calpine knew in 1994 what it knows now, it is safe to say that it never would have invested its time and capital in the Fourmile Hill project." He continued: "...Unless the situation changes, Calpine is unlikely to embark on a similar project ever again. This should concern this Subcommittee because many of the geothermal resources in the United States are located on Federal land. As long as the Federal permitting process remains as time-consuming and costly as what Calpine has experienced, private companies will be severely discouraged from developing these resources."

The message is clear: Extensive and expensive administrative processing is having a significant negative impact on geothermal development on public lands. The years of delay and uncertainty in moving forward at these sites sent shock waves through the geothermal industry. It sends the message to every company considering a new geothermal project on public lands—expect many years of arduous and expensive bureaucratic processing.

Geothermal Energy on Military Lands

In addition, there are millions of acres of public land in the West that are reserved for use by the military. These lands potentially hold significant geothermal resources. GEA fully recognizes the importance of the military's use of public lands, and believes that leasing or development should occur on military lands only with their consent, and under such terms and conditions as they deem necessary and/or advisable to meet the military mission.

However, where development occurs, GEA believes geothermal leasing and development on lands subject to military reservation there should be:

- (1) Uniform policies on securing and maintaining the leasehold estate;
- (2) Uniform royalty structures and consistency with policies affecting development on non-military lands; and
- (3) Centralized administration of the lease and royalty programs.

What we are asking for is that standard, uniform policies be developed regarding leasing and royalties on military lands so that a potential developer knows what to expect. The current situation, which allows ad-hoc decisions to be made on a case-by-case basis, deters geothermal development on military lands. Essentially, we believe geothermal resources should receive treatment similar to other oil, gas and mineral activities on military lands.⁴

A New National Resource Assessment is Needed

One of the proposals made during the last Congress was to direct a new national resource assessment by the U.S. Geologic Survey, and we strongly support this proposal. The importance of USGS resource assessment was affirmed by the National Research Council, which reports that, "effective and timely scientific information from [the USGS] programs is needed to help the nation determine its energy options through the year 2000 and beyond."⁵

⁴See 43 U.S.C. 158. The Engle Act of 1958 placed mineral resources on withdrawn military lands under jurisdiction of the Secretary of the Interior and subject to disposition under the public land mining and mineral leasing laws.

⁵Energy-Related Research in the USGS, National Research Council, 1998, National Academy Press, Washington, DC

The last assessment of the U.S. geothermal resource base was conducted in the late 60s and early 70s. A lot has happened in thirty years, including our fundamental understanding of the earth's geology. The lack of an up-to-date resource assessment is a fundamental barrier to expanded geothermal development in the United States. The USGS has initiated a new assessment for the Great Basin; however, Congress funded this work only for its first year. This assessment should be a priority. The USGS should be authorized, directed, and funded to complete an entire national resource assessment over the next three years.

Updating The Geothermal Steam Act

While we applaud the efforts made to date by the Administration to promote the development and use of geothermal resources on public lands, industry has begun to recognize that there are some fundamental problems with the Geothermal Steam Act that need to be addressed. The House Resources Committee proposed a series of amendments to the Steam Act during the 107th Congress that have been the basis for an on-going discussion about how to improve the underlying law. Following is a summary of our views on some positive amendments to the Steam Act that would help encourage new geothermal development.

KGRAs and Competitive Leasing:

To begin with, the Steam Act was written at a time when government experts were expected to determine where the best resources were located. The Federal Government would determine what areas would be designated "Known Geothermal Resource Areas," and these would be subject to competitive bidding. This method is not too different from the approach taken by the oil and gas leasing laws prior to their modification by Congress in the 1980s. Similar modifications should be made to the Geothermal Steam Act.

We recommend that KGRAs be eliminated as a criterion for determining where bidding is held on a competitive basis, and that the law should be modified to resemble the current oil and gas leasing statutes where lands are offered first for competitive bidding and then made available on a non-competitive basis. In states where there are expressions of interest in bidding, BLM should hold a competitive lease sale at least once every two years. Prior to scheduling the sale, companies should be asked to submit any nominations they may have for specific lease blocks upon which they wish to bid.

Royalties:

The current royalty requirements should be modified to reduce administrative costs and promote new power and direct use development. Instead of the complex and administratively expensive net back formula now used, royalties should be based upon a simple percentage of gross proceeds. We estimate that currently that would be roughly a 3-1/2% gross royalty. To encourage new development, Federal royalties could be "stepped," or be set at 2% of gross revenues for the first four years of production with an increase to 3-1/2% for the remaining term of the lease. Recognizing that local governments rely upon royalty payments for essential services, if a stepped royalty is adopted, we would further recommend that the state share of the royalty should be increased to 100% for the initial period.

For direct use operations, there should be no royalty or a simple, nominal fee. Experts on direct use operations believe that the current royalty requirement is perhaps the major impediment to greater direct use of geothermal energy in commercial, mining, ranching and similar operations in the West. Kevin Rafferty of the Geo-Heat Center in Klamath Falls, Oregon states, "The really telling statistic in my opinion is that we now have hundreds of direct use projects in operation across the West and we are only able to identify 3 that use resources on the public lands. The users are out there and so are the Federal resources but no one is using them. It seems pretty obvious that something is wrong." According to Mr. Rafferty, the high cost of direct use royalties was the most commonly cited problem at a recent meeting held to discuss how to expand geothermal energy use in the West.⁶

Similarly co-production of mineral by-products from geothermal sites should be subject to no royalty or a nominal fee. Mineral production from geothermal sites should be treated the same as mineral production elsewhere on the Federal lands. It is sadly ironic that under the existing law a Federal lessee producing metals from the fluid used in a geothermal plant would have to pay the Federal Government a royalty on the mineral (in addition to a royalty on the power), but producing that same metal by open pit mining on the public lands would not be subject to a royalty.

⁶Email communication from Kevin Rafferty, Associate Director, Geo-Heat Center, Klamath Falls Oregon, February 24, 2004.

There is significant potential to produce minerals from geothermal sites that should be encouraged. Doing so will not only help the economy and national security but will reduce the overall environmental impacts of mineral production.

Royalty Revenues:

A fundamental problem facing the Federal Governments' efforts to promote geothermal production on Federal lands is the lack of resources to support the efforts urgently needed by the BLM, USGS, and others. To help address the substantial backlog of leasing, permitting and related environmental and land-use reviews and to support a new geothermal resource assessment we would propose that the Federal share of geothermal royalties be dedicated to these efforts on a temporary basis.

For the next five years, the Federal share of geothermal royalties, bonus bids, and rentals should be used to fund the USGS resource assessment above, to eliminate the backlog in BLM planning, leasing and permitting activities, and to complete targeted environmental reviews for areas with significant new development potential. These environmental reviews should be conducted cooperatively with state and, as appropriate, tribal land authorities and should seek to minimize subsequent permitting and related project delays. For military lands, the share of Federal royalties should be dedicated for their geothermal development efforts.

Payments/Due Dates Lease/Reinstatement for Inadvertent Lapses:

Again, unlike the oil and gas leasing law, there is no flexibility in the existing geothermal statute for inadvertently late lease rental payments. If a payment were even one hour late, the law would impose termination of the lease. This is not only unreasonable, it can seriously disrupt lease development.

We would recommend that a standard 30-day grace period be applied for all payments due to the BLM, with a penalty as prescribed by regulations, similar to oil and gas.

Lease Consolidation, Unitization/Pooling:

For a number of reasons, including efficient development of the resource, a geothermal area should be developed under common terms and agreements. In some cases, this would mean lease consolidation where a single company has multiple leases. In other cases, this could mean unitization or pooling where there are multiple leaseholders or perhaps a mix of Federal, state or other leases.

The current law and regulations do not facilitate these developments. For example, the BLM cannot unitize a group of leases unless they have exactly the same lease terms. Also, they do not have the same degree of authority to prompt pooling arrangements or unit agreements as they have for oil and gas leases.

We would recommend that the law be modified to provide BLM the authority to consolidate leases that do not have exactly the same terms (issued same day, same royalty rate, etc'.) BLM should be authorized to renegotiate lease terms in order to have common terms for a lease block. BLM should also be given broader authority to initiate unitization or pooling agreements when it would facilitate development of the resource.

BLM as Lead Federal Agency:

There continues to be significant problems with leasing and development of geothermal resources where there are multiple agency jurisdictions involved. We applaud the efforts of the BLM to work cooperatively with the Forest Service and the Navy, and encourage all parties to work together. However, the law should be amended to provide BLM greater authority to ensure that timely decisions are made.

We would recommend that the Steam Act be amended to make it clear that BLM has lead status for all decisions under the Steam Act. BLM should be authorized to establish, by regulation, specific timeframes for actions by other agencies where their consent or consultation is required.

Agency Appeals Process:

Finally, appeals of agency decisions under the Steam Act should be expedited. The U.S. Forest Service has a more expeditious process governing appeals of their actions as compared to the BLM. The BLM should consider modifying its regulations to be more like the Forest Service. Specifically—

1) The BLM should adopt regulations similar to those of the Forest Service whereby only National Environmental Protection Act (NEPA) decisions can be appealed, such as a Decision Notice or Record of Decision. Implementing actions, such as the issuance of a permit or sundry notice, cannot be appealed. The current BLM regula-

tions allow for the appeal of the NEPA decision, and then for the further appeal of any permit that is issued subsequently. The delays can be endless.

2) Regulations should be modified to set a time limit for the Interior Board of Land Appeals (IBLA) to decide appeals. The regulations should provide that if the IBLA does not make a decision within the time limit, then the appeal is deemed denied. The Forest Service regulations set a 45 day time limit for deciding an appeal. In contrast, an appeal of the BLM Record of Decision for Calpine's Fourmile Hill geothermal project (referenced earlier) took 22 months before a decision was reached to deny the appeal.

Transmission

Since most geothermal power facilities must be located where the resource occurs, they are often in rural areas. The benefits of this coincidence for rural economic development are substantial and positive. In nearly every county that currently has a geothermal power plant, it is the largest taxpayer in that county and provides substantial long-term employment as well.

However, for the developer this adds a potentially significant problem—the location may or may not be near transmission lines. This obstacle needs to be recognized by the Federal agencies, and they need to place a priority on processing rights-of-way and permits for transmission lines. It also raises the need to plan transmission systems to optimize their availability for power production from geothermal and other renewable resources.

Just this week, the Departments of Interior and Energy issued a report entitled *Assessing the Potential for Renewable Energy on Public Lands*. This is an important and positive step forward for agency land-use planning efforts, and should provide important information for state, regional and Federal agencies that are undertaking transmission planning. When the USGS completes a new geothermal resources assessment, we expect its findings will provide even more reliable resource information for transmission planning purposes.

Conclusion

Geothermal resources on the public lands can contribute significantly to our Nation's energy supplies. Solid progress is being made through the initiatives of the White House, Secretary Norton and Secretary Abraham to achieve the expanded use of our geothermal resources. Congress' support for these efforts, and for funding these efforts, will be critical to their success.

We urge this Committee to consider amendments to the Geothermal Steam Act that will build upon the Administration's efforts. These amendments could help streamline the existing law, and ensure that the resources are available to eliminate the backlog of leasing and permitting decisions, and to complete a new national geothermal resource assessment.

Geothermal energy can help address the critical energy problems of our Nation. With the tax, regulatory and legal changes we have discussed, there would be a dramatic revival in the use of geothermal energy use for electric power production, greenhouse heating, aquaculture, and other purposes. This would reduce our dependence upon foreign oil, reduce our spiraling demand for natural gas, and provide a substantial and immediate stimulus for the economy.

Thank you.

[An attachment to Mr. Gawell's statement follows:]

Attachment #1

Table #1

STATES USING GEOTHERMAL RESOURCES TODAY
(Source: Geo-Heat Center, Oregon Institute of Technology)

- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Georgia
- Hawaii
- Idaho
- Louisiana
- Mississippi
- Montana
- Nevada
- New Mexico
- New York
- Oregon
- South Dakota
- Texas
- Utah
- Virginia
- Washington
- West Virginia
- Wyoming

Table #2

GEOTHERMAL ELECTRIC PRODUCTION POTENTIAL
(Based Upon US Geologic Survey Testimony⁷)

Alaska	250 MW
Arizona	1,000 MW
California	12,000 MW
Hawaii	250 MW
Idaho	540 MW
Montana*	400 MW
Nevada	2,000 MW
New Mexico	2,700 MW
Oregon	2,200 MW
Utah	1,350 MW
Washington*	300 MW
TOTAL	22,990 MW

[Mr. Gawell's response to questions submitted for the record follows:]

Response of Karl Gawell, Executive Director, Geothermal Energy Association, to questions submitted by the Committee on Resources, U.S. House of Representatives.

Question 1: You state that delays are having major impacts on new geothermal projects. What have been the major sources of delay in the experience of your companies? What can Congress do about this?

Reply: The cost of any project escalates when companies face delays, particularly delays involving years in duration. Moreover, when timing of project development cannot be anticipated with any accuracy, additional delays are incurred because contractors and equipment may require many months of lead-time. This latter problem is complicated further by the fact that when energy supplies are tight, and the need for new development is the greatest, drilling rigs or other equipment will be the most difficult to find and the most expensive.

While GEA has not done a systematic study of these problems, it is clear that simply the delay in having decisions made is a common theme. Here are examples of what I have heard as some of the most common types of problems:

- PROBLEM: BLM cannot issue a lease or permit because it first has to conduct a land-use plan adequacy review. These reviews have been taking a year or

more to complete, and can result in further delays if plan modifications or amendments are found necessary.

To begin with, BLM needs adequate funding to complete the required analysis under NEPA, FLPMA and other relevant statutes. In particular, BLM could prepare pre-lease environmental and land-use analyses in areas with a high potential for development. This would be most successful if it was coupled with a new USGS resource assessment to help define these areas. These pre-lease reviews should form the basis for expedited action on leases and permits for areas covered by the analysis.

- **PROBLEM:** The resource cannot be developed because there is a lack of coordination between Federal agencies. For example, both the Navy and the BLM have issued leases in the Fallon area of Nevada. However, it appears that the resource may underlie additional lands as well as Native American lands. Without a coordinated leasing plan, there will be little development since there are now multiple parties with competing rights to the resource and there may possibly be additional parties in the future.

As indicated in our testimony, the BLM and the military services should have consistent and coordinated policies towards development of geothermal resources on the public lands.

- **PROBLEM:** Even in the best of cases on the public lands (when a project is on single agency land) there are still multi-jurisdictional approvals required for the project. At the Federal level, a project would typically involve the land agency, EPA, U.S. Fish and Wildlife Service, and the National Trust for Historic Preservation. In addition, approvals for the project may involve half dozen or more state entities such as the state energy or land board, air quality control board, and water quality control board. Finally, local jurisdictions may require various permits or approvals for roads, transmission lines and related facilities.

While by law each of these reviews may be intended to focus on different, specific issues, we often find that the same issues are raised over and over again throughout the process. For example, during consultation under Section 106 of the Historic Preservation Act, critics of the Fourmile Hill project submitted a lengthy brief that raised largely issues that had been raised and resolved previously during the NEPA or land-use planning process.

Federal agencies should be directed to enter into Memorandum's of Understanding (MOUs) about geothermal leasing and development that clearly define each agency's role, and they should be encouraged to work with state and local agencies as well in achieving clear coordination of their processing, elimination of duplication, and sharing of information between themselves regarding issues addressed and resolved.

- **PROBLEM:** Of particular concern in recent years is the protection of Native American historical, cultural and religious sites through the Section 106 consultation of the National Historic Preservation Act. This consultation can be complicated and lengthy, but too often is left to late in the process.

This consultation process should be conducted earlier and these issues resolved before companies have to make major financial commitments to site development.

Native Americans are increasingly engaged in consultation regarding projects on public lands. The Congress may wish to consider whether Native American Tribes that operate similar to units of local government near geothermal projects, or that have demonstrated cultural and historic ties to the lands, should share in the Federal royalties from the project. As part of its trust responsibilities, dedicating a small portion of the Federal share for such purposes would appear appropriate, and would not reduce funding to state and local governments.

- **PROBLEM:** In some cases, particularly regarding Forest Service lands, leases simply are not issued because the surface management agency fails to give consent. It has been the policy of the Forest Service in the Pacific Northwest to take no action on leases, and as a result, lease applications have simply languished for years and years.

The Forest Service should be encouraged to participate more effectively in achieving the clear policy goals of the Administration, particularly with respect to the development and use of renewable energy resources on public lands. Also, as noted in our testimony, BLM should be the lead agency for geothermal decisions. Other agencies should have clear timeframes to make decisions, and BLM should be given authority to ensure that agencies are held accountable for inordinate delays.

- **PROBLEM:** Then, even if you proceed past all of the hurdles, there is a final delay at the Interior Board of Land Appeals. The IBLA can take two years or more just to hear an appeal of an agency decision, unlike the Forest Service appeals process.

As we indicated in our testimony, we believe the Department of the Interior should adopt appeals procedures similar to those used by the Forest Service to ensure expedited action on appeals of agency decisions.

- **PROBLEM:** In areas with geothermal leases, too often there is a complex patchwork of existing leases with different owners that creates its own obstacles to development. Before development will usually be able to occur, all parties with rights to the resource need to come to a common agreement about its development, financial returns, etc.

While BLM could play a more constructive role in encouraging unit development and pooling, it lacks the resources and questions the extent and flexibility of its authority to do so. In the future, the patchwork of leases could be avoided by moving to a leasing system that does not depend upon the Federal Government and know where high value resource are through designating KGRAs, but uses industry nominations and competition to achieve these results.

Question 2: You indicate your companies have been involved in the efforts of the Administration to promote renewable development on public lands. In fact, you appear to laud these efforts, but some have argued that they are merely window dressing. What would you say to these skeptics?

Reply: We have no doubt about the commitment of Secretary Norton and Secretary Abraham to encouraging the greater use of renewable energy resources on public lands. They have personally been involved in the Summit meetings, and have directed changes in their agencies that are having real, positive results.

For example, at the Department of Interior, the Secretary has roughly doubled the resources applied to BLM's geothermal program. This has allowed significant progress to be made in the lease backlog. One result is that BLM held the first major competitive lease sale in Nevada in many years.

Beyond resources, they have directed their agencies to put together a fundamental database on renewable energy on the public lands. Their recent report is an important first step in advancing renewable development in the West. While you might look at the information it presents as fairly fundamental—for example identifying the areas now under geothermal leases in 11 Western states—it is symptomatic of the neglect that renewable energy resources have faced that this information was not systematically available previous to this effort.

Admittedly, there is more that needs to be done to encourage tapping the renewable energy potential of public lands, but the efforts of Secretary Norton and Abraham—which were undertaken at the encouragement of the Vice President—deserve support and praise.

Question 3: Your testimony indicates that the USGS resource assessment was conducted in the late 60s and early 70s. Is this information not still useful, and what would be gained by a new resource assessment?

Reply: The primary motivation for the new Great Basin study is the critical need to update the USGS assessments produced in the late 1970s. This is equally true for a Western U.S. geothermal resource assessment. Although these assessments provided invaluable information on the size and location of geothermal resources in the U.S., they were based on a relatively limited understanding of the nature of active geothermal systems and on incomplete data from identified geothermal systems. Over the past two decades many geothermal systems have been studied in detail and the scientific investigations of geothermal processes have made significant advances. At the present time, DOE plans to rapidly expand the use of geothermal resources, and the geothermal industry is making determined efforts to ensure that geothermal energy is an important component of the Renewable Portfolio Standards for electric power generation that are being implemented by many western states. In this rapidly changing energy environment, a new assessment of the moderate- and high-temperature geothermal resources of the Western U.S. is critical to the future development of geothermal resources. Specifically, a new assessment can answer some fundamental questions. How large are the nation's geothermal resources? Where are they located? What percentage of these resources is located on public lands, and what are the impediments to development? How much of the identified geothermal resource can be exploited with existing technology, and how much will require the commercialization of new technologies? What is the likely size of undiscovered resources, and where will they be located? Answers to these and other questions are needed to provide Federal, state and local governments, as well as the geothermal energy industry, with a roadmap for future development of a significant source of renewable energy.

Unfortunately, the funding for the Great Basin Resource Assessment, which would have been the first steps in a new Western U.S. geothermal resource assessment, was not appropriated and the project is now at a standstill. While both the

House and Senate provided some funding, no funds were approved during the House–Senate Conference Committee’s consideration.

Question 4: You discuss the need for funding or appropriations—with respect to the USGS resource assessment. Given your background as a former Interior Appropriations staffer, how would you justify this to the Appropriations Committee?

Reply: First, I would point out that the USGS has responsibility for conducting energy and mineral resource evaluations and has been appropriated nearly \$80 million annually for energy and mineral geologic resource assessments. Unfortunately, their budget does not identify that any of these funds are supporting renewable energy resource assessments.

As the USGS points out, its energy resource programs are important to the Nation. In the agency’s own words, “Our Nation faces the simultaneous challenges of increasing demand for energy, declining domestic production from existing oil and gas fields, and increasing expectations for environmental protection. The Energy Information Administration (2000) forecasts that worldwide energy consumption will increase 32 percent between 1999 and 2020 because of growth of the world economy. Forecasts indicate that in the same time period, U.S. natural gas consumption will increase 62 percent, petroleum consumption will increase 33 percent, and coal consumption will increase 22 percent. The U.S. Geological Survey provides the objective scientific information our society needs for sound decisions regarding land management, environmental quality, and economic, energy, and strategic policy.”

Geothermal energy has significant potential to contribute to our national energy supply needs, but the antiquated USGS resource assessment is a significant impediment. As noted in the response to question 3, there is a compelling need for a new geothermal resource assessment. If the USGS would ensure that even 5% of its energy and mineral resource evaluation was applied to renewable energy resources, and in support of the Administration’s priority on utilizing renewable energy resources, there would be adequate funding to conduct and complete a new geothermal resource assessment within a few years.

The CHAIRMAN. Mr. Gawell, I will just start with you. When you talk about the underlying act, the generic act, what are some of the changes or possible changes that you would propose that we look at in that particular act?

Mr. GAWELL. Well, in my testimony I go through several. But to begin with, I think the first change is to move away from a Federally designated KGRA system for leasing. I think the ultimate debacle for KRTAs is, you know, the Medicine Lake project, which we talk about, which was leased, one of the first Known Geothermal Resource Areas leased after the law was passed in 1970, ’71. The first facilities to develop there may come on line in another year or two. So even in an area where the Federal Government, the land use plan designated as high priority, there is still lots of administrative problems.

But most importantly, we have moved beyond the ability of the U.S. Geologic Survey to determine where the resource is. When you look at the resource maps being produced now in Nevada, you find geothermal resources all throughout the State, fairly high temperature ones. If the U.S. Geologic Survey and the BLM are going to figure out where they were, they would have to have a drilling program. It would sort of go back to quasi-socialism and government here. You would have to have a very major effort for them to designate it.

This was one of the problems we ran into with oil and gas in the Seventies and Eighties. When we moved to a system driven more by industry nominations, where industry nominates tracts that are put up for competitive bidding, those that don’t go for sale competitively are available, noncompetitively, and it has in a sense the knowledge of a wide range of people through industry help decide where to move things forward instead of waiting for government ef-

forts, which aren't funded, which don't occur, and which, frankly, have also created some situations where we now have multiple leases within essentially the same resource area. So you have one basin and maybe four or five holders, because when it was first leased, the BLM didn't understand that it, in fact, was one area. So move away from the KGRA system.

Also, they need enhanced authority to deal with some of the problems that the old law created. They need enhanced authority for dealing with unitization in these fractured areas, a pooling of resources between again fractured leases, and maybe there's a State lease involved.

The Geothermal Steam Act, when you read it, is actually very strict. For example, it does not allow BLM to unitize unless every condition in the leases involved in the unit are identical. That has created serious problems in terms of being able to get production out of areas, even where we know the resource is.

I think there are several areas like that outlined in my testimony, which I think are fundamental, and which would help us move forward and really gear the Act more toward developing these resources based upon our knowledge and science today.

The CHAIRMAN. I'm sure that once I've had the opportunity to go through your written testimony in detail, we'll have some further questions that we can run by you.

Mr. Wood, I would like to kind of go back to the line of questioning that we had with the previous panel. In that instance, we were talking about the impact of American business on the high price of gas. I know that some of those costs are being passed on to the farmers. Just within the last few days, we have had a number of conversations with the producers of fertilizer and what the impacts are.

Can you go into a little bit of detail about what some of the impacts are that farmers in your area and throughout the country are facing with these increased costs?

Mr. WOOD. Thank you, Mr. Chairman. I would be glad to do that.

I would like to beg of you to go back to my own farm, where we're looking at input costs this spring. The price of nitrogen fertilizer that we use very heavily on corn, last year we paid \$285 a ton. Right now, if we could buy it, it's probably \$425 a ton—if we could buy it.

Now, you have to take into consideration that American agriculture has made several adjustments. Through the use of hybrid corn varieties, we now are producing—we have doubled the corn production in the United States while using 32 percent less nitrogen, because we have changed that plant so it can use nitrogen that much better.

The cost of the dry fertilizer, if you will, is up at least 15 percent. The cost to plant an acre of corn—the direct cost, not the indirect costs, but the costs of seed, fertilizer, management enhancement, materials—in our area is calculated at \$112 an acre, as compared to about \$87 an acre last year. That gives you a relative range of where that impact will hit. That would transfer probably a cost per bushel of corn, an increased cost per bushel of corn, at somewhere around 15 cents.

The CHAIRMAN. As far as your ability to compete in this international market, there is no question that this has a definite impact. Your ability to compete with some of the same areas that our previous panel was talking about, some of the same markets, is going to be that much more difficult. And with the price of commodities in this country right now, I don't think our farmers can take this kind of a hit in the middle of all of this.

I appreciate the Farm Bureau and your testimony. This is something that, being a member of the Ag Committee, I am very familiar with, but some of the members of the full Committee may not have that kind of information coming back to them. So it is extremely important that you share that with us. I appreciate that. Thank you.

Mr. WOOD. I thank you very much for the opportunity.

The CHAIRMAN. Mr. True, in response to some of the testimony we've had, I would like you to kind of give me an idea of what the impact is on an independent oil producer of some of the rules and regulations and fees and things that we dream up here. How does that impact you, and how does it impact the ability of the independents to go out and produce more of these resources that we so desperately need?

Mr. TRUE. Mr. Chairman, thank you for that question. It is a significant impact, and it's not only on gaining access to the particular lease to drill; it's the whole process by which we have to go through in order to determine whether or not a lease is prospective.

For example, the industry now is in litigation in a number of different areas over the simple, what we believe to be, almost no impact, of going in and doing seismic, where you go in and either use a big thumper truck, where you would simply do a large impact on the ground and then measure the electric waves as they come back up, or we go and drill shallow shot holes and set off an electric charge, through the entire process then of trying to build a road to gain access to a lease, and build a location.

I recently talked to one of IPAA's members who actually found a gas well and then was over a year getting a permit to build a gas line to simply take that gas from that well and put it into a regional gas line and get it out. So it's this entire process that we're looking at that impedes significantly our ability to, in a timely manner, gain access to the resource and then bring it out.

The fees aren't particularly damaging at this point, I would argue, but the cost of doing the environmental impact statements and those types of things, and the delays in being able to process those, represent a significant problem to the industry. We're talking about millions of dollars for EIS's now.

The Powder River Basin has been mentioned several times today. The new EIS that has been recently completed, one of the environmental groups late last year said, regardless of what the EIS said, they were going to sue over the results of it. So we anticipate litigation in that regard.

I have not confirmed this number, but I'm told that in some BLM offices—excuse me. I'm not even going to make reference to that. But the litigation issue is significant, not only to industry but also to government, because at every turn we seem to be litigating.

So what I'm trying to do is paint the picture that it's not a simple solution. It's the mosaic of all of these different regulations that are representing now a significant barrier in order for us to bring the resource on line.

The CHAIRMAN. Thank you.

Mr. Kind.

Mr. KIND. Thank you, Mr. Chairman.

I want to thank the panel for your testimony here today. I apologize that I was stuck in another Committee hearing, as is usually the case around here, with dual responsibilities or multiple responsibilities. But we do appreciate your testimony.

Mr. True, let's stay with you for a second, because we have been receiving, at least my office has, some information from outdoor recreationists, outdoor sports groups, in regards to the concerns they have with a couple of the BLM offices out in the Rocky Mountain area in regards to the waiver of certain protections as it relates to hunting and fishing and things of that nature. I'm not asking you to comment on the specific merits of those allegations, but do you think there is a perception problem being created out west that you're getting some feedback on, that is a source of concern for you and the industry?

Mr. TRUE. Congressman, I have been in the oil and gas business in the Rockies for 30 years. Probably a third of our activities or more are on public lands exploration. I think the opposition is growing, but I don't think the practices are changing on the ground. I think the industry has had a great working relationship with sportsmen, with agriculture. I think it's the influence of other groups coming in and creating a sense of division, where we have a history—we have decades of history of working together in multiple use in the Rockies.

So in answer to your question, I think as a practical matter on the ground, there is no difference. The people who work in the oil and gas business are sportsmen. That's why they live in the Rockies. They like living there. They are very conscious of that. So I think, as a practical matter, we're working together well.

Mr. KIND. Just so I understand what you're saying, from your perspective you think it's more a matter of the outside groups trying to reshape or change the public perception in the area, as opposed to specific decisions being made within the BLM offices.

Mr. TRUE. I agree, yes.

Mr. KIND. That's what your testimony is. OK.

Mr. Sweeney, let's move on to you. Since our Subcommittee has had numerous hearings in regards to split estate lands and some of the problems occurring with coalbed methane and private property owners out west, do you think the Federal Government has been remiss in not assuring that surface owners be notified of lease issuances?

Mr. SWEENEY. As I said in my statement and in our remarks, I do believe the BLM has a responsibility to notify surface owners of lease issuances. This has not happened. In a recent letter that we had from, as I said, the Director of the BLM, Kathleen Clarke, she stated in her letter that the BLM did not intend to notify surface owners prior to lease issuance because they didn't want to spend

the time to find the ownership and know the surface owners, that it would cost too much money.

I guess, in our mind, when we have the Federal Government owning the minerals over the private surface, that it ought to be the responsibility of the government to tell surface owners of the intention to lease when that action has and can have such a dramatic effect on a persons' ranch or farm. That seems like a reasonable request to be made.

Mr. KIND. So no notification is going out right now?

Mr. SWEENEY. You get public notification of lease sales that would be issued in the record for any citizen who would know of a lease sale. But if you are a landowner, there is no record that, in fact, the lease is on or under your surface, directly on your surface, to you. So I think one of the issues is—and this goes beyond just the lease issue—is more consultation directly with the person whose land is going to be directly affected by those lease issuances, not just a general notice which, if you missed it, in terms of a busy time, calving or doing something else and didn't know that that was there—and this happens a lot. I mean, people don't know it's—

Mr. KIND. Let me approach it a little differently. Do you think this is a matter of a policy decision being made within BLM, or is it a matter of lack of resources in their ability to do the outreach, or perhaps implement the type of landowner protections that you're advocating?

Mr. SWEENEY. I think there is definitely a resource issue, in terms of needed resources to continue to implement things that will help in the notification of landowners and other issues. So there is definitely a resource issue.

I think also, because of the expanded nature, particularly in some cases of coalbed methane, you have more conflicts I think developing between surface landowners, ranchers and farmers and the coalbed methane development because of the extent of the development and the impact on the extraction of the water. Therefore, there is a greater need for outreach and to deal with surface owners on that question.

Mr. KIND. Thank you.

Mr. Chairman, has my time expired? OK. Thank you all.

The CHAIRMAN. You heard the bells go off. We are going to recess the Committee. Just so the members know, we have three votes, so it will be about 30 minutes before we return. I apologize to the panel and to the next panel, but don't control when they call votes.

We will return as quickly as possible. I would ask the members to cast your votes and return to the Committee as quickly as possible.

[Recess.]

The CHAIRMAN. I call the hearing back to order. I apologize to our witnesses for the delay.

I will recognize Mr. Kildee for his questions.

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

First of all, I want to welcome a constituent, Mr. Wayne Wood, the president of the Farm Bureau of Michigan. He and I had breakfast together about four or 5 days ago, I think, and it's good to have you here, Wayne. I had a chance to tour the ethanol plant

right after that breakfast and was very impressed with what they're doing there with the ethanol.

Also, prior to that, I toured the sugar plant there, where a saw a great use of energy to convert the beet into sugar. So that area of Michigan is both producing fuel and consuming fuel.

Could you answer this. The amount of ethanol which is mixed in with gasoline now, could that be significantly increased using the present engines that we have?

Mr. WOOD. Thank you, Congressman. To the distinguished gentleman from Michigan, it was our pleasure to have breakfast and take you on a tour of those facilities to see how we're adding value to agriculture, putting some money in farmers pockets, which is very important.

We could probably raise the level of that. It's more a situation of getting the engines so they burn that correctly. I'm not sure how far we could raise it. You know, with soy diesel, we have been at various levels, including 20 percent, and sometimes 10 percent. I think it's more a cost factor, because of the cost of the ethanol.

That plant that you toured in Caro is much more efficient than most of the ethanol plants in the United States. They're getting more gallons of ethanol out of a bushel of corn which will enhance the opportunity for ethanol as we move forward.

Mr. KILDEE. We can probably look forward to even greater efficiency, can't we? Aren't they way ahead of where they started in Minnesota?

Mr. WOOD. Minnesota and the Dakotas, yes. We certainly can look forward to greater efficiency. We can look forward to broadening the base of materials that are used to generate that ethanol.

We are using the corn, and the corn is then used for livestock feed, as you witnessed there.

Mr. KILDEE. Right.

Mr. WOOD. There is maybe an opportunity to use the corn stover, which would provide for a lower cost input than the current grain itself that the livestock ultimately use.

Mr. KILDEE. I was impressed by the fact that nothing is really wasted, is it, when they—

Mr. WOOD. Nothing is wasted. They recapture the water out of the process. All we're wasting right now is some heat that goes in the air. If we can figure out how to get that, we'll do it.

I would just indicate to the Committee that that's a great demonstration of industry and farmers working together, because both of those plants that you talked about have farmer ownership involved, and the ethanol plant also has a private company to enhance that efficiency, also.

Mr. KILDEE. Let me ask you this, too, Wayne.

Is there any special or unique difficulty that agriculture has in passing on the increased cost of energy?

Mr. WOOD. I'm not sure whether it's unique. It's pretty special if we get the opportunity to pass on those costs of energy. So far we haven't mastered that ability. It is something we certainly talk about, but we've not been able to pass those on.

We make decisions on how to best use those inputs when they cost more money, but there is no opportunity to pass it on. It comes out of the line that's called "family living."

Mr. KILDEE. Thank you very much.

Mr. WOOD. Thank you for the opportunity.

Mr. KILDEE. Thank you for all you do in Michigan.

The CHAIRMAN. Thank you, Mr. Kildee.

Before I excuse this panel of witnesses, I will again say there are other members that have questions that they will submit in writing to you. If you can answer those in a timely manner so that they may be included in the hearing record, I would appreciate it.

Mr. Sweeney, if you would provide that letter for the record as well. I will have a conversation with the Director of BLM about the contents of that at my first opportunity.

I want to thank you. I apologize to you for the delay that we experienced here this afternoon, but I appreciate your testimony and the answers to the questions. I will excuse the panel. Thank you.

Our fourth panel is Jaime Steve, Dr. Rollin Sparrowe, Dave Alberswerth, and William H. Carlson. Before you guys get all settled in, if I could have you stand and raise your right hand.

[Witnesses sworn.]

Let the record show that all the panelists answered in the affirmative.

I thank you all for being here. I appreciate your patience in waiting for your turn at the witness table. Mr. Steve, if you're ready, you can begin.

**STATEMENT OF JAIME STEVE, LEGISLATIVE DIRECTOR,
AMERICAN WIND ENERGY ASSOCIATION**

Mr. STEVE. Thank you, Mr. Chairman.

My name is Jaime Steve and I serve as Legislative Director of the American Wind Energy Association, based here in Washington, D.C. The companies I represent include GE Wind Power—that's General Electric—FPL Energy, AEP [American Electric Power], PacifiCorp and Vestas American.

I have a relatively short statement, but I'm going to cut to the chase because there have been a lot of witnesses and you've been patient as well. So there are only two quick points I want to make about wind in general.

It used to be a California industry only. We are now in about 27 States, providing power for approximately a million homes, the equivalent of power for about a million homes. One of the interesting ways we can do that is because we have access to an existing tax credit, which expires at the end of this year. So it's very important to the industry that we extend that credit to continue the alternative energy development that we're doing, and to continue a situation under which ranchers and farmers and other landowners can gain as much as \$3,000 in royalty payments per windmill, per year, for a period of 20 years. So that's pretty significant for folks that are having a hard time getting by right now.

That is really important because, for a lot of farmers and ranchers, they have referred to this as a giant—every windmill is a giant 401(k) on their property that does not go down in value. That's particularly important because, as one Member of Congress I have heard in the past, who shall go unnamed, said in a very thick regional accent, "Everybody's 401(k) is now a 201(k)." You might recognize the accent.

During the last year, the wind industry worked collaboratively with the Bureau of Land Management to bring real world experience to the Bureau's recently released guidance for processing right-of-way applications for wind energy site testing and monitoring facilities, as well as applications for wind energy development projects on public lands administered by BLM. I am pleased to inform you that this was a very positive experience, almost an enjoyable experience, working with BLM. There's probably not a lot of people who can bring that testimony to you.

During this exchange, we learned much about BLM and BLM officials came to understand and appreciate the practical concerns of wind energy developers.

The BLM guidelines that emerged from this process included a call for a minimum rental payment formula under which wind turbines placed on Federal lands would provide about \$2,300 per megawatt of installed power. It's \$2,300 per megawatt. Most new wind turbines are greater in size than one megawatt. They're in the range of 1.5 megawatts, sometimes 1.6 megawatts of power. They would contribute significantly more than \$2,300 per year to the Federal treasury for a period of at least 20 years.

My simple reason for being here today is to ask that other land management entities, such as the U.S. Forest Service and the U.S. Fish and Wildlife Service, build on the successful work that has already been accomplished by the BLM in this area. My understanding is that the Forest Service is already on the road to adopting guidelines very similar to those of the BLM.

That is important to us because the Forest Service operates in the northeast, whereas BLM most operates out west, so we have some developers operating in the east that would like to see these same kinds of guidelines applied to those areas.

In conclusion, expanding U.S. wind development into appropriate areas of Federally owned land will allow environmentally responsible development and help our country meet a growing portion of our pressing energy needs with a clean, nonpolluting, domestically produced resource that also provides high-tech jobs and income to farmers and ranchers.

Thank you.

[The prepared statement of Mr. Steve follows:]

**Statement of Jaime Steve, Legislative Director,
American Wind Energy Association**

Chairman Pombo and members of the Committee, my name is Jaime Steve. I serve as Legislative Director for the American Wind Energy Association based here in Washington, D.C. Companies that I represent include GE Wind Power, FPL Energy, Inc., AEP (American Electric Power), PacifiCorp and Vestas American.

Increased use of clean, domestic wind energy on both private and public lands is a bipartisan issue with broad support in Congress and from the Bush Administration. For example, in both 1999 and 2001 Congress acted to extend the wind energy Production Tax Credit (PTC)—a key component in financing new wind projects. An additional three-year extension of this tax credit was contained in last year's House energy bill (H.R. 4). This provision was also contained in the Bush-Cheney energy plan and the last two Bush budget proposals.

This tax credit, coupled with more than 80 percent reductions in wind power costs since the 1980's has enabled wind to compete almost head-to-head with conventional energy sources in regions with good wind resources. In 2001 alone, Texas saw more than 900 megawatts (MW) of wind power come on line. This translates into more than \$1 billion in economic activity and roughly the amount of electricity needed to power 200,000 homes. At the same time, hard-pressed Texas farmers and ranch-

ers leasing small portions of their land for wind development are gaining annual payments of about \$3,000 per windmill, per year, for at least twenty years. For financially struggling landowners, high-tech wind turbines placed on their land are essentially giant 401K retirement plans that never decrease in value. In addition, these wind developments are contributing to the tax base of local governments. The simple point is that wind energy is real and it is spurring significant economic development in rural America.

In the early 1980's wind energy development was essentially a one-state business—California. Today, utility-scale wind power facilities are in 26 states¹ producing nearly 5,000 megawatts of pollution-free electricity. Most of these projects are on private land.

BLM Guidelines

During much of last year, the wind industry worked collaboratively with Bureau of Land Management (BLM staff) to bring real world experience to the Bureau's recently released guidance for processing right-of-way applications for wind energy site testing and monitoring facilities, as well as applications for wind energy development projects on public lands administered by BLM. I am pleased to inform you that this was a positive and even enjoyable experience.

During this exchange we learned much about BLM and BLM officials came to understand and appreciate the practical concerns of wind energy developers.

The BLM guidelines emerging from this process included a minimum rental payment formula under which wind turbines placed on Federal lands would provide about \$2,300 per megawatt of installed power. Because most new wind turbines are greater than one megawatt in size, they would contribute more than \$2,300 per turbine per year for twenty years into the Federal treasury.

My reason for being here today is simply to ask that other Federal land management entities—such as the U.S. Forest Service and the U.S. Fish and Wildlife Service—build on the successful work of the BLM. My understanding is that the Forest Service is on the road to adopting guidelines very similar to those of BLM.

Transitional issues

In addition, the industry asks that any rules that may flow from new legislation be sensitive to any financial investments in potential projects made prior to enactment. Specifically, we are concerned that any companies now working to develop sites on Federal lands should not be unnecessarily delayed by requiring developers—who have already put in years of preparation—to start all over again under a new application process.

Conclusion

Expanding U.S. wind development into appropriate areas of Federally owned land parts of will allow environmentally responsible development and help our country meet a growing portion of our pressing energy needs with a clean, non-polluting, domestically produced resource that creates new high-tech jobs while also generating revenue for the Federal Government. Thank you.

The CHAIRMAN. Thank you.
Dr. Sparrowe.

STATEMENT OF ROLLIN D. SPARROWE, PRESIDENT, WILDLIFE MANAGEMENT INSTITUTE

Mr. SPARROWE. Thank you, Mr. Chairman.

I am pleased to be here representing our Institute, but would point out that I have been working with quite an array of both fishery and wildlife groups on assessing energy impacts and coming forward with some positive positions on ongoing work. There is so much going on all of a sudden throughout the Rocky Mountains that we have not been in the game, so to speak, and we're very pleased to be here and have a chance to share some thoughts.

¹Alaska, California, Colorado, Hawaii, Iowa, Kansas, Massachusetts, Maine, Michigan, Minnesota, Montana, Nebraska, New Hampshire, New Mexico, New York, North Dakota, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Vermont, Washington, West Virginia, Wisconsin, Wyoming I would like to address two issues specifically involving the proposed legislation and the ability to develop wind on Federal lands.

I have provided some fairly extensive testimony and offer to add more, to address the Committee's attention to a couple of important websites where there's lots of information on this.

We do not oppose the orderly development of energy. We realize it's going ahead. Some of us have more than 10 years experience on the Upper Green in Wyoming; others of us more than 20 years back involved with some of the first booms in Colorado and Utah and other things, mostly in a research and evaluation capacity, trying to deal with fish and wildlife.

We are unhappy to find that our profession, as well as industry and BLM and everyone else involved in this, really doesn't have any more answers than we had 20 years ago for a lot of these issues. There is a lot of unknown about the effects on fish and wildlife, and we are concerned that it may be underestimated as the pace has accelerated so quickly.

The stakes are high for hunters and anglers. You take a place like the Green, which is a very important—I happen to be a part-time resident out there and have had quite a bit to do with it over the last decade. Almost 100,000 mule deer, pronghorn, elk, moose, some of the best remaining populations of sage grouse, and some very rapid expansion of development that has gone from traditional fields to in-fill projects, to now coalbed methane in the area, and quite a bit more is projected.

We have tried to connect with industry and BLM, the Department of Interior. We held a summit last June in which eight of our organizations got together with about ten oil and gas companies, some ranchers and BLM officials, with both Kathleen Clarke and Rebecca Watson, and we talked about what our respective needs were and whether there might be some common ground.

One area of common ground was that we all felt that BLM had inadequate resources to satisfy many needs, not just accelerated leasing, but also stewardship of renewable above-ground resources.

Just recently, on March 5th, we cosponsored, with the Isaac Walton League and the University of Wyoming and the Wildlife Conservation Society, a science-based, nonadvocacy meeting in Pinedale, Wyoming, to have the researchers and scientists give us the real scoop on what they had found in some early studies, some 2-year studies, that provide a baseline for information on those very important populations in the Green River.

This is a key example right now, and a very timely thing. We had a very positive meeting, a good exchange of what we know, and we came to know better what we don't know. We wanted that to be helpful to BLM, the Forest Service, game and fish, the responsible agencies that now are going forward with a brand new resource management plan. There's a lot of attention to this one because of the high profile of the fish and wildlife involved.

In this key time there have been some things in the early stage here. Some migration corridors, four to be specific, that are very important to the future existence of these herds. So there are some things that are laid out before us that could be done right now. In addition to what I'm sure you and others may be tired of is the call for monitoring and evaluation over time. We know that has to happen and it's important, but there are some real things we could do right now.

The bottom line is that there are not resources available to the State wildlife agencies, and we think also to BLM as a management agency, to effectively deal with the large scope of what is going on.

Our kinds of organizations, fish and wildlife organizations, not only are ready to partner on the ground and do some things, but I think we can be of help in support for BLM budgets, as well as some funding, if that can be found somewhere, to make it easier for the States to do their job and cope with the future of the sportsmen's interests in maintaining the herds and the fisheries.

Thank you for the opportunity to comment.

[The prepared statement of Mr. Sparrowe follows:]

**Statement of Dr. Rollin D. Sparrowe, President,
Wildlife Management Institute**

Introduction

Mr. Chairman, I am pleased to testify on behalf of the Wildlife Management Institute (Institute) regarding the orderly development of energy resources on public lands. Our Institute, established in 1911, is staffed by professional wildlife scientists and managers. Its purpose is to promote the restoration and improved management of wildlife and other natural resources in North America.

We commend your Committee for initiating this dialog and for attempting to address the social, economic and environmental impacts of energy development as we enhance our energy security. We are concerned that the seriousness of the impacts energy development may have on wildlife and other natural resources may be underestimated. We urge your Committee to lay the groundwork that will lead to a plan for long-term and orderly development of energy resources with the least amount of impact on wildlife and other natural resources. In this time of significant challenge to our society, we respectfully suggest that stewardship of living resources is essential to our Nation's security.

Our Institute believes exploration and development of energy resources may seriously impact wildlife and other natural resources. Though many site impacts are not fully understood, it is clear that energy development projects represent a major hazard to wildlife in some of the nation's most imperiled habitats. We have participated for almost a decade in public processes concerning traditional oil and gas development in Western Wyoming. Some of us had experience with earlier energy projects in Colorado, Wyoming, Utah, New Mexico, and Alaska. It is significant that many of the same questions about fish and wildlife impacts are with us twenty years later. Many of our current concerns are about the pace and scope of development in the Upper Green River of Wyoming, but other areas are growing in importance.

For example, potential coalbed methane (CBM) deposits exist in widespread locations in Alabama, Arizona, Colorado, Indiana, Illinois, Iowa, Kansas, Kentucky, Michigan, Montana, New Mexico, Oklahoma, Ohio, Pennsylvania, Texas, Tennessee, Utah, West Virginia and Wyoming; and there are thousands of proposed CBM development projects across the United States. The process of extracting methane gas results in huge amounts of water of varying quality being brought to the surface at each well site. This massive amount of ground-water removal can negatively influence amount and quality of important underground aquifers, and run off can effect streams.

For traditional oil and gas as well as CBM, infrastructure including roads, pipelines, and electrical power to support CBM extraction also threatens wildlife habitats and movements among those habitats. Thousands of miles of roads, pipelines and power lines are needed to fully develop CBM and other deposits, which increase the fragmentation of already modified wildlife habitats. We are concerned over the lack of reliable estimates regarding the impacts these proposed developments will have on wildlife and other natural resources.

Stipulations for Wildlife

We hear from energy companies, the Administration, and many in the Congress that we must remove restrictions on exploration, development and operations and open new areas-without specifying which ones. The clear target appears to be seasonal and other use stipulations that attempt to mitigate impacts on wildlife. Please keep in mind that the herds of mule deer, elk, and pronghorn, and flocks of sage grouse, are important wildlife populations that support local businesses and culture.

Their recovery from past over-exploitation at the turn of the century was paid for over the past seven decades by sportsmen's dollars. It is simply unfair to expect American sportsmen and women to foot the bill to recover wildlife populations a second time.

We are not opposing orderly development of energy resources to meet our country's needs. However, we firmly believe that reasonable restrictions and stipulations on energy development are among the best tools to protect wildlife. These protective measures are the result of thoughtful compromises among conservationists, energy development interests, and public land managers at the local level. Local measures to protect wildlife and fish and water resources from the effects of energy development are not simply "impediments" to energy production. They are part and parcel of responsible multiple use management of our public lands. We do not agree that fish and wildlife habitat protection unduly limits the ability to produce energy supplies. The long-term protections to wildlife and fish afforded by these common sense measures create their own economic opportunities, and should not be sacrificed to produce short-term energy supplies. Neither the Congress nor the U.S. Bureau of Land Management (BLM) should make hasty decisions to roll back processes and procedures currently used to conserve wildlife while development occurs. In fact, further investment in understanding impacts on wildlife is in the Nation's interest.

In examining the record of operations on the Pinedale Anticline in Wyoming, we find that as many as 85 percent of winter use stipulations to protect big game herds have been exempted by BLM on appeal from energy companies. Similar rates of exemption appear to be happening for sage grouse. This suggests that the stipulations are not unduly limiting production—in fact it raises concerns about overly liberal accommodation, especially for a declining species like sage grouse. Examples of this information is available on the BLM web site <www.pinedalerm.com>.

A responsible approach to energy development must include a more comprehensive program to manage fish and wildlife. Neither the BLM or U.S. Forest Service, nor the individual states involved have the data or staff and money to do all the work necessary to take care of renewable fish and wildlife resources, considering the pace and magnitude of proposed and future developments. Funding for monitoring wildlife, fish and other resources, conducting habitat management, and carefully balancing production with protecting resource values is not currently available.

Broadening The Dialog

Decisions on energy development should be made carefully, based on specific consideration of geographically distinct areas and impacts on wildlife populations and their seasonal ranges. Until now, fish and wildlife organizations have not been at the table as discussions occur about plans and proposals to open important lands to more exploration. Hearings in the Congress on developing our nation's energy reserves have not included invited testimony from hunter and angler interests. Also, planning for accelerated development with energy producers has not included our interests.

To begin to bridge this gap, representatives from the fish, wildlife, ranching and energy communities met in Wyoming in June 2002 to share concerns and began an overdue dialog. The Department of the Interior helped support the dialog, which was an orderly two-day exchange and discussion of where we might find some common ground. A summary of the dialog was prepared by Meridian Institute, which facilitated the meeting, and is available as a download at <<http://www.iwla.org/reports/energysummit/html>>.

On March 5, 2003, a science-based non-advocacy discussion was held in Pineale, Wyoming to focus on big game herds in the path of development. In a meeting co-sponsored by our Institute, the Izaak Walton League of America, The Wildlife Conservation Society, and the Cooperative Fish and Wildlife Research Unit at the University of Wyoming, results of baseline research on big game herds was presented. On that basis, a discussion ensued that identified needs for longer-term monitoring and evaluation of the herds during development, designed to produce information useful in management decisions. The audience included BLM, U.S. Forest Service, Wyoming Department of Game and Fish, non-governmental conservation organizations, private researchers, energy companies involved in local development and a Sublette County Commissioner.

This meeting was facilitated by our Institute, and a summary is being prepared. Feedback from participants was positive, and suggested that future science-based meetings may be useful on sage grouse, aquatic resources, and perhaps others. I am including for the record a summary set of science-based recommendations for mule deer and pronghorn (refer to Appendix I). This baseline work identifies specific vital migration habitats that should be protected before further leasing occurs. More detailed reports with maps and tables showing critical habitats can be supplied at the

pleasure of the Committee. This illustrates the science-based needs for work on the ground to evaluate resource impacts. Similar work and analysis is still needed for sage grouse, fisheries, sage habitats, and other species.

Major developments have grown quickly in the Upper Green River Valley. New fields of coaled methane are predicted. A significant revision of the Pineal Resource Management Plan for the area is open for public scoping. The quality of the baseline information, presented at the March 5 meeting, is excellent, and may surpass what is customarily available for BLM to start such a process. An additional asset is that BLM has currently opened a nomination process for a Pineal Working Group to be appointed by the Secretary of Interior under the Federal Advisory Committee Act. This process can provide an important example of how to carefully develop energy resources in an environmentally sensitive manner, with citizen input. With data from monitoring and needed studies, adjustments in the pace and manner of development can occur to reduce impacts on fish and wildlife.

Wildlife and People

The fish and wildlife resources in the Upper Green River area are extraordinary. More than 38,000 mule deer; 42,000 pronghorn; and 8,000 elk live in the Basin. Many herds migrate long distances—pronghorn up to 150 miles and mule deer 100 miles. They cross many barriers of roads, fences, pipelines, towns, and other obstacles. Energy is another potent influence. Fisheries include blue ribbon trout streams, lakes, and habitat for such threatened species as Colorado cutthroat. Now that coaled methane has joined existing extensive oil and gas fields, concerns are larger for these fisheries.

Hunter numbers are important to Wyoming communities. In 2001, 2,600 people hunted pronghorn in the Upper Green, 7,300 hunted mule deer, and 7,600 pursued elk. Trout fishing is a major attraction on the steams and lakes in the same area.

The problems that would be caused by precipitous action on existing protections for wildlife are shared not only by hunters and anglers. For example, rural towns in the Green River Basin of Wyoming tell us a large portion of their annual income is collected during hunting season to motels, restaurants, grocery stores and the like. The U.S. Fish and Wildlife Service's 2001 National Survey of Hunting and Fishing indicates that annually \$1.8 billion in retail sales and 43,000 jobs are realized by the states in the Northern Rocky Mountains from hunting alone; add fishing and observing wildlife, and the value is about three times that figure. It is important to note that these are long-term, substantial benefits that accrue regularly to local communities only if wildlife and their habitats are secure. Local people will need to rely on wildlife and fishery resources to sustain their local economy and culture long after energy development is gone.

Accelerated energy development must be done with much more attention to detail, and careful evaluation of costs and benefits, than is evident in much of the recent dialogue. Importantly, organizations representing hunters and anglers have a lot to offer that has not yet been used by government or the Congress. The diverse array of wildlife and fishery organizations can provide evaluation and analysis of important resource values, and we are ready to help. The generalized calls to "open things up" must get back to reality and deal with specific, geographically identified areas to which we can all relate.

We suggest a reasonable platform for the consideration of energy development on public lands: (1) development and production of energy on public lands should be conducted with as much care as such development on private lands; (2) renewable resources such as mule deer and cutthroat trout require equal consideration under law along with mineral extraction; (3) scarce hunter and angler dollars from excise taxes should not have to pay to monitor the effects of development nor fund remedial action, but those tasks must be done and paid for as a required cost of development; and (4) where development occurs, it must be authorized carefully on a site by site basis with specific attention to the fish and wildlife resources.

THE KEY QUESTION FOR THE FUTURE

The real question is: at what cost do wildlife and fish adapt to further intrusions on the landscape? Neither wildlife managers nor the energy industry has the answer, and BLM as the responsible agency for energy development has not been willing to consider the large issues of incremental effects and habitat fragmentation. The issue in most cases will not be that a single road or a single development or a single industry should be blamed for its effects on wildlife. Our mule deer, elk, pronghorn and sage grouse have been affected by roads, fences, ranching and farming, towns, second home development and long-term reduction in habitat quality. Migratory herds in Wyoming live on the National Forest in summer where accelerated development is proposed, and migrate over 100 miles to the sage desert where

accelerated development already is underway. Can they persist as we know them with major changes on all parts of their annual range? Herds of elk that previously migrated even further from Jackson Hole to the sage deserts along the Green River can no longer do so because of those multiple influences. At some point the next new activity will be the one that leads to a potential irreversible reduction in the ability of some of these herds to survive—and certainly to sustain the current level of public use and local economic benefit.

A critical need for coping with these changes as they occur is for effective, science-based monitoring to answer specific questions. Many of the potential effects of accelerated energy development are subtle, long term in nature, and difficult to measure. This results in a continuing standoff where wildlife managers say “look at those roads, structures and activities, they have to have an impact”, and development interests say “look at those wildlife standing around the structures, they don’t care at all”. Our wildlife and fish resources cannot stand this impasse while development occurs.

Energy and mineral exploration and development involve significant outlays of funds by state wildlife, fish and natural resource management agencies for environmental studies, planning, development, monitoring, mitigation and management of fish and wildlife resources. State wildlife, fish and natural resource management agencies are funded primarily through permit and license fees paid to the states by the general public to hunt and fish, and through Federal excise taxes on equipment used for these activities. Revenues derived from sales, bonus bids, royalties, and rentals under the mineral leasing laws of the United States are paid to the United States Treasury through the U.S. Minerals Management Service of the Department of the Interior, yet none of these revenues are returned to the states specifically to manage the impacts of energy and mineral exploration and development on the wildlife, fish and other natural resources for which they are entrusted.

We propose a wildlife and fish funding concept for your consideration. Revenues from energy development are substantial and likely to increase, and those already collected from onshore oil and gas producers that go into the U.S. Treasury offer a logical source of funding for wildlife. This wildlife and fish funding concept would not interfere with the revenues that go to the states or elsewhere. The funds—designated for wildlife and fish in proportion to the development activity—would go back to the states to fund programs designed to manage these wildlife for monitoring and evaluating impacts, and for habitat protection and enhancement of fish and wildlife populations influenced by development. In this manner, the long-term nature of development and necessary active management can be accommodated. All appropriate property rights and other concerns could be dealt with directly in legislation. We envision distribution of funds proportional to the amount of development occurring in each state involved in onshore production.

In conclusion, Mr. Chairman, we urge your Committee to provide leadership on this important nationwide issue. A wide array of wildlife and fishery organizations and our hunters and anglers across America have a stake in the outcome of any decision to accelerate energy development on public lands. It is not enough to proclaim that energy development can occur in all areas in an environmentally sound manner. Some areas are so important, and the alternatives for wildlife in harsh climates are so few, that such sweeping statements likely are incorrect. There is not the current knowledge base that will allow such action to be taken and still assure that wildlife will be sustained, unless a long-term investment is made for the welfare of affected fish and wildlife. We suggest that implementing this funding concept would reflect positively on the Congress, Administration and the energy industry. It would bring the solutions back to the states where the issue arose.

We would be remiss if we did not speak up for the needs of BLM in discharging its responsibilities. They lack funding for monitoring and evaluation, staff to manage contracts and interpret biological data, and have a crushing workload. We do not believe that BLM can meet the needs of accelerated leasing and simultaneously protect the living resource base, with current resources. More funds and staff are needed to do their part for enhancing America’s energy security. This is one area of overlapping interests between fish and wildlife conservation interests and energy companies, and we think broad support can be gathered to get them the resources they need.

Thank you very much for considering our view on this important nationwide issue. We look forward to working with your Committee on this matter, and we are available at your convenience to discuss our concerns and recommendations.

APPENDIX I—An Uncertain Future: Big Game and Expanding Energy Development in Wyoming's Upper Green River Valley¹

Background: World-class Wildlife Values

When it comes to diverse populations of large free-roaming mammals—pronghorn antelope, mule deer, moose, and elk—Wyoming's Upper Green River Valley is unmatched in the contiguous United States. Located south of Jackson hole, between the Wind River Mountains, the Wyoming Range, and the Gros Ventre Mountains, it's a land of sweeping vistas where great sage plains meet snowcapped peaks.

Unlike most terrestrial mammals of the Lower 48, the big game animals of the Upper Green River Valley (UGRV) are highly migratory. Mule deer migrate between 40 and 100 miles to the north and northwest, summering in five different mountain ranges adjacent to the Valley. Ten Wyoming Game and Fish Department feedgrounds in the basin also attract elk from the surrounding mountains, and some pronghorn in the area undertake the longest antelope migration in North America—going all the way to Grand Teton National Park, well over 100 miles away.

Wintertime is a crucial time for these big game animals. Because of roads, subdivisions, and energy development, their winter habitat is becoming increasingly fragmented, potentially limiting their ability to survive this season. The interplay of these factors are magnified in the UGRV, which supports more than 10 percent of all the mule deer and pronghorn antelope in Wyoming. In total, 32,000 mule deer and 48,000 pronghorn utilize the Upper Green.

Energy Development with Unknown Consequences for Big Game

The Upper Green is also rich in natural gas, and the Bureau of Land Management (BLM) has permitted thousands of wells in the area under its 1988 Resource Management Plan (RMP). Additional energy development is planned, and conservationists are concerned that the agency has allowed oil and gas development to exceed the limits set in the current RMP. Although evidence suggests that energy development may negatively affect big game populations, no research has demonstrated direct reductions in reproduction or survival from such activity. One such study is under way, and in the meantime the BLM has started a multi-year process to revise its RMP. The revised plan will lay the ground rules for wildlife management and future energy development here over the next fifteen to twenty years.

Lessons from the Existing Resource Management Plan

In their design and implementation, the BLM's existing 1988 RMP—as well as the EIS it recently prepared for the Pinedale Anticline Project—have the following problems:

- The migratory movements of pronghorn through the UGRV aren't described, nor are migratory bottlenecks recognized. These are locales where migratory animals are squeezed into corridors as narrow as ° mile wide.
- The designations of winter range do not consider the most current information and may not accurately reflect areas used by wintering mule deer and pronghorn.
- Although the BLM enforces seasonal restrictions on winter ranges, it has granted exceptions to approximately 85 percent of the applications for variances to winter-range restrictions during the 2001–2002 season.
- Shrub communities are the most important habitat for wintering big game. But data on these communities is limited. One study found 60 percent of 86,590 acres to be in only fair to poor condition. Loss of shrub habitat to energy development could result in overuse and degradation of remaining communities.
- The BLM assumes each well will create 5.5 acres of disturbance. This may be inaccurate for the following reasons: Local access roads are not defined, and no data has been given concerning successful attempts to reclaim well sites. Although indirect disturbances on wildlife are mentioned, no calculations are provided of acres lost due to wildlife's avoidance of well sites and roads. The effect of development on transition ranges—heavily utilized by wildlife as they move between winter and summer habitats—is unknown.
- Where the effects of creating gas fields are predicted, the BLM has used a method called the Bayesian Habitat Model. It has been applied with limited data and its predictions are subjective and can be questioned for their ability to provide an accurate simulation of energy development's impacts. Moreover,

¹This fact sheet—and the selected recommendations—are adapted from detailed scoping comments on Upper Green ungulate populations and management issues prepared by Dale Strickland of WEST Inc. and submitted to the BLM in February 2003. Contact Linda Baker (307)–360–3670 to receive a copy of this 45-page report.

the 1988 RMP doesn't consider the total cumulative impact from ongoing loss of habitat.

How to Ensure a Better Resource Management Plan for Wildlife:

Energy development could have impacts on wildlife that occur immediately as well as over the long-term. The Pinedale RMP revision should incorporate recommendations that address both time horizons. These include:

Recommendations for Addressing Immediate Impacts:

- No surface occupancy should be allowed in areas that provide severe winter relief range for mule deer and pronghorn.
- Until ongoing studies are completed, a minimum buffer zone of 200 meters should be placed around wells and roads. In places, larger buffers should be considered.
- Where possible, directional drilling from a reduced number of pads per section should be required. Pads should be placed to minimize disturbance to big game.
- Based on their already well-documented importance to big game, four locations should be considered as Areas of Critical Environmental Concern: the Trapper's Point Migratory Bottleneck; the Cora Butte Transition Range; the Fremont Lake Bottleneck; and the LaBarge Creek Native Elk Winter Range.

Recommendations for Addressing Long-Term Impacts:

- Sufficient data should be collected so as to define the ecological and landscape conditions necessary for maintaining big game populations at Wyoming Game and Fish Department target levels.
- The WGFD Strategic Habitat Plan should be closely followed and included within the Pinedale RMP revision.
- Indirect impacts of energy development on wildlife are poorly understood. They should be more extensively studied and incorporated into a long-term cumulative effect analysis, which also takes into account the subdivision of private lands in the UGRV.
- Since the existing body of scientific knowledge is inconclusive regarding the impacts of energy development activities on big game populations, one of the most important recommendations the BLM can incorporate in its RMP revision is to adopt the principles of adaptive management. These include: 1) accurate delineation of critical habitat and corridors; 2) development of a relatively low number of wells, followed by an assessment of their effects through monitoring and research; 3) based on these assessments, modify development, and implement effective mitigation measures.

The CHAIRMAN. Thank you.
Mr. Alberswerth.

STATEMENT OF DAVID ALBERSWERTH, DIRECTOR, BUREAU OF LAND MANAGEMENT PROGRAM, THE WILDERNESS SOCIETY

Mr. ALBERSWERTH. Mr. Chairman, thank you very much for the opportunity to express the views of The Wilderness Society this afternoon. I'm going to address our concerns about oil and gas development on Federal lands in the Rocky Mountain States, and I'll try to be very brief here in view of the hour and summarize my statement.

Mr. Chairman, the vast majority of Federal oil and gas resources within the Rocky Mountain States is currently available for leasing and development, and has been for a long time. That is the inescapable conclusion to be drawn from the Interior Department's recently released EPCA report, which I brought a copy of here. You may be familiar with it.

It concludes that 85 percent of the technically recoverable oil and 88 percent of the technically recoverable natural gas resources underlying Federal lands in this region are currently available for leasing and development. Interestingly, if one includes in the

EPCA estimates of technically recoverable oil and gas from non-Federal lands, only about 7 percent of the natural gas and about 9 percent of the oil within the study region are unavailable for development.

Oil, and especially natural gas development, is a robust activity on Federal lands within the Rocky Mountain west. For example, according to the BLM, there are currently over 94,000 producing oil and gas wells on the public lands that it manages. In Fiscal Year 2001, the BLM permitted a record 4,850 drilling projects on BLM lands, up from 3,400 permits issued in Fiscal Year 2000. The recently released Powder River Basin environmental impact statement projects development of over 50,000 new coalbed methane wells within the Wyoming portion of the Powder River Basin alone within the next 10 years.

The new, reasonably foreseeable development scenario published for the BLM's new draft Farmington Resource Management Plan in New Mexico projects the development of close to 10,000 wells during the next 20 years. That's an area that has already over 19,000 producing oil and gas wells. During the Clinton administration, leases were issued on over 26 million acres and 19,000 drilling permits were approved.

These facts and trends and the recent findings of the EPCA report contradict claims that there are too many restrictions or impediments that inhibit industry access to oil and gas resources on public lands.

In conclusion, in light of the new information from the Department of the Interior's EPCA study, that most Federal oil and gas resources within the Rocky Mountain region are available for leasing and development, the question policymakers should be asking is not are too many Federal oil and gas resources unavailable for leasing and development to meet our energy needs. Instead, we should be asking such questions as have we adequately protected the scenic, ecological and environmental air and water resources, wildlife habitat and wilderness values of our public lands and national forests. Are farmers and ranchers with split estates being treated fairly when it comes to coalbed methane development? Are we being careful enough to protect the precious surface and groundwater resources of the rural communities where the coalbed methane boom is in full swing? Should we be more careful in waiving leasing provisions designed to protect wildlife resources, especially when it comes to declining species, such as sage grouse? And are reclamation bonds imposed upon operators adequate to the task of assuring post operation clean-ups?

Thank you again for this opportunity to present our views. I will be pleased to answer your questions.

[The prepared statement of Mr. Alberswerth follows:]

Statement of David Alberswerth, The Wilderness Society

Mr. Chairman and Members of the Committee, thank you for the opportunity to present the views of The Wilderness Society on the subject of oil and gas development on onshore Federal lands. My name is David Alberswerth, and I am The Wilderness Society's Bureau of Land Management Program Director. My statement will focus on the Bureau of Land Management's onshore oil and gas program affecting the public lands of the Rocky Mountain States.

The vast majority of Federal oil and gas resources within the Rocky Mountain Overthrust Belt states is currently available for leasing and development, and has

been so for a long time. Despite industry claims to the contrary, and earlier assertions by the Bush Administration, the Department of the Interior's recently released "EPCA" report concludes that 85 percent of the "technically recoverable" oil (3.3 Bbbl), and 88 percent of the "technically recoverable" natural gas resources (122.6 TCF) underlying Federal lands in this region of the country are currently available for leasing and development. Interestingly, if one includes the EPCA estimates of "technically recoverable" oil and natural gas from non-federal lands in the analysis, only 7 percent of natural gas and about 9 percent of oil within the study region are unavailable for development (see attachment).¹ The inescapable conclusion to be drawn from the most recent data available is that over 90 percent of the region's oil and gas resources, on Federal and non-federal lands, are available for leasing and development.

Oil and especially natural gas development is a robust activity on Federal lands within the Rocky Mountain West. For example, according to the Bureau of Land Management, there are currently over 94,000 producing oil and gas wells on the public lands that it manages. In Fiscal Year 2001, the BLM permitted 4,850 drilling projects on BLM lands, up from 3,400 permits issued in Fiscal Year 2000 (see attachment).² The recently released Wyoming Powder River Basin environmental impact statement projects the development of over 50,000 new coal bed methane wells within the Powder River Basin within the next 10 years.³ The new "reasonably foreseeable development scenario" published for the BLM's new draft Farmington Resource Management Plan projects the development of 9,970 new wells during the next twenty years within that planning area, which currently has over 19,000 producing oil and gas wells.⁴ During the Clinton Administration, leases were issued on 26.4 million acres and 19,310 drilling permits were issued (see attachment).

These facts and trends, and the recent findings of the EPCA report, contradict claims by industry advocates that there are too many "restrictions" or "impediments" that inhibit industry "access" to oil and gas resources on public lands. For example, the Bush Administration's "National Energy Policy" claimed that, "...about 40 percent of the natural gas resources on Federal land in the Rocky Mountain region have been placed off-limits" to development.⁵ However, the EPCA report concludes that about 12 percent of Federal natural gas resources in the region is off-limits to leasing and development.⁶

Viewed from another perspective, the 15.9 TCF identified in the EPCA report as unavailable for development is about 1 percent of the 1,466 TCF "gas resource base" within the continental U.S. (exclusive of Alaska) identified by the National Petroleum Council in its 1999 study, *Natural Gas: Meeting the Challenges of the Nation's Growing Natural Gas Demand*.⁷

Because it is now established from the Bush Administration's own analysis of Federal onshore resources that most publicly-owned natural gas and oil is available for development, the industry's lobbying focus may shift to that category of lands identified in the EPCA report that is "Available for Leasing With Restrictions on Oil and Gas operations Beyond Standard Stipulations." Just what is the nature of these "special and seasonal stipulations" of such concern to industry?

This category of available lands often encompasses areas where evidence indicates the presence of sensitive wildlife habitats, such as elk calving or winter range areas, or big game migration corridors, or sage grouse leks, or critical raptor habitat where oil and gas activities at certain times of the year could pose severe threats to wildlife. In such cases, the BLM may require that operations only occur at certain times of the year, when such areas are not in use by certain wildlife species. In some cases, the BLM imposes "No Surface Occupancy" leases, whereby the lessee is required to access the oil and gas resource from off-site. Such "NSO" stipulations are also designed to protect wildlife habitats, while making the resource available for extraction. The types of special stipulations imposed to protect environmental values can be summarized as follows:

"Standard Stipulations"—These are provisions within standard BLM oil and gas leases regarding the conduct of operations or conditions of approval given at the permitting stage, such as: prohibitions against surface occupancy within 500 feet of surface water and or riparian areas; on slopes exceeding 25 percent gradient; construction when soil is saturated, or within 1/4 mile of an occupied dwelling. These are generally applied to all BLM oil and gas leases, regardless of special circumstances.

"Seasonal" or other "Special" Stipulations—"Seasonal Stipulations" prohibit mineral exploration and/or development activities for specific periods of time, for example sage grouse strutting areas when being used, hawk nesting areas, or on calving habitat for wild ungulate species. These are often imposed at the request of state wildlife officials, as well as in compli-

ance with U.S. Fish and Wildlife Service requests to protect sensitive species.

“No Surface Occupancy”—NSO leases prohibit operations directly on the surface overlaying a leased Federal tract. This is usually done to protect some other resource that may be in conflict with surface oil and gas operations, for example, underground mining operations, archeological sites, caves, steep slopes, campsites, or important wildlife habitat. These leases may be accessed from another location via directional drilling.

Representatives of the oil and gas industry have voiced criticism regarding why such provisions are imposed on Federal oil and gas leases at all, or why certain areas of our public lands and national forests are off-limits entirely to oil and gas development, when in their view energy extraction is such an important activity on Federal lands. The answer is that the Federal land management agencies' primary obligation is not to satisfy the wants and desires of the oil and gas industry. Instead, they are statutorily mandated to balance the wishes of the oil and gas industry with the protection of a multitude of environmental, ecological, scientific, and cultural values harbored by our public lands.

For example, Congress mandated in the Federal Land Policy and Management Act that the Secretary of the Interior manage the public lands,

“...in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use.” (43 U.S.C. 1701(a)(8))

Similar statutory requirements pertain to the National Forests. The imposition of special, seasonal, or NSO stipulations in certain circumstances is the result of a policy developed in the 1980s by the BLM to balance the industry's desire for access to oil and gas deposits with the BLM's responsibility to manage the other resources and values enumerated in FLPMA. Although characterized as “burdensome” by some industry representatives, these stipulations can—and frequently are—waived at an operator's request.

Attached to my statement is a table published (but no longer available) on the Rawlins (Wyoming) BLM Field Office website. This area is subject to significant oil and gas activity. The table indicates that that for Fiscal Year 2001, of 128 requests for waivers from protective stipulations recorded, the BLM granted 103, or 80 percent of them (A few waivers granted were for activities other than oil and gas activities.). Similar data from the Pinedale Field Office for 2001 indicates that of 40 requests for stipulation waivers, 31 were granted, or 77 percent. During the 2002–2003 season, of 52 requests for waivers received by the Pinedale Field Office, 45 were granted, or 86 percent. What the data from these two BLM Field Offices clearly indicate is that wildlife stipulations on oil and gas leases are usually waived at the request of the operator to accommodate activities not otherwise allowed during the period of the seasonal restriction, or within an area ordinarily set aside from oil and gas activities.

Instead of focusing on instances where the BLM may not have issued a particular drilling permit application in a timely manner satisfactory to the operator, it seems to us that the frequency of stipulation waivers in areas where there is intense development raises the question as to the effectiveness of stipulations as a means of protecting key environmental values.

For example, we know that sage grouse populations in the U.S. are in severe decline, in fact, their distribution has declined by about 50%, while estimated population size has declined by about 90%. As a population they are very sensitive to habitat fragmentation. Given the frequency of the waivers indicated on the attachment for sage grouse habitat, it seems to us the question we should be asking is not, “Why does the industry have to put up with seasonal restrictions for sage grouse habitat?” Instead, we should ask, “What impacts are occurring to sage grouse populations as a consequence of the BLM's frequent waiver of stipulations designed for their protection?”

Finally, in our view it is entirely appropriate that some Federal lands should be off-limits to oil and gas leasing and development. Lands identified as off-limits in the EPCA Report include National Parks, National Monuments, designated Wilderness Areas, and Wilderness Study Areas. One specific area that has been placed administratively off-limits to future leasing and has drawn especially harsh criticism from the oil and gas industry is the Rocky Mountain Front area of the Lewis and Clark National Forest in Montana. In 1997, following an extensive public involvement process, the Forest Service adopted a Forest Plan amendment for approximately 356,000 acres of the Front that effectively prohibited leasing for the duration

of the Plan amendment. The area in question—the spectacular and dramatic uplift of the Rocky Mountains from the Northern Great Plains—is a region of remarkable scenic beauty, and harbors a multitude of extraordinary wildlife, scenic, and recreational values. It has been the focus of preservation efforts by Federal, State and private entities for almost a century.

The Lewis and Clark National Forest Plan adopted in 1986 emphasized management of the area in question for its special wildlife, recreation, and scenic attributes. The Plan Amendment adopted in 1997 implemented that earlier management direction by prohibiting oil and gas leasing for the next 10–15 years. It should also be noted that the 1997 Plan Amendment enjoys widespread support within the State of Montana. Although the oil and gas industry has attempted to characterize the Forest Supervisor’s decision as essentially “arbitrary and capricious,” the Supervisor’s decision has been upheld upon administrative appeal and at the District and Appeals Court levels. As the Bush Administration pointed out in its brief to the Supreme Court in opposition to the industry’s request that the Supreme Court review the Court of Appeals decision, “the Record of Decision approving the [1986] Forest Plan acknowledged ‘people’s apprehension over the effects of oil and gas development and their desire for the land to remain unchanged,’ and concluded that ‘management of the Rocky Mountain Division should emphasize wildlife, recreation, and scenic values.’” (Brief for the Federal Respondent in Opposition at 5, *Independent Petroleum Association for America v. U.S.*, 279 F. 3d 1036 (9th Cir.), cert denied, 123 S. Ct. 869 (2003).)

In conclusion, in light of the new information from the Department of the Interior’s EPCA study that most Federal oil and gas resources within the Rocky Mountain region are available for leasing and development, the question policy-makers should be asking is not, “Is too much Federal oil and gas unavailable for leasing and development?” Instead, we should be asking such questions as: Given the extensive availability of our publicly-owned onshore oil and gas resources for development, have we adequately protected the scenic, ecological, environmental, air and water resources, wildlife habitat, and wilderness values of our public lands and national forests? Are surface owners with split estate lands being treated fairly when it comes to coalbed methane development? Are we being careful enough to protect the precious surface and groundwater resources of the rural communities where the coalbed methane boom is in full swing? Should we be more careful in waiving leasing provisions designed to protect wildlife resources, especially when it comes to declining species, such as sage grouse? And, are reclamation bonds imposed upon operators adequate to the task of assuring post-operation clean-ups?

Thank you again for this opportunity to present our views.

¹ BLM, January, 2003, *Scientific Inventory of Onshore Federal Lands’ Oil and Gas Resources and Reserves, etc.*, pp. xii-xiii, xv.

² BLM, *Budget Justifications and Annual Performance Plan, Fiscal Year 2003*, pp. III–116 through 121.

³ BLM, *Final Environmental Impact Statement and Proposed Plan Amendment for the Powder River Basin Oil and Gas Project, Volume 3, Appendix A, Reasonably Foreseeable Development Scenario for Oil and Gas Development in the Buffalo Field Office Area, Wyoming, February 2001*, p. 2.

⁴ Engler, Thomas W., et al., BLM, July 2, 2001, *Oil and Gas Resource Development for San Juan Basin, New Mexico...*

⁵ *National Energy Policy: Report of the National Energy Policy Development Group, May 2001*, p. 5–10.

⁶ *Op. cit.*, p. 3–5.

⁷ *Domestic Petroleum Council, December, 1999, Natural Gas—Meeting the Challenges of the Nation’s Growing Natural Gas Demand, Volume I., Summary Report*, pp.7–8.

The CHAIRMAN. Thank you.
Mr. Carlson.

**STATEMENT OF WILLIAM H. CARLSON, VICE PRESIDENT,
BUSINESS DEVELOPMENT-WHEELABRATOR TECHNOLOGIES,
INC., AND CHAIRMAN, USA BIOMASS POWER PRODUCERS
ALLIANCE**

Mr. CARLSON. Thank you, Mr. Chairman.

The utilization of energy resources on public lands is of great interest to the USA Biomass Power Producers Alliance, who, as our name implies, are the people who produce power from biomass.

The dramatic expansion of biomass energy from thinning of Federal forests is in the interest of national energy security and the health and preservation of our forests. In this case, unlike others, the extraction of energy provides dramatic environmental benefits. The inclusion in the energy bill of a redefined biomass tax credit and a fuel transportation provision are the catalysts to set such a public land program in motion.

The President, in his State of the Union address, expressed as a national priority both the thinning of our nearly 190 million acres of at-risk public forest and the expansion of our secure domestic sources of energy. The marriage of these, in a way that saves tens of billions of public dollars, is possible. This Congress, through a comprehensive energy bill, can put the pieces in place.

This system of thinning with energy and product production has been demonstrated on over one million acres of public and private forests in northern California with spectacular results. Catastrophic wildfires are stopped in their tracks, wildlife habitat is enhanced, watersheds saved, rural economies strengthened, and forest lands returned to health, typically at no cost, all while protecting the largest and best of the forest.

A network of small wood conversion facilities and biomass power plants to support cost-effective, large-scale thinning projects exists only in northern California, however. Our task is to duplicate this infrastructure throughout the west, using private investment, and a comprehensive energy bill can accomplish that end.

Before investing in the creation of this infrastructure, investors need to affirmatively answer three key questions: one, is there an assurance that the raw material will be available for the capital recovery period; two, is there proven technology that will eliminate risk, both in the energy and product conversion and in the resource treatment; and three, is there a set of project economics that will support the investment with a fair return and low risk.

Answering these three questions affirmatively throughout the West could trigger an investment of \$30-50 billion of private capital supporting the thinning of perhaps five million acres per year, saving four billion dollars per year in thinning costs, while producing perhaps 10,000 megawatts of renewable energy.

The assurance of long-term raw material supply was largely solved by the recent establishment of long-term stewardship contracting authority for both the U.S. Forest Service and BLM, allowing 10 year access in a goods-for-services arrangement.

Technology risk is a nonissue, as burning wood for power has a 50-plus year history. The technology to thin, while protecting and enhancing the environment, is well proven with individual entrepreneurs continuing to lower costs, expand range, and soften the footprint.

A comprehensive energy bill can assist project economics. Economically, maximum use must be made of all thinned material. Any material used for higher uses, such as wood products, paper or chemicals, only improve the economics of the residual fuel. Infra-

structure to produce these products will develop with stable supply, as their markets are well developed and mature.

Subcommittee Chairman McInnis has indicated he will pursue the inclusion of a fuel transportation provision as part of an energy bill. Biomass plants need a combination of a strong, stable revenue stream and low fuel costs to be viable, and this provision will allow remote fuels to be utilized.

Any energy bill should follow the lead of several western States and provide opportunities for strong, stable revenues from renewable projects by encouraging renewable direct access, renewable purchase requirements, and/or emission reduction credits.

The President's budget, in both the House and Senate versions of last year's energy bill, included definitional changes to the IRS section 45 biomass tax credit that would allow projects such as these, both existing and new, to qualify for the tax credit. Existing plants scattered throughout the West will play a key role in support of thinning. Closed plants, in such rural places as Afton, Wyoming, Emmett, Idaho, and Heppner, Oregon, could potentially be reopened because of this legislation.

These changes, spelled out in Congressman Herger's H.R. 804 would preserve and expand the biomass power infrastructure to support needed forest health initiatives. Though heard in the Ways and Means Committee, its' relationship to the work of this Committee is direct and important, and we would urge each of the members of this Committee to become a cosponsor.

The energy bill can result in an infrastructure to allow thinning of five million acres per year of fire-prone western forests, with an acre producing 30 tons of fuel and a truckload of small logs. This material could fuel 10,000 megawatts of biomass power, and instead of costing the Treasury \$80 billion to thin 100 million acres over 20 years, the cost may well be reduced to zero.

We need a massive effort to restore our Nation's public forests to health to prevent repeats of the seven million acres that burned in 2002, and we need an environmentally sound program to develop domestic renewable sources of energy. We can accomplish both with only modest incentives provided as part of a comprehensive energy bill, and at only a fraction of the cost of conducting either effort separately.

Thank you.

[The prepared statement of Mr. Carlson follows:]

Statement of William H. Carlson, Vice President, Business Development, Wheelabrator Technologies, Inc., Chairman, USA Biomass Power Producers Alliance

The utilization of energy resources on Federal lands is a topic of great interest to the USA Biomass Power Producers Alliance (USABPPA) given our long relationship with biomass from Federal forest lands and our knowledge of the condition of the Federal forests. USABPPA is an organization of those companies producing power for the grid from biomass resources, and represents the majority of such power in the US. We will explain why a dramatic expansion of biomass energy from thinning of Federal forests is in the interest of national energy security, economic well being, and the health and preservation of those very forests. Typically, any decision to increase extraction of energy, particularly from public lands involves environmental tradeoffs. In the case I will present today, that thesis is turned on its head, and the extraction of energy provides dramatic environmental and economic benefits. The inclusion in an energy bill of a redefined and reauthorized biomass tax

credit and a fuel transportation subsidy are the catalysts to set such a program in motion.

The President, in his State of the Union address, expressed as a national priority the thinning of our nearly 190 million acres of unhealthy, overstocked, at risk public forests. Likewise, the expansion of our secure domestic sources of energy is as important nationally to the President. The marriage of these two concepts in a way that also nets a savings of tens of billions of dollars for the Treasury is possible, and this Congress, through a comprehensive energy bill, can put in place the remaining elements to allow this to proceed. Far from being an unproven concept, this system of thinning with energy/product production has been demonstrated over 15 years on over one million acres of public and private forests in Northern California and the results are nothing short of spectacular. Catastrophic wildfires are stopped in their tracks, wildlife habitat is enhanced, watersheds saved and rehabilitated, smoky air reduced, rural economies are strengthened, and forest lands are returned to health typically at no cost, all while protecting the largest and best of the forest.

The network of small log mills/other value added manufacturing and biomass power plants that is necessary to support cost effective large scale thinning projects, and that exists only in Northern California, was due to a unique set of circumstances not present elsewhere in the West. The trick, that we will discuss today, is how to maintain existing facilities that can assist in this effort while duplicating this infrastructure throughout the western forests using private investment, and we will explain how a comprehensive energy bill can go a long ways towards accomplishing that end.

Before investing in the creation of this infrastructure, investors; be they individuals, communities or corporations, will need to affirmatively answer three key questions:

One, is there an assurance that the raw material will be available in the necessary quantities for the period of time required to recover the capital;

Two, is there a proven technology that will eliminate risk, both in the energy/product conversion as well as in the resource procurement; and

Three, is there a set of project economics that will support the investment of this capital with a fair return and relatively low risk?

If these three questions can be answered affirmatively throughout the West, and based on our California experience, we could see an investment of \$30-50 billion of private capital supporting the thinning of perhaps 5 million acres per year, saving the Treasury \$4 billion per year in thinning cost and \$80 billion over 2 decades, while producing perhaps 10,000 mw of secure domestic renewable energy.

Fortuitously, the first criteria, assurance of long term raw material supply, was largely solved by the recent establishment of long term stewardship contracting authority for both the U.S. Forest Service and Bureau of Land Management. By assuring ten year access to excess biomass in a goods for services arrangement, both wood conversion and power plant facility infrastructure development will benefit from this authority and the security it brings with it.

The second criteria, technology risk, is largely a non-issue in this case as burning wood for power has a 50+ year history. While the technology continues to evolve, it is primarily improvements in efficiency and emissions, with the underlying technology remaining constant. Likewise, the technology to thin cost effectively while protecting and enhancing the environment is well proven, with individual entrepreneurs continuing to lower costs, increase production, expand range and soften the footprint.

The third criteria, project economics, is where a comprehensive energy bill can assist, at least on the biomass power plant side. In all cases, maximum use should be made of all thinned material. Any material used for higher uses such as building material, paper, chemicals or other wood products only improve the economics of the residual fuel. If raw material supply is stable over time, the infrastructure to produce the higher valued products will develop, as their markets are well developed and mature. To repeat, the more upstream diversion that occurs, the lower the cost of thinning and the lower the cost of the resulting fuel for biomass power.

Forest Health Subcommittee Chairman McInnis has indicated he will pursue the inclusion of a fuel transportation provision for such fuels as part of an energy bill, and that will be a major benefit to biomass power plant economics. Biomass plants need a combination of a strong stable revenue stream and low fuel cost to be viable, and Congressman McInnis' provision will allow remote fuels to arrive at the plant at a reasonable cost, allowing the plants to be more centrally located with respect to transmission. We sincerely hope that the authors of this Committee's piece of the energy bill will include this important provision.

On the revenue side, any energy bill should encourage states to provide opportunities for strong stable revenues from renewable projects, including biomass, by en-

couraging renewable direct access, renewable purchase requirements and/or emission reduction credits. Several Western states (AZ, CA, NM, NV) have recently mandated programs benefiting renewables, and an energy bill should continue this trend.

One program unique to biomass that is included in the President's budget and was included in both House and Senate versions of last years' energy bill is the change to the IRS Section 45 Biomass Tax Credit. The change in definition of biomass would allow projects such as those described here to qualify for the tax credit, and would make the credit available to both new and existing plants. Existing biomass plants, scattered throughout the West, are expected to play a key role in support of thinning. Plants previously closed in such places as Afton, WY, Emmett, Idaho and Kinzua, OR. could potentially be reopened based on this legislation. Passage of these changes, spelled out in congressman Herger's HR804, would be the single most important thing an energy bill could do to preserve and expand the biomass power infrastructure in support of these needed forest health initiatives. Though Congressman Herger's bill will be heard in the House Ways and Means Committee, its relationship to the work of this Committee is direct and important, and we would hope that each of you will choose to cosponsor HR804.

As I stated previously, an energy bill can be the catalyst that sets in motion the investment of perhaps \$30-50 billion in private capital in an infrastructure to convert the excess biomass off perhaps 5 million acres per year of unhealthy, fire prone Western public forests to products and energy. Based on our experience, an acre will produce approximately 30 tons of fuel and 2-5,000 board feet of small logs. This 150 million tons annually of excess unused material could fuel 10,000 mw of biomass power, more than doubling the current output of the industry, but still only a small percentage of western power needs. And not insignificantly, instead of costing the Federal Treasury \$80 billion to thin 100 million acres over the next two decades, the cost may well be reduced to zero. If there was ever a program where environment, energy and economics are all positive, this is it.

The situation that the U.S. finds itself in today is truly unique. We have a need for a massive effort to restore our nation's public forests to health to prevent repeats, or worse, of the 7 million acres that burned in 2002. And we have a need for an environmentally sound program to develop secure domestic renewable sources of energy to prevent further increases in our dependence on foreign sources of energy. By marrying these two efforts as described above, we can accomplish both with only modest incentives provided as part of a comprehensive energy bill, and at only a fraction of the cost of conducting either effort separately. And, as added benefits, catastrophic wildfires will be reduced, wildlife habitat will be enhanced, watersheds saved, air quality improved, rural economies strengthened and forest lands returned to health typically at hopefully no cost, all while protecting the largest and best of the forest.

The membership of the USA Biomass Power Producers Alliance stands ready to assist you in this effort. Thank you.

The CHAIRMAN. Thank you, Mr. Carlson.

The question for you on the viability of doing this, do you believe that legislation such as Mr. Herger's would have to pass in order for this to be economically feasible?

Mr. CARLSON. Yes, I do. What we're finding is that, with the long-term stewardship contracting authority and the goods-for-services arrangement, it will be likely that these Federal acres can be thinned for a very low cost or no cost, based on the value of the other products, which makes the fuel then relatively cheap.

The western States, many of them are moving into an area where you can get, say, slightly above market cost, market prices, for your energy. But the missing piece that will make the economics work to building this infrastructure in places other than California is the tax credit. That's the only large missing piece to this equation at the moment.

The CHAIRMAN. Because of the cost of transportation?

Mr. CARLSON. Yes. This type of fuel primarily is the transportation costs associated with it, which in many cases alone may be

in the neighborhood of three cents per kilowatt hour produced, just for the cost of the transportation of fuel.

The CHAIRMAN. I know I have a biomass plant in my home town, and it burns primarily agricultural waste, straw and trimmings from trees and so forth. That has continued to be their major problem, the cost of bringing it in.

Mr. CARLSON. Certainly there are a lot of similarities between forest waste and agricultural waste. Again, they're bulky, they're low weight materials, and the transportation also in the ag business—the Tracy plant that you're referring to—it's exactly the same issue that we deal with in the forest wastes.

The CHAIRMAN. I appreciate your testimony. I think this is definitely something that has to be part of our future. Making it economically feasible is going to be an important part of using this type of energy in the future. But I appreciate your testimony.

Let me go to Mr. Steve, if I can. First of all, I was looking at your calendar of all the different windmills, and I don't see my ranch in here.

Mr. STEVE. That's in next year's.

[Laughter.]

The CHAIRMAN. As you're probably aware, we have windmills, wind turbines, on my ranch. We have a ranch in the Altamonte in California. A lot of what you testified to I can verify. It has made a big difference for a lot of those ranchers to have the income off of those wind turbines. For a lot of those guys, it has made the difference of whether or not they continue to ranch and have cattle there. So it has made a big difference. I can verify that as absolutely true.

Let me ask you, though, as far as leasing Federal lands, what system exists right now that allows companies that are involved in a renewable resource like this to go in and lease those lands and put windmills in?

Mr. STEVE. I would say that refers directly to the experience we had with the Bureau of Land Management—and this is very recent. There was nothing until just recently, until Secretary Norton tried to follow through, or started to follow through, on the President's energy plan. That's what put this in motion. BLM responded very quickly, worked with our industry to essentially set up, as I said, some guidelines, which say, OK, here's how you can gain access to the lands, and once you decide you want to develop a project there, here's how much you'll pay us. You know, we knew we weren't going to get by with not paying anything to the Federal Government because we already pay to private landowners, so the Federal Government should see some income as well. So we tried to have it very similar to what we're paying private landowners.

But that's the process which was just put in place. We think it's a good one. We didn't get everything we wanted by working with the agency, but we didn't expect to get everything, either. We think it was a very good process and we would like to see it replicated with other land management agencies.

The CHAIRMAN. So the Federal Government would have a lease similar to what you have done with private landowners?

Mr. STEVE. Correct.

The CHAIRMAN. What about access in terms of going in and putting up your monitors and determining which areas are the best to put a project like this together? Have you had the opportunity to do that yet?

Mr. STEVE. I don't believe any projects have yet started under these new guidelines.

The CHAIRMAN. I mean the monitoring.

Mr. STEVE. The monitoring, I believe, is going to be starting soon. I don't know of any specific instances that it has happened yet, because this is so fresh and so new.

Currently, if a wind developer has a choice between developing on private lands or Federal lands, they'll immediately go to private lands. The hassle factor was too high in the past.

The CHAIRMAN. Yeah.

Mr. STEVE. One of the important things that these guidelines from BLM tried to do was set up a situation where you didn't get speculators coming in, similar to—Remember when the Internet was starting up. People were buying up all these names, these domain names, and then selling them for ridiculous prices. They never had any intent of using them.

So the BLM tried to kind of head off that same type of thing with wind development on Federal lands. You didn't want somebody coming in, locking up the land, and then having no intention of doing a project on that land. They wanted serious project developers to come in, so that somebody wasn't then increasing the cost of energy development by essentially being the middle man or middle person and charging significantly for somebody else to gain access to those lands. That was a key component of it.

The CHAIRMAN. I know this is somewhat of a touchy subject, but I know in California, when wind energy was first being developed, there was a large environmental component to that, where a lot of environmental groups were very much in favor of doing it. After a number of those projects were put in, we began to hear about visual pollution and some other issues that some of the environmental groups had with that.

Have you met with any kind of that resistance in terms of developing Federal lands?

Mr. STEVE. Not with regard to Federal lands, no. Again, we only think these types of wind turbines should go in appropriate areas of Federal lands. We're not urging that if BLM has tracts of land adjacent to a national park that we're going to have these windmills right adjacent to that national park. We would say that's probably not an appropriate place to put them. But certainly there are lots of other lands that are appropriate.

The CHAIRMAN. Thank you.

Mr. Alberswerth, if I could go to you just for a minute, one of the concerns that I have is that, in listening to your testimony, I think the vast majority of it I agreed with, in terms of concerns that we have in trying to make sure that we do this right.

But I guess my question for you is, is there anything that we're going to do in this energy bill that you would support? If we're talking about access to public lands and development on non-environmentally sensitive lands, with all of the restrictions and everything that you've heard everybody talking about here today, do

we ever get to the point where you and your organization actually supports it, or is that just a nonstarter from the beginning?

Mr. ALBERSWERTH. Of course, we don't know what your bill is going to look like, but last year—and I'm sure you're aware of this—we had deep concerns and objected to provisions in the Committee's bill that, in our view, would have weakened the existing environmental protections that were out there.

I do think that, you know, if you put together a package of proposals that perhaps dealt with some of the concerns of surface owners, that surface owners have, protecting water quality when it comes to coalbed methane, perhaps—one proposal that we had was for the BLM to develop a regime of unsuitability criteria to apply during their land use planning process, to determine better what lands are available, should be available, for leasing and development and what not, we would certainly look at that sort of thing.

Our main concern last year, as an organization, to the House bill, though, was what we perceived to be rollbacks of the existing authority, the existing regulatory regime of the Interior Department to take into account and protect those environmental values that we're concerned about. We certainly would object to any similar language this year.

The CHAIRMAN. I understand what your concern is. I think there's a difference of opinion as to whether or not that was actually what was happening. That's really, I guess, at the root of what my concerns are.

As that bill was being put together last year, concerns were raised, and a lot of work and effort was put in by the Committee, both this Committee and others that had jurisdiction, to try to address those concerns. There didn't seem to be, at any point, any recognition on your part or the organization that you represent to recognize the efforts that were being made, to recognize that they were trying to take care of what your concerns were. It was opposition from the beginning and all the way through the process. There was really very little constructive work that was coming in, in trying to work through those problems.

I believe very strongly that we can protect our environment and have the development of energy resources. I don't believe that those two are mutually exclusive. In order for us to move forward, we need constructive work; we need constructive help from those in the environmental community to try to work and achieve that. If we are up against opposition from beginning to end, with absolutely no opportunity to come to consensus, then you destroy our ability to take care of some of those very problems that you've brought up.

I think it's important that we have a constructive working relationship and that those of us on the Committee can see the opportunity of coming to consensus somewhere at the end, or else all of the work that we put into doing that is for nothing.

Mr. ALBERSWERTH. May I respond, Mr. Chairman?

The CHAIRMAN. Yes.

Mr. ALBERSWERTH. You should know that we did, in fact, work closely with the Committee staffs during the conference Committee deliberation over the energy bill last year, and we actually ended up being satisfied with the public lands provisions of that bill. Of

course, the bill never was accepted by Congress. But we thought that in that process actually our concerns about the public lands were largely addressed. We had constructive dialog with Committee staff people on both the House and Senate during that process.

The CHAIRMAN. Well, I will look at and talk to the staff about that. I was not aware that at any time you supported the public lands sections of the bill. If I'm mistaken about that, I apologize for it. But I'm not aware that that ever happened.

Mr. ALBERSWERTH. You are correct, that we objected to H.R. 4. That is on the record and you are correct on that, sir.

The CHAIRMAN. Then I guess I didn't understand what you said about working on the conference Committee then.

Mr. ALBERSWERTH. Well, we worked at a staff level with staffs of the Senate and the House, in their deliberation over those public lands provisions. The final product, which, of course, was never voted on, we were actually satisfied that our concerns had been addressed in that product. So that may be something you would like to take a look at as you're moving through—

The CHAIRMAN. Are you telling me that you supported the work that was done in the conference Committee, or would have supported it if it came to the floor?

Mr. ALBERSWERTH. We would have supported those provisions. Now, there are lots of provisions in that bill that we may have had problems with, but I'm fairly narrowly focused here on the public lands aspects of things.

The CHAIRMAN. I want you to understand—and I'm willing to work with you on any part of this bill that I have jurisdiction over—in order for us to work together, at some point there has to be the opportunity that you're going to actually support the bill. If I don't see any opportunity to get you to support the bill, then I'll find someone else to work with. Because I think it's disingenuous to make a bunch of compromises and try to find that consensus with no hope of ever having your support in doing that. You know, that's my concern.

Mr. Sparrowe, finally with you, do you believe there are any opportunities to streamline the overlapping environmental review process that is currently in place on Federal lands?

Mr. SPARROWE. Yes, I'm sure there are.

The CHAIRMAN. Are you aware of any? Can you share that with us? I know you've spent a great deal of time and energy on this issue. I'm just trying to pick your brain a little bit here, if I can.

Mr. SPARROWE. Well, I haven't been thinking about it recently in the context of overlapping authority. I've been thinking about it in the way in which these developments, for example, that I talked about, proceeded. It seems to us there are some opportunities already lost to stay out of trouble on some of these issues because of the pressure on BLM to assist with acceleration of leasing. We were told just 10 days ago that in the Upper Green, for example, 95 percent of what they have available to lease is leased. Now we're dealing with some problems caused by some of the areas that were leased.

I would just maintain that everyone would be—Several thousand wells are going in, which is very likely, in the very northern part

of this now, as a couple of fields are fully developed and new ones come on. Had we been able to sit down at first, I could probably point on the map right now to half a dozen that, had they not been leased, everybody would have been better off, because there wouldn't be strife about the whole thing and there would be relief for some important wildlife resources in this case.

Out of several thousand, I don't see that six or a dozen would really inhibit the effective development of energy to meet the needs of the country. In fact, some of those could be approached later when problems are worked out about the resources.

We don't have processes like that right now. The RMP process that BLM uses has been so long in leading to reviews that we're now looking at things where lots of decisions were made in the last 10 years based on something that was 20 years old. Everybody in Interior, from Steve Griles on down, from the beginning, has told us yes, we realize that stuff's out of date. It isn't good enough and we're likely to be challenged. But the decisions are going ahead. So some of the overlapping authority is workload and a vision of what the agency's responsibilities are, and just the sheer capability of dealing with things.

I understand the concerns about overlapping authorities. We have been working with Chief Bosworth and the Forest Service about his concerns about gridlock and the whole issue of forest policy. Frankly, the past 3 months are so swamped with the number of issues that are before everyone that I'm not sure we're all dealing with them totally effectively. But I think there certainly are some things to be done, but I think you've got to—I have a philosophy about a lot of things we fight about, and a lot of things that we keep coming to loggerheads about. If we can be very specific and say this rule and that rule, where they overlap affecting these resources, I'll bet we can find some ways to make that work better. The problem always is that when we're generalizing.

It's like the concerns we have about saying the wildlife stipulations are inhibiting orderly energy development. BLM's own data show that 85 to 90 percent of them are being exempted for winter use for big game. That's one of our particular interests. I say where's the problem? If there's a problem there, it may be because of the lack of data. We're not making those kinds of exemption decisions based on the right information for everybody.

The CHAIRMAN. In that case, I would have to actually dig into it a little bit deeper, but I do know in other cases that they use facts like 85 or 90 percent are being approved, of those that are applied for being approved, or that they're being exempted. But what that doesn't take into account is the ones that BLM just tells them "you've got a major problem with this one; don't even bother", and that one is pulled out. So using a figure like that is not—and don't take this personally—it's not an honest figure, because it doesn't take into account everything that's happened in order to get to that point. When you talk about a half-a-dozen that you believe should have been pulled out, you may be right, but we don't know and I don't know at this point how many they applied for or talked to BLM about where the Federal Government told them this one is in an area that you shouldn't develop. So there is a lot of different facts that go into this.

At some point, I think we have to look at these overlapping authorities and how they all fit together, and if we actually use good science and we force the agencies to follow the law, there should be no necessity of all the overlapping authorities. That's where I think we need to go.

Mr. ALBERSWERTH. It's a big job. It's a big job.

The CHAIRMAN. Yes, it is.

I appreciate the testimony and the answers to the questions. Again, to this panel, I will say that there will be questions submitted to you in writing. If you can answer those in writing so that they may be included in the hearing record, it would be appreciated. I believe the hearing record will be held open for 10 days, so we will get that to you as quickly as we possibly can so you can answer them.

I'm going to dismiss the panel. Thank you again for your testimony. Again, thank you for your patience in sticking with us all day here.

That concludes our hearing.

[Whereupon, at 2:46 p.m., the Committee adjourned.]

[A statement submitted for the record by Howard D. Richards, Sr., Chairman, Southern Ute Indian Tribal Council, follows:]

**Statement of Howard D. Richards, Sr., Chairman,
Southern Ute Indian Tribal Council**

Mr. Chairman and other members of the Committee:

It is my honor to appear before you today on behalf of the Southern Ute Indian Tribe. Our Reservation is located in southwestern Colorado on the northern portion of the San Juan Basin. Our tribe has aggressively pursued exploration and development of energy resources for several decades, and our success in this area has allowed us to improve the financial security and the quality of life of members of our tribe. We believe that enhancing production of Indian resources serves the dual purposes of improving tribal economies and improving the energy security of the Nation as a whole. Our story may be of use to you in your deliberations.

Oil and gas leasing of our lands commenced in the late 1940s, under the supervision of the Bureau of Indian Affairs ("BIA"). For approximately twenty-five years, we held lease sales and issued standard form leases approved by the BIA. Because of concerns that our mineral resources were not being properly managed by the BIA, the Southern Ute Indian Tribal Council imposed a moratorium on future leasing between the years of 1974 and 1984. During that ten year period, a number of important activities took place. First, the revelation that oil and gas companies were grossly neglect underpaying royalties due the federal government and Indian tribes, Congress enacted the Federal Oil and Gas Royalty Management Act of 1982. Second, through a combination of self-funding and assistance from the BIA Minerals Division, we began a disciplined evaluation of the leased and unleased resources underlying our lands. In order to conduct this evaluation we hired several non-Indian experts, and we started a tribal energy resource office. Our consultants and employees helped us understand the scope and extent of our resources, and, through their efforts, we established a computerized data base from which we could generate maps and lease information. Third, Congress passed the Indian Mineral Development Act of 1982, which for the first time authorized tribes to engage in direct negotiation of oil and gas lease contracts.

Armed with improved technical knowledge and a new legislative vehicle for negotiating leases for our lands, we entered into a series of mineral agreements in the 1980s, primarily with major companies or large independents. In our negotiations, we generally included provisions granting the tribe preferential purchase rights or rights of first refusal in the event the leasing company chose to sell or assign its interest to others. Although we have had some disagreements, our relationships with industry representatives have generally been favorable. We have honored our contractual obligations and we expect the companies to do the same. We have worked hard to ensure that companies comply with their lease terms. By the same token, we have demonstrated our willingness to live up to our contractual

obligations by including provisions waiving the tribe's immunity from suit needed to interpret or enforce our negotiated agreements. As a result of the successful development of coal seam gas from our lands commencing in the late 1980s, our economy has steadily grown.

Our experiences and the recommendations of our technical staff led us to create a tribally-owned oil and gas company in approximately 1992. The purpose of the company was to acquire ownership of oil and gas leasehold interests on or near the Reservation and, ultimately, to operate wells on behalf of both the tribe and non-Indians. That company, Red Willow Production Company, is currently the fourth largest producer of oil and gas in Colorado. We also learned the importance of establishing sound business relationships with other members of the industry. For example, in 1994, we entered into a partnership with the Stephens Group, from Little Rock, Arkansas, and together purchased one of three major pipeline-gathering systems operating on the reservation and re-named the system "Red Cedar Gathering Company." Through aggressive capital investment, we were able to construct pipeline gathering facilities in strategic locations on the Reservation to enhance production and development. More than 1% of Nation's daily gas supply flows through the Red Cedar system. Today, the Southern Ute Indian Tribe, through a variety of subsidiaries, also holds oil and gas investments in Canada, Montana, Colorado, New Mexico, and Texas. The fair market value of Red Willow and Red Cedar easily exceeds half a billion dollars.

During the course of our economic development, our Tribal Council adopted a Financial Plan, which provides separate management of our business enterprises, including our energy development enterprises. Today, I am accompanied by Robert Santistevan, the Executive Director of the Southern Ute Indian Tribe Growth Fund, who will provide additional information to you about our tribe's progress in energy development and the benefits that we have been able to provide to our members as a result of our successful efforts.

As Mr. Santistevan will demonstrate, we have come a long way, and we intend to continue walking down the path of success for the benefit development of our tribal members.

