

NATIONAL ENERGY POLICY

HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND AIR QUALITY

OF THE

COMMITTEE ON ENERGY AND
COMMERCE

HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

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NATIONAL ENERGY POLICY

WEDNESDAY, FEBRUARY 28, 2001

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ENERGY AND COMMERCE,
SUBCOMMITTEE ON ENERGY AND AIR QUALITY,
Washington, DC.

The subcommittee met, pursuant to notice, at 1 p.m. in room 2123, Rayburn House Office Building, Hon. Joe Barton (chairman) presiding.

Members present: Representatives Barton, Largent, Burr, Whitfield, Norwood, Shimkus, Wilson, Pickering, Blunt, Bryant, Radanovich, Bono, Walden, Tauzin (ex officio), Boucher, Sawyer, Wynn, Doyle, John, Waxman, Markey, Gordon, Rush, McCarthy, Barrett, and Luther.

Staff present: Miriam Erickson, majority counsel; Karine Alemian, professional staff; Peter Kielty, legislative clerk; Andy Black, policy coordinator; Sue Sheridan, minority counsel; Rick Kessler, minority counsel; Ray Kent, minority professional staff.

Mr. BARTON. If everyone could take their seats, we will get started. We want to maintain the tradition of starting on time or starting as close to on time as is physically possible.

Congressman Boucher is on his way, and he will be here shortly. We obviously have enough members to begin our opening statements.

I want to welcome our new Chairman of the FERC to our first in a series of hearings on national energy policy. Today we are going to focus on one of the commodities that is going to be important in that policy, which is natural gas. We are going to look at all fuel sources with the purpose of identifying both production capability and what the demand for the particular fuel source is, and look at any legislative or regulatory changes that need to be made in order to explore, produce, distribute and use the specific energy sources under consideration at this specific hearing.

Last night, in the State of the Union, the President said, "We have a serious energy problem that demands a national energy policy." I couldn't agree with the President more. Those of you that watched it on television and those of you that were fortunate to perhaps be in the chamber would have seen that I was the first person on his or her feet when the President said that.

At today's hearing, we are going to look at natural gas. Future hearings, working with our minority, which we will announce very soon, we will cover coal, nuclear energy, crude oil and petroleum products, hydroelectric and other renewable energy sources, conservation and energy efficiency.

Next week, we are going to have a hearing devoted specifically to Members of Congress who have concerns about our energy policy to come and testify before this subcommittee. We are going to have a panel next week on Tuesday that focuses on the situation in the electricity market in California and energy policy generally around the country. Members that wish to testify are being notified today by a dear colleague, and of course, we will do as many member panels as are necessary to give every member an opportunity to testify next week.

With regard to today's hearing, natural gas is our cleanest burning fuel source. For a long time, it has been the fuel of choice for residential heating, and in the last 10 years, new electric power generations. Recently, however, the market has been pinched by greatly increasing demand. The downturn in wellhead prices in the late 1990's discouraged some companies from producing and exploring for natural gas. That has led to a reduced growth rate in natural gas production. Because of that, we do import natural gas today in the United States, primarily from Canada, but to some extent, overseas from our L&G sources.

It is time to take a look at rebalancing supply and demand in an environmentally responsible manner in natural gas markets. It is also time to make sure that natural gas can get where it is needed, which means that we need to focus on the transmission infrastructure. A healthy region cannot complain about high natural gas prices, yet obstruct establishment of additional pipeline capacity. We must also do our part to reauthorize pipeline safety law in a responsible fashion.

I am pleased today to welcome Chairman Curt Hébert to the subcommittee for the first time in his new capacity as permanent Chairman of the Federal Energy Regulatory Commission. And I want to take a point of personal privilege to let everyone know, in no uncertain terms, that I fully support Chairman Hébert being the permanent Chairman of the FERC. I look forward to working with him in the years ahead to craft a comprehensive national energy policy. And I am very confident that with his ability and the Commissioners that are there and the new Commissioners that the President's going to appoint very soon, once they are confirmed by the Senate, this subcommittee and your commission is going to have a very cooperative working relationship.

So I don't want there to be any concern about whether I support Chairman Hébert being Chairman Hébert. He has got my total, unqualified support. This is going to be a very busy time for you and your commission, but I know that you are up to the task.

I am also pleased on the next panel, a small panel of 10 experts, which we have had to extend the table—you will notice our table is I think a little bit longer than it normally is to get each of you. Congressman Boucher and I have decided to do as many hearings as we can where we have one panel so that all members have a chance to ask questions and that people that are on the second or third panel end up having to speak only to me and Congressman Boucher. So we are going to try to do as many hearings as we can with one panel, except when we have administrative officials like Chairman Hébert.

We are going to work in this subcommittee with other committees to hopefully craft a comprehensive energy policy for this country. We are going to focus today on natural gas. We know that for the near term it is the environmentally responsible fuel of choice, and as such, we need to give it serious consideration.

Mr. Boucher is not here yet. We will go to Mr. Doyle for an opening statement, and we will go to Mr. Bryant.

Mr. DOYLE. Thank you, Mr. Chairman. I want to thank you for convening this hearing to examine a wide range of factors impacting natural gas markets, and to further determine the role of natural gas in a comprehensive, national energy policy. This hearing should prove to be a valuable source of information as we move forward in fashioning a national energy policy that is mindful of all energy sectors, assures reliable and affordable service, encourages conservation, and maximizes new technology opportunities.

As we are all aware, natural gas prices have risen sharply during the past year following a 15-year period of adequate supply and demand. Natural gas prices have risen dramatically at the wellhead over the last year, which has translated into drastic increases in heating bills for residential customers. And just as prices have increased, so has demand. This demand for natural gas has been attributed to a robust economy coupled with an environment that supports the growth of natural gas-fired electricity generation. If these dynamics sound familiar to the subcommittee's previous dialog on electricity markets, that is because we are facing some of the fundamentally same challenges involving generation, transmission, and distribution.

A strong demand for natural gas is not a new-found discovery but a trend that we have been aware of for some time. In the testimony we will hear today, numerous studies will be highlighted that project U.S. gas consumption is expected to increase by 40 percent by the year 2020. We also should not ignore the fact that currently more than half of the present U.S. oil supply is imported, and without natural gas production, our oil import volume would be much larger.

We should also be mindful of the fact that numerous scientists, as well as the Presidential Committee of Advisors on Science and Technology, have noted natural gas will remain a principal energy source well into the next century. This, in part, is attributable to the increasing demand for clean fuels and reduced emissions.

Mr. Chairman, while I am very much concerned about matters involving increased drilling, adequate storage and pipeline safety, I want to emphasize the importance of expanding options in terms of recoverable resources. I am particularly interested in heightening efforts in the field of methane hydrates, and was pleased to have my bill, The Methane hydrate Research and Development Act, signed into law last year.

If I could tell you only one thing about the importance of research, identification, assessment, exploration, and development of methane hydrate resources, it would be this: If only 1 percent of the methane hydrate resource could be made recoverable, the United States could more than double its domestic natural gas resource base. And when a new abundant resource is found that meets a growing demand with a greater level of efficiency, con-

sumers will not only have a greater selection of options but more affordable costs as well.

In addition to potential as an abundant and affordable energy source for consumers, methane hydrate deposits also represent a challenge to conventional oil and gas extraction. Hydrates influence physical properties of ocean sediments, particularly, it strengthens stability. Characterizing hydrate formation and breakdown is critical for the safety of deep offshore drilling and other deep sea operations.

While I strongly believe that methane hydrate should play a strong role in our long-term energy policy, we must be quick to act in responding to our short-term energy needs. I have been a strong proponent of LIHEAP and have lent my support to recent efforts to obtain supplemental funding and increase what will be appropriated in response to the overwhelming demand for assistance.

But we must find ways to enhance these types of efforts, and we must act quickly. Just like my fellow members of the subcommittee, my constituents and small business owners are struggling in dealing with the rising costs of natural gas. One resident has seen her gas bill reach \$600 for 2 months, up from \$89 a month last year. And one small business owner's recent gas bill topped \$5,000, an amount more than doubled the cost of last year's bill.

It is my sincere hope that today's discussion will assist us in our efforts to not only move through this period of price volatility but also in making sound, long-term decisions that will foster a national energy policy that places great import on affordable supplies.

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

Mr. BARTON. We thank the gentleman from Pennsylvania.

We want to just make an editorial comment. The ranking member and the chairman's opening statements are 5 minutes, and all other members, according to the rules, are 3 minutes. Now, we are going to be very generous, but we have got a lot of hearings to do this spring, and we hope that most of our opening statements can be within the general constraints of the rules.

The gentleman from Tennessee, Mr. Bryant, is recognized for an opening statement.

Mr. BRYANT. Mr. Chairman, I have an opening statement, but I would point out that Mr. Pickering, my friend from Mississippi, arrived before I did, if that makes any difference.

Mr. BARTON. I happen to notice you before I noticed him.

Mr. BRYANT. I understand that.

Mr. BARTON. We will recognize Mr. Bryant, and then our next one will be Mr. Pickering on the Republican side.

Mr. BRYANT. Thank you, Mr. Chairman. I will try to get through this speech in 3 minutes, although, for some of us in the southern region, it is awfully difficult to—

Mr. BARTON. I understand.

Mr. BRYANT. [continuing] talk fast.

I have been listening to my friend from Pittsburgh's opening statement. I realize probably most of our opening statements are going to sound an awful lot alike. And you are probably sitting out there saying, "Well, they always do, and so why don't you move

on?" But I do want to give my statement and indicate my appreciation for the chairman for holding this very important hearing.

Likewise, in Tennessee, there has been—including me, my bill has increased dramatically over a comparable time last year. And a number of constituents that I have, have called and written us about bills that have tripled and quadrupled. And unfortunately, a lot of folks don't make the money that we make in Washington, and they have more difficulty—much more difficulty—making those payments. Even though they may be smaller in size, but it is still three or four times what they are used to making. So this is a very critical issue.

I have a more complete statement that I will give to the record—I will hand it in after my comments—but I did want to add a couple of other statements.

I think we have to begin to recognize that in this country we cannot have our cake and eat it at the same time. And we have to, I think, go toward a more balanced approach to the issue of energy. I am very optimistic that this committee, through hearings like this, will be of assistance to those in the Administration whose task it is to develop a national energy policy, and I hope we can play a part of that.

And a part of that policy has to include, at a minimum, relief on our pipeline situation. I know that was a part of the reason—along with several others that you will hear all about today—but that was part of the reason we had a smaller supply to bump up against this large demand that we had. We have to look at our policy, our policies, the Federal policies on Federal pipelines, the environmental issues there. Obviously, where I come from, the property rights issues are very big down there. All these come into play when you are talking about pipelines. But we have to have more pipelines out there to get this gas out to the distributors.

Other issues we have to look at are exploration, finding additional sources in this country and in the northern part, in Alaska, offshore, again, in a balanced approach that will protect the environment. But I am afraid, as we face issues like we faced in California with electricity, that we don't overreact, and we don't move too quickly, but yet we take a balanced approach and, again, be aware of issues of the environment and protecting property rights, but yet, knowing that we have a surging demand for power in this country that for the foreseeable I don't think is going to stop.

And it is up to Congress I think to set the lead in this, and I know our good chairman from Texas is going to do that. And again, I thank you for doing that and would, again, ask unanimous consent to put my full statement in.

Mr. BARTON. Without objection, so ordered.

Mr. BRYANT. Thank you.

[The prepared statement of Hon. Ed Bryant follows:]

PREPARED STATEMENT OF HON. ED BRYANT, A REPRESENTATIVE IN CONGRESS FROM
THE STATE OF TENNESSEE

Mr. Chairman, I would like to commend you for holding a hearing on the drastic increases in the consumer cost of natural gas. Let me begin by saying, I was shocked at how much gas prices have risen when I received my utility bill at my home in Henderson, TN. Over the winter, I have heard from many of my constituents in Tennessee wanting answers as to why their utility bills had tripled, and in

some cases, quadrupled without warning. In the real world, families have to stick to a budget. Real families can't dip into a surplus, they have to plan ahead. These huge increases in gas prices have put real families in a bind, and I hope this hearing will lead to some solutions.

Most experts agree that our nation is in the midst of a natural gas shortage. The travesty is that our natural gas supply is plentiful, but because of stifling federal regulations, we are unable to develop our nation's resources.

Federal regulations that have hindered construction of new gas-fired power plants need to be relaxed. Our nation is consuming more power than we are able to produce. We should explore opening up 8% of the barren, frozen tundra in the Arctic National Wildlife Refuge (ANWR) in northeast Alaska and off-shore areas in the Pacific Ocean and Gulf of Mexico to environmentally responsible oil and gas development. Also, without new pipelines, we cannot distribute gas across the nation, which would affect prices. I support streamlining the regulatory process for pipeline approval, so that we can meet our energy needs. We must take advantage of our nation's resources to control our own destiny in the ever-changing global market.

As our society becomes more technologically advanced, we are requiring more energy than ever before and as we move away from oil and coal power, demand for natural gas will continue to increase. The good news is that natural gas-fired generation has a number of benefits. Among them is the fact that gas-fired plants can be constructed faster than other power facilities, an advantage in this time of power shortages. Additionally, gas plants have environmental advantages because they produce fewer emissions of both pollutants and greenhouse gases. If Congress can provide adequate incentives and enough attractive prospective territory to foster a high level of drilling activity then we should have a much increased gas supply as a result.

I hope that today's hearing will help to direct this body towards developing a coherent national energy policy that will ensure our natural gas supply meets the current and growing demand.

Mr. BARTON. The gentleman from Virginia, Mr. Boucher, is recognized for an opening statement.

Mr. BOUCHER. Thank you very much, Mr. Chairman. I want to commend you for scheduling today's hearing on natural gas policy. Under the chairman's procedure, today's hearing will be the first in a series of hearings our subcommittee will conduct on our nation's policies with respect to its major energy sources. And I want to commend Chairman Barton for this useful approach at a time when the need for a national energy strategy focusing on our domestic resources stands in stark relief.

Over the course of the last year, the price for natural gas has doubled, resulting in sharp increases in residential consumer bills. The sustained higher prices for gas and the extreme spot market spikes we have experienced during the last year seem all the more dramatic because of the unusually low price for natural gas in the preceding years. Accordingly, I believe this is a timely hearing. Many of our constituents are asking both for assistance and for explanations.

The effect of high natural gas prices is not confined to residential heating bills. As a major fuel source for electricity generation and the production of commercial fertilizer, it is clear that consumers across the Nation may also be paying for increased gas costs whenever they turn on the lights or purchase food at the grocery store.

The data produced to this date, by the Energy Information Administration and by others, seems to indicate that for the most part the cause of these increases is mainly a case of demand growing faster than supply. Exploration and development of gas fields has been increasing steadily since 1995; however, beginning in 1999, the number of new wells has declined as low prices discouraged investment in exploration and development. Fortunately, the data

also suggests that the market is responding properly, and exploration and new development activity has been on the rise over the past year as a result of the high price that gas is now commanding.

Nevertheless, I think it is appropriate that we examine various approaches that our committee may undertake to aid in increasing the supply of natural gas. Since the deregulation of price controls and allocations, the tools at the disposal of this committee primarily relate to the construction and reliability of pipeline transportation of natural gas from the wellhead to the consumer.

While it appears that the Federal Energy Regulatory Commission is using its authority under Section 7[c] of the Natural Gas Act to permit new pipeline facilities in an expeditious manner, I look forward to learning whether there are ways to improve on this process without compromising either public participation or necessary environmental protections. I am also interested in learning more about the various proposals to make Alaskan natural gas available to the rest of the nation, whether under authority of the Natural Gas Act or the Alaska Natural Gas Transportation Act.

Finally, the price increases in California related to a pipeline explosion that took place last August indicate that the pipeline safety and supply reliability are inextricably linked. And so I hope we will hear from witnesses now and at future hearings about how our pipeline safety laws and regulations can help guard against supply disruptions. We will review these matters carefully so that we can ascertain what, if any, changes to these acts are necessary and appropriate.

Perhaps even more important to this inquiry is the question of natural gas demand. This committee has primary jurisdiction over our nation's energy conservation statutes and programs, and a comprehensive review of our conservation policies is therefore warranted. While DOE efficiency standards for a number of consumer appliances have undoubtedly served to reduce the demand for gas by affecting electricity demand, we should ask if there is more that needs to be done to promote conservation, particularly in the commercial and in the industrial sectors. Is the Federal Government doing its part to limit demand for natural gas and gas-fired electricity at its own facilities? Are we offering the right incentives to encourage the use of more energy-efficient products? These are just some of the questions we may want to consider as this hearing and our future consideration develops.

Many of our energy and environmental policies over the last few years have encouraged the construction of natural gas-fired electricity generation. This may be fine, and there is no doubt that combined-cycle, natural gas power plants enjoy a number of natural, economic advantages that have contributed to their growth and expanded use. But at the same time that we have encouraged increased reliance on natural gas for electricity production, we have also put in a place a range of policies that have had the effect of discouraging the use of other fuels, particularly coal. The result is an unbalanced energy portfolio and an economy that may be too dependent on too few fuel sources.

We need to find ways to conserve electricity and the demand for gas while encouraging the environmentally sound and efficient pro-

duction of energy from coal and the general expansion of our national portfolio of energy sources.

Mr. Chairman, as I have said before, this subcommittee has a long tradition of bipartisanship. In part, I think that is due to the character of the people who have served here. But it is also because energy issues are often more regional in nature than they are partisan. And so one of the challenges that I think we are going to face in this Congress, Mr. Chairman, may lie in bridging the gaps between the producer and consumer regions of the Nation more than in bridging gaps between people on the two sides of this aisle.

As I continue to work with you and other members of the subcommittee in examining our energy policies, and perhaps in considering legislation, I look forward to working with you to ensure that we put in place balanced energy policies that serve the national interest.

Thank you, and I yield back.

Mr. BARTON. Thank the gentleman from Virginia. We now would welcome an opening statement from the gentleman from Mississippi, Mr. Pickering.

Mr. PICKERING. Mr. Chairman, thank you. And I, too, want to join you in welcoming the permanent chairman of FERC, a good Mississippian, Curt Hébert. And I look forward to working with you as we address comprehensive energy solutions for our country.

And Mr. Chairman, I can think of no better place to start with than natural gas, as we all see across the country the high prices of natural gas are causing severe suffering among our residents, and in agriculture, and particular in my State, poultry producers. And then with the coming planting season, we know that the input cost to fertilizer is going to be extremely high. So we are concerned across the board as to how the energy situation is going to affect our overall economy and our people. I look forward to hearing the solutions.

I believe, though, that if we look at the problem we face now, the old saying, "We have met the enemy, and the enemy is us." We have locked up, locked away, shut down, shut out our fuel sources, our natural gas reserves, either on the coast, in the Gulf of Mexico, in Alaska, and we need to find a way to unlock our reserves of our energy sources so that we can increase our own independence and our own supply and bring the prices down. We need to find a way to bring common sense to environmental regulations and permitting and pipeline safety.

I look forward to meeting all those objectives with you and working with you, Mr. Chairman, as we go forth.

Mr. BARTON. Thank the gentleman from Mississippi. The gentleman from Ohio, Mr. Sawyer, is recognized for an opening statement.

Mr. SAWYER. You caught me by surprise, Mr. Chairman.

I would like to just take a moment to thank you and Mr. Boucher for this series of hearings that we begin today and to welcome Chairman Hébert and our other panelists who will be with us today. I have a longer opening statement. I would like to associate myself with the remarks that were made both by you, Mr. Chairman and by our ranking member. They are thoughtful, and they go to the depth of some of the problems that we face.

I would only reemphasize the importance of recognizing the linkage between natural gas and electricity. It is a growing linkage and one that in many ways should point us toward an understanding that it is sometimes easier to move natural gas by wire than it is by pipeline, and more efficient as well. The whole set of issues that surround infrastructure in natural gas is every bit as important as the one that surrounds electricity. The question of siting and timely development of the ability to move energy from one place to another is critical and at the heart of a complex solution of a multi-dimensional problem.

With that, Mr. Chairman, I yield back the balance of my time.
[The prepared statement of Hon. Tom Sawyer follows:]

PREPARED STATEMENT OF HON. TOM SAWYER, A REPRESENTATIVE IN CONGRESS FROM
THE STATE OF OHIO

I commend the Chairman for having this hearing on natural gas as the first in a series to address a national energy strategy. There are many recommendations that Congress should carefully consider, including: expanding LIHEAP; expanding natural gas infrastructure; development of new natural gas technologies; increasing energy efficiency; and, assuring adequate supplies of natural gas.

I am confident that we will hear from the many witnesses today about the uncertain supply and increased demand for natural gas. Yet, I do not think that the issue at hand is simply a supply and demand problem.

When prices increased earlier in 2000 to \$3.00 per unit (MMBtu), this supposedly gave producers enough incentive to open the wells. I have been informed that the cost of getting natural gas out of the wells is \$2.85 per unit. Any additional costs are associated transmission. While there has been more exploration, it is not clear why the prices continued to rise to nearly \$10 per MMBtu by December.

Were the additional costs of transmission so great that the price of natural gas increased three times over? What will it take to improve the conditions of old lines, and conduct new infrastructure development? Or is this price—which does not seem reflective of the cost usually associated with natural gas—reflect something other than transmission? Was there some other inefficiency in the market causing this unnatural increase in price?

The long-term projection for stable natural gas prices ranges from \$3.00 to \$3.50 per unit. I am interested to hear from our witnesses today how the fifteen cent to sixty-five cent cost of transmission over production has been formulated. It is not clear to me how these projected prices can be reconciled with the prices we saw in the later part of 2000. I look forward to the testimony and thank our witnesses for addressing this very important issue.

Mr. BARTON. Thanks to the gentleman from Ohio. The gentleman from Kentucky, Mr. Whitfield, is recognized for an opening statement.

Mr. WHITFIELD. Mr. Chairman, thank you very much. All of us are excited about the series of hearings as we explore the possibilities of putting together a national energy policy which has been lacking in our country for some time. It is fitting that our first hearing does focus on natural gas, particularly since throughout the country, residential, commercial and industrial users have all been reeling from the high prices of natural gas. And I have received this stack of bills from my district from people whose rates have increased anywhere from 200 or 300 percent in 1 month. And I haven't had any issue in recent time that I have received so much correspondence about.

I was reading Beth Campbell's testimony, as well as others, and she went through a number of reasons why natural gas prices have increased, and there are many reasons for it. One that she mentioned was the passage of the Clean Air Act Amendments of 1990 and subsequent regulations affecting air quality standards. And we

know also that the previous administration did have a bias, in my view, for natural gas. I think it is important that we also, as we form this policy, recognize that coal is our most abundant resource—nuclear fuel is providing 20 percent of all electricity produced in our country—and that our policy must include using all of our resources, and do it in an equitable way.

So I look forward to this hearing and the others, and I yield back the balance of my time.

Mr. BARTON. We thank the gentleman from Kentucky, and hope we give enough financial resources to you and your personal life that you can help pay those bills. I am sure they would appreciate it. If you just send the check back when you answer the correspondence, that will help in your reelection effort in the next election cycle.

We would like to hear from the gentleman from Minnesota, Mr. Luther, for an opening statement.

Mr. LUTHER. Thank you, Mr. Chairman. I will be very brief.

Coming from Minnesota, I can assure you I share the concerns of many here about the impact of natural gas prices on family budgets in our State. I want to thank you, Mr. Chairman, for holding this hearing, and I assume subsequent hearings, looking into this issue and particularly looking at real, long-term, responsible solutions to this whole energy issue and particularly the natural gas price issue that is plaguing us at the current time.

I am particularly pleased that you have included a broad range of interests in the hearings, including a representative from FERC and from a consumer interest. I think it is key that we have that kind of a balanced view of the entire issue. And I thank you and look forward to the testimony, Mr. Chairman.

Mr. BARTON. Thanks to the gentleman from Minnesota. Gentleman from Illinois, Mr. Shimkus, for an opening statement.

Mr. SHIMKUS. Thank you, Mr. Chairman. I would like my official statement to be put in the record.

Mr. BARTON. Without objection.

Mr. SHIMKUS. And, obviously, we are talking basic economics, a supply and demand equation. The last administration did have a fuel of choice, and that was natural gas. And the demand has outstripped our available supply, and prices have skyrocketed. It is not rocket science. I think what we have to do when we debate a national energy policy is have a wide availability of fuels. Let the market decide the most efficient use of those fuels. I don't just tend to agree that using natural gas and the transmission system is the most efficient use. I think the market will decide that. And when the market can decide it, then we will have lower prices across the board for all our energy needs and not really directed or manipulated by legislators here.

My farmers are about ready to go into the field too, and we know the natural gas role in fertilizers. And there is a price to be paid for no national energy policy. And we are paying it right now, and hopefully we will rectify that in the weeks ahead.

With that, Mr. Chairman, I yield back my time.

[The prepared statement of Hon. John Shimkus follows:]

PREPARED STATEMENT OF HON. JOHN SHIMKUS, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF ILLINOIS

Good morning, Mr. Chairman and to all whom have shown up this morning. I am looking forward to this hearing today.

The Midwest has been hit particularly hard by high natural gas prices this winter. In some parts of Illinois, consumers are paying \$1.00 per therm. The cold winter that the Midwest experienced did not help matters at all. The State of Illinois and the natural gas utilities have taken numerous steps to help consumers pay their gas bills, but none of these steps address the long term problem of supply.

One of the main reasons for Illinois' high natural gas prices was the focus on power generating and peaker plants to meet above-load demand. We have drawn down stocks of natural gas that have been used as the heating fuel of choice in the Midwest, and as a result doubled the price.

We should all be worried that a majority of power plants that are currently on the drawing board are powered by natural gas. When our country starts to rely too heavily on one particular fuel source, we run the risk of supply shortages and price spikes. This is what we are seeing now. We have become too reliant on one or two forms of fuel.

The high natural gas prices are also causing overseen problems in rural areas. Natural gas is used to make fertilizer for our nation's farmers. These high prices have led to a shutdown of U.S. nitrogen plants, raising uncertainties over the price and supply of nitrogen fertilizer this coming spring. Natural gas accounts for 60-70% of the total cost of nitrogen. So this has been a double hit on farmers. They are paying higher prices to heat their homes, like everyone else, then they are also paying higher prices for their fertilizers.

I happen to think that our nation should not rely only on just one energy source such as natural gas, coal, nuclear or renewables to generate power, but all of these sources. It is the smart thing to do over the long haul. Just like any good retirement portfolio, our energy industry should be diversified. Fuel diversity will lead to less supply problems and more stable prices for consumers.

Again, thank you for having this hearing today Chairman Barton. I yield back the balance of my time.

Mr. BARTON. Thanks to the gentleman. Gentleman from Louisiana, Mr. John, is recognized for an opening statement.

Mr. JOHN. Thank you, Mr. Chairman. You caught me in the wrong chair here. Thank you very much for having this—

Mr. BARTON. If the gentleman will suspend. I am having a finger pointed at me by the lady from the show-me State.

Mr. JOHN. And I yield, Mr. Chairman.

Mr. BARTON. I want the record to show that my staff said Mr. John arrived before Ms. McCarthy. But if in fact Ms. McCarthy arrived first, we will certainly let the gentlelady from Missouri go before the gentleman from Louisiana.

Mr. JOHN. I will yield.

Mr. BARTON. Does that make you happier?

Ms. MCCARTHY. Well, it is not the first time that it has occurred, Mr. Chairman, but I am delighted that Mr. John will honor that.

Thank you, Mr. Chairman. May I proceed?

Mr. BARTON. You may proceed, for 3 minutes, though.

Ms. MCCARTHY. Yes, sir.

I have it down to one little page. I want to thank you, and I also want to thank Ranking Member Boucher for this series of hearings and welcome the permanent chairman of FERC being with us today.

I have been working on national energy policy issues since 1976 when I first became a State legislator, and I hope—while natural gas is important to all of our districts right now, I hope we on this subcommittee will be able to formulate a long-term view that includes renewed efforts on conservation, seeing how we can at the Federal level provide incentives for developing fuel efficiency, and

taking advantage of technological advances that are already occurring on alternative fuel resources. I would like to see this subcommittee also take a good look at developing alternative indigenous resources for national security purposes as well as environmental ones.

And this subcommittee, thanks to your leadership, Mr. Chairman, did pursue an issue that Mr. Shimkus and I introduced and passed on biodiesel fuel, which is helping our communities. And Mr. Doyle referenced his methane hydrate success. There are others out there, and we need to be pursuing them and taking a good look at how we can help them and develop them. And last, I think any national policy should address reducing our carbon emissions so that we can address the scientific concerns with regard to global climate change.

So I look forward to working with you. I am glad that we are going to have a series of hearings. I hope that we will take a long-term view, broad view, and also a view that will rise above politics so that we can, indeed, put a national energy policy in place that continues the economic opportunities in this country and allows us to expand them.

Thank you, Mr. Chairman.

Mr. BARTON. Thank the gentlelady from Missouri, and profuse apologies for going out of order. If you are on time next time, you will go before I go.

We will give you the honor of making the opening opening statement.

The gentlelady from California, Congresswoman Bono, for an opening statement.

Ms. BONO. Thank you, Mr. Chairman. I am very happy to be sitting on this subcommittee, and today is my first day back, as you know. And thank you for your help in putting me on this subcommittee. I, like all Californians, have a grave interest in this issue and where we are. And as I just heard my colleague before me talk about global warming, I have got a bigger issue. And that is, in Palm Springs when it gets to be 128 degrees in the summer. This is a serious issue. And it is not about quality of life, it is about life and death for these people. The threat of rolling blackouts in California is a real one, and I have been assured by many in the energy industry that it is guaranteed that we will be having these blackouts. I don't know how my people are going to survive this; I do not know for the life of me—128 degrees. If you have ever felt it, it is seriously like stepping into an oven. And I hope you all come out to Palm Springs, but August wouldn't be the best month for you to come out and visit us.

But you know, I am also hearing people talking about supply and demand and the problem we are having in transmission in the gas pipelines. These issues are only coupled in California by the problems we are having with deregulation and the flaws in, perhaps, fed deregulation. So I care deeply, and I also thank the chairman for the time he spent in California with all of us in trying to begin to tackle this issue. And I thank Chairman Hébert for the time earlier with the California delegation as well.

But I am a little frustrated by my colleagues. And I mean that with all utmost respect. But how people can say that this crisis

came without any forewarning, amazes me. I have a brother who is a geologist who is an independent producer, and for 10 years or 20 years he has been screaming that this crisis is going to be here. And here we are. And, again, in California, it is life and death. And I, again, want to say that I am anxious to hear your testimony and thank you for your being here today.

And with that, I yield back.

Mr. BARTON. Thank the gentlelady. Now we go to the very polite gentleman from Louisiana, Mr. John, for an opening statement.

Mr. JOHN. Thank you, Mr. Chairman. Thank you for holding this hearing. And I want to also welcome Chairman Hébert. I heard you were from Mississippi, but with a name like Hébert, I guarantee you, roots are in Louisiana somewhere. So welcome and good luck.

As we embark on what the President called a national energy policy debate, I think that natural gas is part of the equation that cannot be left out. And I believe that Americans, in a lot of ways, are addicted to energy, whether it is gasoline, electricity and all of the things that go with that, such as recharging our cell phones and other things as we enter and embark upon an electronic economy. It is just going to get worse.

The gentleman from Illinois, Mr. Shimkus, talked about it as a simple question of supply and demand. Well, I have a different twist on it—well, not a different twist, but something to say about it from the demand side. I believe we are not going backwards. I think that demand is going to continue to increase, and there is certainty in that. I believe that is where we will go; that is the avenue we will take. On the supply side, I don't think it is as certain. I think that we have a lot of questions to answer. We have a lot of soul searching to do as we look at some of the problems we have.

You know, I have said this so many times to my constituents back home in Louisiana. It makes me a little nervous to know that only 2 years ago we had cheap natural gas, we had 70 cents a gallon gasoline, \$10 a barrel oil, and look at the situation we are in today. I have also stated that I believe strongly that America, being the most powerful country militarily, technologically, and economically in the history of mankind, has a vulnerability, and it is energy. And I think it is that serious.

And I think that the embarkment that we are going to start in a national energy policy is as critical as any issue that we will debate in the next coming years. It is just coming to light now because of the situation in California and because of gasoline prices. We had the coldest winter in some years in Louisiana. We actually had three freezes. So it was cold in Louisiana this year.

Mr. BARTON. Wisconsin has got great sympathy that you had 3 days of freezing.

Mr. JOHN. For us guys, it is cold, Mr. Chairman. For us guys, it is cold.

But I believe that it is time to stop demonizing the domestic producers. They are part of the solution to the supply problems. Too many times they have been looked at as being part of the problem, but of course, I think it is going to become apparently clear that they are going to be part of the solution to any sustained economic growth as we open the doors of a new economy that is going to be driven by electricity and fuel.

I also am anxious to hear a lot of the comments from some of my colleagues. I have my good friend down in the audience that represents Louisiana Chemical Association, Dan Borné, who knows all about what high natural gas prices mean to Louisiana industry. We talked a little bit about how other industries are going to be affected and the trickle down effect. Well, I can tell you that 40 percent of the U.S. ammonia is produced in Louisiana. Ninety percent of the cost of ammonia is natural gas. Ammonia makes fertilizer. Fertilizer feeds our fields for our farmers. The farmers will feel this effect not only in the price of diesel fuel to run their tractors but in the cost of production.

So I am very excited about embarking on a national energy policy, and it is something that I believe is very, very important to the national security of this country. So with that, I have a written statement that I would like to put in the record.

Mr. BARTON. Without objection, so ordered.

[The prepared statement of Hon. Chris John follows:]

PREPARED STATEMENT OF HON. CHRIS JOHN, A REPRESENTATIVE IN CONGRESS FROM
THE STATE OF LOUISIANA

Mr. Chairman, I want to thank you for calling this hearing today on natural gas issues. In deference to the numerous witnesses who are patiently waiting to testify I will be brief with my remarks. However, I would like to comment on a couple of the natural gas issues that I believe are critical in developing a comprehensive national energy policy.

First, if we want continued economic expansion of our new high-tech economy, demand side solutions cannot alone help our nation meet its energy needs. For too long, many Americans have taken for granted that the fuel that heats their homes, runs their cars, and recharges their cell phones is the end product of an expensive and complex process which begins with extraction of gas, oil, coal or uranium. Any comprehensive energy policy must look at supply-side issues and I am happy that we have witnesses represented today who will talk about access issues which have constrained our domestic producers from developing our nation's resources base.

The single greatest factor in this winter's high natural gas prices has been a lack of domestic supply to meet growing demand. This comes as no surprise to those of us who represent oil and gas producing congressional districts. Two years ago when our domestic producers were being crushed by historically low oil prices, and massive job losses were taking place in our communities, the silence was deafening from the rest of the nation. As long as gasoline prices and energy prices were low nobody cared about the fact that our independents and major producers of oil and gas were cutting jobs, cutting back on new investment, and abandoning marginally producing wells. Well, Mr. Chairman, we reap the seeds we sow.

While the number of production rigs has doubled in the past two years, the effects of low prices have not ended. Over 400 jobs have been lost in my congressional district in the last few months as oil and gas companies continue to cut costs and streamline their business operations in preparation of receding prices when this new production comes online.

Natural gas is a commodity and the best way to prevent huge swings in price is to ensure that there is an adequate, stable supply base. It is time to stop demonizing our producers and recognize that they are a central part of any comprehensive solutions we may develop. Moreover, if we want to meet growing demand, we must address some of the access issues that prevent development of America's natural resource base. Surely members from states tied up in moratoria do not believe their lands are more important or valuable than those of states who are not covered by these restrictions. It is unwise and short-sighted to have a few states bearing a disproportionate load for the entire nation—especially when we are talking about the development of federal, not state, lands.

We must also make sure that the right incentives exist to maximize our domestic supply base. This should include tax incentives for marginal and stripper wells to keep them in production, an extension of the Section 29 nonconventional fuels tax credit to encourage production of natural gas from tight rock formations and other sources, and royalty relief in federal waters where appropriate.

While most access and tax policy issues are beyond the Jurisdiction of the Energy and Commerce Committee, I believe it is important for this Committee to recognize their importance in a comprehensive national energy policy.

Mr. Chairman, let me conclude by thanking you for inviting a representative of the Louisiana Chemical Association to testify today. Sustained high natural gas prices have affected many industries, but few more so than Louisiana's ammonia industry, which accounts for 40% of the U.S. production of ammonia. Natural gas makes up 90% of the costs of producing ammonia and as a result of high prices, several companies have been forced to shut down all or part of their ammonia production units. Most of the ammonia produced in Louisiana is used to make fertilizer, so the effect of high natural gas prices will soon trickle down to our nation's farmers—who are already struggling with low prices. Mr. Jas Gill knows my district well having spent time in the community of Lake Charles working for the Olin Corporation. I would like to welcome him to the subcommittee and appreciate his testimony here today.

Mr. Chairman, thank you again for convening this important hearing and I look forward to working with you to craft a comprehensive national energy policy.

Mr. BARTON. The vice chairman, the distinguished gentleman from Oklahoma, is recognized for an opening statement.

Mr. LARGENT. Thank you, Mr. Chairman. Today's hearing on natural gas issues is of particular interest to me. My home State of Oklahoma is a large producer of natural gas; nevertheless, my constituents are not immune from having to pay high natural gas bills. In fact, the No. 1 complaint that I hear in my office from folks back home is what am I going to do to lower their natural gas bills?

I want to recognize one of our witnesses today who is on the second panel, Mr. Cuba Wadlington. Mr. Wadlington is the president and CEO of Williams Gas Pipeline located in Tulsa. And Cuba, we welcome you to the subcommittee.

Mr. Chairman, the U.S. is a country rich in both energy resources and the technology to develop them. Unfortunately, the policies of our own Government are preventing much needed development of these resources from occurring. For those of you who follow British history, you may recall the popular expression, "Taking coal to Newcastle." Newcastle was a center of English coal production. The phrase was coined to indicate the absurdity of taking a product to a place that had plenty of it.

But that is exactly what happened in the late forties when the British government nationalized the coal industry. Shortages and rationing resulted, and taking coal to Newcastle became a grim reality. Similarly, the United States today with its vast supplies of oil, natural gas, timber, and other natural resources is suffering shortages and high prices because of restrictions imposed by our own Government.

I read with interest the testimony of one of our witnesses today, Mr. Patrick Silva, from the Natural Resources Defense Council. It is the NRDC's position that we can solve our natural gas supply problems by maximizing the benefits of building energy-efficient buildings and manufacturing energy-efficient heating and water heating equipment. I agree that it will help alleviate some demand problems, but it is not the silver bullet.

The NRDC apparently would like us to believe that if we maximize existing natural gas supplies, we can continue to be energy self-sufficient. I infer from that sentiment that the NRDC opposes any exploration or production of potential natural gas deposits, par-

ticularly if they happen to be in areas that the NRDC deems to be environmentally sensitive.

Mr. Chairman, you know all too well that our domestic oil and natural gas industry has suffered job losses in the tens of thousands over the last decade. I am afraid that until the oil and natural gas worker becomes himself an endangered species, the environmental community will continue to bite the hand that feeds our energy requirements. My goal is for this subcommittee to develop a comprehensive, common sense, environmentally sound, long-term energy policy. Otherwise, I fear that the next popular expression will be, "Taking oil and gas to Tulsa."

Thank you, Mr. Chairman.

Mr. BARTON. Thanks to the gentleman from Oklahoma. We now welcome from the balmy badger State, Mr. Barrett of Wisconsin for an opening statement.

Mr. BARRETT. Thank you very much, Mr. Chairman. I was getting choked up listening to Mr. John talked about the three freezing days.

Thank you also for holding this important hearing, and thanks to the witnesses for being here today to discuss natural gas and the nation's overall energy policy.

Soaring natural gas costs, along with the high price of crude oil and other fuels, have put this country's energy policies under the microscope, and rightly so. I am hopeful that this afternoon's hearing will point to some sound solutions for meeting this country's long-term energy needs.

To date, I am afraid that some have been looking too hard in the wrong place for solutions. Although gas production on some public lands is certainly needed, expanding production in the country's most environmentally sensitive areas for a limited amount of gas or oil is not sound public policy nor is it what the majority of American people want.

Any truly effective energy policy must include meaningful demand management incentives and significant infrastructure improvements, as well as initiatives to ensure an adequate energy supply. The crisis in California, in particular, suggests that we must work with the States to ensure a diversified fuels portfolio that includes coal, hydroelectric, and renewable sources in addition to natural gas.

Of utmost concern to me are the ways in which energy policy and the fuels market impact the nation's consumers. Major utilities in my home State of Wisconsin are seeking retail rate increases upwards of \$72 million to offset the rising costs of natural gas. Residential prices for natural gas, as everyone here knows, have already doubled this year. And while everybody's pocketbooks are affected, many low-income families, many moderate-income families and seniors living on fixed incomes have been truly overwhelmed by their gas bills this winter in Wisconsin.

An energy assistant program director in my State recently reported that thousands of households are confronting heating bills that are higher than their monthly incomes. Faced with heating costs that range from nearly \$200 to almost \$700 a month, seniors and working families are being forced to make unacceptable choices, like cutting spending on groceries, medical prescriptions,

and other necessities in order to pay their heating bills. I realize that this is a complicated issue, but we certainly have to do what we can to work together.

And again, I thank the chairman for holding these hearings and hope that we can help the people in this country because they deserve the help. And I would yield back the balance of my time.

Mr. BARTON. We thank the gentleman from Wisconsin. We recognize the gentlelady from New Mexico, Congresswoman Wilson, for an opening statement.

Ms. WILSON. Thank you, Mr. Chairman. I think, probably, our perspective on energy policy will depend, as the ranking member said, a lot on regional perspective. And as a New Mexican, we are an energy-producing State. We produce coal and gas and oil and uranium—at least, we used to produce uranium. We still have the uranium. We have plenty of public lands, more than almost any other State, except Nevada and Alaska. We sell wholesale power to States like California, and we are on the same grid as California, which certainly send chills through a lot of New Mexico's spines. And we have two Department of Energy national laboratories, where some advance research on energy supply and efficiency is done.

But like my colleague from Oklahoma, I also have constituents who are facing high energy bills, high natural gas bills, fears about what being on the same grid as California is going to do. And let us face it, while we are starting off these hearings talking about natural gas, all of these issues are interrelated, because one of the reasons that gas prices are high is because of the increase in demand for electricity as produced by natural gas power plants. And so energy policy, as a whole, we are going to have to tackle. And we need—for the first time in a decade, I think we have the opportunity to craft a national energy policy.

That policy must produce dependence on foreign oil and foreign sources of energy. It must allow for responsible exploration and increased supply of energy as the American economy grows. And it must demand, and probably put in statute, interagency coordination on matters affecting American energy supply and also curbs to demand.

In this country, the EPA and the Department of Agriculture and the Department of the Interior can all make decisions unilaterally that affect American energy supply without having to take into consideration its effects on the economy or our energy policy. We need to put in statute a mechanism to make that not possible to do anymore, so that agencies cannot protect their vested interest without looking at what it will do to the entire economy and to the supply of energy.

It certainly was made very clear in our hearing last year on hydro licensing and the way so much water goes down spillways in this country just because it is so hard to license a hydro dam. So we have a shortage of energy in California which depends on hydro power. We have hundreds, if not thousands, of dams that are regulated by States that have no turbines on them. And the reason they don't have any turbines and that electricity is going down the spillway is because it is such a hassle to be licensed to put a turbine, because as soon as you put a turbine on a dam, it becomes feder-

ally regulated. And the Federal Government can order you after 7 or 8 or 9 or 10 or 12 years to breach that dam, even if it has been there for hundreds and hundreds of years.

California made terrible mistakes in how it did deregulation, and there will be good lessons for us to learn there. But there are also lessons to learn in research and development. We lose more electricity in the transmission of power from New Mexico to California than is consumed by the entire State of New Mexico. Think of that for a moment and how that would make a difference to rolling power outages in the State of California. So whether it is the efficiency of the light bulb or the pilot light, which in this beginning of the 21st century should probably be much more efficient than they are, I think there is advantages to investing in research and development as part of a comprehensive energy policy.

And finally, I will say what others have said before me, but we really need to do this, and that is to rethink nuclear energy as a country. I have seen some things said publicly and some stories in major newspapers and television in the last several months that I thought I would never see, that tell me that people really are perhaps now willing to rethink the role of nuclear energy in reducing America's reliance on foreign oil. And I look forward to that challenge.

Thank you, Mr. Chairman.

Mr. BARTON. Thanks to the gentelady. I think that is the longest opening statement you have ever made. You have probably been associating with Mr. Markey a little bit too much.

Ms. WILSON. Mr. Chairman, it would have been funnier if I—

Mr. BARTON. It was eloquent. Actually, I thought it was well done, so I am not being critical. We appreciate the thought you put into that.

The gentleman from Tennessee, Mr. Gordon, is recognized for an opening statement.

Mr. GORDON. Thank you, Mr. Chairman. This is an important hearing. I think it is time to get on with it.

Mr. BARTON. I do love Bart Gordon of Tennessee.

The gentleman from Georgia, Mr. Healthcare, Congressman Norwood.

Mr. NORWOOD. Thank you very much, Mr. Chairman. I have this tremendous opening statement, and I know you are dying to hear it. However, I would like to just submit it for the record, and in summary, conclude by saying I do, as all of us do, appreciate your interest in a national energy policy. I am delighted that our new President is interested in a national energy policy. And I heard one of our colleagues earlier say I hope we can keep politics out of it. I think politics has gone a long way to get us into the mess we are today.

The people of the 10th District of Georgia want me to come to these hearings and learn. They want to know why their gas bills are so high. They want to know why their gasoline bills are so high. And I think at the end of the day we are going to determine that all Americans want all the energy they possibly can use at a low cost. However, there are some Americans who want to use candlelight energy and be warmed by a nice fire. And we are going to have to go through that, and that may involve some politics. But

at the end of the day, the American people, I believe the majority of the American people, want you and President Bush to develop a sound, sensible energy policy for this nation so we won't have the terrible things that are happening in California happen in the rest of our States.

So I thank you, Mr. Chairman, for this hearing.

Mr. BARTON. Well, the EPA has determined by regulation that candlelight is a point source pollutant and subject to various regulations, so that probably won't be very viable as an alternative.

Seeing no other members present—oh, in the nick of time, the gentleman from Massachusetts is recognized for a 3-minute opening statement.

Mr. MARKEY. Thank you. I appreciate it. It is more interesting this way. I remember back in 1978 when we were debating the bill which would decontrol the price of natural gas, and it was going to come down to a two or three vote margin in the House. For all of you out there nodding your head, you have been gainfully employed for a long period of time. Congratulations.

But it was a close voting. Tip O'Neill came to me out on the House floor. He knew I was on this committee. And I really felt that in the Senate version they had taken out too much money for conservation and too much money for rapid transit. So I wasn't really convinced it was a perfect bill. And Tip put his arm on me, and he said, "Eddie, I need your vote." I said, "Tip, I can't be with you." He said, "Eddie, I need your vote. We can't have President Carter be defeated on this." I said, "The bill isn't quite good enough. If only it was better. When the bill is better, I will be with you." He said, "Eddie, I need your vote." I said, "Tip, on this one, you are not right." He said, "Eddie, when I am right, I don't need you."

"Let me think about that," I said.

So as the years went by and I reflected upon the wisdom of the great man, I realized that he was right, that I should have voted for that bill, which I didn't at the time. And in fact, in my last conversation with him, which was right before NAFTA, I reminded him of that conversation 15 years before, and I told him that I would vote for NAFTA because my President wanted it, and it was close. And whenever it is close, you should give it to the President in your party. So I did that.

But with different—excuse me?

Mr. BARTON. Remember that when it is close, your President will get your vote.

Mr. MARKEY. I didn't say my chairman. I did not say my chairman.

My chairman is different, although, if you are, okay, I am more than willing.

We have had new breakthroughs in natural gas. Sable Island off the coast of Nova Scotia makes it possible for us in New England, for the first time, to be at the front end of the pipeline. There is only 3 million people who live in Quebec. We are their customers. So that is good news for us, and it is going to lead to a very rapid conversion of the New England economy to one which is very much based upon natural gas, as Sister Carita taught us in the sixth grade at the Immaculate Conception Grammar School,

from our friends, the Canadians, the longest unprotected border in the world.

And so, for us it is good news in natural gas. Something that we were told was in short supply back in 1978, it turns out is abundant; it is plentiful. In fact, so abundant that it could be used for New England in the future.

In addition, the natural gas resources down in Trinidad could also be tapped if other ports—as Boston does it in my district, in Everett, Massachusetts, where there is an L&G facility—could be constructed along the East and the Gulf Coast. I think we could largely solve our energy problems if other parts of the East and Gulf Coast were willing to build L&G ports, liquefied natural gas where the gas is frozen biogenically and then transported by cargo ships up into the heavily populated areas of our country.

So we in Boston, in my district, we are one of the few areas that have this right now. But I think that given the fact that Trinidad has this supply, that BP is in control of it and quite optimistic about its long-term abundance, then I think we should move in that direction as well. In other words, as long as we are creative and working together, and not automatically saying that we should go to the pristine areas of Alaska in order to drill before we have exhausted other more pragmatic and consensus areas, then I think we can work together.

It would be quite unfortunate if we went to an uneconomic area for drilling in the heart of the Arctic Refuge before we went to the places where I think we can all agree and work together to build a common pulse.

And I think you for holding this hearing, Mr. Chairman, and I yield back the balance of my time.

Mr. BARTON. We thank the gentleman. We tell that story in Texas as a Sam-Rayburn-talking-to-Lyndon-Johnson-when-he-was-a-young-con gressman story. I have heard that before but not from the Tip O'Neill-Ed Markey version.

Mr. MARKEY. Well, Tip O'Neill tells it as James Michael Curly telling it to him.

And John McCormick telling the story to Sam Rayburn.

Mr. BARTON. Right. It is probably part of the Texas-Boston, the Austin-Boston axis.

We promised to introduce no bill to drill under Boston Common from this subcommittee. You have my word on that.

The gentleman from California, Mr. Radanovich, is recognized for an opening statement.

Mr. RADANOVICH. Thank you, Mr. Chairman. I have no opening statement, just looking forward to the testimony. Thank you.

Mr. BARTON. Seeing no other members present—whoops, Mr. Waxman has just arrived. Does Mr. Waxman wish to make an opening statement? Okay.

And the full committee chairman, Mr. Tauzin, you wish to make an opening statement?

Chairman TAUZIN. Not on the record.

Mr. BARTON. Then the chair would ask unanimous consent that all members not present have unanimous consent to put their opening statements in the record. Hearing no objections, so or-

dered. Mr. Walden has presented his statement. He will be back shortly.

[Additional statements submitted for the record follow:]

PREPARED STATEMENT OF HON. GREG WALDEN, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF OREGON

Mr. Chairman, I'm from a hydro rich area of the United States where 70% of our energy comes from our abundant hydro resources. It is the most inexpensive energy there is, and it is renewable. However, we in the Northwest region are having a drought, and that coupled with current energy markets in the West is having a devastating effect on Oregon's economy and the rest of the Northwest.

In a year like this when we are projecting merely 59% of normal water levels and we are shipping power to our neighbors to the south we have found that power diversity is becoming critical. Because 70% of our electricity comes from hydro, some 30% comes from coal, nuclear and natural gas fired generation. This puts us in a very critical situation this summer.

I am happy to say that we are looking at a number of new projects in Oregon that will be gas fired. Most of these plants will be located in my district because a large natural gas pipeline goes right down the center. They are an important part of meeting our region's growing needs. I also know that by state statute we have a CO₂ mitigation fund that will keep these plants from leaving a very large footprint on our environment.

But our situation at this moment in the Northwest is dire. Increases in the price to heat homes has created an impossible situation for those families of lower incomes. They cannot afford two, three, or four times their normal heating bill. In addition, we have some farmers that grow specialty crops for dry goods that can't dry their crops because current gas prices add too much to their costs.

Here is what I hope to learn from this hearing. I want to know about gas supply. Do we have adequate supplies to meet the ever increasing demand? If our gas supplies are enough, do we have the means to get it out? Are there laws in the way? If there are, what can we do on the federal level to rectify the situation? And, do we have the capacity in our pipeline infrastructure to deliver the natural gas to its final destination?

The Northwest is meeting increasing demand by diversifying its energy sources. I hope that this hearing will enlighten all of us on how we can allow that to happen.

With that Mr. Chairman, I'm anxious to hear what the panels have to say and yield back the remainder of my time.

PREPARED STATEMENT OF HON. W.J. "BILLY" TAUZIN, CHAIRMAN, COMMITTEE ON
ENERGY AND COMMERCE

Mr. Chairman: I would like to commend you for holding this first of a series of hearings on a comprehensive national energy policy. I think it is fitting that we begin with natural gas. We need to increase the supply of natural gas and get more of it to consumers.

Natural gas is currently the fuel of choice for new electric power generation. The experience in California has awoken the rest of the country to the fact that electricity is something we cannot take for granted.

Natural gas is environmentally friendly. When burned, it emits far fewer pollutants than other fossil fuels.

Natural gas is abundant, if we can get to it. About 85% of our current consumption is produced domestically. The remainder largely comes from Canada.

High natural gas prices can have a ripple effect through our Nation's economy. A good example is what we experienced this past winter in my home state of Louisiana. You see, in addition to electricity production and heating, natural gas is used as a feedstock to produce chemicals, which in turn are used for all sorts of products. One such chemical is anhydrous ammonia. Companies in Louisiana produce about 40% of our nation's anhydrous ammonia. This chemical is used to produce an infinite number of commercial products, as our witness Mr. Gill will testify to today. One important use of anhydrous ammonia is to make nitrogen fertilizer, which is critical for crop yield, particularly corn.

CF Industries is a farmer-owned cooperative that operates a world scale nitrogen fertilizer plant in my district. CF supplies about 1/3 of all the nitrogen fertilizer needs for farmers in the U.S. When gas prices soared this past December, CF had to shut down over half of its production in Louisiana because it could not cover its cash production costs. Natural gas, as it turns out, is by far the primary cost compo-

ment in producing anhydrous ammonia, and in turn nitrogen fertilizer. This directly affects our Nation's farmers and the goods we all take for granted.

Making choices to open and close manufacturing plants based on the supply of natural gas is no way to run a business. The market will return natural gas prices to reasonable levels if we let it. This means examining old policies in light of modern technologies, and pursuing new policies that will allow supplies to better keep pace with demand. The situation of companies in Louisiana demonstrates the need for a comprehensive hemispheric energy policy. Our country cannot afford to put strategic industries like these out of business.

I look forward to hearing the testimony of our witnesses today.

PREPARED STATEMENT OF HON. RALPH M. HALL, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF TEXAS

Mr. Chairman and Members of the Committee: I thank you for scheduling this hearing on natural gas policy—the first of what I expect to be many hearings on the development of a comprehensive national energy policy.

Natural gas is a clean, relatively abundant and domestic fuel that this country is banking on to meet much of our incremental energy needs in the 21st century. However, while government policy has had the effect of promoting the use of natural gas, the policies affecting the development of natural gas resources and the delivery of gas from where it is found to where it is consumed are profoundly weak and backward.

If the industry is to meet the projected demand—some say an increase of up to 35 trillion cubic feet in twenty years from the current levels of 22 trillion cubic feet today—it can't be business as usual from this point forward.

The investment that needs to be made in this industry is huge—\$150 billion for transmission and distribution alone. And that doesn't even count the additional billions needed upstream by the exploration and production sector. And it's not just investment that's needed.

If you come to my part of East Texas you will not have to go far to meet someone who used to be in the oil business. He or she may be a former production company executive, deckhand or roughneck. They're not in the business now because the infrastructure to support exploration and production has almost been wiped out. Low oil prices did that. And these folks have learned their lesson. Most of them have found jobs at places like Wal-Mart where the pay is least steady, and they're probably not coming back until they have confidence that this government cares enough about the price of crude oil and natural gas to enact policies to stabilize prices.

The brain drain in the petroleum industry has been unbelievable. The confidence to enter the business is not there. The best example I know of is at the University of Texas at Austin. There are so few students in the petroleum engineering program, and the demand for them now is so great, that I'm told at least one company is already hiring students in their junior year and paying them a salary. And I thought only athletes turned pro in school.

Mr. Chairman, we won't get that 35 trillion we need if we don't open up some public lands for exploration and production; if we don't streamline the FERC permitting process for new pipeline construction; if we don't enact some tax provisions to create sufficient incentives for producers to drill and produce gas in mature horizons where the yields from even new wells continues to decline.

And we can't count on the Canadians or the Mexicans to meet our incremental needs for the future. They have their own ideas about how they want to use *their* gas, and it probably doesn't include us as much as we might wish. We have to build the confidence of our people back in order to build the infrastructure to deliver the natural gas that this country needs.

If the best and the brightest of our young people continue to see that the oil and gas business is a losing proposition, we won't get that 32 trillion. And the impact on the nation—in terms of jobs elsewhere not created or lost—will affect the economic wellbeing of this country.

Thank you Mr. Chairman. I yield back the balance of my time.

Mr. BARTON. We now would like to welcome the Chairman of the Federal Energy Regulatory Commission, the Honorable Mr. Hébert from Mississippi. Your statement is in the record in its entirety, and we recognize you for such time as you make consume to elaborate on that statement. Chairman Hébert.

**STATEMENT OF HON. CURT HÉBERT, JR., CHAIRMAN,
FEDERAL ENERGY REGULATORY COMMISSION**

Mr. HÉBERT. Thank you, Chairman Barton. It is good to be here. Let me open by telling all of you it is certainly my honor to be here. I certainly want to apologize to the members, Congressman Bono, Congressman Radanovich and Waxman, who heard me earlier today in a meeting we had with the California members who were concerned what is going on there. But I am pleased to be invited on this, and I appreciate your leadership, Mr. Chairman, on this issue.

I don't think there is anything more important to America right now than energy policy. In my testimony today, I would like to make three basic points. First, the Commission's primary role in the natural gas industry is to ensure that adequate pipeline infrastructure is available to serve the growing demand for natural gas at just and reasonable rates. Since the Natural Gas Wellhead Decontrol Act of 1989, the Commission has had no jurisdiction to regulate the prices charged by natural gas producers at the wellhead. The Commission retains only limited jurisdiction over certain sales for resale in interstate commerce. The Commission's primary natural gas jurisdiction is, one, to authorize the construction of interstate pipeline transmission in storage facilities; two, set the rates, terms and conditions of service for interstate transportation and storage of natural gas.

Second, while the recent increases in natural gas prices are a matter of serious concern, natural gas deregulation has been an extremely successful long-term policy. And the fundamental structure of natural gas markets remain sound. Beginning in 1984, competition in the natural gas industry has led to 15 years of prices that were lower than anyone anticipated in America. In fact, the low prices lasted for so long that it was easy to forget the inherent tendency of energy markets toward boom and bust cycles.

The deregulation of wellhead prices, together with the Commission's Open Access Transportation Program, has produced a robust, flexible, and responsive natural gas market. Already producers have responded to higher prices with increased drilling. Although, there is inevitably a time lag between increased drilling and a supply response, the increase in gas supplies hopefully will, over the next several years, help moderate the recent price increases. Increasingly too, customers are adjusting.

For example, we hear of electric generators actively reconsidering their exclusive reliance on natural gas for new plants. Several members mentioned exactly that concern today and how diversity and changes in fuels is important. Everyone has a role to play in helping drive demand and supply back together in better balance. I will not make any predictions about what prices will be in the future, but I firmly believe at this point that allowing the competitive wellhead market to work continues to be the best way to obtain adequate gas supplies at the lowest, reasonable prices for America.

Third, the Commission, we can help mitigate price increases by exercising its jurisdiction over the certification of new pipeline projects to ensure that newly developed supplies can reach the market quickly and where needed. Adequate natural gas pipeline

transmission and storage capacity is critical to support the continued functioning of the competitive market for the gas commodity. As new gas supplies are developed in response to the continued growth in natural gas consumption and increased prices, new pipeline facilities will be necessary to allow those supplies to reach the market. I pledge my continued support of the construction of new pipeline infrastructure to meet these critical needs. And I will do everything I can to ensure that the commission processes certificate applications for proposed pipeline projects as quickly as possible.

For example, in response to the present situation in California, the Commission is responding as quickly as possible to any applications to construct new capacity. In the last 7 months, the Commission has issued certificates for three projects with total capacity of almost 119,000 MCF a day of capacity that could benefit the West. Several more certificate applications are pending, and the Commission is committed to moving quickly on these projects as well. The Commission is prepared to adopt additional procedures for expedition if they will help to alleviate the present emergency. Of course, any actions the Commission takes, Mr. Chairman, to expedite new capacity for gas to serve California and the West can only be effective if there is available local capacity to deliver gas downstream of the interstate pipeline.

The availability of sufficient, local take-away capacity, however, is a matter that is within the control of the States, not the FERC. For example, it appears that the intrastate gas transportation network in Southern California is constrained, and this, to some extent, may have affected gas prices in that area, which are among the highest in the nation. I urge the State of California, and its leadership, to expedite its consideration of proposals to relieve those constraints and provide relief to California consumers. The Commission will cooperate with the States in order to ensure that new facilities subject to State jurisdiction are properly integrated in the interstate grid.

Aside from the current situation in California, there is also a critical need to provide transportation for newly developed gas supplies to reach all U.S. markets. One major potential new source of gas is in the arctic regions, including the north slope of Alaska. The Commission conditionally approved the Alaskan Natural Gas Transportation System in the late 1970's pursuant to the Alaskan Natural Gas Transportation Act. The U.S. portion of the ANGTS comprises three segments which were issued a conditional certificate by the Commission in December 1977. Originally, the ANGTS was scheduled to be completed by January 1, 1983. However, to date, only the eastern leg and a portion of the western leg have been constructed and placed in operation.

I strongly support the construction of a natural gas pipeline from the north slope of Alaska to the lower 48 States. If constructed, an Alaskan pipeline would provide unprecedented economic energy security and environmental benefits to the United States by bringing a very large supply of additional gas to the domestic market. I am fully committed to acting on any request for the construction of pipeline infrastructure to deliver this gas to the North American consumers. I well understand that the ongoing development of Ca-

nadian and Alaskan natural gas supplies is critical to U.S. national and energy security.

In conclusion, I assure you I recognize, Mr. Chairman, the critical importance to your constituents and the constituents of all the members of this committee of having an adequate natural gas transportation infrastructure. And we at the Commission will do our part to ensure that new pipelines can be built to support a growing industry, and that natural gas transportation supports flexible, innovative markets.

I am confident that States and other Federal agencies will also do their parts to put in place local infrastructure and to mitigate short-term hardships. To me, Mr. Chairman, the mitigation can be done most efficiently up front before the process begins. I am also eager to engage in a team effort with executive agencies that will also play a major and coordinated role in the environmental review of any proposals. It is critical that any regulatory overlap be minimized, and that all agencies work together in a coordinated and efficient manner.

Mr. Chairman, the people of America need a one-stop shop to facilitate their energy needs. I emphasize that the Commission's Open Access Program for natural gas transportation has resulted in a vibrant, transparent, liquid competitive market for natural gas. It is critical that we continue to develop the same type of competitive, comparable markets for electric energy and transmission as well, and do so as expeditiously as possible.

Mr. Chairman, those are my opening remarks. I do have with me General Counsel for the FERC, Kevin Madden to my left, who is here to make sure, since we are a quasi-judicial agency, I don't step out of the bounds on cases pending before us. Thank you.

[The prepared statement of Hon. Curt Hébert, Jr. follows:]

PREPARED STATEMENT OF HON. CURT HÉBERT, JR., CHAIRMAN, FEDERAL ENERGY REGULATORY COMMISSION

Mr. Chairman and Members of the Subcommittee: Good Afternoon. I am Curt Hébert, Jr., Chairman of the Federal Energy Regulatory Commission (Commission). I am pleased to be invited to this hearing on natural gas issues and the role of natural gas in national energy policy.

In my testimony today, I would like to make three basic points. First, the Commission's statutory role in natural gas markets focuses principally on transportation, not commodity prices. The Natural Gas Wellhead Decontrol Act of 1989 completed the deregulation of the prices producers charge for gas sold at the wellhead in 1993. As a result, the Commission has no direct authority to regulate the prices charged by natural gas producers. The Commission retains only limited jurisdiction over certain sales for resale in interstate commerce. The Commission's primary natural gas jurisdiction is to: (1) authorize the construction of interstate pipeline transmission and storage facilities; and, (2) set the rates, terms, and conditions of service for interstate transportation and storage of natural gas. In short, our central role in the natural gas industry is to ensure that adequate pipeline infrastructure is available to serve the growing demand for natural gas at just and reasonable rates, terms and conditions of service, and without undue discrimination.

Second, since wellhead decontrol and the Commission's open access transportation program, there has been a well-functioning, competitive market for the sale of the natural gas commodity. From the mid-1980s until this winter's heating season, competition among natural gas producers and others has resulted in readily available supplies at prices lower than during gas price regulation. This winter prices have risen because of an imbalance between supply and demand, due to a number of factors discussed later. However, the current high prices should provide the necessary market signal to producers to increase production. Already there are reports that producers have significantly increased drilling activity. Although there is a time lag between increased drilling and a supply response, the increase in gas supplies hope-

fully will, over the next several years, help moderate the recent price increases. As reported on Monday of this week, the futures contract price has dropped by about 50 percent, from almost \$10 an MMBtu (million Btu) earlier this winter to about \$5 an MMBtu (Gas Daily, "Bid week prices coast narrowly into weekend" February 26, 2001). While this is probably due to warmer weather and recent decreases in storage withdrawals, these are clear signs of a well-functioning market. I will not make any predictions about what prices will be in the future, but I firmly believe that allowing the competitive wellhead market to work is the best way to obtain adequate gas supplies at the lowest reasonable price.

Third, notwithstanding the fundamentally sound nature of the natural gas market, the Commission can help mitigate price increases by exercising its jurisdiction over the certification of new pipeline projects to ensure that newly developed supplies can reach the market. One of my top priorities as Chairman is to ensure that needed energy infrastructure is built. If increased gas supply is to help bring prices down, there must be adequate transportation facilities to move newly developed gas supplies to delivery markets. Also, current bottlenecks limiting the transportation of natural gas to areas where demand is highest must be eliminated. I will do everything in my power to ensure that the Commission quickly processes certificate applications for new pipeline projects that will meet these needs. To that end, Commission staff is looking at creative ways to expedite the processing of applications for new pipeline capacity to serve critical areas of the country. However, to the extent transportation bottlenecks are within state jurisdiction, the states must similarly undertake to improve their infrastructure. I assure you I recognize the critical importance to your constituents, and to our country, of having an adequate natural gas transportation infrastructure.

I will now turn to the specifics of these matters in greater detail.

I. THE FEDERAL ENERGY REGULATORY COMMISSION'S ROLE IN NATURAL GAS MARKETS

The Commission's role in the natural gas industry is largely defined by the Natural Gas Act of 1938. This Act gives the Commission authority to grant permission to construct new interstate natural gas pipelines and related facilities, such as storage and compression. It also authorizes the Commission to set the rates and terms of service for the resale and transportation of natural gas in interstate commerce. Regulation of retail sales and local distribution of natural gas is a matter under State control, as is the production and gathering of natural gas. Controls on the wellhead price of natural gas, which the Commission previously regulated pursuant to a 1954 Supreme Court decision, were gradually phased out by the Congress. This started with the Natural Gas Policy Act of 1978, and culminated in the Natural Gas Wellhead Decontrol Act of 1989, which lifted all remaining wellhead price controls as of January 1, 1993. The Commission still retains jurisdiction over certain sales for resale in interstate commerce, but that jurisdiction now accounts for only a portion of the overall natural gas market. However, that jurisdiction is limited to sales for resale by interstate pipelines, intrastate pipelines, local distribution companies and their affiliates, unless the sales are from their own production or from sources where we have a free trade agreement such as Canada and Mexico. In 1993, the Commission authorized these sales to be made at negotiated, that is, market-based rates. Although the Commission, in limited circumstances, could amend the authorizations to provide for some other pricing method, I do not believe that this would provide effective relief to consumers, as sellers would find ways to move their supply to unregulated sales. Price controls on FERC jurisdictional resales would merely distort the market in the same way they prompted the industry to shift supplies from the interstate market to the intrastate market before the NGPA.

The Commission also authorizes natural gas pipeline siting and construction if found to be in the public convenience and necessity under section 7 of the Natural Gas Act. Consideration of factors under the National Environmental Policy Act (NEPA), other appropriate statutes, and landowner interests must be taken into account before approving a natural gas pipeline project. In addition to its certificate jurisdiction, the Commission has authority, delegated by the Secretary of Energy, over the siting and construction of facilities for the import or export of natural gas under Section 3 of the Natural Gas Act, as well as authority under Executive Order No. 1045 to issue Presidential Permits for such facilities if they are located at an international border.

II. COMPETITIVE NATURAL GAS COMMODITY MARKETS

The oil embargo of the mid-1970s, coupled with heavy-handed price regulation by the Commission (then the Federal Power Commission), led to shortages and supply curtailments of natural gas in the interstate gas market in those years. In response

to these critical supply shortages, Congress passed the Natural Gas Policy Act of 1978, which began the decontrol of natural gas commodity prices.

In 1985, the Commission required open-access, non-discriminatory transportation of non-pipeline natural gas across the U.S. natural gas pipeline grid. In 1989, the Congress enacted the Natural Gas Wellhead Decontrol Act of 1989, which ended all remaining wellhead price controls as of January 1, 1993. In 1992, the Commission took further steps to ensure a well-functioning natural gas market by requiring interstate natural gas pipelines to unbundle, or separate, their transportation service from their own sales service. That removed the opportunity for pipelines to discriminate in favor of their own "merchant" business by providing a higher quality transportation service as part of their bundled transportation and sales service. Subsequently, pipelines exited the natural gas sales business completely and transferred their sales contracts to their marketing affiliates.

The Commission also established a program to permit holders of transportation capacity to resell their unused pipeline capacity rights, called "capacity release," creating a valuable and efficient secondary transportation market. Since then, the Commission has been monitoring the gas transportation and storage of natural gas to ensure the most efficient and effective natural gas delivery infrastructure for consumers. Last year, the Commission, in Order No. 637, revised its open access transportation regulations relating, among other things, to scheduling procedures, capacity segmentation, and pipeline penalties. When these changes are fully implemented, they should give shippers added flexibility to make more efficient use the existing pipeline grid.

As a result of the pro-competitive policies pursued by both the Congress and the Commission, the natural gas commodity market is truly competitive. There are about 8,000 producers operating over 300,000 wells in the United States. In addition, the North American natural gas markets have been integrated, thus permitting an increasing contribution of Canadian gas to meet U.S. market growth, as well as U.S. gas sales to Mexico, increasing markets for U.S. producers. Natural gas buyers in general are no longer limited to buying from one pipeline. Instead, they have a wide range of supply options and various transportation and storage options. In addition, an active financial market has developed to allow buyers and sellers to hedge against price volatility, depending on their tolerance of risk.

Although different sources quote different numbers, no one disputes that this competition has produced substantial consumer benefits. In addition, reserve prospects for natural gas appear to be very promising. Estimates range from 1,200 trillion cubic feet (Tcf) to 1,700 Tcf, the equivalent of a 55-75 year supply at current and projected requirements. Pro-competitive policies, technological innovation, especially in discovery and drilling techniques, environmental policies, and low prices have led to increased demand for this clean-burning fuel, especially in the electric generation area.

Unfortunately, the other side of this bright picture is that spot wellhead prices for natural gas have roughly tripled since 1999, when natural gas was routinely traded in the \$2.50-3.00 per MMBtu range. While the price increase has focused a lot of attention on the natural gas industry by lawmakers and regulators, I believe the market itself has responded, without any need for new laws or new regulations. Producers of natural gas have already undertaken efforts to increase the supply of natural gas, and the number of active natural gas rigs has more than doubled in the past year and a half. While there is usually a lag bringing this new production on line, the increase in new drilling should help balance supply and demand.

In sum, the operation of the interstate natural gas market appears sound, as evidenced by the dramatic increase in drilling activity in response to market signals.

III. WHY ARE NATURAL GAS PRICES SO HIGH THIS WINTER?

As explained above, natural gas is now a commodity that is sold in an open market where the laws of supply and demand determine the price. Weather, economic growth and the price for other fuels are all factors that affect the demand for gas. This winter several factors converged at once to produce very high spot natural gas prices.

Demand for natural gas has increased in all sectors over the last decade due to economic growth. In addition, a significant number of new electric generators has come on-line in the last few years that are fueled by natural gas. While these generators produce power in an environmentally friendly way using clean-burning natural gas, they are creating a year-round demand for a commodity that has traditionally been used more in the winter than in the summer. Increased use of gas by electric generators has also affected overall demand in the winter.

Weather is also a factor that affects the demand for natural gas. After much warmer than normal winters in many areas of the country for several years, temperatures in November and December of this past year either were below, or well below, normal in all but five states. This significantly increased the demand for natural gas, as well as other heating fuels, such as propane and fuel oil.

Although the demand for natural gas has grown in recent years, the supply has somewhat lagged behind this demand. After the prices for natural gas and oil collapsed in 1998, producers invested less capital in the exploration and production of natural gas. In January of 1998, there were over 633 drilling rigs in operation. By April of 1999, after a sustained period of low gas prices, the rig count dropped to 362. While there are plentiful reserves in the ground, maintaining adequate deliverable gas supplies requires a steady drilling program. The reduction in gas drilling reduced supply. This trend was reversed in late 1999. Although there were 905 active drilling rigs on February 16 of this year, historical experience shows there is a time lag (between three months to eighteen months or more) between increased drilling and a significant supply response.

Finally, while spot prices have spiked to \$20 per MMBtu, or even higher in some areas of the country this winter, it is important to understand that local distribution companies and end-users need not, and generally do not, buy all their gas on the spot market. Today's competitive market provides gas purchasers a number of options for achieving greater price stability than is available on the spot market. Gas purchasers can, for example: (1) enter into long-term supply contracts; (2) purchase gas during cheaper, off-peak periods and place it in storage for use during peak periods; (3) forward contract using gas futures; and, (4) purchase financial hedging instruments. Through such strategies, gas purchasers can keep their overall gas costs substantially below spot market levels. For example, in January of this year, when spot market prices at New York City gates rose above \$18 per MMBtu, the overall gas costs of the two major New York local distribution companies, Con Edison and Brooklyn Union, were in the \$8 to \$10 per MMBtu range.

IV. PIPELINE CONSTRUCTION

Adequate natural gas pipeline transmission and storage capacity is critical to support the continued functioning of the competitive market for the gas commodity. If that market is to ensure an adequate supply of natural gas at the lowest reasonable cost, all gas sellers must be able to reasonably reach the highest-bidding gas buyers, and all gas buyers must be able to reach the lowest selling producers. For this to continue to occur, it is clear that additional pipeline capacity must be built. As new gas supplies are developed in response to the continued growth in natural gas consumption and increased prices, new pipeline facilities will be necessary to allow those supplies to reach the market.

I pledge my continued support for the construction of new pipeline infrastructure to meet these critical needs, and I will do everything I can to ensure that the Commission processes certificate applications for proposed pipeline projects as quickly as possible.

For example, in response to the present situation in California, the Commission is responding as quickly as possible to any applications to construct new capacity. We are also encouraging applicants to work closely with staff at the earliest stages of project development to expedite the certification process. Early staff involvement may include getting a head start on meetings with stakeholders and the preparation of environmental documents. For the appropriate projects, this may significantly speed the certification process.

In the last seven months, the Commission has issued certificates for three projects, with total capacity of almost 119,000 Mcf/d of capacity, that could benefit the West. Several more certificate applications are pending and the Commission is committed to moving quickly on these projects, too. The Commission is prepared to adopt additional procedures for expedition if they will help to alleviate the present emergency. The Commission is actively pursuing ways to expedite the approval of infrastructure needed to serve California and the West, including raising the current dollar limit on automatic authorizations. This will allow pipelines to construct needed facilities automatically, as long as they comply with environmental regulations.

Of course, any actions the Commission takes to expedite new capacity for gas to serve California and the West can only be effective if there is available local capacity to deliver gas downstream of the interstate pipeline. The availability of sufficient local take-away capacity, however, is a matter that is within the control of states. For example, it appears that the intrastate gas transportation network in southern California is constrained and this may, to some extent, have affected gas prices in

that area, which are among the highest in the nation. I urge the State of California to expedite its consideration of proposals to eliminate those constraints and provide relief to California consumers. Pipelines should coordinate their efforts with local distribution companies, public utilities and state officials. The Commission will cooperate with the states in order to ensure that new facilities subject to state jurisdiction are properly integrated with the interstate grid.

Aside from the current situation in California, there is also a critical need to provide transportation for newly developed gas supplies to reach all U.S. markets. For example, the Energy Information Administration (EIA) projects a significant increase in imports of natural gas to the United States from Canada. Delivering that gas to U.S. markets will require increased pipeline capacity.

Another major potential new source of gas is from the Arctic regions, including the North Slope of Alaska. I strongly support the construction of a natural gas pipeline from the North Slope of Alaska to the lower-48 states. If constructed, an Alaska pipeline would provide unprecedented economic, energy security, and environmental benefits to the United States by bringing a very large supply of additional gas to the domestic market. It has been estimated that there are at least 26 trillion cubic feet of natural gas in the North Slope of Alaska, which would be a very significant addition to our Nation's energy supply. I am fully committed to acting on requests for the construction of pipeline infrastructure to deliver this gas to North American consumers. I well understand that the ongoing development of Canadian and Alaskan natural gas supplies is critical to our nation's energy needs and security.

Aside from the above described certificate proceeding, there is currently no application on file with the Commission concerning an Alaska natural gas pipeline. However, under the direction of Chairman Hoecker, the Commission's staff prepared a report reviewing the history of proceedings under the Alaska Natural Gas Transportation Act (ANGTA), including the statutes and relevant orders. I have not yet an opportunity to review that report in detail. As I have already emphasized, my main goal is to ensure the construction of needed pipeline infrastructure to allow new gas supplies to reach market.

V. CONCLUSION

The recent increases in natural gas prices are a matter of serious concern for gas customers and indeed for the nation as a whole. Nonetheless, natural gas deregulation has been an extremely successful long-term policy and the fundamental structure of natural gas markets remains sound. Beginning in 1984, competition in the natural gas industry has led to fifteen years of prices that were lower than anyone anticipated. In fact, the low prices lasted for so long that it was easy to forget the inherent tendency of energy markets towards boom and bust cycles. The nation's competitive policy has also produced a robust, flexible and responsive natural gas market. Already, producers have responded to higher prices with increased drilling. Increasingly, too, customers are adjusting. For example, we hear of electric generators actively reconsidering their exclusive reliance on natural gas for new plants. Everyone has a role to play in helping driving demand and supply back into better balance. We at the Commission will do our part to ensure that new pipelines can be built to support a growing industry and that natural gas transportation supports flexible, innovative markets. I am confident that states and other federal agencies will also do their parts to put in place needed infrastructure and to mitigate short-term hardships.

Thank you. I will be happy to answer any questions you may have.

Mr. BARTON. Well, we thank the Chairman for his participation, and we thank you for bringing your General Counsel.

The Chair would recognize the full committee chairman, the gentleman from Louisiana, Mr. Tauzin, for 5 minutes for whatever purpose he desires.

Chairman TAUZIN. Thank you, Mr. Chairman. I wanted to join you, Mr. Chairman, first, in the strong support for Chairman Hébert's position as Chairman of the FERC. I hope the administration confirms that as a permanent chairmanship, not just because he's not only fully competent and qualified but because he is an Hébert, because his father comes from Algiers, Louisiana, right near my district.

More importantly, Chairman Hébert, the focus of today's hearing on natural gas is critical. I am not sure most people know, but I know you know this, that Louisiana is one of the highest per capita users of natural gas in the country, by and large a consumer State as much as a producer State. That in this year of high natural gas prices, CF Industries—former-owned co-op, produces one-third of the nitrogen fertilizer that is critical to the farm community this year—had to shut down half of its production because of the high cost of natural gas.

So we have not only a home consumer heating issue, a home consumer electric issue, we now have huge impacts on jobs and the production of fertilizer that is going to be critical to economic recovery as we enter the planting season.

What are your predictions about the supply of natural gas to plants like CF Industries? Are these high prices going to be sustained, you think, through the spring or do you think we see some hope of moderation in the near future?

Mr. HÉBERT. Mr. Chairman, it is my thought that you are going to see some moderation. I don't think there is any question that, specifically in certain regions, there are tight supplies.

For instance, we just got a press release on El Paso. I have got it around here somewhere. But they are talking about the fact that you have 14.4 Bcf that was bid on, total bids that were placed, when actually there is 1.22 Bcf available. So you see what is chasing what, and you see where we can be on our supply situation. Many of the pipes are running full. There are many things that we can do at the FERC.

As you know, in the past 3½ that I have been at the FERC, I have talked to you and numerous other members—my good friend Congressman Pickering and the Chair himself, and Congressman Largent, as well as Congressman Sawyer, about my concerns about pipelines, and how, in fact, that we need to be careful and we need to be forecasting 5 and 10 and 15 years out forward. Congressman Markey, his situation up in the Northeast as well, we are looking at an increase of somewhere even close to as much as 80 percent that they are going to need out by the year 2015, and this is serious. I think it is serious in the Southeast, I think it is serious in the Northwest and in the West, and I think it is serious in New England.

Chairman TAUZIN. A couple of quick questions. One, do you need any more legislation to move the Alaskan Natural Gas Pipeline or are current authorities good enough for the Commission to move it forward?

Mr. HÉBERT. How did I know you were going to ask me that question? The statute was passed at a very different time in America. It was passed at a very different time on environmental issues; it was passed at a very different time on pricing issues. There are lots of questions as to whether there more to be done there. I certainly can't answer that for you. I will tell you that the times are very different. Certainly, we have the potential of getting a filing under the statute, and certainly we have a potential of getting filings outside the statute.

Chairman TAUZIN. Let me make it easier.

Mr. HÉBERT. I will tell you, we will act on those filings as expeditiously as we can, as soon as we can. I do think it is important that we sure ourselves up domestically.

Chairman TAUZIN. Yes, I was going to suggest that if you could comment to the committee in writing as to what, if any, legal changes need to be made to the structure of the authority if in fact those are needed, and how this committee might assist you in moving that project.

Mr. HÉBERT. Mr. Chairman, if I might add, or ask you, would it be all right if I speak to the clarifications that come up that you might address as opposed to me making those clarifications for you?

Chairman TAUZIN. Oh, I understand.

Mr. HÉBERT. I get a little uncomfortable doing that, but I will be glad to give you clarification.

Chairman TAUZIN. I fully understand. If you can simply point to the areas where this is doubt or confusion or perhaps the need for clarification.

Second, you can't order an electric natural gas driven turbine anymore in this country without being on a 2-year waiting list. Natural gas has become such a fuel of choice for electric generation, primarily I assume because of a number of reasons, but most of all environmental concerns with clean air. Are we anywhere, in our projections, near satisfying the demands of the next 5 and 10 years in natural gas with current levels of production or are we going to have to rely upon more and more natural gas coming in from Canada, the Caribbean and other available sources in our Hemisphere?

Mr. BARTON. The gentleman can answer the question, and it will have to be the chairman's last question.

Mr. HÉBERT. I don't even think it is debatable. I think it is clear that especially if you start looking at 5 and 10 years out that we need additional supply, period, without exception.

Chairman TAUZIN. Thank you, Mr. Chairman.

Mr. BARTON. Did you conclude your answer?

Mr. HÉBERT. I was trying to be short. I know you prefer it that way.

Mr. BARTON. I was stunned. I mean, an Hébert talking to a Tauzin.

Mr. HÉBERT. And I talk fast too.

Mr. BARTON. And you have got 15-second answers—unheard of.

Chairman TAUZIN. If he had been a Beaudraux, we would be here all day.

Mr. BARTON. The Chair now recognizes the distinguished ranking member, Mr. Boucher, for 5 minutes of questions.

Mr. BOUCHER. Thank you very much, Mr. Chairman. Mr. Hébert, welcome to the committee today. The unfortunate situation in California has generated some commentary and suggestions from some sources that transmission companies that also have their own gas to sell have discriminated in favor of their own product and against that of a competitor, either by withholding transmission in order to increase the price in a way that favored the owner of the transmission company or by allocating transmission so as to discriminate in favor of the gas that the transmission company owns. And

I would like to spend just a few minutes with you this afternoon gaining an understanding of the legal structure in which these kinds of concerns are addressed, and asking also for your view of what the right public policy is in terms of how these matters might be handled.

First of all, can we agree that under existing Federal law it is illegal for a company that owns transmission and also has its own gas to sell to discriminate in the award of transmission in favor of its own product to the injury of its competitor who is also seeking to sell gas? Is that illegal under current law?

Mr. HÉBERT. Yes, it is.

Mr. BOUCHER. And there would be no need, therefore, to augment the statute in any way to further address that particular practice; would that be your view?

Mr. HÉBERT. I think that is fairly clear.

Mr. BOUCHER. Let me give you another situation. Let us suppose that the company owns transmission and also has its own gas to sell. And instead of simply favoring its own product in terms of the award of transmission, what it does is withhold the transmission for the product of its competitor; it constrains transmission. And the effect of doing that is to increase the price of its own product, and it is doing that for that purpose. But, of course, it is injuring the consumer because the price is going up for the end product, and at the same time it may be injuring competitors who are not able to get their gas into the transmission stream. Now, would that practice, in your view, be illegal under current law or is some augmentation of the statute necessary to address that?

Mr. HÉBERT. Well, you are right in that we regulate it and it is tightly done so, but as far as it being illegal under the law, no.

Mr. BOUCHER. Do you think that should be illegal under Federal law?

Mr. HÉBERT. I guess that would depend on whether or not you believe we are doing an adequate job.

Mr. BOUCHER. Well, let me ask the question this way: Do you believe that you have adequate statutory authority to address the practice?

Mr. HÉBERT. I do believe that. Yes, sir, I do.

Mr. BOUCHER. And do you think that you have been addressing the practice adequately using those authorities?

Mr. HÉBERT. I think we have.

Mr. BOUCHER. Is that a position that is universally held or is there some controversy about whether or not you have been doing that adequately?

Mr. HÉBERT. If there is some controversy—I am assuming you may be speaking of one of my colleagues—I am uncertain—

Mr. BOUCHER. Well, I am actually not, but you want to tell me about—

Mr. HÉBERT. No. I am uncertain as to if one of them may disagree with that.

Mr. BOUCHER. Okay. Generally, though, there is an agreement that you are doing an adequate job in policing that practice, and you are not asking for additional statutory authority with respect to it?

Mr. HÉBERT. Right.

Mr. BOUCHER. Let me ask you about permitting of new transmission lines. And my simple question is this: To what extent does the increase in price to the consumer of gas that would be occasioned by the cost of building new transmission capacity influence your decision about whether or not to permit that construction at the outset? Is that part of your—

Mr. HÉBERT. I want to make certain I understand the question.

Mr. BOUCHER. Is it part of your analysis, in other words, to examine whether or not a result of new transmission being constructed will be an increase in price to the end user?

Mr. HÉBERT. We look at the need, and then certainly we have to look at the environmental side of it. But as to the price on the front end, it is not something that we in a regulated sense look at, no.

Mr. BOUCHER. And so if there were appearances before your agency by people who said, "Don't build this transmission line because there is already adequate capacity, and by simply duplicating existing capacity there will be an ultimate increase in price," you would not take that into consideration in determining whether or not to permit the line?

Mr. HÉBERT. I think you may be getting into the question of need, and certainly we look into the question of need. It is one of the criteria necessary—

Mr. BOUCHER. So you would address that from the standpoint of need rather than from price solely?

Mr. HÉBERT. Correct.

Mr. BOUCHER. Okay. Mr. Chairman, this has been very informative. Mr. Hébert, thank you. And I believe my time has expired.

Mr. BARTON. The Chair would recognize himself for 5 minutes. I am going to go through a series of questions, try to do it fairly quickly. You can elaborate in writing, but we want to try to get some things on the record while we can. Do you feel that in terms of pipeline siting authority any new legislation or clarification is needed by this subcommittee and full committee?

Mr. HÉBERT. Not on pipeline siting, where you are trying to remove any and all obstacles at the FERC level. I would like an opportunity to go through that with a little finer comb and respond to it.

Mr. BARTON. Okay. What about the issue of L&G terminals being built in the United States and importing liquified natural gas? Are there any Federal issues there that we need to clarify in terms of legislation, or do you feel the existing statutes are adequate if we set as a policy goal an increase in L&G terminal capacity in this country?

Mr. HÉBERT. Yes. The siting is the real question. I mean, we have State issues but nothing on the Federal side other than the siting itself.

Mr. BARTON. In terms of any projections—and of course we have a witness on the next panel from EIA—does your agency independently do any projections of pipeline capacity that would be necessary to meet expected increase in demand for natural gas throughout this country?

Mr. HÉBERT. No, none at all.

Mr. BARTON. So that is purely—you respond, you react when a proposal to build a new pipeline is presented, but you don't try to project the capacity requirement?

Mr. HÉBERT. Right. We let the market influence that, then when the filing comes before us, we take the filing into consideration. And then all the relevant information will come in from the filing party and intervening parties.

Mr. BARTON. Okay. From California, there has been a concern addressed to members of a committee that held an informal series of meetings last week that the transmission charge that certain pipelines are charging at the border of California drives the overall price upwards to \$50 in MCF. They claim that it is not a commodity charge; that it is an actual transmission charge that is resulting in the \$50 MCF price, and it is an issue that is right at the border between California and surrounding States. Is the FERC aware of such concerns? And if so, do you have any active investigation underway?

Mr. HÉBERT. Yes, Mr. Chairman, I am aware of it. We do have a filing before us. We have several filings before us pertaining to California. I have instructed the staff to get those up and out as soon as possible and hopefully no later than the end of this spring. Now, acting expeditiously, I would love to speak on the issue with you, but since it is a pending matter I have got to be very—

Mr. BARTON. Based on Federal law, the wellhead price, the commodity price for natural gas, is unregulated, and the FERC doesn't have any authority. But under existing law, the FERC still has authority over the transmission charge in interstate commerce; is that correct?

Mr. HÉBERT. Correct.

Mr. BARTON. So if, in fact, there was a finding that the transmission charge was unjust and unreasonable, the FERC could step in and set a ceiling on that, a rule on that; is that correct?

Mr. HÉBERT. We do have jurisdiction over those transmission rates.

Mr. BARTON. Okay. I think I have several other questions, but I have got the main ones on the record. So I am going to yield back some of my time. And we would recognize Mr. Sawyer for 5 minutes, or Mr. Doyle. Mr. Doyle was ahead of Mr. Sawyer. Five minutes.

Mr. DOYLE. Thank you, Mr. Chairman. I just have two questions. Chairman, you have highlighted the distinct jurisdictions that FERC and the Office of Pipeline Safety have. Is this structure of dual oversight working effectively, and if not, what adjustments could be made?

Mr. HÉBERT. Yes. I want to make certain you do know now Pipeline Safety is through the Department of Transportation. I know you know that. We do everything we can to facilitate concerns of consumers when it comes to safety because it is a big issue when we look at siting pipelines. But the pipeline safety itself goes strictly through the Department of Transportation and not us.

Mr. DOYLE. Thank you. One other question. You are of the mind, from your testimony that I have read, that what has happened with prices, that despite the increase in prices, you feel we have a well functioning market existing in natural gas. And that, if any-

thing, that what we should be doing is accelerating the certification of new pipeline projects. Do you think that pipeline construction should take primacy amongst all the other efforts? Is that what you think the top priority is?

Mr. HÉBERT. I never—I would never use the word “primacy.” I think several people—I know Congressman John used it; I heard Congressman Sawyer use it. I think “balance” is the appropriate word. And I think when we get out of balance, looking at the need versus the environmental and the landowners, I think that is when we get in trouble. I do think in certain areas of the United States, we have been out of balance for the last couple of years. We have got to find that adequate supply. We have to be able to have the infrastructure to not only transport it, but then deliver it, transporting it being me, delivering it actually being the State side.

So I don’t want to say that supply is any more important than the environment, but it is as important as the price you are willing to pay. In other words, if you get out of balance and you say you are not going to site, be it pipelines, or electric transmission, or generating facilities, then you know you are going to pay a higher price because in fact you are going to have scarcity. So in that sense, when you find scarcity, I do believe it is important to make building infrastructure a priority, but the laws are pretty clear that you still got to give an abundant amount of attention to environmental and landowner concerns.

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

Mr. BARTON. Thanks to the gentleman. We recognize the gentleman from Mississippi for 5 minutes for questions.

Mr. PICKERING. Mr. Chairman, in my opening comments and in your opening comments, you talked about Alaska and the reserves that we have available to us if we only had the pipeline to transport it to the 48 lower States. In the Gulf of Mexico on the eastern side of the Gulf there are significant reserves at the Destin Dome and other reserves in the eastern part of the Gulf of Mexico. What is necessary to see those reserves unlocked, and what is the potential or what is the size or the scope of those reserves to your knowledge?

Mr. HÉBERT. I don’t know the size of the reserves. I will provide that for you. But I will tell you, when it comes to markets—and we look around the entire United States when it comes to exploration and production—what we tend to do at the FERC is let the market make that decision. We don’t like to make a decision as to where it should come from because, quite frankly, with the opportunity to transport, you can almost take it from anywhere and put it anywhere absent problems of siting. So we would let the market require that.

I will tell you, quite frankly, when we start moving into metropolitan areas where we are seeing some of the need now to deliver some of this supply, it is very difficult. But as far as the supply itself and how we move it and when we move it, we let the market determine that. But as far as what the reserves are themselves, I will get back with you on that and give you that information.

Mr. PICKERING. Does the FERC have any relevant permitting to pipelines that would take the natural gas from offshore, say, to

Pascagoula, Mississippi or Mobile, Alabama, or refining, and then from there to distribution?

Mr. HÉBERT. We have had several cases in the last few years, Congressman Pickering, on exactly how that should be treated. It gets into the issue of gathering. If it is transportation of a product, yes, we do. If it is gathering of that product, no, we don't.

Mr. PICKERING. Is the FERC currently involved in any of the attempts to produce the Destin Dome or any of the other reserves in the Eastern Gulf?

Mr. HÉBERT. Well, we have been involved in the Destin Pipeline. Other than that, I don't know if we have any involvement at this time. If so, I am unaware of it.

Mr. PICKERING. One other quick series of questions. As you know, last year we had extensive discussions, and the subcommittee marked up an electricity restructuring initiative which focused primarily on incentives for transmission and reliability and those types of efforts, the linkage between natural gas and going back to electricity. What can you see in those efforts that we can do as we put together a comprehensive energy bill that would give us greater reliability, transmission capacity as we look at natural gas or other electricity-producing opportunities?

Mr. HÉBERT. I think anything that you can do that would move the Federal Government and local and State agencies toward a spirit of cooperation and working together, try to create that one-stop shopping. I think the thing that is most difficult for the industry, which in the end means it is very difficult for the American public because they can't get that adequate supply to them in time, is the fact that they have to go with so many people with their fingers in the pie, so many regulators, so many agencies, so many associations.

If there were a way to understand that we must have one vision together, understanding that, quite frankly, my considerations are very different than EPA's and they are required to be under the law. But let us see if we can't figure out some way to cooperate, somehow have an understanding together so we can expedite these processes. Any clarification you can give there legislatively, I think would be great.

As you know, one of the things that I have continued to talk about, and actually I was pleased to hear several members in here talk about, is the incentives—how do you incent the industry? I mean, I think any direction you could give in that indication would be wonderful. Quite frankly, if we see a need, be it in the West, be it in the Northeast, be it in the Southeast, and we don't see that need being met, what would be wrong with us giving the proper signal on the transportation end, and maybe even providing another 200 basis points to get someone interested in providing that opportunity?

Because the point I don't think could have been made better than was made by Congressman Bono. And that is, the last thing we want is for the lights to go out to some extent to where it is not quality of life but it is, in fact, life. So we must get about the business of that, and I would be glad to work with you and the committee to any extent possible to provide that.

Mr. BARTON. The gentleman's time has expired.

Mr. PICKERING. Thank you, Mr. Chairman.

Mr. BARTON. The gentleman from Ohio, Mr. Sawyer, is recognized for 5 minutes for questions.

Mr. SAWYER. Thank you very much, Mr. Chairman. Thanks also for the comments in response to Mr. Pickering. His question goes very much at the kind of concern that I have in both natural gas and electricity around the question of capital formation in order to do the kind of investment that it is going to require in order to provide the delivery and reliability of service that we are talking about in both energy arenas.

It seems to me that given particularly the long lead time necessary for that kind of infrastructure investment, that we face a particularly important standard of analysis in trying to forecast both the availability of supply, the demand, and the prices that surround that. It is central to capital formation.

What can you tell me in terms of how those forecasts are developed, and more to the point, how accurate they have been in recent years in terms of anticipating those several dimensions of supply and demand?

Mr. HÉBERT. I think typically over the last few years, most people have challenged numbers that showed the demand to the extent that we have seen. But I think what we have learned is that—I think it was Congressman John that said we had an addiction to energy.

Mr. SAWYER. Yes.

Mr. HÉBERT. We certainly appear to have that. How many TVs do we have in our homes, how many telephones and computers and alarm clocks?

Mr. SAWYER. Who would ever have anticipated that computer consumption of electricity and the size that that has achieved in just the last 5 years?

Mr. HÉBERT. So I tend to believe most of the numbers. If you are asking me when the numbers come in and the numbers appear to be a little high, what is our skepticism now, because of comments made earlier, I would rather have additional capacity than be low on capacity. So it is my point now that we must aim high. And as tough and as difficult as that is to do, the last thing we want to do is hear stories like we just heard in Palm Springs.

Mr. SAWYER. As a matter of decisionmaking, I couldn't agree with you more. My question, though, is how did the performance, the forecasting performance, over the last 5 years compare to the reality that played itself out? If you don't have those numbers, I completely understand.

Mr. HÉBERT. I will provide for the record what I can find for you on that.

I just don't have anything off the top of my head. I think if you look in some regions—you look in Pennsylvania, it looks like, evidently, the numbers they depended on were pretty good. If you look at the Southeast, they look in pretty good shape too. If you look in the West, I don't think they could have anticipated a lower than average rainfall, the lower than average snowpack combined with the increase in demand.

Mr. SAWYER. Has the analysis been sufficient, adequate, to the work that you have to do as a regulator?

Mr. HÉBERT. I think it has.

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

Mr. BARTON. Thanks to the gentleman from Ohio. We would now go to Mr. Bryant from Tennessee for 5 minutes for questions.

Mr. BRYANT. Thank you, Mr. Chairman. Mr. Chairman, I think we all agree that the domestic natural gas consumption is expected to increase at a faster rate than production over the next number of days, and that FERC regulates the construction of new natural gas pipelines pursuant to acts of Congress.

Among other things, FERC considers environmental impact statements pursuant to the National Environmental Policy Act, Endangered Species Act, Fish and Wildlife Coordination Act, The Coastal Zone Management Act, as well as others, including an increasing amount of landowner protests. In addition, pipelines must comply with numerous State permits and procedures.

Now, critics have claimed that the lack of interagency coordination, duplicative requirements and conflicts between Federal and State agencies make the pipeline construction process increasingly difficult. FERC has attempted to alleviate this problem by reviewing its own internal procedures. It is also beginning to establish a collaborative process for construction applications. Could you tell me briefly what that is?

Mr. HÉBERT. Well, Congressman Bryant, we are still working on the collaborative process; we have got to do a little massaging there. But I will tell you, when it comes to the cooperative spirit of trying to get everyone working together, I think that is moving in the right direction. I was speaking to the Natural Gas Council yesterday. We just got everyone together in the same room trying to resolve some difficulties, understanding we have got to provide some opportunities here. I think it is serving us well, and I think we have got to do more of it.

I will tell you that when it comes to certificating a pipeline and moving forward with that project, what slows us down—we can make the decision on need generally in about 5 or 6 months. What slows us down is the environmental part of that, and that is why we do it later. So what we are trying to do is we are trying to get these parties together before they file. And if we get them together before they file, then they come together with one route. It makes it so much easier on us because one of the great things—and you pointed out all the agencies we have to work with.

One of the things that really slows us down, and almost doubles the amount of time you have to spend at FERC, is when you change a routing process. So if we can get that cleared up on the front end, it certainly helps us. I think what we have done with landowners last year is a wonderful thing too. Now we are requiring notice—three days after they get a docketed number—to landowners. So landowners are going to be aware.

The thing I have tried to tell the industry is, even though I am a lawyer, I think it is a bad idea to send a lawyer with a bunch of papers in his hand knocking on the door, talking about you as a landowner and how we are about to take your land. So let us send some people with some people skills understanding that people, quite frankly, are real sympathetic and non-understanding

sometimes about—or they are not sympathetic and not understanding about losing their property and being compensated for it.

But there has been improvement through this cooperative spirit. I pulled some numbers, and it looked like 10 years ago, it was taking—I think the numbers came actually from 1990. It was taking us around 400 days in most circumstances to get these certificates out. We have almost cut that in half; we are down around 200. It was like 383, and now I think the number was like 194 or something like that. So that in fact is helping.

Mr. BRYANT. I have talked a lot, and others have mentioned—you emphasized in your statement the need for pipeline—streamlining that process. Another issue you address, and we have ignored it so far, is the storage capacity issue. Can you just briefly tell us what that situation is as we head into a hot summer?

Mr. HÉBERT. Again, the storage capacity, depending on what region you are looking at, could obviously be different. I think it may have been Congressman Largent who talked about the rupture with El Paso and what happened there. You had the storage drawn down there because, quite frankly, they were drawing down to help California out to keep California on its feet while you were dealing with the ruptured pipeline. So it depends on what region you are talking about. Most circumstances, the storage levels were down.

Another indication in California was not so much only that you had these units running and that they are gas-fired units, but you have got these gas-fired units, whereas they might have at one time run at 25 and 30 percent of capacity because, quite frankly, they are older units—around 40 years old in some circumstances—they are running them at 75 and 85 percent of the time, so it is taking up much more energy. Especially if you look at the West as a whole, they haven't had any new generation to come online even though you have seen more natural gas being used because of demand. You have had some QF units come on, but other than that, you have not had a new generation to speak of.

Mr. BRYANT. Is there a—

Mr. HÉBERT. So when it comes to the storage, that storage is being drawn down pretty heavily.

Mr. BRYANT. My question was, Is there a replenishing effort going on, or will there be? Can you guess?

Mr. HÉBERT. Well, we have—

Mr. BARTON. This will have to be the last question.

Mr. HÉBERT. We are about to enter into a shoulder period, so that replenishing period is about to start. It should start within, I would guess, the next couple of weeks, I would hope, depending on the weather. But we will know more about that about half-way through the spring to see exactly how much we can replenish.

Mr. BRYANT. Thank you, Mr. Chairman.

Mr. HÉBERT. And I will report back to you on that.

Mr. BARTON. Thanks to the gentleman from Tennessee. I want the record to show that if Congresswoman McCarthy was here, it would be her turn to ask questions.

But since she is not here, we would go to the gentleman from Louisiana, Mr. John, for 5 minutes.

Mr. JOHN. Are you sure, Mr. Chairman? Thank you. I have a very brief question that I asked to the panel in last week's hearing.

And it deals with the big controversy over in California with FERC's role and the controversy of what is happening in California as it relates to the transmission grid that California is trying to take control over in exchange of bailing out some of their utilities.

Could you maybe comment on where we are as far as that whole issue goes? Because I feel that there are some ramifications further down the road.

Mr. HÉBERT. We issued an order December 15, and in that order we gave certain instruction to California telling them what they needed to do, even to the extent of their board, on the ISO board. We have certainly seen them move in different directions there. Now, it looks as if California may in fact be trying for the State to purchase their transmission. If that transmission is acquired by the State, it is my belief that we see a filing by the State of California as to that circumstance, and we will deal with it as expeditiously as possible. I will give them an up or down answer on that as expeditiously as possible.

Let me tell you where my concern lies. I think when we are looking at remedies for California, or the West as a whole, because I don't think we can any longer just talk about California; I do think we have to talk about the West as a whole. To me, there are almost two things that you always need to look at on any remedy: Is it increasing supply or is it decreasing demand? And if the remedy is not doing one of those two things, then I think you have to ask yourself, in fact, what is it doing?

And beyond that, we issued an Order 2000, which set up our regional transmission organizations which I believe are going to be the framework that is going to make our electric grid work, and it is going to make it work reasonably well. We need for Order 2000 to be followed. We need for there to be a regional transmission organization in the West. I think we have to be careful when it comes to single-State operators of these transmission systems, and we have to do what is in the best interest of the region when the region depends on one another.

I don't think it is any secret that they do depend on one another in the West. So we will have to look at that carefully, but we will have to make sure that it follows Order 2000 and it is moving toward a regional transmission organization as well as the—

Mr. JOHN. You may be wondering why a gentleman from Louisiana would be so interested in what happens in California. I think the gentlelady from California would agree with me that if California were a country, it would be the fifth or sixth or seventh largest economy in the world. So I believe that even though we live hundreds of miles away, I think California is important to our country as a whole, and what happens over there should be of concern from New York, all the way across our land.

Getting back to the grid real quick, if the Governor of California, and the legislature and all the authorities are successful in taking over the transmission grid, would it or would it not, in effect, result in your not having regulatory authority over that grid because now it would be, in effect, state-owned?

Mr. BARTON. Would the gentleman yield on that?

Mr. JOHN. Yes.

Mr. BARTON. To add to that question, isn't it also true, before they could do that, the FERC would have to approve it?

Mr. HÉBERT. That is true. We would have to approve it; there is no question about that.

Mr. JOHN. That is the heart of my question.

Mr. HÉBERT. Your contingency is based on our approval.

Mr. JOHN. Right.

Mr. HÉBERT. So it is hard for me to consider the contingency based on that. I am not certain whether or not we would approve it.

Mr. BARTON. I think the gentleman's question is, assuming that it became reality—forget how we get there, but it became reality—is it not true that a State that owned its transmission grid would not be FERC jurisdictional?

Mr. JOHN. And then that is really the bottom line. You would obviously have that consideration raised in your deliberation as to whether to approve it. But if it were to happen.

Mr. HÉBERT. Let me answer both questions. Only if we approve—

Mr. BARTON. I am trying to help clarify the gentleman from Louisiana's question.

Mr. HÉBERT. I think the issue—and I understand the issue is does the State own it, do they not. But the issue in the end is going to be do we approve it or not. So I am not certain anything else matters. But let me say this: It is fundamentally important, I believe, if we are going to have an energy system that works, that we move toward comparability and open access. And you have got to do what it takes to get there. And that is why you have got to move toward these regional transmission organizations.

Mr. JOHN. Okay.

Mr. BARTON. Well, I want the chairman to know—and we may do a specific hearing on this. But if and when we do, I have great concern that a State entity is not subject to some—a State-owned entity is not subject to some jurisdiction. And normally, within a State, the State would have jurisdiction over the municipality or something like that. But if the State owns the grid in that State, they are subject to no jurisdictional authority. And that is of concern to the chair.

Mr. JOHN. That is correct.

Mr. HÉBERT. I understand your question. And our bootstrap in California right now, our legal bootstrap, is the ISO itself. I want to be very careful—I am not trying to avoid you; I would love to answer your question. But I have only got two colleagues, and if I have someone raise a point that I have already decided on an issue that is going to end up in front of me, I am very concerned about that.

Mr. BARTON. Help is on the way.

Mr. HÉBERT. I know. I know, and I appreciate that.

Mr. BARTON. You have got two more people coming.

Mr. HÉBERT. So the last thing I want to do with the crisis in the Northwest and in the West is to take myself out of the picture so decisions cannot be made. So I want to be careful about this. We will have to approve that transaction.

Mr. JOHN. I know my time is up, but I still would like, it seems to me, a very simple answer, that if you do approve it, regardless of how you get there, would it, in fact, no longer be under your regulatory power? And I understand that there would be a lot of legal maneuvering to get to that decision, but forget about that.

Mr. HÉBERT. The problem is, I think where you are coming down is, are they a public utility or not. And if the State owns it—

Mr. JOHN. Maybe so.

Mr. HÉBERT. [continuing] they may not be a public utility. But I don't want to make that decision for you, but I will say this. Absent them being a public utility, there are still provisions under the Federal Power Act that bootstrap us in.

Mr. BARTON. And the gentleman's time has expired.

Mr. JOHN. Thank you, Mr. Chairman. We are going to go to Mr. Whitfield from Kentucky for 5 minutes.

Mr. HÉBERT. We lawyers always find a way in if we want in.

Mr. WHITFIELD. Thank you, Mr. Chairman. I noticed in your testimony you are talking about responding as quickly as possible to any applications to construct new capacity relating to California. Are there new applications specifically related to the situation in California? I notice that you say right now you have three—you have issued certificates for three projects in the last 7 months. Are there others in the pipeline now?

Mr. HÉBERT. Yes, sir. We have five pending, but it is my understanding that we are going to have more before us very soon.

Mr. WHITFIELD. And these three projects that you refer to, where are they located in your testimony?

Mr. HÉBERT. I would have to provide you with that because I don't know that off of the top of my head.

Mr. WHITFIELD. Okay. You also talk in here about raising the current dollar limit on automatic authorizations. What is the dollar limit on that now?

Mr. HÉBERT. We had talked about moving it. We had had several occasions. I want to make sure—30 million is where we are talking about moving it to, but currently it is at 15.

Mr. WHITFIELD. Fifteen? And you are thinking about moving it to 30? And would that require a vote of the commissioners?

Mr. HÉBERT. I would have to get the agreement of my colleagues, yes.

Mr. WHITFIELD. Okay. And that is something that you all will be considering, I take it?

Mr. HÉBERT. I hope quickly. I understand help is on the way also.

Mr. WHITFIELD. What is the significance of having an automatic authorization compared to the regular process?

Mr. HÉBERT. Well, it just—you know, the process is so much quicker. If they have the automatic authorization, we would be able to get it—I mean, they are going to have certain compliances they are going to have to make, but other than that, we can move them through the door quickly. I don't know what—as far as when we start them. Yes, I mean, they have got their NEPA requirements. But for that, they are automatic.

Mr. WHITFIELD. Okay. But they still have NEPA and other environmental requirements. And also, you made the comment that it

appears that the Intrastate Gas Transportation Network in Southern California is constrained. And I was just wondering what do you mean by that?

Mr. HÉBERT. Well, what happens, when we have an interstate pipeline, and we bring it—let us say we bring it at the border, and they have got a intrastate, strictly a State line, if that State line cannot handle the capacity that we make available to them, it doesn't matter how much capacity we make available because they cannot deliver to the end user.

Mr. WHITFIELD. And that is the situation in California right now.

Mr. HÉBERT. We understand that may be.

Mr. WHITFIELD. Okay. Now, it is my understanding that there is very little natural gas used in New England. Is it your understanding that that is caused by unreasonably strict environmental regulations, landowner protests, uncooperative State agencies, or what is the answer to that?

Mr. HÉBERT. Well, they have been dependent for a very long time on fuel oil, as you know. That has been their resource that they have decided to use. We have attempted to get additional pipelines in there, and we have done some of that. We are always trying to do more. As you know, if you would bring more natural gas, it would do two things for you. One, it would clean up the environment; two, it would give you a choice of fuels. If you have got a choice of fuels, you are going to lower the demand; therefore, lower the price. So we think that is a good idea.

Mr. WHITFIELD. All right. Mr. Chairman, I yield back the balance of my time.

Mr. BARTON. We thank the gentleman from Kentucky. I would recognize the gentleman from Massachusetts for 5 minutes for questions.

Mr. MARKEY. Thank you, Mr. Chairman, very much. Mr. Chairman, there are 26 trillion cubic feet of gas up in Prudhoe Bay Field area. Why hasn't that pipeline been built by the industry to bring it down in to the lower 48? They were approved to build the pipeline in 1982. The EIS was finished. The Government finished its job; it is all done. There is only, according to this, only 1 trillion cubic feet of gas in the Arctic Refuge, and yet they are making a big deal out of going into the Arctic Refuge, but they have had permission to bring down the 26 trillion cubic feet from Prudhoe Bay for 18 years. Why haven't they done it?

Mr. HÉBERT. Well, I think primarily that kind of goes back to my opening remarks where I talked about how we go through boom and bust cycles, and then, in fact, when we see it swing back, we see the E&P pick back up. Same thing, pipelines as well. When it comes to delivering that product, if the price is at such a point based on the cost it takes to build and transport the infrastructure, it doesn't get done.

Mr. MARKEY. But I am saying, they could have built it right along the oil pipeline. It is already constructed. Has it been a 19-year bad cycle of natural gas? That is not the way I view the natural gas market.

Mr. HÉBERT. Well, prices have been pretty low for a substantially long period of time.

Mr. MARKEY. So would it be your opinion that it is unlikely that we will ever see that pipeline come down from Alaska, given our past 19 years where they haven't built it. See, ordinarily, we are told, well, the Government, they are inefficient. But here, we finished the whole process, the EIS, everything. Said build, and in 19 years they haven't build. And yet, we are being told we have to go to the rest of the Alaska which is pristine wilderness and allow them to start over there as well with their footprint.

Mr. HÉBERT. Yes. This is one of the conversations I continue to have with people to make them understand why the incentives and the price signals are important.

Mr. MARKEY. No. That is rhetorical question. I am making a rhetorical point that we should never permit them to go to the Arctic Refuge until they have done the Prudhoe Bay because if they can't make Prudhoe Bay cost effective, how in the world are they going to make the Arctic Refuge cost effective? You know, they have had 19 years in an already approved pipeline route, and they haven't done that. So that is the only point. And there is only a fraction of the energy over there. So I am just making a rhetorical point. I understand your price signal point.

Mr. HÉBERT. No, no. If I may answer because I respectfully don't agree with it, because I think there is a way to transport at an economical cost and give the right incentives price signals to the industry to do exactly that.

Mr. MARKEY. But the industry vehemently disagrees with you for 19 years.

Mr. HÉBERT. Oh, I don't disagree that they have not wanted to do it for some period of time because of price signals.

Mr. MARKEY. Yes. Nineteen years, 19 years of bad price signals. What are good price signals?

How high does the price of natural gas in America have to go before they have an incentive to build the pipeline down from 26 trillion feet of cubic—

Mr. HÉBERT. I won't debate it with you, but I will just say that I think the economics have changed on that model.

Mr. MARKEY. Well, I am saying, let us hope they first do that, though. Let us come in for that before they ask for the refuge. Do you understand my point? They should first get the approval and start the construction on that before they do the refuge; don't you agree with that?

Mr. HÉBERT. I hear your point.

Mr. MARKEY. I hear your point. Yes, thank you.

Now, let us go to New England. You say there is a pipeline constraint in California. Are there pipeline constraints in New England?

Mr. HÉBERT. I mean, we have got some congestion problems as far as a constraint on capacity, comparable bottlenecks.

Mr. MARKEY. If California a 10 on a scale of 10, what do you think the pipeline constraints for New England are? Just so we get a little bit of a preview of coming attractions.

Mr. HÉBERT. You are trying to get me in trouble.

Mr. MARKEY. Comparably.

Mr. HÉBERT. I don't think it is comparable at this point to what you have seen in California.

Mr. MARKEY. So maybe a 5 on a scale of 10 or a 2? Where would you put it?

Mr. HÉBERT. I would say less.

Mr. MARKEY. Less than that. Okay, good. Thank you. Less than five or less than two?

Mr. HÉBERT. How about four?

Mr. MARKEY. Four is a good answer. Okay? I am not too worried. I know that FERC is also considering whether or not to impose an \$8.75 per kilowatt month installed capacity of the I-cap charge in New England; Massachusetts delegation, Maine, Senator Reed from Rhode Island, just about everyone in New England on utility commissions—

Mr. HÉBERT. That is pending, and I have received your communications. And I am very much—we are on top of it.

Mr. MARKEY. I appreciate that very much. And I appreciate the consideration that you have given to it thus far. Let me see if I have got another question.

Mr. BARTON. The gentleman's time has expired, but we will give him 1 more minute if he's got a burning question.

Mr. MARKEY. Again, just to focus in on this a little bit more. Sable Island has about 6 trillion cubic feet. They have just made another strike in an adjoining field very recently, another 1 trillion feet. The Canadians just announced that last week. If New England and the Northeast fills the pipeline capacity to bring that natural gas in, are you optimistic about our ability to be able to have a reliable source of energy for the next generation?

Mr. HÉBERT. We have got proposals that are going to deliver that gas. But I will tell you that I am optimistic if we can have it delivered, but as you know, it is very complex and difficult bringing those type structures and facilities into metropolitan areas, but we are going to work through that as expeditiously as possible. But I would ask for great coordination, and I would guarantee mind with State and local representatives of associations and agencies.

Mr. MARKEY. We have already got 400 million cubic feet a day. Are you confident that we can expand that capacity in the next couple of years?

Mr. HÉBERT. I hope so.

Mr. BARTON. With Congressman Markey's support, it will be easier, won't it?

Mr. HÉBERT. It will be easier. It is kind of like a tap on the shoulder.

Mr. MARKEY. Thank you, sir.

Mr. BARTON. I would be happy to engage in a discussion with my colleague from Massachusetts about some of those questions he asked on the Alaskan natural gas pipeline. I didn't want to infringe on the right of the Chairman of the Commission, but there are some answers out there.

Mr. MARKEY. He probably wouldn't have minded.

Mr. BARTON. The gentlelady from California is recognized for 5 minutes.

Ms. BONO. Thank you, Mr. Chairman. I am sorry that my colleague, Congressman John, has left. He said he doesn't know why he is concerned with the price of energy in California, but it is clear he wants to retire to California, and it is probably to my district.

So I am glad that he does care. But I also enjoyed his questioning. I was writing the same question for myself to ask you and was disappointed when he got to it first.

But I appreciate how definitely you have avoided answering the question about the Governor's proposal to buy the transmission line, and I understand why. But you have done a good job of not answering that question.

My question is more about cost plus price controls. And I know we are hearing this a lot with, of course, electricity. And I don't want to sound like I am advocating for or against this proposal, but I think that we are clearly seeing support in California delegation for this, and I am concerned that it is a proposal that is going to perhaps help us short term but hurt us down the road. And I would like to know your views on cost plus price controls.

Mr. HÉBERT. Let me give you this caveat up front, if I may. I do have an open mind, although, I have to be careful about saying I have an open mind, because I was in a conversation with someone in the media 1 day, and we talked and talked and talked, and I said, "I will consider; I haven't seen it proved to me." And we were talking about the price cap issue. I said, "Well, if you have got to talk me into it, you have got to convince me there won't be short-term harm as well as long-term harm, because that is in fact what we have seen." But I said, "Other than that, I will consider it." And then the headlines of the "San Francisco Chronicle" was that Hébert to Consider Price Caps. I want you to know I do have an open mind when it comes to cost plus.

The difficulty is this: We are in an energy age of how quickly can you get it done. I have got great cases from 1993 forward right now at the FERC. I don't think California can wait 8 years to solve this problem; as a matter of fact, I know you can't. There are other difficulties in that there is public power, quite frankly, that I don't have any jurisdiction over. There is an added question, in fact, that I am not sure how I determine the cost basis of some of these marketers. I am not sure what the cost basis is of a computer and an algorithm and a telephone. Also, the tracking of the energy is very difficult. It is very difficult because it changes hands so many times.

Now, there are things that we are going to do, and that this is why Order 2000 and the RTO process is important. Because we have not been certain to date what we need to do with market monitoring and how we need to monitor the market entirely. Is it a broad view? Is it a narrow view? I can tell you that we have limited resources, and I want you to know we have been committed to California and the Northwest to such an extent that we have got a backlog of 2,000 cases right now that I have had to put special attorneys on to try to deal with those cases because, quite frankly, those people deserve their day in court too, and we have got to move them forward. So we have got limited resources.

We have got a study coming up which is going to tell us what more we need to do with market monitoring, because we know we don't have that right. The RTOs—we had the vision in Order 2000 to know that we didn't have the resources, so the RTOs are going to do their market monitoring as well. So it is important that we look at it in that sense.

That is a long answer to your question, but it is a very long process, and my point is, I don't think you have a long time.

Ms. BONO. Right. I am hearing from everybody that blackouts are guaranteed this summer. And I am hoping that my constituents recognize that. And nobody has addressed this issue, and perhaps you are not the right person to. But in my district there was a neighborhood without power for an entire weekend. And SCE didn't want to get out because they couldn't afford to get the people out on overtime to restore the power to these people. And perhaps this isn't your question, but I hope somebody somewhere along the line starts asking, what would happen in the event of a catastrophe?

I understand Seattle just had an earthquake a little bit ago of 6.4. That is what I heard. So maybe I will be embarrassed and find out it wasn't true, and hopefully it wasn't. But I am curious to know too what the contingency plans are here should there be disruption in the transmission. Are we thinking about that? How are we going to be able to react and resupply the gas or the electricity, whatever it might be? Are we thinking at all about worst-case scenarios?

Mr. HÉBERT. Well, my guess is that I am probably not the answer. I think that is probably something a little closer to FEMA than it would be to me. But I will tell you, while being chairman of the State commission, one of the things I did was to ensure that each and every utility that operated within that State had emergency plans in how to deal with exactly that. They had them file them with us. I think most States are doing that. I think FEMA is probably involved in that, although, I don't know that. But that would be a very difficult situation, and we certainly do need to have a grasp on that.

And it would be my hope that the transmission companies themselves have that. But certainly, if we set these regional transmission organizations up, they are going to have that type plan. That is going to be something that they, quite frankly, cannot live without, because they are going to make their living off throughput. They are going to make their living off volume. They are going to make their living off reliability and performance. And that is why they are so important.

But I will commit to you this in California and the Northwest as a whole: We are trying to squeeze every megawatt that we can out of that system. We will do anything and everything we can. We are looking for ideas. We are looking for people to bring it to us. That will help, but all we can do is remove regulatory obstacles, regulatory impediments. It still doesn't solve the supply problem. That can't come from us; it has to come from someone else. But when it comes to delivering that supply, we can certainly help there. But I will do anything and everything I can. We are looking for ideas; we invite that. But I assure you, if we get a filing, it will happen sooner rather than later. And if I agree with it or don't agree with it, it will come out.

Mr. BARTON. The gentlelady's time has expired.

Ms. BONO. Thank you.

Mr. BARTON. The gentleman from Maryland, Mr. Wynn, is recognized for 5 minutes.

Mr. WYNN. Thank you, Mr. Chairman. Mr. Hébert, I was initially going to ask you about the administrative barriers to pipeline construction that have been commented upon today, but then after listening to Mr. Markey's question and your response about the impact of price signals, it seemed to me that I ought to ask I guess a more basic question. What is the greater impediment, administrative obstacles, for unprofitable price signals?

Mr. HÉBERT. Well, I think right now what you have is you have very good price signals. Price signals are good. At a time when prices are very low, you kind of have the opposite, but now you don't have that.

Mr. WYNN. Okay. Now, I think you also said that because it is somewhat cyclical, the natural gas that Congressman Markey referred to, people just didn't move on it, notwithstanding that, apparently, the administrative barriers have been overcome, the lack of, I guess, a long-term profitability picture inhibited the construction. Is that a fair assessment?

Mr. HÉBERT. Yes. I think the price signals were not there at that point. I don't think they thought they could deliver it and not only add value to the system but probably to their shareholders.

Mr. WYNN. Is it your opinion that the current price signals are sufficient to move that natural gas to stimulate the construction of that pipeline?

Mr. HÉBERT. I can't answer that. I will let the market answer that. But I will tell you, I have to believe that the price signals are very good. And I will tell you, from the time that I spent with the investment community in New York, they are excited about the opportunity.

Mr. WYNN. Well, it seems to me it is difficult for us to develop an energy policy if we don't really know what the factors or forces are that are going to determine whether or not existing and approved pipelines get constructed in a timely manner given the build-out time. I mean, how do we develop an energy policy? And you can say you can't comment on that. If not you, who?

Mr. HÉBERT. I am not sure I understand what you are asking. Do you want me to comment on why the pipelines work or don't work or—

Mr. WYNN. Well, I want you to basically extend—and the chairman indicated there are answers, and I would love to hear them—why approved pipelines from substantial quantities of natural gas have not been constructed to bring that gas on line.

Mr. BARTON. Would the chairman of the Commission yield?

Mr. HÉBERT. Oh, absolutely.

Mr. BARTON. One possible answer might be that the delivered cost to the expected market has got to be equal or lower than the delivered cost of existing supplies that are already serving that market. And in the case of Alaska, when you add the build-out, the actual capital costs to construct a natural gas-only pipeline, then you have to liquify it if you take it down to Valdez. You have got to figure the cost of the tankers to terminal. Then once you get it in lower 48, you have got to figure the delivered cost to Chicago or wherever the expected market is.

The bottom-line cost is—the numbers I remember—you were showing natural gas delivered come in around \$9 to \$10 in MCF

at the time the market was delivering at \$3 to \$4. So it was non-economic. On the other hand, if it looks like natural gas prices in lower 48 are always going to be the \$4 to \$5 to \$6 in MCF before delivery, just at the wellhead, that same project then becomes economic if there is an expectancy that the market is going to stay at that level. That is one possible answer to the question.

Mr. HÉBERT. And if you want to make sure and deliver that supply—

Mr. WYNN. I wanted to thank the chairman, first, for the answer. Then I was going to follow up with a series of questions.

Mr. BARTON. I would be happy to.

Mr. HÉBERT. The chairman can, obviously, get into areas that I can't get into. I can't say, should you take it to a boat and move it, should you have a longer pipeline, should you go east, should you go west, north or south. I can't answer those things. We look for them to bring us the filings, and we will look at those filings, and we will move forward on them. But I will tell you, I think it is a bottom-line decision of, do you think it is important to sure yourself up domestically or not knowing, in fact, that the signals are there that you need more pipes.

Mr. WYNN. Okay. If I could jump in—

Mr. HÉBERT. And that is not always upstream; it could be downstream.

Mr. WYNN. Okay. If I could just jump in then. You say that the price signals are favorable now, and that is the dominant factor. Would you say—and I guess I followed in on Kevin Tausin's line of questioning. Do we need legislation to address these administrative obstacles, or is it really determined by the market as opposed to this other stuff we have been hearing about?

Mr. HÉBERT. Again, I would like to stand by my earlier statement in that I would rather not talk about obstacles. I would rather—and I will copy you on it as well—what the clarifications and questions might be as to differences in the time the statute was taken into effect and today. It is quite different.

Mr. WYNN. If I can pursue a couple of things about these administrative obstacles. There was a notation that they are duplicative requirements. What are those?

Mr. HÉBERT. I am sorry?

Mr. WYNN. Are there duplication requirements? Are there duplicative requirements?

Mr. HÉBERT. Oh, yes, there are many agencies involved in this process, if that is your question—who is going to take the lead role, who is going to cooperate.

Mr. WYNN. Well, the duplication, what is necessary to eliminate the duplication with all these agencies involved?

Mr. HÉBERT. Again, I would have to give you clarification on that after this, and I will do that.

Mr. WYNN. Okay. Similarly, the conflict between the Federal agencies and the State agencies, how is that likely to be resolved or how should that be resolved?

I mean, that is the million dollar question. We just try to work together cooperatively and try to share information and do as much work up front as possible and move forward.

And I know this is dangerous territory. But if we are serious about developing a national energy policy, does the Federal Government have to become more dominant in this process, or should we pull back, for that matter, and defer more to the States? I am trying to get at which approach gives us a better energy policy that moves this pipeline construction process along quicker.

Mr. HÉBERT. There are two parts to that answer. One is, I think it is always best if the Federal Government, or any government, can be less prescriptive as opposed to more prescriptive. Okay? And I think their role has to be to try to remove obstacles and impediments to facilitate efficiencies and speed of getting things done, while at the same time understanding that we have obligations to two things that are very important: landowners and the environment.

The other part of that question is, if you look at natural gas, we certainly have siting authority on natural gas pipelines. We do not have siting authority for electric transmission lines.

Mr. WYNN. All right. Thank you, Mr. Chairman. I yield back the balance of my time.

Mr. LARGENT. The gentleman's time has expired. I am going to yield myself 5 minutes as it is my turn to ask questions. Your last statement is exactly where I want to go.

Mr. HÉBERT. I knew I shouldn't have said that.

Mr. LARGENT. Yes. FERC does have the power or authority of eminent domain in siting natural gas pipelines; is that correct?

Mr. HÉBERT. That is correct.

Mr. LARGENT. And do you think they should have that authority?

Mr. HÉBERT. Absolutely.

Mr. LARGENT. And do you think they should also have that authority for siting electric transmission lines?

Mr. HÉBERT. Here I go. Once upon a time when I was chairman of the Mississippi Commission, I took very strong positions that in fact States should retain that authority. I was chairman of the Mississippi Commission, and quite frankly we had not moved toward competition at that point. I was the only one actually on the commission that was trying to move quickly in that direction.

Now that I am at the FERC—not that I have Potomac fever—I think you just have to answer the basic question, is electricity going to be an interstate commodity or is it not? And if it is, you have to treat it like one. I do think it is important that we give as much deference to States as possible so that they understand that they are in the mix and they are involved.

I do think, again, that is where the regional transmission organizations can play a role because they can work through this together. You could have representatives from each State trying to figure out where they go with this planning, and that way, one State, perhaps, could not veto a line going through that is going to benefit all, because the one thing we are learning through this entire process is, as goes Mississippi, so goes Oregon. And so we are all in this big boat together, and we are going to sink or swim together. So for that reason, I have to say it is probably time to move forward, as much as I hate it.

Mr. LARGENT. Well, I want to work with you on that, and see if we can't come up with a common sense, middle ground on—

Mr. HÉBERT. You and I have had great discussions on that.

Mr. LARGENT. Yes. Let me go back to an issue that was raised by Congressman Boucher in his questioning because, in my mind anyway, he left the impression that this gaming the system by the use of the transportation and natural gas is taking place where somebody owns both production and—or gathering and transportation, and they are rigging the system to favor themselves to increase prices. Is that, in fact, taking place, to your knowledge?

Mr. HÉBERT. We have a pending case, so I have to be careful. I do want to make a clarification, because I may have confused you a little bit, and I want to think about how I answered Congressman Boucher. I think he may have been talking about prices, and I was talking about rates. We do have jurisdiction over the rates, but as you know, sometimes it is rolled in, so the price itself, we may not have full jurisdiction over it.

Mr. LARGENT. Okay. Well, let me ask the question this way: If that were occurring—in other words, if somebody was gaming the system to benefit themselves or to increase prices in the natural gas arena, what tools does FERC have to address that type of abuse? Do you have tools available, and what are they?

Mr. HÉBERT. We do have tools to address that. As a matter of fact, one of the things that we are doing to check in to see exactly what has happened and what is the conduct in the United States right now, is we have got an affiliate conference coming up on March 15. We are going to gather exactly that type information and see what the conduct is. I will have more information for you at that point; I do not have it right now.

But I will tell you, when you see these numbers like I talked about with El Paso, the number of bids that came in for the available capacity, then at the same time you look, and you see pipes running full, it doesn't lend you to believing that, but that is not to say that it has not or could not occur.

Mr. LARGENT. Okay. Well, go to the tools that the FERC has access to addressing that type of market abuse if, in fact it happened. What could FERC step in and do if they found a company or entity guilty of that?

Mr. HÉBERT. I mean, through Section 311, we have got discouragement penalties, so we could certainly do that. But it would take a finding of that type behavior.

Mr. LARGENT. This will be my last question. Do you have the power to order divestiture of the transmission?

Mr. HÉBERT. It is questionable.

Mr. LARGENT. Okay.

Mr. HÉBERT. I hate to give you that answer, but I will get you more information on it, but it is questionable.

Mr. LARGENT. Okay.

Mr. HÉBERT. I am just not comfortable giving you a yes or no on it.

Mr. LARGENT. Well, thank you, Mr. Chairman. It is good to be able to call you Mr. Chairman. We are glad you are in the position you are in. Thank you.

Mr. HÉBERT. Thank you.

Mr. LARGENT. And I yield back my time and recognize Congressman Rush from Illinois for 5 minutes.

Mr. RUSH. Thank you, Mr. Chairman. Chairman Hébert, I certainly appreciate your time and your patience here. But I want to go back to something that you stated earlier in your testimony, that aside from natural gas markets, reactions to warmer weather and decreased storage withdrawals, lower futures prices indicate the beginning of the end of this winter's crisis. And, of course, this crisis, we seem to be moving away from the crisis now, but my question is, will the increase in drilling be enough to overcome low winter storage combined with summer gas-fired generation by next winter? Are we going to have the same issues next winter that we had this winter?

Mr. HÉBERT. I think that is a great question, getting prepared for next winter. I will tell you that I think what is being projected at this point is going to prepare us better for next winter. That is not to say that we will not have problems next winter. I still think there is much work to do. And that is why I continue to take the position that we need to expedite any and all filings that come before us and move as quickly as possible, and work cooperatively with all the Federal and State and local agencies.

Mr. RUSH. You also discussed FERC's commitment to maintain an adequate gas network. And I must say that in Chicago we have been fortunate that we benefit from the remnants of tremendous industrial infrastructure. How important were delivery issues over this past winter? And second, would you share with us the extent to which the current infrastructure is adequate or not adequate in the Midwest?

Mr. HÉBERT. I can't speak to take away capacity. I can speak to the interstate pipelines. And you are right, you are very fortunate where you are. You have a literal spaghetti bowl of pipelines there. I think you have got about five pipelines coming through there, so you are fortunate. I think you are in good shape on your interstate pipelines. There are other opportunities, which, certainly, every choice you get gives you better and more options. I know you understand that. As far as the take-away, I cannot answer. There is always more that the States could be doing.

Mr. RUSH. Well, although we have this tremendous infrastructure in place, our prices—and this might not be a question that you can address—but our prices increased at the same rate that other regions' cost of heating oil increased. And I just want to know, if we have got the infrastructures in place, there was no residual benefit to the customers.

Mr. HÉBERT. Well, I think there was, but I think you didn't get to see some of it because some of what you are getting and much of what you are getting actually is gas we don't regulate; it is Canadian gas. So you are seeing it come down. But the good news for you is you did not have any firm transportation interrupted. So you didn't have any firm customers interrupted.

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

Mr. LARGENT. The gentleman yields back, and we recognize the gentleman from Georgia, Mr. Norwood.

Mr. NORWOOD. I have got two very simple questions. One, I think that a farmer from Georgia might ask you, and one maybe a fisherman from New England might ask you. So feed me back the an-

swers so I can go home and explain it. Can you see that chart over there?

Mr. HÉBERT. Yes.

Mr. NORWOOD. The part I would like for you to look at is just from late 1999 until today. That is a rather amazing spike in my view. And my guess is that either demand increased greatly over the last 12 months or supply went down. Something strange had to happen to spike that like that. I would just like to know your opinion as to what really has happened in the last 12 months that has increased this cost so dramatically over the last 20 years. Did demand really go up that much in the last 12 months?

Mr. HÉBERT. Primarily, what you see right there is the electric generation, the influence of the electric generation. Not everyone saw that price. And I know you see that, but certainly not everyone saw that price.

Mr. NORWOOD. Well, my farmer did. So now take it from there. Are you saying by electric generation, demand went up then? Is that what has happened?

Mr. HÉBERT. Well, there is no question there is increased demand.

Mr. NORWOOD. And it caused that big a spike in the last 12 months?

Mr. HÉBERT. At the wellhead.

Mr. NORWOOD. Now, was that demand or is that a decreased supply? It has to be one or the other, doesn't it?

Mr. HÉBERT. Yes. I mean, EIA, certainly I guess since they put it together, they can give you the information on how they came to that conclusion. But certainly, it is either demand or supply; there is no doubt about that.

Mr. NORWOOD. That is right. Now which is it? Who knows that? If you don't know, tell me—

Mr. HÉBERT. I am hoping EIA knows it.

Mr. NORWOOD. Give me your best guess.

Mr. HÉBERT. No, let me—you had a lot of different factors. And actually, we issued a report on this period. Not only did you have increased demand, you had a situation where you had colder than normal weather over the last few years.

Mr. NORWOOD. Well, that is demand.

Mr. HÉBERT. Well, but you had hydro facilities, quite frankly, that didn't have the ability to run like they could in higher rainfall and higher snowpack years.

Mr. NORWOOD. That is demand.

Mr. HÉBERT. So you had these electric generators running at levels, as I said earlier, whereas, normally they may have been running at 25 and 30 percent; here they are running at 80 and 85 percent. And they are much older, very inefficient units.

Mr. NORWOOD. So if we get some nice rain and hydropower comes back into play, that is going to come back down?

Mr. HÉBERT. There is no question it would have helped.

Mr. NORWOOD. Do you think it will bring it half-way down or all the way down?

Mr. HÉBERT. I couldn't answer that. It would have helped a lot in the West.

Mr. NORWOOD. So your basic answer then seems to be that it is both; that the demand went up for various reasons, and our ability to supply other forms of fuel went down. But our ability to supply natural gas sort of stayed the same.

Mr. HÉBERT. It is a combination of those factors, but it is also a combination of—when you ask why is your demand where it is and why is your supply where it is, you are just seeing the balance swing back where your E&P is picking up again, where you are going to be in a supply situation. Quite frankly, it is going to help you here. At the same time, if you look at the demand, you have got a situation where supply is chasing demand, especially in some regions, especially in the West with no end in sight, which is pushing the volatility up.

Mr. NORWOOD. Well, quickly, can we increase supply?

Mr. HÉBERT. You better increase supply or decrease demand. And I don't see any way—

Mr. NORWOOD. Can we increase supply?

Mr. HÉBERT. Absolutely, you can.

Mr. NORWOOD. We have the ability?

Mr. HÉBERT. Yes.

Mr. NORWOOD. Politically we can do that.

Mr. HÉBERT. I can't answer that.

Mr. NORWOOD. That is the interesting question. My next question is actually for Mr. Markey. Had he been given 30 minutes, I know he would have asked this, so I will try to help him out. Besides, I have a friend or two in New England. And it has sort of been asked, but we didn't exactly get the answer. Is it true that in New England there is a lack of natural gas?

Mr. HÉBERT. Not now, but there was. They have remedied some of that. Certainly, they could use more natural gas. And if they want to change fuels, they are going to have much more natural gas.

Mr. NORWOOD. Well, how long has it been that they have been short of natural gas, 2 years, 5 years?

Mr. HÉBERT. Well, they had a problem delivering it, was their problem. They are solving some of that. We had the Maritimes—

Mr. NORWOOD. Well, that is sort of where I am getting at. You said you had attempted to bring pipelines into New England. Is that what you mean by they had a hard time delivering it; there wasn't enough pipelines?

Mr. HÉBERT. You are trying to get me in trouble when I leave here, aren't you?

Mr. NORWOOD. No, sir; I am not. Give me the same 30 seconds Markey had, a little longer.

Mr. LARGENT. You have already had it.

Mr. HÉBERT. I think it is two things. One, it was the deliverability. Now, they have got the new source of supply from Sable, which is obviously helping them.

Mr. NORWOOD. So it wasn't environmental problems, environmental regulations or uncooperative State agencies up there, or landowner protests? None of that affected it?

Mr. HÉBERT. In individual cases that was present.

Mr. NORWOOD. Sorry, that red light is on. Thank you, sir.

Mr. LARGENT. The gentleman's time has expired. I recognize the gentleman from Missouri for 5 minutes.

Mr. BLUNT. Thank you, Mr. Hébert, Mr. Chairman. In the reverberations of all this through the economy, I want to ask just a question or two about propane. As a derivative, those propane prices, which Southwest Missouri where I live, a lot of people don't have access to natural gas pipelines, so they use that derivative. There have been some suggestions that greater storage capacity, tax incentives for storage capacities and things like that would keep some alternatives that you can stockpile a little more effectively out there. Do you have any thoughts on that or want to talk about propane just a little bit?

Mr. HÉBERT. We don't regulate propane but for the transportation of it, and that is very small. But I will tell you this: To me, it is not necessarily an issue of propane; it is an issue of diversification of fuels. I think that is important. And I don't care if you are talking about new technologies, if you are talking about renewables, if you are talking about nuclear clean coal; I think it is all important. And many people in the gas industry even right now will tell you that it is important that we, for strategic reasons and defense purposes, have diversification of fuels, and that we are very sympathetic to that and understand where we go with an imbalance.

Mr. BLUNT. Well, there may be some—that may be a case where just simply some tax policies on the depreciating storage facilities or something a little faster would allow that alternative to be out there and set aside in a way that creates some balance in the market, and balance in the market is very much part of this problem I would think.

Mr. HÉBERT. I think anything you can do to, one, remove obstacles, and two, to give incentives on the front end is much better than having consumers complain about lights being off, stuck in elevators, and paying three and four times their normal bills. I don't doubt that at all, and I totally agree.

Mr. BLUNT. Thank you, Mr. Chairman.

Mr. LARGENT [presiding]. The gentleman yields back. The gentleman from Oregon is recognized for 5 minutes, Mr. Walden.

Mr. WALDEN. Thank you, Mr. Chairman. I apologize for not being able to be here sooner. We were having a delegation meeting from Oregon, talking about the hydro problem and the energy crisis affecting the region with our Governor.

I was wondering if you could give me a little better idea. You mentioned about the hydro system contributing to the demand side of this equation in terms of price at the wellhead. I am curious since our region's 70 percent hydro, our supply, what you are seeing out there. I know we have got 60 percent average snowpack right now that may contribute down the line. But I thought we had stayed pretty constant in our power production, and in fact had exceeded the biological opinion to be able to shove power into California when they were in their greatest need.

Mr. HÉBERT. Well, part of the problems you have got is you are drawing down on this, and you are going to have a problem on your water for this next summer. Now, I know you know that. That is probably one of the things that you talked about today.

Mr. WALDEN. Yes.

Mr. HÉBERT. I think there were some glitches on the hydropower systems as far as the amount of energy they were producing, what was being drawn down, where it was being sent. When you do that, you are going to experience some volatility on the natural gas prices.

Mr. WALDEN. Okay. You may have already covered this, but have you gotten into the need for additional transmission capability of the pipelines and what you see there?

Mr. HÉBERT. Absolutely. And I want you to know, this is not my chart. I know I am being asked about it, but I think someone else is going to testify about this chart. I think that is why it is up there. I might would have turned it around had I known some of this was coming back.

Mr. WALDEN. Could you speak to pipeline capacity—

Mr. HÉBERT. Sure.

Mr. WALDEN. [continuing] and what needs to be done, and how soon it needs to happen? I had a meeting this morning with some folks who were saying they were able to look at 10-year contracts for nearly double what they have got running through their line now. And I am curious: What is it we can do to help facilitate making sure the delivery system works? And if I can get back to you at some point on hydro relicensing and hydro system and power line capacity too.

Mr. HÉBERT. Right. And I will be glad to meet with you privately too. I am always willing to do that. But I will tell you, as I have told some others earlier, especially in the Northwest, you have had a lot of different reasons that have made it difficult to get new pipes out there. A lot of people want to just primarily blame it on environmental, landowner. I think that is some of it. I think you have had what some may call an imbalance. You haven't sited any new generation, other than some QFs, out there to speak of, especially in the West.

But there is also the situation that hydropower has been such an influential factor out there. And quite frankly, when you have a lot of rain and you have a lot of snow, it keeps those gas prices down pretty good out there, so it makes it a little tougher and a little less reasonable for some of these people to bring their market out there. So I think some of this, whereas, yes, it is doing some damage right now, I think it is sending some price signals to some people who are going to be ready to get about the business of doing something out there.

Mr. WALDEN. And I know you have heard this elsewhere, but I am hearing it from my farmers like my friend from Iowa is hearing as well, about the price of fertilizer going through the roof too when it comes to gas prices. So to the extent that you have got solutions for us as to how we get more gas out there and get that price down, we certainly welcome—I know you have got some of that in your testimony.

Mr. HÉBERT. And the one thing I have continued to tell the committee, and I would tell you as well, there is only so much we can do. If I get a filing, I can get a interstate pipeline to you. And one thing I cannot do is anything about your intrastate pipelines with

the take-away capacity. I can transport it to you; I cannot deliver it.

Mr. WALDEN. One of the issues that keeps coming up is the need to have a better working relationship among the Federal agencies—

Mr. HÉBERT. No question.

Mr. WALDEN. [continuing] when it comes to these siting issues. And especially out in the West where so much of our land is Federal owned, or managed, or some of us might say mismanaged on occasion. But it seems like these agencies approach it in a sequential order. And you just get finished with one, and then you have got to start on the next one, on all these siting issues. And I know you know this for pipelines, but it is certainly going to hit us. If we could put generation capacity on in Wyoming and Montana, but there isn't the capacity on the electrical grid to ship it to where it needs to go, we are going to have to string more lines.

Mr. HÉBERT. Absolutely.

Mr. WALDEN. Can you describe for me how the Administration is approaching that?

Mr. HÉBERT. I cannot tell you how the Administration is approaching it. As you know, we are quasi judicial, and we have to be very careful in our conversations with the Administration. Because much of this has to do with pending actions, especially in the Northwest. But I will tell you, we are trying to remove any and all obstacles, impediments that we can.

If you have an idea, if there is an incentive, if there is a reason to provide some incentive to get an interstate transmission system up, we want to work with you on that. We do think Order 2000 is fundamentally important, that you have a regional system that works. We are going to try to squeeze every megawatt—like I was telling Congressman Bono a little earlier—out of the system.

Mr. WALDEN. Good. Because the great conflict that will arise immediately is the snowpack at 60 percent, the reservoirs are down. We drained them lower to provide power under Federal order, to ship power to California. We are not going to see those reservoirs come back up. And we have got all the environmental species issues, going to clobber us this summer. Thank you, Mr. Chairman.

Mr. LARGENT. The gentleman's time expired. Chairman Hébert, we appreciate your indulgence. Thanks for joining us here. We look forward to working with you in the months to come. And there have been some questions that you have agreed to respond to.

Mr. HÉBERT. I will take care of those.

Mr. LARGENT. We would ask that you do that expeditiously.

Mr. HÉBERT. Absolutely.

Mr. LARGENT. We thank you, and excuse you, and call our next panel.

Mr. HÉBERT. Thank you.

Mr. BARTON. Well, ladies and gentlemen, welcome. I want to apologize in advance for putting 10 of you on one panel. Mr. Boucher and I had tried to think of a way to make sure that there were members here to hear your testimony, and we have adopted a one-panel rule, except when we have a Federal cabinet level appointee. And you have seen with Chairman Hébert, the opening statements took about an hour, his statement took about 10 minutes, and then

we took 1½ hours to question him. So I do apologize for asking you to go through this.

But the good news for having you all in one panel, we have got 5 or 10 members who are actually here, and if we split you into two panels, those of you unlucky enough to be on the third panel, you would be stuck with Mr. Boucher and myself. So we do get greater participation by doing it this way.

We are going to start with Ms. Campbell. We will give you 6 minutes, then we will go through, give everyone else 6 minutes. Then we will come back and do questions. And I do ask you try to stay within your 6-minute limit because with 10 people, 6 times 10 is 60. That is an hour of just pure listening to you give your opening statements.

Having said that, this is the meat and potatoes of this hearing. The focus of the hearing is on the natural gas industry today, supply demand, regulatory system. And the answers and your testimony that you give is going to have a significant impact on the policy recommendations that we make on a bipartisan basis to the President on a comprehensive national energy policy.

So with that, we will start with Ms. Campbell, who is the director of the Natural Gas Division of the Energy Information Administration. Your testimony is in the record in its entirety. We now recognize you for 6 minutes to elaborate on it. Welcome to the subcommittee.

STATEMENTS OF ELIZABETH CAMPBELL, DIRECTOR, NATURAL GAS DIVISION, ENERGY INFORMATION ADMINISTRATION; CUBA WADLINGTON, JR., PRESIDENT AND CEO, WILLIAMS GAS PIPELINE, ON BEHALF OF INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA; JERRY JORDAN, CHAIRMAN, JORDAN ENERGY, INC., ON BEHALF OF INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA; RICHARD G. REITEN, PRESIDENT AND CEO, NW NATURAL, ON BEHALF OF AMERICAN GAS ASSOCIATION; ANDREW J. LITTLEFAIR, PRESIDENT, PICKENS FUEL CORP., ON BEHALF OF NATURAL GAS VEHICLE COALITION; ROBERTA A. LUXBACHER, VICE PRESIDENT-AMERICAS, EXXON MOBIL GAS MARKETING CO., ON BEHALF OF NATURAL GAS SUPPLY ASSOCIATION; WALKER HENDRIX, COUNCIL, KANSAS CITIZENS' UTILITY RATEPAYER BOARD; JACK HILLIARD, GENERAL MANAGER, FLORENCE UTILITY, ON BEHALF OF AMERICAN PUBLIC GAS ASSOCIATION; JAS GILL, VICE PRESIDENT, MANUFACTURING, CYTEC INDUSTRIES, INC., AND PATRICIO SILVA, PROJECT ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL

Ms. CAMPBELL. Thank you, Mr. Chairman, members of the committee. I appreciate the opportunity to appear before you today.

The Energy Information Administration, EIA, is an autonomous statistical and analytical agency within the Department of Energy. We do not take positions on policy issues, but we do produce data and analysis that are meant to help policymakers as well as the public. Our views do not represent those of the Department or the Administration.

The committee has requested information about recent prices for natural gas, EIA's projections for natural gas supplies, and what the Nation might do to assure adequate supplies in the future. Our surveys, short-term energy outlook containing quarterly projections for the next two calendar years, and annual energy outlook providing projections to 2020 are the basis of today's testimony.

Natural gas prices are measured in several ways. There are spot market prices for immediate sales, long-term contract prices, and futures market prices. There are also price measurements made at different points in the supply system, at the wellhead or at the city gate, and at different geographic market locations and also for different consumer groups. Our home bills reflect the price of the gas commodity purchased by local utilities or marketers in a mix of spot and long-term contracts, charges for shipment to the city gate by interstate and intrastate pricelines, storage charges, and charges for local distribution company services.

At the beginning of the supply chain is the wellhead price, the figure over there. During 1998 and 1999, wellhead gas prices hovered around \$2 per 1,000 cubic feet. Spot gas prices in the supply region, generally the Henry Hub area, which are usually slightly higher than the composite wellhead prices comprised of spot and longer-term sales prices, began rising this summer. Spot prices were above \$5 per 1,000 cubic feet in the fall more than double the average spot price a year earlier, all prices in nominal dollars. Later, spot prices reached as high as \$10.53 on December 29 of last year. Since that point, spot prices have fallen and were below \$6 during the last 10 days. Some regional markets, most notably California, have experienced particularly high prices this year.

The sustained high national prices are due to a number of factors. First is the strong demand for natural gas. Preliminary data for 2000 indicate that U.S. natural gas consumption reached a record 22.7 trillion cubic feet, passing the previous high in 1972. The high levels of demand are related to the strong economy in 2000 and the return of cold winter weather in late 2000. Production of natural gas also rose last year to approximately 19.1 trillion cubic feet. The gap between consumption and production was closed by record levels of gas imports primarily from Canada. Production appears to have increased throughout 2000 as a result of successful drilling and well completion.

Strong demand for gas in summer 2000 meant that smaller quantities were injected into storage for use during this winter's peak demand. Following strong heating season demand recently, data as of February 16th indicate that national storage levels are 33 percent below the 5-year average and storage in the West region is 56 percent below its 5-year average. While end-of-season storage will be at or near a record low, there were concerns in December and January when the temperatures had been coldest that working gas storage would be depleted by the end of the heating season. This fear contributed to the price spikes at that time.

Regional storage and pipeline capacity are also part of the explanation for prices seen across the nation. Storage and pipeline capacity nationally have been adequate to meet most peak-day demands during recent winters. However, the California market and the Northeast region are examples of areas where in recent years

concern about supplies or deliveries led to price competition. By contrast, production increases in Rocky Mountain States during recent years have resulted in constraints for gas existing in the region. This has resulted in that region having the lowest average natural gas spot prices in the Nation.

Turning to the future. EIA projects that this winter, the November through end of March period, wellhead natural gas prices will average about \$6.10 per 1,000 cubic feet, more than two and a half times the price of the previous winter. Assuming normal winter and continued low storage levels, the annual average wellhead price for the year 2001 is projected to be about \$5 per 1,000 cubic feet. In 2002, we expect the storage situation to improve somewhat leading to a decrease in the price to \$4.50. Domestic natural gas production for 2001 and 2002 is expected to rise in response to the high rates of drilling the past year.

Mr. BARTON. Ms. Campbell, could you try to summarize in the next 55 seconds.

Ms. CAMPBELL. Yes.

Mr. BARTON. I know it is hard to ask you to do this within 6 minutes.

Ms. CAMPBELL. All right. In the outlook for 2020, natural gas consumption is expected to increase to reach almost 35 trillion cubic feet, and consumption increases are expected in all sectors, but the most rapid growth is expected for electricity generation. Domestic natural gas production is expected to increase to 29 trillion cubic feet in 2020 with the gap being closed with increases in import. And EIA does not propose or advocate any particular policies or programs.

Our testimony notes a number of areas that have changed in the last 15 years which have contributed to increases in demand or changed the supply situation. We also note that the assumptions that were used underlying the forecasts are a continuation of current policy and regulation. And that is made because of EIA's requirement to be policy neutral, but that we have also assumed continuing technology improvements and substantial increases in investments.

[The prepared statement of Elizabeth Campbell follows:]

PREPARED STATEMENT OF BETH CAMPBELL, ENERGY INFORMATION ADMINISTRATION,
DEPARTMENT OF ENERGY

Mr. Chairman and Members of the Committee: I appreciate the opportunity to appear before you today to discuss current and future natural gas prices and supplies in the United States.

The Energy Information Administration (EIA) is an autonomous statistical and analytical agency within the Department of Energy. We are charged with providing objective, timely, and relevant data, analysis, and projections for the use of the Department of Energy, other government agencies, the U.S. Congress, and the public. We do not take positions on policy issues, but we do produce data and analysis reports that are meant to help policy makers determine energy policy. Because we have an element of statutory independence with respect to the analyses that we publish, our views are strictly those of EIA. We do not speak for the Department, nor for any particular point of view with respect to energy policy, and our views should not be construed as representing those of the Department or the Administration.

The Committee has requested information about:

- Recent high and fluctuating prices for natural gas
- EIA's projections for natural gas supplies in the future
- What the Nation might do to assure adequate supplies in the future.

Each month EIA prepares information about natural gas supply, consumption, and prices derived from a variety of respondents and data sources. It also updates its *Short-Term Energy Outlook*, which contains quarterly projections through the next two calendar years, taking into account the latest developments in energy markets. The *Annual Energy Outlook* provides projections and analysis of natural gas consumption, supply, and prices through 2020. The projections in this testimony are from the *Short-Term Energy Outlook February 2001 (STEO)* and from the *Annual Energy Outlook 2001 (AEO2001)*, published by EIA in December 2000. These projections are not meant to be exact predictions of the future, but represent a likely energy future, given technological and demographic trends, current laws and regulations, and consumer behavior as derived from known data. These EIA products are the basis of the information provided today.

Recent Natural Gas Prices

Natural gas prices are measured in several ways. There are spot market prices for immediate sales, long-term contract prices, and futures market prices. There are also price measurements made at different points in the supply system—for example, at the wellhead or the citygate—and at different market locations throughout the United States including the Gulf Coast, the U.S.-Canadian border, or the Northeast. Prices are also measured for different end-user groups—residential, commercial, or industrial consumers and electric utilities. Our home bills reflect the price of the gas commodity purchased by local utilities or marketers in a mix of spot and long-term contracts, charges for shipment to the citygate by interstate and intrastate pipelines, storage charges, and charges for local distribution company services.

At the beginning of the supply chain, however, is the wellhead price. During 1998 and 1999 wellhead gas prices hovered around \$2 per thousand cubic feet. Spot gas prices in the supply region, which are usually slightly higher than the composite wellhead price comprised of spot and longer-term sales prices, were generally below \$3 per thousand cubic feet. Preliminary data for last summer indicate that overall wellhead prices were above \$3.60 per thousand cubic feet (Figure 1) and spot prices averaged more than \$4 per thousand cubic feet. Spot prices remained above \$5 per thousand cubic feet in the fall. This was more than double the average spot price a year earlier, all prices in nominal dollars. In late November, gas spot prices (as measured at the Henry Hub in southern Louisiana—a major pipeline interconnection and transshipment point) moved past \$6 per thousand cubic feet, reaching as high as \$10.53 on December 29, 2000. Since that point spot wellhead prices have fallen and were below \$6 throughout the week of February 19, 2001. In addition to higher prices nationally, some regional markets have experienced particularly high prices. California has experienced the highest of the regional prices.

The sustained high national prices are due to a number of factors. The first of these is the strong demand for natural gas throughout 2000. Preliminary data for 2000 indicate that U.S. natural gas consumption reached a record 22.7 trillion cubic feet (Tcf), passing the previous high of 22.1 Tcf in 1972. The year-to-year increase in consumption from 1999 to 2000 was almost 1 Tcf. The high levels of demand the past year are related to the strong economy in 2000 and the return of cold winter weather in late 2000.

The industrial sector accounts for about 40 percent of U.S. natural gas demand, followed by the residential, electric utility, and commercial sectors. Natural gas consumption peaks in the winter due to residential and commercial space heating demand. Electric generator demand, however, peaks in the summer when gas-fueled generators are in greatest use. Another contributing factor for high prices of natural gas has been the high price of crude oil. Some industrial consumers and power generators are able to switch between natural gas and distillate fuel oil or residual fuel oil. The rise in natural gas prices has usually followed the rise in crude oil prices.

Production of natural gas also rose last year but was more modest than the consumption increase. Preliminary data indicate that the year-to-year increase, about 0.5 Tcf, resulted in production of approximately 19.1 Tcf. The gap between consumption and production in 2000 was closed by record levels of gas imports, primarily from Canada. Production appears to have increased throughout 2000 as the result of successful drilling and well completion. Gas drilling rig activity remains high and should result in increased production in 2001 and 2002.

Strong demand for gas in summer 2000 meant that smaller quantities of natural gas were injected into storage for use during this winter's peak demand. At the beginning of the winter heating season on November 1, 2000, natural gas in storage was about 7 percent below the average 5-year level (Figure 2). Data as of February 16, 2001 indicate that national storage levels are 33 percent below the average 5-year level and storage in the West region is 56 percent below its average 5-year level. Nonetheless, it now appears, presuming that withdrawals for the rest of Feb-

ruary and March are average, that U.S. working gas storage will remain above 500 billion cubic feet at the end of March 2001. While end-of-season storage will be at or near a record low, there were concerns early in January 2001, when the temperatures had been coldest, that working gas storage would be depleted by the end of the heating season. This fear contributed to the price spikes at that time. Concerns about storage levels in the West region remain.

Regional storage and pipeline capacity are also part of the explanation for the regional differences in prices seen across the nation. Storage and pipeline capacity nationally have generally been adequate to meet most peak-day demands during recent winters. However, there are some points on the system where capacity constraint and bottleneck problems could arise during severe weather periods, if incremental demand increases beyond local capabilities. The California market and the Northeast region are examples of areas where concern about supplies or deliveries led to price competition for available supplies. By contrast, gas production increases in Rocky Mountain States during recent years have resulted in constraints for gas exiting the region. This has resulted in the region having the lowest average natural gas spot prices in the nation.

Supply problems in California for natural gas-fired electricity generation have helped to increase natural gas prices and have frequently caused interruptible customers to be cut off in that State. The situation in California is characterized by low natural gas storage, natural gas pipeline bottlenecks, high electricity demand, and low availability of alternative means of electricity generation, e.g., hydropower and nuclear electric power.

The Outlook for Natural Gas

Short-Term Outlook. EIA projects that this winter spot wellhead natural gas prices will average about \$6.10 per thousand cubic feet, more than two and one half times the price of the previous winter season (all prices expressed in nominal dollars). Assuming normal weather and continued low underground storage levels, the annual average wellhead price in 2001 is projected to be about \$5 per thousand cubic feet (Figure 3). In 2002, we expect the storage situation to improve, leading to a decrease in the average annual wellhead price to \$4.50 per thousand cubic feet. Domestic natural gas production for 2001 and 2002 is expected to rise as production responds to the high rates of drilling experienced over the past year. Production is projected to increase by 5.4 percent in 2001 and 2.5 percent in 2002.

The Outlook for Natural Gas to 2020. *AEO2001* provides an integrated projection of U.S. energy market trends for the next two decades on an annual basis. Natural gas consumption is expected to increase at an average rate of 2.3 percent per year. Increases are expected in all sectors, but the most rapid growth is for electricity generation, where natural gas use (excluding cogenerators) is projected to grow from 3.8 to 11.3 trillion cubic feet between 1999 and 2020 (Figure 4). Unlike oil, domestic natural gas production, with its larger and more accessible resource base, is expected to increase from 18.7 trillion cubic feet in 1999 to 29.0 trillion cubic feet in 2020 to meet growing domestic demand. Increased production comes primarily from lower-48 onshore conventional nonassociated sources, although onshore unconventional production is expected to increase at a faster rate than other sources. In order to fill the gap between domestic production and consumption, net natural gas imports are expected to increase from 3.4 trillion cubic feet in 1999 to 5.8 trillion cubic feet in 2020. Net liquefied natural gas imports are projected to increase from 0.1 to 0.7 trillion cubic feet by 2020; however, most natural gas imports are by pipeline from Canada. In EIA's reference case, average natural gas wellhead prices are projected to eventually return to the historical trend and gradually increase thereafter, driven by natural gas demand growth, particularly in electric generation, and the natural progression of the discovery process from larger and more profitable fields to smaller, more costly ones. Average lower-48 wellhead prices are forecast to increase at an annual rate of 2.0 percent from 1999 levels. Because of expected improvements in transmission and distribution efficiencies, average delivered prices are expected to increase by only 0.5 percent annually.

Electricity consumption overall is projected to grow by 1.8 percent per year through 2020. Generation from both natural gas and coal is projected to increase through 2020 to meet growing demand for electricity and offset the decline in nuclear power expected from retirements of some existing facilities. Assumptions about electricity industry restructuring, such as higher cost of capital and shorter financial life of plants, tend to favor the less capital-intensive and more efficient natural gas generation technologies. The natural gas share of total generation is expected to increase from 16 to 36 percent between 1999 and 2020 but coal is expected to continue to be the leading fuel for electricity generation.

The Future for Adequate Supplies of Natural Gas

EIA does not propose or advocate any particular policies and programs. We do note that, in general, there are a wide range of policies that could alter the energy future described in the *AEO2001*. In this section, EIA presents a summary of recent changes in energy markets, policies, and technologies that affected natural gas consumption and supply and also summarizes the assumptions used in the *AEO2001* which contribute to the forecast of balanced growth in natural gas consumption and supply. These provide indications of the kinds of policies and programs which could contribute to adequate supplies of natural gas.

Between 1986, when gas consumption had fallen to 16.2 Tcf and the new peak in gas consumption last year, a number of important changes in energy markets, policies, and technologies occurred. These included:

- Deregulation of wellhead prices begun under the Natural Gas Policy Act of 1978 and accelerated under the Natural Gas Wellhead Decontrol Act of 1989;
- Improvements in exploration and production technologies and reduction in their associated costs, improving the return for exploration and production efforts;
- Increased imports from Canada and pipeline investment to support those movements;
- Federal Energy Regulatory Commission (FERC) Orders 436 (1985), 636 (1992), and 637 (2000) separating commodity purchases and transmission services and affecting access to shipping capacity;
- Investment in major pipeline construction expansion projects from 1991 through 2000 adding about 50 billion cubic feet per day of capacity; and
- Passage of the Clean Air Act Amendments of 1990 and subsequent regulations affecting air quality standards for industries and electricity generators in non-attainment areas.

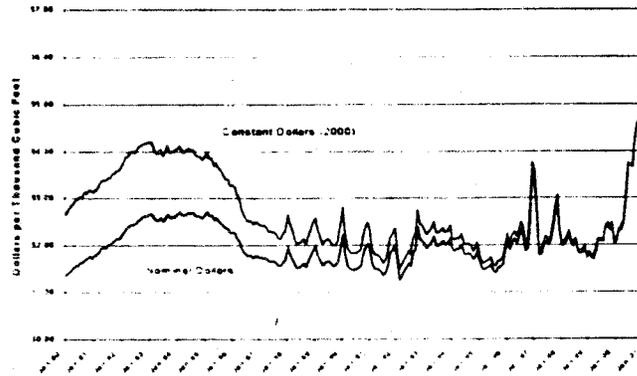
Assumptions underlying the forecasts for natural gas in the *AEO2001* include the following:

- Continuation of Federal, State, and local laws and regulations in effect on July 1, 2000. (This assumption is made because of EIA's requirement to be policy neutral.) This includes policies regulating access for oil and gas development;
- Continued improvements in exploration and production technologies at historical levels to aid in and lower cost for discovery and development of resources, particularly offshore deepwater resources and onshore conventional gas;
- Substantial increases in drilling and pipeline investments and drilling crews necessary to meet these gas production levels (e.g., 23,400 gas wells drilled in 2020 instead of the 10,500 in 1999); and
- Timely permitting decisions and adequate capital to allow increased pipeline capacity to deliver new supply to expanding gas markets.

Together these overviews of past changes and assumed future changes indicate the variety of factors which could influence energy supply and demand in the future.

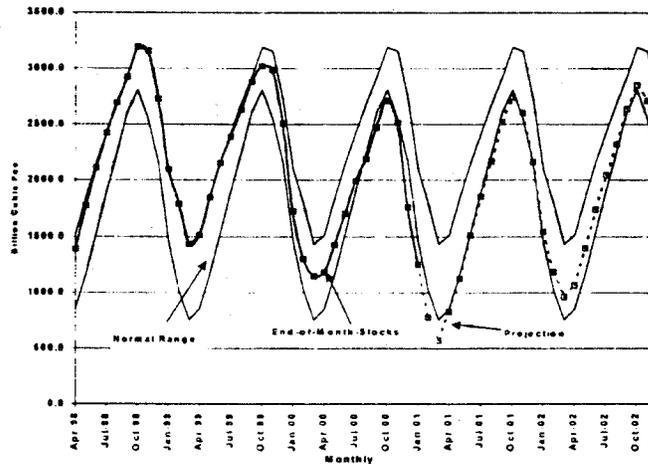
Conclusion. In the near term, we expect annual average natural gas prices to be higher in 2001 than in 2000 but to decline in 2002. Storage volumes of natural gas are low and replacement of gas in storage will contribute to strong summer 2001 demand and higher gas prices that will make storage for next winter costly. Thank you, Mr. Chairman and members of the Subcommittee. I will be happy to answer any questions you may have.

Figure 1 Average Wellhead Price for Natural Gas, January 1980-December 2000



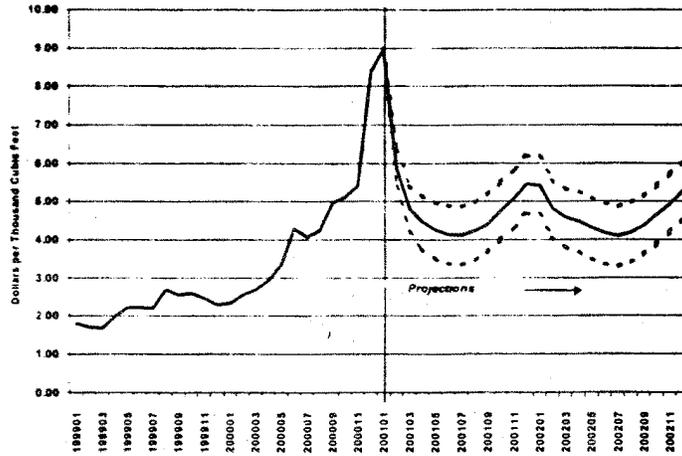
Source: EIA, *Natural Gas Monthly*

Figure 2 Actual and Projected Volume of Natural Gas in Storage, April 1998-December 2002



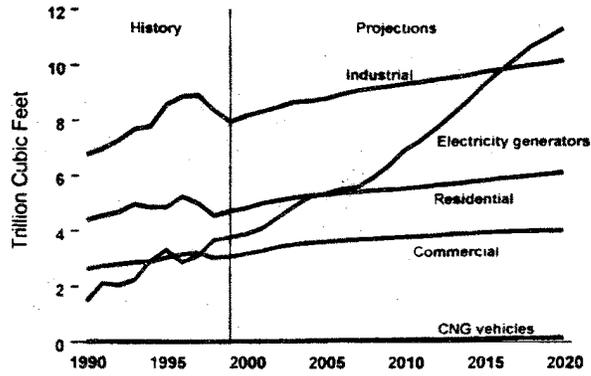
Source: EIA, *Natural Gas Monthly: Short-Term Energy Outlook*, February 2001.

Figure 3. Natural Gas Spot Prices, 1999-2002



Source: EIA, *Natural Gas Monthly: Short-Term Energy Outlook*, February 2001

Figure 4. Natural Gas Consumption by Sector, 1990-2020



Source: EIA, *Annual Energy Outlook 2001*.

Mr. BARTON. We want to thank you. I am sure we will have questions for you.

We want to recognize Mr. Cuba Wadlington. If Steve Largent were here, he would give you a more formal introduction. But we welcome you to the subcommittee. Your testimony is in the record in its entirety, and we would like to recognize you for 6 minutes to elaborate on it.

STATEMENT OF CUBA WADLINGTON, JR.

Mr. WADLINGTON. Thank you, Mr. Chairman. I am here on behalf of the Interstate Natural Gas Association of America. INGA is a trade association that represents the Interstate Natural Gas Pipeline which transports over 90 percent of the natural gas that is consumed in the United States.

Natural gas provides 25 percent of the energy consumed in the United States, including 16 percent for electric generation. Because of the significant role natural gas is playing in improving air quality, many experts have called natural gas the preferred fuel. The natural gas industry is facing a number of challenges today—high natural gas prices as a result of lower prices in the past and low supply. At that time, the red count failed dramatically and segments of the production services industry went out of business. I would defer any further comments on that to my producer friends, but that is one of the huge challenges that we are facing.

Regarding natural gas pipelines, we have experienced no significant delivery problems this winter, but the interstate natural gas pipeline system is nearing the critical stage throughout the country. We seriously need to move forward to build significant infrastructure in order to meet the current demands and the future demands for the utilization of natural gas.

EIA has estimated that natural gas will increase from the current 22 plus TCF to something in the neighborhood of 30 TCF as we approach the end of this decade. As a representative of interstate pipelines, the first goal of any energy policy is to have an adequate supply of natural gas. Currently, the United States is able to meet 85 percent of the demand through domestic supplies in the lower 48, both on and offshore. Almost all of the remaining 15 percent of supply comes from Canada. Although Mexico has some significant natural gas reserves as well, demand for natural gas is growing at such a fast rate that Mexico will need to import natural gas from the U.S. in order to keep up.

Liquefied natural gas is projected to remain a small incremental addition to natural gas supply for the foreseeable future. We need to look at and develop our resource base if we hope to meet this demand.

I commend the current Administration for creating an energy task force under the Vice President Cheney to review actions that have been, or could be taken, by various Federal departments and agencies that can effect energy supply and infrastructure as the Administration review and develop these recommendations to Congress regarding energy policy.

INGA also strongly supports expedited approval of a natural gas pipeline to bring natural gas from the north slope of Alaska to the lower 48 States. While such a pipeline project is an expensive, mul-

timillion dollar proposition, INGA believes that the market is ready to support the investment that would be required to build a new natural gas pipeline.

I also cannot stress enough the importance of building new pipelines. The current natural gas pipeline infrastructure will not support a 32 CF market. There simply is not enough capacity. The INGA Foundation completed a study in 1999 called Pipeline and Storage Infrastructure Requirements for a 32 CF U.S. Gas Market. This study estimated that our industry would need to invest about \$34 billion in interstate pipeline and storage infrastructure development between 1999 and 2010 just to keep up with the market as it is going. INGA estimates that it currently takes about 4 years on average to obtain approvals for a construction of a new natural gas pipeline. INGA can support a study by FERC on the impediments that delay the review, certification and construction of interstate natural gas pipeline projects. This study should consider the approvals and permits required from other Federal departments and agencies, as well as from States.

INGA would like for FERC and the Council of Environmental Quality, with FERC as the lead agency, to form an interagency task force to develop a memorandum of understanding to expedite the environmental review in permitting of interstate natural gas pipelines. This would be an example of the one-window approach that Chairman Hébert talked about as part of his testimony.

Finally, INGA supports the R & D efforts between DOE and the Office of Pipeline Safety to develop improved and new technologies to better assess any enhanced pipeline safety.

While INGAA member companies have been supporting pipeline safety research for over 50 years through both the Gas Technology Institute and the Pipeline Research Committee, we're pleased that DOE is focusing on research for pipeline safety. INGAA believes that it is important that DOE coordinate these efforts with the Office of Pipeline Safety as well as the above research committees to maximize the bang for the buck of these new investments in order to bring and enhance new technologies to the market.

Mr. Chairman, I want to thank you and the other members of the House Commerce Subcommittee on Energy and Air Quality for providing INGAA an opportunity to tell you what the Interstate Natural Gas Pipeline would like to see in a national energy policy.

There are a number of other issues and incentives that your committee should consider as you debate energy policy, including ways to increase energy efficiency, but please make no mistake, we need to address both supply and demand and the infrastructure requirements to get the supply to the markets if we want to continue to provide consumers with reliable energy at reasonable prices.

[The prepared statement of Cuba Wadlington, Jr. follows:]

PREPARED STATEMENT OF CUBA WADLINGTON, PRESIDENT AND CEO, WILLIAMS GAS PIPELINE ON BEHALF OF THE INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

Mr. Chairman, my name is Cuba Wadlington. I am President and CEO of Williams Gas Pipeline. I am here today to testify on behalf of the Interstate Natural Gas Association of America (INGAA). INGAA is the trade association that represents interstate natural gas pipelines in the United States, the inter-provincial pipelines in Canada and PEMEX in Mexico. These pipeline systems transport 90 percent of the natural gas consumed in the United States.

Williams, through its subsidiaries, connects businesses to energy and to communications. The company delivers innovative reliable products and services through its extensive networks of energy distributing pipelines and high-speed fiber-optic cable. Williams Gas Pipeline has five interstate natural gas pipelines that deliver natural gas from coast to coast in every geographic region of the United States. On any given day, Williams Gas Pipeline delivers to market 17%-20% of the natural gas that flows in the United States.

Thank you for providing me this opportunity to testify before you today. Natural gas provides 25 percent of the energy consumed in the United States, including 16 percent of electricity generation. Because of the significant role natural gas is playing in improving air quality, many experts have called it the preferred fuel.

Before discussing the issues we believe are important to the interstate natural gas pipelines regarding the development of a national energy policy, I would like to give you some background on the natural gas industry. Wellhead natural gas prices were, as you know Mr. Chairman, regulated for many years. We all know that the history of wellhead price regulation in the U.S. was a dismal one where prices were held artificially low, causing a significant natural gas shortage in the mid 70s. Congress enacted the Natural Gas Policy Act in 1978. This law began the process of decontrolling these wellhead prices. Ten years ago, Congress saw fit to repeal all remaining federal economic regulation of natural gas production. The Federal Energy Regulatory Commission (FERC) followed up shortly thereafter with its Order No. 636, which unbundled pipeline transportation services from the natural gas commodity, and removed pipelines from the gas merchant function. Interstate pipelines no longer own the natural gas moving through their systems; rather, they market capacity on their pipelines in much the same way that airlines sell seats on their aircraft. The rates charged by interstate pipelines, however, remain regulated by the FERC. In the years since this restructuring has occurred, interstate pipelines have become more efficient, reduced their costs and created and offered new services while significantly increasing the volume of natural gas transported. On average, the transportation segment represents less than 16 percent of the price consumers pay for natural gas. In the current market, this share is even less.

Competition for natural gas works. We are moving more natural gas today than we ever have before, approximately 23 Trillion cubic feet per year.

TODAY'S NATURAL GAS ENVIRONMENT

The natural gas industry is facing a number of challenges today. Higher natural gas prices have occurred as a reaction to the extremely low petroleum and natural gas prices of a little over a year ago. At that time, the rig count fell dramatically and segments of the production services industry went out of business. I will defer to my producer friends for more comments on this. But this period of higher natural gas prices has created a climate of concern and calls for re-regulation by some at both the federal and the state levels.

Regarding natural gas pipelines, we have experienced no significant delivery problems this winter. We are doing our best to safely and reliably ensure that our customers continue to enjoy the benefits of using natural gas to heat their homes and run their businesses. But we face a number of challenges. We need to continue to develop our pipeline and storage infrastructure. To do this we will need to have availability of capital, continued flexibility to meet the challenges of a changing market and mitigation of impediments to pipeline construction.

FUTURE NATURAL GAS DEMAND

The Department of Energy's Energy Information Administration estimates that use of natural gas will increase from 23 Tcf today to 30 Tcf shortly after 2010 (a 32 percent increase in gas demand). Other experts forecast a similar growth in gas use.

The largest area of growth is expected in electric generation, which, as stated above, currently uses natural gas to fuel 16 percent of electric generation, followed by the industrial sector. The primary reasons for the large growth in the gas segment of the power generation market are the relatively low cost of gas-fired generation, the low air emission characteristics of those facilities, and the reduced time-frame it takes to permit and build those facilities. Following is a chart that shows the benefits that accrue from using natural gas in a 300 Megawatt electric power plant.

Comparative Emission Levels From a 300-Megawatt Power Plant

	Existing Coal Boiler	New Coal Boiler	New Gas-Fired Combined- Cycle
NO _x Emissions (lb/MMBtu)	0.50	0.18	0.04
SO ₂ Emissions (lb/MMBtu)	1.20	0.42	0.00058
Particulate Matter (lb/MMBtu)	0.11	0.04	0.0029
CO ₂ Emissions (lb/MMBtu)	205	205	125

ENERGY POLICY

Mr. Chairman, I thank you for holding these hearing to discuss what energy policy is needed to assure consumers of an adequate supply of natural gas at reasonable prices. As a representative of interstate pipelines, the first goal of any energy policy is to have an adequate supply of natural gas. Currently, the United States is able to meet about 85 percent of demand through domestic supplies in the lower 48, both on and off shore. Almost all of the remaining 15 percent of our supply comes from Canada. While the Canadians have done an admirable job in developing their natural gas production and transportation markets, they alone cannot provide the vast quantities needed to support future market needs. Although Mexico has some significant natural gas reserves as well, demand for natural gas is growing at such a fast rate (approximately 11 percent per year) that Mexico will need to import natural gas from the U.S. in order to keep up. Some liquefied natural gas is currently being brought into the United States and some of INGAA's member companies are looking at developing new LNG import facilities as an option, but LNG is projected to remain a small incremental addition to natural gas supply for the foreseeable future. We need to look at and develop our resource base if we hope to meet this demand.

Mr. Chairman, I brought the chart behind me in today to illustrate the point I am trying to make. Natural gas is a domestically produced fuel, yet a quick glance at this chart from the National Petroleum Council clearly indicates that a great deal of the Lower 48 is prohibited from new exploration and production, primarily because of environmental concerns. The irony, of course, is that natural gas is growing in importance precisely because of its environmental benefits for use in generating electricity or fueling industrial operations.

INGAA supports other incentives such as an expansion and extension of Section 29 tax credits to encourage development of new and unique energy sources. In 1999 4.87 Trillion cubic feet of our natural gas came from non-conventional resources resulting from Section 29 credits. This is 26 percent of the natural gas produced in the lower 48 states. INGAA also would like to see additional incentives such as expensing of geological and geophysical expenditures for small producers to stay in business and help increase our domestic natural gas supply.

There have been other Administration policies that have impacted the ability of producers to gain access to lands such as the U.S. Forest Service Roadless initiative which failed to take into account the impact these regulations could have on energy production, development and transportation. I commend the current Administration for creating an energy task force under Vice President Cheney to review actions that have been or could be taken by various federal departments and agencies that can affect energy supply and infrastructure as the Administration reviews and develops recommendations to Congress regarding energy policy.

INGAA also strongly supports expedited approval of a natural gas pipeline to bring natural gas from the North Slope of Alaska to the lower 48 states. While such a pipeline project is an expensive, multi-billion dollar proposition, INGAA believes that the market is ready to support the investment that would be required to build a new natural gas pipeline in Alaska. I remind the Committee that permitting and construction of this project should begin soon as we expect the completion of this project to take up to eight years.

I also cannot stress enough the importance of building new pipelines. The current natural gas pipeline infrastructure will not support a 30 Tcf market. There simply is not enough capacity. The INGAA Foundation completed a study in 1999, *Pipeline and Storage Infrastructure Requirements for a 30 Tcf U.S. Gas Market*. This study estimated that our industry would need to invest about \$34 billion in interstate pipeline and storage infrastructure development between 1999 and 2010 just to keep up with where the market is going. Expenditures for new pipelines and pipeline expansions were \$2.2 billion in 1999 and \$2.5 billion in 2000. Two new pipelines were brought on line last year—the Alliance Pipeline bringing natural gas and natural

gas liquids to the Chicago area from Alberta, Canada, and the Maritimes Northeast Pipeline bringing natural gas from Sable Island, off the East Coast of Canada, through Maine and into the Boston area.

The Merrill Lynch map that is behind me, and also enclosed with this testimony, shows the new proposed projects at FERC as of September 2000. The blue lines are the existing interstate natural gas pipeline infrastructure while the arrows describe the proposed additions to the pipeline network.

INGAA estimates that it currently takes about four years, on average, to obtain approvals for and construction of a new natural gas pipeline. I want to commend Chairman Hebert and FERC for the work they have done to expand the use of the blanket certificate process and permit use of expanded rights-of-way where necessary during pipeline construction. However, INGAA can support a study by FERC of the impediments that delay the review, certification and construction of interstate natural gas pipeline projects. This study should consider the approvals and permits required from other federal departments and agencies as well as from the states.

INGAA would like for FERC and the Council on Environmental Quality, with FERC as the lead agency, to form an interagency task force to develop a memorandum of understanding to expedite the environmental review and permitting of interstate natural gas pipelines. This task force should use NEPA documentation and its scoping process as the basis of decisions, identify and agree on review and decision timing, and contain a conflict resolution process.

INGAA supports a study of federal rights-of-way to determine the feasibility of their use as right-of-way for new pipeline or other transmission capacity.

Finally, INGAA supports establishment of an R&D effort between DOE and OPS to develop improved and new technologies to better assess and enhance pipeline safety. While INGAA's member companies have been supporting pipeline safety research for over 50 years through both the Gas Research Institute (now the Gas Technology Institute) and the Pipeline Research Committee, we are pleased that DOE is focusing on research for pipeline safety. There may be some valuable research at the DOE labs that could ultimately be applied to help us inspect and monitor our pipelines. INGAA believes that it is important that DOE coordinate its efforts with the Office of Pipeline Safety as well as the above research committees to maximize the "bang for the buck" of these new investments in order to bring enhanced and new technologies to market.

Mr. Chairman, I want to thank you and the other Members of the House Commerce Subcommittee on Energy and Air Quality for providing me the opportunity to tell you what the interstate natural gas pipelines would like to see considered in a national energy policy. There are a number of other issues and incentives that your Committee should consider as you debate energy policy including ways to increase energy efficiency. But, please make no mistake; we need to address both sides of the equation—supply and demand—if we want to continue to provide consumers with reliable energy at reasonable prices.

Mr. BARTON. We want to thank you for your testimony and your charts on the natural gas pipeline infrastructure in the country.

Now I want to welcome Mr. Jerry Jordan who is appearing on behalf of the IPAA, Independent Petroleum Association of America.

Mr. Paul Gillmor who is a member of the full committee and a subcommittee chairman says to give his personal well wishes to you. He served with you briefly in the Ohio, I think the Ohio Senate, and said that you did all the work and he took all the credit. So he wanted me to let you know he's delighted that you're here.

We will put your statement in the record in its entirety and we would ask you to summarize in 6 minutes.

STATEMENT OF JERRY JORDAN

Mr. JORDAN. Thank you, Mr. Chairman, members of the committee. I am Jerry Jordan, President of Jordan Energy and Chairman of IPAA. Today, I'm testifying on behalf of IPAA, the National Stripper Well Association and 32 cooperating State and regional associations, oil and gas associations. These associations represent thousands of independent oil and natural gas producers in the United States. Independents drill 85 percent of the wells drilled in

the U.S. and produce 40 percent of the oil and 65 percent of the gas.

Currently, natural gas prices, as we know, are twice what they were a year ago and they were even higher in the last 6 months. This testimony is intended to address the causes of these extraordinarily high natural gas prices and describe what the industry is doing to address the supply problems which gave rise to the prices.

Additionally, I will list actions that can and should be taken by the Federal Government to help alleviate the problem and encourage increased production, exploration and production for natural gas. I want to emphasize first that the supply and demand situation that has caused these high prices was both foreseeable and predicted, although the severity was underestimated by most experts. The conditions giving rise to the market situation were recognized by both industry and government experts as early as 1999. Early that year, a broad-based group of industry experts met in the White House with Cabinet level government officials and warned them of the severe plight of the producing industry. At that time the focus was on oil, but the likely impact on natural gas was also described. At that meeting, we strongly suggested that a high level interagency task force be created to address the problems and develop a national energy policy. Fortunately, that has now been done.

Specific curative actions were also suggested. At that time, we were specifically and unequivocally told let the market work and certainly it has.

The issues giving rise to our concerns about the natural gas market were next described in the study and report of the National Petroleum Council that was issued in December 1999. The important conclusion in that report is that the resource base in North America is adequate to meet the increasing demand for many decades, but it also found that the industry's ability to tap that resource effectively was conditioned on one, a healthy natural gas industry, and two, sound government policies. We had neither at the time that report was released.

The industry was coming off nearly 2 years of depression, caused by the ruinously low oil prices of 1998 and 1999. The oil and natural gas segments of our industry are inherently intertwined. Consequently, when oil prices plunge, drastic reductions of exploration budgets were imposed by our producers because drilling under those conditions made no economic sense. Gas exploration was adversely affected by the cuts as well.

Meanwhile, as the industry's capabilities were hard hit, natural gas demand continued to increase at a rate beyond all earlier predictions. Over 95 percent of new electric power plants planned and being built across the country will be powered by natural gas. This trend reflects the Federal policies of recent years which have discouraged coal, nuclear and hydro projects. All of these factors combine to create the natural gas market situation which has triggered the high prices.

The industry has responded promptly to the improved market signals. The number of rigs employed in the search for natural gas has more than doubled in the last year and thousands of new engineers and other employees are being hired by our service compa-

nies, but recovery will take time because of the exploration of the process—because of the complexity of the exploration process, the huge capital needs of the industry and more importantly, because of the land access impediments imposed by the Federal agencies.

These two issues, access to capital and access to nonpark Federal lands are the primary factors which are slowing recovery. Much of the nation's natural gas reserves underlie government-controlled land, both on and offshore. Access to these reserves has been severely restricted, primarily because of fears of environmental harm. But those fears are largely based on 30-year-old technology. Using modern, 21st century methods, these resources can clearly be developed in an environmentally sound manner—sound and sensitive manner.

IPAA believes that the Federal regulatory process must identify and recognize the impact of regulatory actions on energy supplies and future energy decisions. This means that there must be coordination among the relevant agencies like the Department of Energy, Department of Interior and the EPA as issues are considered and decisions are made. A realistic balance must be struck among the interests and responsibilities of those agencies.

Finally, the other big impediment to industry recovery is a shortage of capital, especially for the small and mid-size producers. The NPC study concludes that capital expenditures for domestic exploration and production must increase by approximately \$10 billion per year. The Federal role in capital access is largely an issue of tax reform. For the industry to meet its future capital needs it will need to increase the use of outside capital. The tax code is a significant factor in encouraging investment of that capital. Therefore, the Administration and Congress need to consider and enact provisions designed to encourage new production and maintain existing production.

Congress has in the past considered a mix of reforms that have had widespread support. They even passed once, but were part of a veto package. These are needed to increase production by independent producers because their cash-flow available for reinvestment in new exploration is limited to their net production revenues.

In conclusion, it is time for this country to take its energy supply issues seriously and develop a sound energy policy that realistically balances our country's competing interests. Certainly, there is room in such a policy for effective energy conservation and production of the environment.

Energy production is an essential component. Independent producers will be a key factor and the industry stands ready to accomplish our common goals if policies allow us to do our job.

I want to thank you for allowing me to testify.

[The prepared statement of Jerry Jordan follows:]

PREPARED STATEMENT OF JERRY JORDAN ON BEHALF OF THE INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA AND THE NATIONAL STRIPPER WELL ASSOCIATION¹

Mr. Chairman, members of the committee, I am Jerry Jordan, President of Jordan Energy, Inc. of Columbus, Ohio and Chairman of the Independent Petroleum Asso-

¹ Colorado Oil & Gas Association; East Texas Producers & Royalty Owners Association; Eastern Kansas Oil & Gas Association; Florida Independent Petroleum Association ; Illinois Oil &

ciation of America (IPAA). Today, I am testifying on behalf of the IPAA, the National Stripper Well Association (NSWA), and 32 cooperating state and regional oil and gas associations. These organizations represent the thousands of independent petroleum and natural gas producers that drill 85 percent of the wells drilled in the United States. This is the segment of the industry that is damaged the most by the lack of a domestic energy policy that recognizes the importance of our own national resources. NSWA represents the small business operators in the petroleum and natural gas industry, producers with “stripper” or marginal wells. These producers are the linchpins to continued development of domestic petroleum and natural gas resources.

Today’s hearing addresses a fundamental issue—what actions are needed to improve the nation’s natural gas supply. This testimony will focus first on several key factors that influence future energy issues, second on actions that need to be taken to improve the future domestic supply.

During the past three decades the United States has become more dependent on energy and more dependent on foreign energy. While there have been numerous efforts to define a national energy policy, none have been successful. Today, the world is operating with its tightest supply of petroleum and the United States is facing tight natural gas supplies. Now is the time to clearly address national energy policy and build the program that is needed to meet future demand.

A NATION DEPENDENT ON FOSSIL FUELS

Like it or not, the nation will be dependent on fossil fuels for the foreseeable future. In particular, petroleum and natural gas currently account for approximately 65 percent of the nation’s energy supply—and will continue to be the significant energy source. Natural gas demand, for example, is expected to increase by more than 30 percent over the next decade.

INDEPENDENT PRODUCERS—THE LINCHPIN TO FUTURE DOMESTIC PETROLEUM AND NATURAL GAS

It is important to recognize that the domestic oil and natural gas industry has changed significantly over the last fifteen years. The oil price crisis of the mid-1980’s and policy choices made then triggered an irreversible shift in the nature of the domestic industry. Independent producers of both oil and natural gas have grown in their importance, and that trend will continue. Independent producers produce 40 percent of the oil—60 percent in the lower 48 states onshore—and produce 65 percent of the natural gas. They are becoming more active in the offshore, including the deep water areas that have previously been the province of the large integrated companies. At the same time those large companies are now mainly focusing their efforts overseas, in addition to Alaska and the offshore, because they are aiming their investments to seek new and very large fields. Domestic energy policy must recognize this reality.

RECOGNIZING THE ROLE OF THE MARKET

Future energy policy should rely on market forces to the greatest degree possible. For natural gas the market is strong and active. Natural gas supply is essentially North American and overwhelmingly from two countries that rely on private ownership and the free market—the United States and Canada. Currently, exploration and development of natural gas in both countries is being aggressively pursued when the opportunities are there, and can be accessed. In the United States drilling rig counts for natural gas are running at rates that are as high as they have ever been since natural gas drilling was distinguished from petroleum. The principal constraints are finding the capital to invest, getting access to the resource base, finding

Gas Association; Independent Oil & Gas Association of New York; Independent Oil & Gas Association of Pennsylvania; Independent Oil & 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 & Gas Association; Kansas Independent Oil & Gas Association; Kentucky Oil & Gas Association; Louisiana Independent Oil & Gas Association; Michigan Oil & Gas Association; Mississippi Independent Producers & Royalty Association; Montana Oil & Gas Association; National Association of Royalty Owners; Nebraska Independent Oil & Gas Association; New Mexico Oil & Gas Association; New York State Oil Producers Association; Ohio Oil & Gas Association; Oklahoma Independent Petroleum Association; Panhandle Producers & Royalty Owners Association; Pennsylvania Oil & Gas Association; Permian Basin Petroleum Association; Tennessee Oil & Gas Association; Texas Alliance of Energy Producers; Texas Independent Producers and Royalty Owners; and Wyoming Independent Producers Association.

competent personnel, and obtaining rigs. If the market is allowed to work, it will continue to draw effort to produce this critical resource for domestic consumption.

Oil, however, is a different situation. In making decisions regarding developing domestic petroleum resources, the nature of the world petroleum market must be recognized. Although the United States remains the second or third largest producer of petroleum, it is operating from a mature resource base that makes the cost of production higher than in competitor nations. More importantly, most other significant petroleum producing countries rely on their petroleum sales for their national incomes. For them, petroleum production is not driven by market decisions. Instead, their policies and their production is determined by government decisions. Most are members of OPEC, the Organization of Petroleum Exporting Countries. Several are countries hostile to the United States like Iraq, Libya, and Iran. Even those that are generally supportive of the United States, like Saudi Arabia and Kuwait, are susceptible to unrest from both internal and external forces.

Thus, the market price for petroleum will be largely framed by production decisions driven not by the market, but by the politics of these countries—both by internal issues and global objectives. United States domestic policy decisions must reflect this reality—looking to this factor in taking actions that can affect domestic production and producers. But, more importantly, it must recognize that a healthy domestic oil production industry is also essential for a healthy domestic *natural gas* industry, *because they are inherently intertwined.*

For example, the failure of the United States to recognize the need to respond to the low oil prices of 1998-99 resulted in adverse consequences for both oil and natural gas production. The nation has lost about 10 percent of its domestic oil production—most of which has been made up by imports from Iraq. And, in addition, the tight natural gas supplies this year are partially attributable to the drop in natural gas drilling in 1998-99 when oil prices were low and capital budgets for exploration and production of both oil and natural gas were slashed by producers because drilling under those conditions made no economic sense.

It is equally important to recognize that while all of these factors influence the ultimate prices of oil and natural gas, it is the commodity markets that have the final say. The role of these markets has emerged from a minor factor in the mid-1980s, when oil and natural gas trading began, to the dominant force today. While many people want to point toward OPEC or big oil, the ultimate price maker is the trading floor of the commodity markets. This has added a new volatility to oil and natural gas prices. Its impact is still poorly understood but must be considered.

PROVIDING ACCESS TO ESSENTIAL CAPITAL

The nation must avoid making bad policy choices like it has in the past. For example, because oil and natural gas exploration and production are capital intensive and high-risk operations that must compete for capital against more lucrative investment choices, much of its capital comes from its cash flow. The federal tax code is a key factor in defining how much capital will be retained. In the late 1970's and early 1980's when oil prices were high and drilling activity was soaring, the industry was hit by the Windfall Profits Tax that pulled a net \$44 billion from the industry at a time when it could have been invested in new exploration and production. In addition, in 1986, when the industry was recovering from the low oil prices of that year, the Alternative Minimum Tax (AMT) was created. The AMT sapped capital from the industry when it was desperately needed. From 1986 to 1997 (before the latest price crisis) domestic oil production dropped by 2 million barrels per day—roughly 25 percent of 1986 capacity. Thus, those tax policies stifled the industry at a time when U.S. energy demand was increasing significantly.

Instead of such counterproductive tax actions, the Administration and Congress need to enact provisions designed to (1) encourage new production, (2) maintain existing production, and (3) put a "safety net" under the most vulnerable domestic production—marginal wells. Congress has considered a mix of tax reforms that have widespread support. They include provisions to allow expensing of geological and geophysical costs and of delay rental payments that encourage new production, extending the net operating loss timeframe and revising percentage depletion that assist both new and existing production, and a countercyclical marginal well tax credit when prices fall to low levels. All of these are programs that independent producers need because their revenues are limited to their production.

Beyond these immediately needed policy changes, new tax policies must be developed to encourage renewed exploration and production needed to meet future demand, particularly for natural gas. In 1999 the National Petroleum Council released its Natural Gas study projecting future demand growth for natural gas and identifying the challenges facing the development of adequate supply. For example, the

study concludes that the wells drilled in the United States must effectively double in the next fifteen years to meet the demand increase. Capital expenditures for domestic exploration and production must increase by approximately \$10 billion/year—roughly a third more than today. Generating this additional capital will be a compelling task for the industry. As the National Petroleum Council study states:

While much of the required capital will come from reinvested cash flow, capital from outside the industry is essential to continued growth. To achieve this level of capital investment, industry must be able to compete with other investment opportunities. This poses a challenge to all sectors of the industry, many of which have historically delivered returns lower than the average reported for Standard and Poors 500 companies.

In fact, as the past year has shown, capital markets have not shifted to supporting the energy sector. For the industry to meet future capital demands—and meet the challenges of supplying the nation's energy—it will need to increase both its reinvestment of cash flow and the use of outside capital. The role of the tax code will be significant in determining whether additional capital will be available to invest in new exploration and production in order to meet the \$10 billion annual target.

PROVIDING ACCESS TO THE NATURAL RESOURCE BASE

National energy policy must also recognize the importance accessing the natural resource base. In 1999 the National Petroleum Council in transmitting its *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.

Much of the nation's natural gas underlies government-controlled land both offshore and onshore. Policies in these areas have constrained or prohibited access largely based on fears of environmental harm. But, these resources *can* be developed in an environmentally sound and sensitive manner. The Department of Energy recently released a comprehensive report, *Environmental Benefits of Advanced Oil and Gas Exploration and Production Technology*, demonstrating that the technology is available. And, it is being employed, when exploration is allowed.

Without policy changes, the nation may not be able to meet its needs. Currently, over 75 trillion cubic feet (TCF) of natural gas in the offshore is off limits to development because of moratoria that are based on technologies that have been replaced decades ago. The rationale for these moratoria is outdated and inaccurate; *there must be a reassessment of these decisions in the context of today's technology and tomorrow's needs.*

Even in those offshore areas of the Gulf of Mexico that are open for development, the federal policies that determine royalties will also significantly define the extent to which development will occur. For example, over the past half-decade, Gulf of Mexico development has soared, partly because of the Deep Water Royalty Relief Act that specified how royalties would be determined for a set time period. This allowed producers to plan their investments better. However, the Deep Water Royalty Relief Act was largely used by large integrated companies and its specific provisions expired in 2000. Now, as independent producers are also seeking deep water opportunities, the planning window is narrow and the policies are less certain. On the Outer Continental Shelf, marginal properties remain that could be developed if the royalty policies were right. All of these issues need to be addressed with the full understanding that independent producers will be increasingly willing to develop these areas as large integrated companies look toward the Ultra-deep Water and overseas for the large fields that they need to find.

Onshore, over 100 TCF of natural gas is under government controlled land in the Rocky Mountains. An inventory of these resources is underway. It is an important first step. But, it is equally important to understand that access to these resources is limited by more than just moratoria. The constraints differ. Monument and wilderness designations prohibit access to some areas. Regulations like the Forest Service roadless policy and prohibitions in the Lewis and Clark National Forest are equally absolute.

At the same time the permitting process to explore and develop resources often works to effectively prohibit access. These constraints range from federal agencies delaying permits while revising environmental impact statements to habitat management plans overlaying one another thereby prohibiting activity to unreasonable permit requirements that prevent production. There is no single solution to these constraints. What is required is a commitment to assure that government actions are developed with a full recognition of the consequences to natural gas and other energy supplies. IPAA believes that all federal decisions—new regulations, regu-

latory guidance, Environmental Impact Statements, federal land management plans—should identify, at the outset, the implications of the action on energy supply and these implications should be clear to the decision maker. Such an approach does not alter the mandates of the underlying law that is compelling the federal action, but it would likely result in developing options that would minimize the adverse energy consequences.

THERE'S NO SHORT TERM FIX—RECOVERY WILL TAKE TIME

Any realistic future energy policy will take time. There is no simple solution. The popular call for OPEC to “open the spigots” failed to recognize that the low oil prices of 1998-99 reduced capital investment from the upstream industry all over the world. Only Saudi Arabia had any significant excess production capacity and no one knew just how much or whether the oil was of a quality that it could be refined in most refineries. The collateral damage of low oil prices on the natural gas industry is affecting gas supply today and will until the industry recovers. The producing industry lost 65,000 jobs in 1998-99. While about 40 percent of those losses have been recovered, they are not the same skilled workers. If measured by experience level, the employment recovery is far below the numbers. Less obvious, but equally significant, during the low price crisis equipment was cannibalized to keep operating and support industries were decimated. It will take time to develop the infrastructure again to build new drilling rigs and provide the skilled services that are necessary to rejuvenate the industry.

CONCLUSION

Overall, attracting capital to fund domestic production under these circumstances will be a continuing challenge. This industry will be competing against other industries offering higher returns for lower risks or even against lower cost foreign energy investment options. The slower the flow of capital, the longer it will take to rebuild and expand the domestic industry.

Providing access to the resource base will be critical and requires making some new policy choices with regard to federal land use.

These two issues are the ones that are particularly dependent on federal actions, and should be the immediate focus of the next Congress and the next Administration.

It is time for this country to take its energy supply issues seriously and develop a sound future policy. Certainly, there is room in such a policy for sound energy conservation measures and protection of the environment. But, energy production—particularly petroleum and natural gas—is an essential component that must be included and addressed at once. Independent producers will be a key factor, and the industry stands ready to accomplish our goals, if policies reflect that reality.

Mr. BARTON. Thank you, Mr. Jordan.

We now want to hear from Mr. Reiten. Mr. Reiten is President and CEO of Northwest Natural. He's testifying on behalf of the American Gas Association. I understand you've got a meeting with the Governor of Oregon at 4:45, so after you give your oral statement, whenever you feel you need to leave to make that appointment, you are welcome to go, but your testimony is in the record. We would ask you to summarize it in 6 minutes.

STATEMENT OF RICHARD G. REITEN

Mr. REITEN. Thank you, Mr. Chairman for this opportunity. Northwest Natural is a local gas distribution company in Oregon and Southwest Washington. I am here and pleased to be here on behalf of the American Gas Association.

Mr. BARTON. Would you suspend—does the gentleman from Oregon wish to more formally introduce our witness? I meant to give you that opportunity.

Mr. WALDEN. Given the time constraints, Mr. Chairman, I would just like to welcome Mr. Reiten to this Panel and I think you'll be pleased with his testimony.

Mr. BARTON. All right.

Mr. WALDEN. Thank you, Mr. Chairman.

Mr. REITEN. Thank you, I was expecting some harassment, Mr. Chairman. It didn't happen.

I'm pleased to be here on behalf of the American Gas Association to discuss the need for national energy policy and focus on issues that are important to the natural gas utility industry. The American Gas Association is made up of local gas distribution companies delivering every day gas to 56 million homes across the country.

Why do we need a national energy policy? Events in the Western States this year, including my own, demonstrate unmistakably that we cannot take for granted the balance of energy supply and demand. Across the entire country, consumers are feeling the impact of natural gas prices caused principally by an imbalance of supply and demand, brought about by an unusually cold winter, November and December being the coldest in the last 50 years. Storage concerns and the California situation and with all of the discussion, I'd like to point out that California uses 70 percent of the gas used in the West and over the 12 months trailing December, they were using 50 percent more gas than the year before for electric generation and that caused some real concerns nationally about prices and I think psychologically led to some of the higher prices as well as the storages and other issues.

With respect to price, let me say first that gas utilities, local gas utilities do not profit from higher gas prices. We earn a return of the cost that we incur in providing gas to our customers. Wellhead gas price increases, which during December were up more than 400 percent, those revenues were passed on back to the gas producers. There were no added margins from higher gas prices for local gas distribution utilities, although we must deal with the customers.

Demand for energy is growing in this country. We can see that the prices have been escalating across the board. Dependence on foreign oil is increasing, now approaching 60 percent. Refining capacity is stressed. We have regional shortages of refined fuels. We have it in the Northwest. And energy delivery infrastructure, pipelines and electric transmission lines are constrained in some areas. All of these factors lead to tighter supplies of energy and higher prices.

A comprehensive national energy policy can ensure that these are addressed and certainly, hopefully, all of our public interests can be balanced in this process.

The White House has formed a National Energy Policy Task Force, chaired by Vice President Cheney to develop the guiding principles for an energy policy and to coordinate the various agencies that are involved in implementing that policy. This is a critical first step.

Legislation is needed to establish free market solutions, relying on a diversity of fuels, not just only natural gas to reduce exposure to price spikes and shortages, but also to reduce dependence on foreign oil for national security, and to improve the environmental quality of energy use.

What are the appropriate policies for natural gas? Two recent studies, the National Petroleum Council study and AGA Foundation's "Fueling of the Future" study set the stage for a serious consideration of Federal and State policies affecting natural gas. Both

studies project a significant increase in natural gas demand over the next 20 years, actually a 50 percent increase to 32 trillion cubic feet. Increased use of natural gas, especially in end use applications can lower oil imports and reduce overall energy consumption and lower CO₂ emissions, relieving some strain on the electricity grid.

Equally important, these studies identify we'll have to have them for the Nation to capitalize on the opportunity natural gas presents. As the NGSAs and the IPAA witnesses are pointing out here, vast reserves of natural gas exist within the borders of the United States, but much of it is not available for exploration and production.

To meet the demand for natural gas over the next 20 years, the National Petroleum Council estimates that \$150 billion must be invested in transmission and delivery infrastructure. Two-thirds of that, approximately \$100 billion will be needed in my sector, the local distribution companies. So we heard from Mr. Wadlington about \$34 billion or more will be needed for interstate pipelines to make sure we get that natural gas to the markets where it is needed.

So we need to expedite review and approval of these facilities and a Federal inter-agency agreement concerning environmental reviews, such applications could make sure that appropriate balance between environmental protection and economic prosperity is achieved.

Lead times can be shortened and efficiencies gained without threatening the environment. In my State, for instance, it takes 24 months for clearance and construction permitting, construction and startup of a \$2 billion semiconductor factory. It takes 42 months to get approval and build a state-of-the-art gas fired power plant. Now ask me, will both have acceptable impacts on the environment? It's a process problem for the energy industry built in over time and a comprehensive national energy policy can hopefully help fix this problem for us.

Tax incentives make sense to encourage needed expansion of delivery infrastructure, shorter depreciation schedules for investment, and infrastructure would help finance needed construction.

We also need to expand the use of new technologies to enhance the efficient use of clean fuels such as natural gas. Federal policy should measure the total efficiency of energy technology from the source to the field in the use of the energy. I want to make a strong point here. Fifty percent of the BTU content is lost in using gas to generate electricity to do a job such as heating water as compared to using gas directly to heat that water which is 92 percent efficient.

Mr. Boucher commented earlier about the possibilities. Here is a real live example. There are 100,000 electric water heaters in our service territory that can be converted from electric to gas in homes that have gas furnaces and that amounts to 400 megawatts of electricity.

Congress should expand and strengthen protections for consumers and families. The national energy policy should extend and expand low income home energy assistance program, the LIHE program and a comprehensive national energy policy can guarantee

the clean, secure, affordable supply of energy that's needed for economic growth and prosperity.

Mr. BARTON. Mr. Reiten, can you summarize?

Mr. REITEN. I'm ready to summarize.

Mr. BARTON. Okay.

Mr. REITEN. The members of the American Gas Association will work with Congress, with consumers and with its partners in the energy industry to accomplish this goal and I do very much appreciate the opportunity to comment here.

Mr. BARTON. We appreciate that.

Mr. REITEN. Thank you, Mr. Chairman.

Mr. BARTON. Feel free to exist whenever you need to meet with the Governor.

Mr. REITEN. Thank you.

[The prepared statement of Richard G. Reiten follows:]

PREPARED STATEMENT OF RICHARD G. REITEN, PRESIDENT & CEO, NW NATURAL ON BEHALF OF THE AMERICAN GAS ASSOCIATION

Good afternoon, Chairman Barton and members of the subcommittee. I am pleased to be here today to present the views of the American Gas Association on national energy policy legislation and the role of natural gas.

AGA represents 185 local natural gas distribution companies, which deliver natural gas to 50 million customers in the United States. NW Natural is the largest natural gas distributor in the Pacific Northwest. We are headquartered in Portland, Oregon and serve Western Oregon and southwestern Washington State.

Ample, reliable energy supply at affordable prices is key to providing economic and national security for Americans. AGA recognizes that, while the United States has tremendous energy resources, America's current energy supply and infrastructure will not, in the future, sustain our growing economy. Therefore, we need to act now to meet our country's energy needs for the 21st Century.

Current Market Conditions

Natural gas prices have increased dramatically over the past year. A year ago the average price for natural gas was less than \$2.50 per thousand cubic feet, currently it is about \$5.00 at the Henry Hub. However, during the heart of the winter heating season, average prices spiked at over \$10. Why has this happened? Three words: supply, demand and weather. Drilling for natural gas declined in 1998 and 1999 in response to extremely low prices. Demand for natural gas continued to grow, causing supply to become tight. Prices began to rise this spring. Then record cold weather across the country in November and December, on top of wholesale price increases, created very high gas bills for residential gas customers. Prices are beginning to moderate, but until there is a significant increase in production, they are likely to remain at relatively high levels.

Natural gas utilities do not profit from higher prices. We buy and resell natural gas to our customers without any price mark-up. However, we are the face—and the bill—that the customer sees. Until this past year, customers have been used to steady or declining natural gas bills. Over the past decade the real price of natural gas has actually decreased, even as demand increased. This is mostly attributable to technological breakthroughs that have made it easier and less expensive to locate, produce and deliver gas—breakthroughs that we believe will continue into the future.

The sharp increase in natural gas prices over the past year has commanded the attention of the American people. The reasons for this increase are well known to the natural gas industry and are perhaps better addressed by the producer representatives testifying today. They include the low natural gas prices in 1998 and 1999 that led to a decline in natural gas drilling coupled with increased demand for natural gas by all consuming sectors. The record cold weather in November and December of last year increased residential consumption and the preference for natural gas for almost all new electric generation continues to grow demand from that sector. Relatively high oil prices and the environmental attributes of natural gas coupled with a strong economy also drove up demand for natural gas in industrial markets.

Natural Gas Distribution Industry Policy Priorities

Given the current energy situation, it is highly appropriate that Congress focus on establishing a national energy policy. Two studies—The National Petroleum Council's 1999 study on Natural Gas and the AGA Foundation's "Fueling the Future" study released in early 2000—set the stage for a serious consideration of federal and state policies affecting natural gas. Both of these studies project a significant increase in the demand for natural gas over the next 20 years under a favorable policy environment.

But equally important, particularly in light of today's environment and the need for supply sufficient to meet a growing demand for gas and electricity, these studies identify what will have to happen for the nation to capitalize on the opportunity natural gas presents. The events of this winter dramatically demonstrate that now is the time to consider and implement many of the recommendations of the "Fueling the Future" study.

"Fueling the Future" essentially recommends that natural gas be allowed to compete fairly and freely against other fuels;

- that access to new supplies of natural gas shall not be unduly restricted so that natural gas can continue to be delivered at a reasonable and competitive price;
- that the natural gas delivery infrastructure maintain its ability to deliver gas safely and reliably, all the while expanding to meet growing demand;
- that new natural gas technologies and markets such as distributed generation receive support, including federal RD&D support, to ease the demand on the electric grid;
- and that RD&D also continue to support technological advances in the exploration, production, and delivery of natural gas in order to keep down costs—and keep down the price of gas.

In the wake of this winter's record cold demand, these central goals seem to take on an even more immediate importance. AGA believes that the nation's present energy situation—both gas and electric—underscores the importance of an energy policy that utilizes each fuel in our national portfolio to its best advantage.

AGA has developed an outline of legislative provisions that we believe will accommodate and facilitate the development of an expanded natural gas market, which would benefit the nation through increased economic and energy efficiency, enhanced energy security and improved environmental quality. As distributors of natural gas to the consumer, we have focused on infrastructure expansion and renewal, new end-use technologies and energy efficiency, and protecting low-income consumers. Adequate, reasonably priced gas supply is obviously a high priority for the natural gas utility industry. However, we have not made any specific recommendations on gas supply issues and generally support the initiatives proposed today by NGSA and IPAA.

Assistance to Consumers

National energy policy legislation must address the needs of consumers. Over the long term, consumers will benefit from policies that assure that energy supplies are available at reasonable prices. We also need to assure that low-income consumers are able to afford the energy they need. AGA is a long time supporter of the Low Income Home Energy Assistance Program. LIHEAP helps consumers pay their energy bills. It is generally available to households with incomes less than 150% of the poverty level. In recent years, this program has been able to assist about 4 million households. The typical LIHEAP recipient is elderly, disabled or a family with young children. The average recipient's household income is less than \$10,000 a year.

This winter, the base program funding was increased by \$300 million to \$1.4 billion and releases of emergency funds increased the available funds to \$2.25 billion. However, applications for assistance have increased by 27 percent over last year according to a survey released this month by the National Energy Assistance Directors' Association (NEADA). Even with the increased funding provided by the federal government this year, the NEADA survey found that funds will not be sufficient to offset the rapid increases in caseloads resulting from higher home heating costs this year.

There is an immediate need for a supplemental appropriation for LIHEAP to assure that moneys are available for the remainder of the heating season and for possible spikes in electricity prices this summer. We also urge the subcommittee to raise the authorization level for the LIHEAP base program to at least \$3 billion for FY2002 and future years and to expand funding for weatherization and state energy programs, as provided in legislation introduced by Representative Markey and Senator Bingaman earlier this month.

Many of our small business customers have had difficulty with rising energy costs as well. We are supportive of legislation introduced by Senator Kerry to provide low-interest loans to small businesses adversely affected by high energy bills and we urge the House to work with the Senate to pass this legislation early this session.

Infrastructure Renewal and Expansion:

As natural gas demand increases by up to 60% over the next 20 years, the National Petroleum Council estimates that \$150 billion must be invested in transmission and delivery infrastructure. Two thirds of that, approximately \$100 billion, will be needed in the delivery sector, and \$50 billion will be needed for interstate pipelines, to make sure natural gas can get to markets where it is needed. This infrastructure includes pipelines, underground storage facilities, peak shaving plants, and LNG plants.

This level of investment is unprecedented for the natural gas utility industry. Accomplishing it will present many challenges. Timely and efficient expansion of the energy infrastructure is, however, absolutely essential to meeting America's energy needs.

The federal government can facilitate these infrastructure investments being made in a timely fashion through favorable tax policy. AGA has proposed that the costs associated with siting and construction of new gas distribution, storage and transmission infrastructure be allowed accelerated depreciation over a seven year period.

A second infrastructure issue that requires federal attention is the siting of new interstate transmission pipelines and distribution lines. While most of the distribution lines are subject to state siting regulations, many larger lines cross federal lands and are subject to permitting delays due to the lack of interagency coordination. We concur with INGAA's recommendation that FERC and all other federal agencies involved in the environmental review of interstate pipeline applications enter into an interagency agreement to expedite processing of applications. We would also include deadlines for each agency to complete its required actions and recommend that such deadlines be given teeth by requiring that all concerned agencies take action on an application by a date certain or be deemed to have assented to the application.

Third, increased federal funding for research and development to enhance pipeline and distribution reliability and to increase the operational efficiency of the pipeline and distribution infrastructure will be critical to our efforts to deliver natural gas to the customer safely, efficiently and reliably.

New Technologies and Energy Efficiency

We must continue to improve natural gas end-use technologies and to develop new technologies to provide industrial, commercial and residential consumers with environmentally friendly gas equipment that conserves energy and lowers fuel bills. Great strides in efficiency have already been made. The average homeowner uses 16% less natural gas than in 1980 due to more efficient gas appliances and better insulated homes.

Federal energy policies should measure the total efficiency of energy technologies, from the source of the fuel to the use of the energy. 50% of the energy benefits are lost in using gas to generate electricity to do a job, such as heating water, as compared to using gas to heat the water. Natural gas used directly in homes, industries and businesses is inherently efficient. Recognizing this inherent efficiency of the direct use of gas is an example of what we mean by an energy policy that utilizes each fuel in our national portfolio to its best advantage.

Federal spending on gas related RD&D should be increased to support advanced end-use equipment such as fuel cells, microturbines, cooling and NGVs. As new products are developed, tax incentives are appropriate to stimulate market acceptance of selected highly efficient and environmentally beneficial gas technologies.

The federal government can lead by example through funding a vigorous implementation of the Federal Energy Management Program and the use of efficient gas technologies to replace outdated, less environmentally friendly equipment. Legislation establishing a new DOE grant program to increase energy efficiency in school buildings will also assist in reducing energy demand and reducing costs to an important sector.

Finally, AGA recommends that the federal government coordinate its energy policy development at the highest level. We commend President Bush for establishing a task force on Energy Policy Development, led by Vice President Cheney and consisting of the Secretaries of the major Cabinet agencies concerned with energy, the environment and the economy. We are hopeful that this task force will not only set the parameters of a viable long term national energy policy, but will establish poli-

cies and procedures that will assure that all Federal agencies consider the impact their programs have on the nation's energy security.

Mr. Chairman, AGA is committed to working to enact a bipartisan, consensus, market-based national energy strategy that will ensure the future security, comfort, and economic well being of our nation's citizens by meeting their energy needs, without sacrificing the quality of our environment. AGA will work with the Congress and other policy makers, with consumers and its partners in the energy industry to accomplish this goal.

Mr. BARTON. We now want to welcome Mr. Andrew Littlefair. I'm not sure how he got on the Panel, it was certainly without my permission since he is a good friend of mine. The last time I talked to you, you were heading the Delegate Negotiations for the Dole Campaign in Texas for State-wide Delegates to the National Convention in 1996 and my name wasn't on the list.

Mr. LITTLEFAIR. So designing an energy policy is going to be a lot easier, Mr. Chairman.

Mr. BARTON. But it is good to have you. It was Texas' loss when you moved to California. I'm sure you're going to give us very informed testimony about the possibility of using natural gas to power a vehicle. So your testimony is in the record in its entirety and in all sincerity, we do welcome you before the subcommittee.

STATEMENT OF ANDREW J. LITTLEFAIR

Mr. LITTLEFAIR. Thank you, Mr. Chairman, members of the subcommittee. My name is Andrew Littlefair and I'm President of Pickens Fuel Corporation. Pickens Fuel owns and operates over 35 natural gas fueling stations in California and Arizona. I also serve on the boards of both the National and California Natural Gas Vehicle Coalitions.

Before I begin, I would like to thank you, Mr. Chairman, for your support of NGVs and your commitment to the causes of clean air and NG security. You set the example for all of us by insisting that the best way to reduce our reliance on imported oil and to promote clean air is through the private sector.

The government needs to set policy priorities, stick to those priorities and provide the private sector the right incentives to get the job done. If the economic signals are right, the private sector will make the correct decisions that will result in cleaner air and reduce dependence on foreign oil.

Now let me turn to the role that the natural gas vehicles can and should play in helping achieve both of these national priorities. Today, NGVs are one of the most effective ways to reduce urban air pollution. Vehicles contribute one half or more of the emissions that cause smog. Although gasoline and diesel engines have continued to get cleaner, today's NGVs are substantially cleaner for every criteria of pollutant. In fact, one natural gas refuse truck in Southern California is the equivalent to remove 325 vehicles from the road.

Light duty NGVs already are certified to California Super Ultra Low Emission Vehicle Standard and now may be counted toward meeting that State's zero emission vehicle requirement which is electric vehicles. Heavy duty NGVs produced only a tiny fraction of the particulates and other air toxics produced by diesel engines and that will continue to be true through this decade and beyond.

It is in part because of this that the South Coast Air Quality Management District recently put into place a number of policies to encourage fleets to switch to cleaner alternatives, especially natural gas. Now all taxis serving John Wayne Airport where I live in Orange County, are powered by natural gas.

In Southern California, no new diesel trash trucks can be purchased starting in July. All the shuttle vehicles and parking lot buses of Los Angeles International are moving toward being 100 percent natural gas. As larger trash hauling fleets in the four counties all around Los Angeles are converting to natural gas. I'm sorry, all the larger trash hauling fleets in the four counties around Los Angeles are converting to natural gas.

The majority of the larger transit bus fleets in the State have selected the natural gas path. In fact, at least 30 percent of all transit buses on order in the United States today are natural gas buses. Significantly, a desperately needed new power plant in California can now be built because of the emissions offsets that the developers of the plant have acquired by agreeing to help Waste Management, Inc. add 120 new natural gas trash trucks.

Another benefit of NGVs is reduced oil imports and we all know that problem. That's why it's important to remember that each NGV displaces 100 percent of the petroleum that vehicle otherwise would use. NGVs can and should be a significant part of the solution to oil dependence.

Mr. Chairman and members of the subcommittee, the bottom line is that the increased use of NGVs simultaneously addresses our need for clean air and energy security needs. Unfortunately, the NGV market has grown much slower than expected. Our No. 1 challenge continues to be what you, Mr. Chairman, found in 1996 when you headed the Speaker's Task Force on Natural Gas Vehicles, namely, economics. And because of the low production numbers NGVs generally cost more than their gasoline or diesel counterparts. Light duty NGVs, for example, cost between \$3,000 and \$5,000 more and heavy duty NGVs can cost up to \$50,000 more.

If the demand for NGVs increase significantly, that incremental cost would come down. While demand has increased, it hasn't increased enough. The Energy Policy Act of 1992 is intended to help stimulate demand. However, the Act covered only a small segment of the vehicle population and it's filled with loopholes. As a result, EPAC's effect on the alternative fuel vehicle market has been much less than anticipated.

Another economic factor is that when customers purchase NGVs they are not financially rewarded for the societal benefits that are produced, namely, cleaner air and reduced oil dependence. There's a market failure here and that's perhaps an appropriate role of the Federal Government to correct such failures and make sure that the vehicle buyers and users receive accurate economic signals. That's why the NGV industry has supported tax incentives to lower the cost of NGVs for consumers, especially fleets. In the last Congress, two bills were introduced to provide tax incentives for alternative fuel vehicles, Senate Bill 2591 and H.R. 2522 in the House.

We also urge Congress to support the NGV market through various appropriations. For example, more money is needed for DOE's

Clean Cities Program and grants from the Clean Cities State Energy Program to co-fund alternative fuel vehicle incentives.

Another critical area is the appropriations for NGV RD&D. Because of the Chairman's leadership, 6 years ago DOE and the NGV industry jointly prepared and endorsed a 5-year NGV RD&D plan. Unfortunately DOE never adequately funded that plan. This year DOE and the NGV industry created an RD&D plan for the next 5 years. We urge Congress to ensure that the plan receives necessary funding.

Mr. Chairman, there's more that can be done and should be done. My written statement contains a list of those items. Thank you very much.

[The prepared statement of Andrew J. Littlefair follows:]

PREPARED STATEMENT OF ANDREW J. LITTLEFAIR, PRESIDENT, PICKENS FUEL CORP.

INTRODUCTION

Mr. Chairman and Members of the Committee, my name is Andrew J. Littlefair. I am the President of Pickens Fuel Corp. (PFC). PFC, incorporated in 1997, owns and operates over 30 natural gas fueling stations in Southern California and Arizona. In California, the PFC network serves an area from San Francisco in the north to Orange County in the south to Riverside and San Bernardino Counties in the east. In Arizona, PFC owns four stations in the greater Phoenix area, including a state-of-the-art liquefied natural gas (LNG) fueling station in Tempe.

In addition to my position with PFC, I also am a Board Member of the Natural Gas Vehicle Coalition, the national trade association dedicated to promoting new markets for natural gas vehicles. I also serve on the Board of the California Natural Gas Vehicle Coalition, an organization dedicated to increasing the use of natural gas vehicles in California.

I appreciate the opportunity to discuss the benefits to America of increased use of natural gas as a motor vehicle fuel and why it is critical that government do more to support natural gas and other alternative transportation fuels.

Natural gas vehicles help achieve the important U.S. policies of cleaner air and increased energy security. They also represent a significant new export market for U.S. manufacturers since concern about urban air quality is now worldwide and U.S. NGV technology is the best in the world. Finally, investment in the development of NGV technology and fueling infrastructure serves as a catalyst to improving the U.S. economy.

While most people are familiar with the benefits of natural gas for electric power generation, heating homes, and cooking, fewer people are aware that it also is an excellent fuel for transportation. NGVs today represent some of the most technologically advanced and cleanest transportation vehicles in the world. NGVs were the first vehicles certified under California's demanding low, ultra low, and now super ultra low emission vehicle standards. Natural gas powered vehicles of all different makes and models are now available from the majority of automobile, truck and bus manufacturers. For example, Caterpillar, Cummins, Detroit Diesel and John Deere all offer a line-up of natural gas engines for heavy-duty vehicles, including transit buses, school buses, and over-the-road trucks. This is in stark contrast to several years ago when the only NGVs available were aftermarket conversions.

While the future for natural gas vehicles—in the U.S. and throughout the world—is bright, much more must be done at the national level if we are to significantly reduce this country's reliance on imported oil and capture the environmental benefits of greater NGV use. Ultimately, only the private sector can bring about the changes necessary to move the US economy away from its overwhelming reliance on petroleum motor fuels. If the US is to realize significant reductions in the amount of petroleum used in the transportation sector, the private sector must develop the new innovative alternative fueled vehicles that are needed. The private sector also must invest in the infrastructure necessary to fuel alternative fuel vehicles.

Government nevertheless must support the evolutionary process of moving beyond petroleum reliance. Government needs to set the policy priorities, remain firm in holding to those priorities, and provide the private sector with the right incentives to move quickly to get the job done. The Congress needs to expand incentives for all alternative fuels, including measures that will bring down the cost of acquiring

alternative fuel vehicles and using the fuels. Congress also should adopt incentives that support the development of alternative fuel infrastructure so users will have places to fill up their alternative fuel vehicles.

The NGVC and other alternative fuel industries supported passage of S. 2591, the Alternative Fuel Tax Incentives Act, during the 106th Congress, and we are working toward introduction of similar legislation in the 107th Congress. This bill provides tax incentives to lower the cost for consumers of owning alternative fuel vehicles. If enacted, the tax incentives will stimulate market demand for alternative fuel vehicles (such as NGVs) and will put us on the road to a self-sustaining market for nonpetroleum fueled vehicles. PFC and the NGVC urge Congress to act quickly and enact incentive legislation this year. We also urge the Congress to continue to fund the Department of Energy's Clean Cities Program, which has been an important catalyst in developing new markets for alternative fuel vehicles, and to expand funding for NGV RD&D.

1. The Need to Reduce Our Dependence on Foreign Oil is Greater Than Ever

Reliance on petroleum imports threatens US economic stability and energy security. It also continues to distort US foreign and military policy. The fact that the US imports too much is not new, however. Reliance on foreign oil was a major impetus for the passage of the Energy Policy Act (EPAct) of 1992. Despite the passage of that law, the US today relies even more on oil imports than it did in 1992. Since EPAct's passage, oil imports have gone from less than 50 percent of total oil supply to nearly 60 percent of supplies. Reliance on foreign oil has grown due to two factors. The first is continued decline in domestic production. Once the world's dominant producer of oil, US oil production has steadily declined since 1970. The second factor is continued growth in domestic demand for oil. The US is now the world's largest importer and consumer of oil.

Congress should be extremely concerned about our reliance on foreign oil. Previous supply disruptions and price spikes resulted in US economic recession. In fact, the recent increase in oil prices is a major factor in our current economic slowdown. Threats to oil security also prompted the 1991 Gulf War. Persian Gulf and OPEC member countries continue to supply an important part of US crude oil and petroleum imports. The latest EIA figures indicate that in 1999 the US relied on OPEC members to provide 48 percent of imported crude oil; Persian Gulf states alone provided 27 percent of *total oil imports*. EIA's long-term forecast indicates that, by 2020, OPEC is likely to provide 56 percent of US crude oil demand and that Persian Gulf exporters will provide 30 percent of total oil imports. OPEC and Persian Gulf exports also make up a significant component (currently 40 percent) of world oil supply. OPEC's share of world oil supplies is expected to reach almost 50 percent by 2020, according to EIA's latest forecast.

Persian Gulf exports in particular are of concern since this region has generally been unstable and continues to be the source of geopolitical conflicts. The past 12 months alone has seen a number of troubling developments in the Middle East and Persian Gulf region. A recent report by the Center for Strategic and International Studies ("The Geopolitics of Energy into the 21st Century") says that the "risk posed by supply interruptions will be greater" in the next several decades than it was at the end of the last century. The report also says that "military conflict will remain a threat to most energy-producing regions, particularly the Middle East where almost two-thirds of the world's oil resources are located" and that "at least 10 of the 14 top oil-exporting counties run the risk of domestic instability in the near to middle term."

Iraq continues to be a special source of concern to the stability of the Middle East. EIA figures indicate that in the recent past Iraqi oil production has provided as much as four percent of world oil demand. This is a significant volume of oil and its removal from international markets at a time when reserve stocks are low could significantly affect world oil prices. Over the next two decades, the EIA projects that Iraq will more than double its oil production, ensuring that it will continue to be an important player in international oil markets. The curtailment of world oil production by OPEC members demonstrates the serious consequences of even small disruptions in the supply of oil to international markets, and proves that OPEC is capable of acting cohesively to control international oil markets. OPEC's market power will continue to grow as its share of world oil production increases. As last year's events have demonstrated, the economic effect of supply disruptions is not limited to any one region but rather reverberates across international commodity markets. Disruptions of oil supplies from the Persian Gulf and from OPEC members will still result in much higher prices being paid for oil imports regardless of their country of origin.

An additional concern is the growing demand for oil among developed and developing nations. It is estimated that demand for oil worldwide may double as a result of economic expansion and growing vehicle populations in developing nations, especially China. This increased demand is expected to place significant upward pressure on world oil prices. The CSIS report also states that China's increased reliance on Persian Gulf oil could lead to tensions with the US.

The US reliance on foreign oil has a significant impact on the economy. Petroleum imports result in fewer dollars spent at home and more sent overseas. In 2000, petroleum imports accounted for some \$90 billion (up from 1999's \$59 billion) of the US trade deficit. This figure does not begin to account for the huge military costs associated with ensuring secure supplies of foreign oil or the environmental costs associated with transporting and using oil.

All of these factors point to the inescapable conclusion that it is in the US' best interest to develop alternative fuel sources for its economic needs.

2. EPAct's Petroleum Displacement Goals Have Not Been Achieved

The Energy Policy Act of 1992 (EPAct) was intended to create a viable alternative fuels market. Its goal was to reduce US petroleum and crude oil imports and increase energy security by promoting reliance on domestic fuels. In part as a result of that law, today, the type and number of alternative fuel vehicles being sold, as well as the number of alternative fuel stations, has grown. The US is the world leader in the field of alternative fuel vehicles and fueling infrastructure. The US automakers should be commended for their impressive array of low-polluting, alternative fuel vehicles.

However, the law has failed to produce a sufficient shift away from reliance on petroleum motor fuels during the past decade. EPAct set a national goal of replacing 10 and 30 percent of the petroleum used in light duty vehicles with non-petroleum alternative fuels by 2000 and 2010, respectively. A report released last year by the US General Accounting (GAO) indicates that, unfortunately, even after almost eight years of EPAct implementation, alternative fuel use accounts for a very small amount of overall motor fuel demand. According to the 1998 figures compiled by the GAO, total alternative fuel use—including the oxygenated blending stocks for gasoline—accounts for less than 4 percent of all highway gasoline use. This is far short of the EPAct goal of 10 percent displacement by 2000. The amount of alternative fuel that is used in alternative fuel vehicles is even less. GAO reported that alternative fuel use in alternative fuel vehicles displaced only about 334 million gallons of gasoline or less than 0.3 percent of total gasoline consumption. The vast majority of the remaining amounts of non-petroleum fuel used in the country are comprised of MTBE or ethanol that is added to gasoline to meet the reformulated gasoline requirements of the Clean Air Act.

If the US is to achieve its energy security goals, it must look to new programs and new initiatives to encourage greater use of alternative transportation fuels. Now is the time to act. US automakers and engine manufacturers currently are offering the most extensive line-up of alternative fuel vehicles and alternative fuel engines. The number of AFVs operated in the US could rapidly expand if appropriate incentives are provided to help offset their initial higher costs.

3. The Transportation Sector: The Key to Energy Security

There are many initiatives underway to expand the use of alternative fuels in various energy sectors. All of these are important. However, it is especially critical that alternative fuels penetrate the transportation market. Since the 1970s, all major energy-consuming sectors *other than transportation* have significantly reduced their dependence on petroleum. Today, the transportation sector remains almost totally dependent on petroleum motor fuels. The US transportation sector is responsible for more than two-thirds of all petroleum consumption and an astonishing 15 percent of world oil demand. The only way to break free of the reliance on petroleum fuels is to increase the use of alternative fuels. Efforts to increase fuel efficiency are laudable and should be pursued. However, increasing energy efficiency of vehicles will not improve energy security. Improving fuel efficiency will simply slow-down the current growth in oil consumption. Fuel efficiency does not provide energy consumers with alternative options for fueling their vehicles. A gasoline or diesel vehicle that gets 60 or even 80 miles per gallon is still 100 percent reliant on petroleum supplies.

Increasing the use of alternative fuels provides consumers with real options when it comes to supply disruptions or price hikes. Each NGV displaces 100% of the petroleum that otherwise would be used to fuel that vehicle. The US cannot wait for the next supply disruption or price spike to create the necessary fueling infrastructure—those efforts must begin now. Given the significant amount of energy consumed by

the domestic transportation sector, a strong US market for alternative fuels would put downward pressure on international oil prices. In addition, exports of US alternative fuels technologies would not only bolster our own economy but would further reduce world-wide dependence on foreign oil, further lessening the market power of certain oil exporting nations. News of growing international interest in alternative fuels increases daily. Countries such as China, Chile, Egypt and Mexico increasingly are looking at alternative fuels to combat air pollution and reduce oil imports.

4. The Environmental Benefits of Natural Gas Vehicles

Natural gas is one of the cleanest alternative fuels. More importantly, this technology is readily available today. When compared to average petroleum vehicles, NGVs reduce exhaust emissions of carbon monoxide (CO) by 50%, carbon dioxide (CO₂) by 20%, non-methane organic gas (NMHC) by 88% and nitrogen oxides (NO_x) by 66%, and produce 20% fewer greenhouse gases. NGVs have been certified to be substantially cleaner than traditionally fueled vehicles. Several models already meet or exceed California's ultra-low emissions vehicle (ULEV) and super ultra-low emissions vehicle (SULEV) standards.

The dedicated natural gas Honda Civic GX, which is produced at Honda's plant in Ohio, illustrates the excellent environmental advantages of natural gas vehicles. The Honda GX is the cleanest internal combustion engine powered vehicle ever commercially produced. The American Council for an Energy Efficient Economy's "Green Book", which is a consumer environmental guide to cars and trucks, rates the Honda Civic GX (along with the hybrid Honda Insight) as the "Greenest Vehicle of 2001." The natural gas Civic is so clean that it now qualifies in California for credits toward that state's zero-emission vehicle sales requirement.

Ford, DaimlerChrysler, General Motors and Toyota also produce light duty natural gas vehicles that are certified to some of the most demanding emission standards in existence.

Heavy-duty vehicles powered by natural gas also are much cleaner than comparable diesel vehicles—generally reducing emissions of particulate matter by 90 percent and nitrogen oxides by more than 50 percent. Natural gas engines also produce significantly less air toxic emissions. A recent study prepared by Argonne National Laboratory found that natural gas vehicles reduce emissions of air toxics by 60-70 percent compared to diesel and gasoline powered vehicles. It is important to note that Argonne's study did not consider diesel particulate matter emissions, which the U.S. Environmental Protection Agency classifies as a mobile source air toxic. Including diesel particulate matter emissions would have substantially increased the overall air toxic benefits produced by natural gas vehicles since they emit far fewer particulates than diesel and gasoline powered vehicles.

Regulatory agencies across the country increasingly are looking to natural gas engines to displace diesel engines as an effective strategy for reducing pollution. Officials in Southern California, for example, have decided that natural gas or other alternative fuels should power most new heavy-duty vehicles because of growing concern about air toxic and other emissions. In addition, many transit agencies around the country have decided to exclusively rely on natural gas and other alternatively fueled buses when purchasing new buses for their fleets. In fact, the majority of the larger transit agencies in California have chosen to select the natural gas bus approach.

Proponents of petroleum vehicles have questioned the continued need for alternative fuel vehicles since the US EPA recently announced plans to make gasoline and diesel fueled vehicles of all sizes much cleaner. While there is no question that conventionally fueled vehicles have gotten cleaner and will continue to do so, additional reductions will continue to be necessary to offset the increased number of vehicles that will be added to America's roads and the increased growth in average vehicle miles traveled (both projected by the U.S. Department of Transportation). Meanwhile, NGV technology will continue to advance, and NGVs will continue to get cleaner, thereby maintaining their environmental advantage over their petroleum counterparts.

In addition, many people believe that eventually the internal combustion engine will be replaced by fuel cell and hydrogen fueled vehicles. Natural gas vehicles offer an excellent (and possibly, the only logical) bridge strategy to this future. Natural gas can be used to supply the needed energy for fuel cell vehicles. In fact, virtually all fuel cells in commercial operation today use natural gas to supply their hydrogen. As fuel cell vehicles enter the market, natural gas could be converted into hydrogen and delivered into the vehicles at existing natural gas refueling stations. Therefore, the NGV infrastructure that is developed today, including the existing pipelines, fueling stations, and fuel storage systems used for vehicles, can be used to support the hydrogen future.

More immediately, natural gas vehicles can provide critical emission reductions today. The recently finalized EPA heavy-duty emission standards will not be fully implemented until 2010. Those regulations also are contingent on very controversial provisions regarding diesel sulfur levels. The petroleum industry has indicated that they intend to fight the standards, especially the sulfur reductions for diesel fuel. It is possible that the emission benefits of the proposed rule will not be available until some time after 2010, if at all. Natural gas heavy-duty vehicles already meet the particulate matter levels called for in the proposed rules and are years ahead of diesel engines in terms of reducing NO_x and air toxic emissions. Natural gas vehicles are available now and they can deliver superior emissions performance with the added advantage of petroleum displacement.

5. The State of the Natural Gas Vehicle Market

More than 100,000 natural gas vehicles are in use in the U.S. today. These vehicles are owned and operated by the federal government, local and state governments, and increasingly private fleets. These vehicles include passenger cars, light duty trucks, school buses, transit buses, refuse haulers, and many other types of vehicles. The majority of the new natural gas vehicles placed in-service today are produced by original equipment manufacturers (OEMs). Such well-known companies as Daimler Chrysler, Ford Motor Company, General Motors, Honda, Toyota, Blue Bird, Thomas Built and Freightliner are manufacturing these vehicles. Nearly every manufacturer of transit buses now offers a line-up of natural gas buses. In addition, heavy-duty natural gas engines are now available from Caterpillar, Cummins, Detroit Diesel, John Deere and Mack.

While the number of NGVs in-use is still small in terms of the overall vehicle population, it is growing at an impressive rate. Since 1992, the number of natural gas vehicles in-use has increased four-fold. More impressive, the total amount of fuel consumed by these vehicles has increased more than six-fold. Today, natural gas vehicles displace more than 90 million gallons of gasoline a year, representing about 27 percent of all alternative fuel that is consumed in alternative fuel vehicles.

The natural gas vehicle industry has primarily targeted urban fleets in its effort to grow the market for natural gas vehicles—including taxicabs, refuse haulers, school and transit buses, airport shuttles and urban trucks. These types of fleet vehicles have been targeted because they tend to be high fuel use vehicles and their fuel consumption and refueling patterns make them the best choice for early introduction of alternative fuels. Suppliers of natural gas are looking for customers that will use sufficient amounts of fuel to justify the capital investment in retail and private fueling. Another advantage of focusing on high fuel use fleets is that replacing these vehicles with alternative fuels provides the greatest amount of emission reductions.

The transit bus market is one area that has seen tremendous growth for natural gas. There are now more than 4,000 natural gas powered transit buses in service in the US. Major cities like Los Angeles, New York, Atlanta, and Cleveland are ordering hundreds of new natural gas buses. Washington, DC just recently announced that it would be purchasing 100 natural gas buses for its fleet. For the last few years, natural gas bus orders have approached almost 20 percent of new nationwide bus orders.

Airports also are increasingly moving to natural gas. Dallas-Fort Worth, John Wayne (Orange County, CA), Logan (Boston), Los Angeles International, Denver International, and Baltimore-Washington International all have or will soon have very large natural gas programs. Airports are looking to natural gas powered vehicles to minimize the environmental impact of vehicles that operate at the airport or service the airport.

Despite this substantial growth and the fact that NGVs are commercially available, NGV market growth has been far slower than expected. The primary barrier has been the purchase price of the vehicles. NGVs generally cost more than their gasoline or diesel counterparts. Light-duty NGVs for example, generally cost \$3,500 to \$5,000 more; heavy-duty NGVs cost from \$25,000-\$50,000 more. If the demand for NGVs increased significantly, the economies of scale that would come from mass production would lower the incremental cost for NGVs. The Department of Energy estimates that light-duty NGVs would cost approximately \$800 more than comparable gasoline models when mass-produced.

This was part of the impetus behind the alternative fuel vehicle provisions of EPAct. EPAct requires federal, state, and fuel provider fleets to acquire light duty alternative fuel vehicles when they replace their existing fleet vehicles, and this has resulted in a significant increase in overall AFVs. These programs, however, only cover a very small segment of the vehicle population and have major loopholes. As

a result, EPAct's impact on alternative fuel vehicle purchase and use (and overall petroleum replacement) has been much less than anticipated.

Another economic factor that has hindered the growth of the NGV market is that many of the benefits of NGVs are what economists refer to as "positive externalities." When customers purchase NGVs, they help reduce overall air pollution, our dependence on foreign oil, our balance of trade, etc. Unfortunately, while vehicle purchasers must incur the full cost of buying these vehicles, they are not economically rewarded for the societal benefits that are produced.

California and a number of other state governments have put in place incentive programs to help correct this market failure. For example, since designating diesel exhaust as a toxic contaminant several years ago, California has moved expeditiously to accelerate the introduction of heavy-duty alternative fuel vehicles. California has created incentives for lower-emission vehicles and has funded the replacement of diesel-powered vehicles with cleaner technologies like natural gas. California also has encouraged the development of emission credit trading programs. These programs potentially allow users of cleaner technologies to receive payments for the emissions reduced by their vehicles. Mobile-for-stationary emissions trading could be an especially valuable economic program for purchasers of NGVs. In one example, a new power plant built in California was able to secure $\frac{1}{3}$ of its NO_x offsets from a fleet of natural gas refuse trucks operated by Waste Management. The amount received for the offsets paid for the incremental price of the trucks. This project has been heralded for its innovativeness and ability to generate significant emission reductions.

Another exciting project involving Waste Management will soon produce liquefied natural gas at a landfill in San Diego, California. The LNG will be used in Waste Management trucks. Most recently, California officials have turned their attention to replacing the state's aging school bus fleet with new, alternative powered buses. Many of these buses will be natural gas powered.

6. Government's Role in Promoting Increased Use of Natural Gas Vehicles

There are a number of policies and programs that the federal government could and should put in place to accelerate the growth of the alternative fuel vehicle industries. Some are refinements of existing programs; some are new. Many fall within the purview of the U.S. Department of Energy or Environmental Protection Agency. However, all require congressional leadership in terms of continued authorizations and/or appropriations.

Financial Incentives

- *Tax Incentives.* Congress should adopt meaningful tax incentives for the purchase of alternative fuel vehicles, the use of alternative fuels, and investments in infrastructure. The NGV industry supported S. 2591, the Alternative Fuels Tax Incentives Act, introduced in the last Congress by Senators Hatch, Jeffords, Rockefeller and others. It also supported a similar bill, H.R. 2522, introduced by Congressmen Camp, Levin and others in the House of Representatives. These proposals are market-driven non-regulatory approaches to promoting alternative fuel vehicles and their use. A credit against income taxes is provided for individuals and businesses for the acquisition of alternative fuel vehicles. The amount of the credit depends on the environmental benefits the vehicle provides. A credit against income taxes also is provided to retail sellers nationwide for the sale of alternative motor fuels.
- *Increase Funding for Local Alternative Fuel Projects.* Congress should provide substantially more funding for the State Energy Program Grants. This program, which is part of DOE's Clean Cities initiative, is helping state and local communities expand their alternative fuel vehicle activities through new and innovative strategies. It is the single most important federal program providing financial assistance on a competitive basis to AFV projects.
- *Support the Green School Bus Program.* Recent studies indicate that children riding on older school buses are exposed to potentially dangerous levels of emissions. Legislation is needed to provide school districts with funding to replace diesel school buses with alternative fuel buses, especially older school buses that may not meet today's safety standards.
- *Provide More Financial Assistance to State and Local Government Fleets.* Congress should provide state and local governments matching funds for AFV acquisition for their fleets, with a higher level of matching for states that commit to a higher percentage of AFVs in the state's fleet.

Research, Development and Demonstration (RD&D)

- *Expand Funding for Alternative Fuel RD&D.* Significant R&D is still needed on alternative fuel vehicles to (1) improve engine efficiency, (2) further reduce en-

gine emissions, (3) reduce the cost and improve the reliability of fueling infrastructures, and (4) demonstrate alternative fuel systems in new applications. DOE's programs in this area should be substantially expanded in line with the new Five-Year NGV RD&D Plan developed jointly by the NGV industry and DOE.

- *Expand Alternative Fuels as Part of Existing Advanced Automotive Technology R&D.* The use of alternative fuels could play a very important role in the deployment of advanced automotive technologies, such as hybrid and fuel cell vehicles. Existing federal advanced vehicle programs, however, have focused on liquid (primarily, petroleum-based) fuels for these vehicles. Congress should provide additional funding for RD&D on gaseous fuels for advanced technology vehicles.

Environmental and Societal Benefits

- *Accelerate Mobile to Stationary Credit Trading.* Congress should require that EPA move quickly to expand the inclusion of mobile source offsets in its stationary source permitting programs and include guidance to the states on how to implement such programs to ensure that total emission levels are actually reduced.
- *Ensure that States Receive SIP Credit for AFV Programs.* Congress should encourage EPA and other agencies to ensure that states receive the *full emission benefits* of NGVs in their State Implementation Plans based on best-in-class assumptions, and that EPA should ensure that it incorporates the latest information on alternative fuel vehicles into its emission models.

Market Development

- *Coordinate State, Federal and Municipal Acquisition of AFVs.* Coordinating state, municipal and federal fleet acquisition of AFVs would produce greater demand and facilitate the acquisition of AFVs. The *placement* of federal AFVs also should be coordinated with covered state fleets. Congress should direct DOE to undertake such an effort, and all other federal agencies to participate.
- *Fix the Problems Associated with Federal Procurement of AFVs.* Currently, federal agencies are required to buy alternative fuel vehicles, but are given no additional funds to cover the incremental cost of such vehicles. Congress should provide funding through DOE to cover the incremental cost of AFVs for the federal fleet. GSA should also be urged to reform its practice regarding charging federal agencies the full incremental cost of AFVs in the first year of the vehicle lease.
- *Build Up International Markets.* Developing countries can make good use of alternative fuel technology to avoid pollution problems and build sustainable transportation systems. U.S. firms are in a prime position to license alternative fuel technology to foreign firms to the mutual benefit of the U.S. and its trading partners. This increased demand will help support U.S. manufacturers. Congress should support efforts by DOE and the Department of Commerce to help U.S. companies capitalize on these market opportunities.
- *Identify Key Market Segments.* Some fleets are much better suited to use alternative fuels than others, but much of the detailed data on these markets is not available. For programs and policies to be most effective, it is necessary to have a detailed understanding of the key market segments where AFVs can be most competitive (e.g., transit buses, trash haulers, school buses, delivery fleets, postal fleets) and produce significant local benefits such as lower emissions and positive contribution to the local economy. Congress should support efforts by DOE and other agencies to develop this important information.

CONCLUSION

On behalf of Pickens Fuel Corp. and the Natural Gas Vehicle Coalition, I appreciate the opportunity to provide our views on these critical issues. It is clear that the US must take steps to lessen its dependence on foreign oil. Natural gas vehicles can help to significantly reduce dependence on foreign oil. It also is clear that America's urban areas must reduce their levels of air pollution. Natural gas vehicles are the cleanest vehicles commercially available today. The US currently has the best technology in the world for using alternative transportation fuels. It is critical for the US to capitalize on this technological edge and begin to move alternative fuels into the marketplace. As explained in our written statement, government incentives continue to be necessary to make this happen. With government incentives and leadership, the private sector can greatly expand the market for alternative transportation fuels.

Mr. BARTON. Thank you. We do appreciate that and some of those things we worked on 4 or 5 years ago we're going to really

try to do this year. Timing is everything and the timing is right to move on some of that, I hope.

We now want to welcome Ms. Roberta Luxbacher who's Vice President-Americas for Exxon Mobile Gas Marketing. She's appearing on behalf of the Natural Gas Supply Association and I think you were in my meeting in Houston.

Ms. LUXBACHER. Yes, I was.

Mr. BARTON. Last week, where we talked about the comprehensive energy policy.

Ms. LUXBACHER. Yes.

Mr. BARTON. So your testimony is in the record in its entirety and we welcome you before the subcommittee and would ask that you summarize in 6 minutes, please, ma'am.

STATEMENT OF ROBERTA A. LUXBACHER

Ms. LUXBACHER. Thank you, Mr. Chairman. I'm here today speaking on behalf of the Natural Gas Supply Association which represents major integrated and independent producers.

Mr. Chairman, the NGSAs and all its members are looking forward to working with your committee and welcome this opportunity to present our views for developing a national energy policy.

As you know, natural gas is one of our nation's most robust and important energy sources. Over a year ago, the National Petroleum Council estimated recoverable natural gas resources in the lower 48 States at over 14 trillion cubic feet. At the current rate of domestic consumption, this is equal to more than 60 years of gas supply. Producers, of which there are over 8,000 in the United States are individually doing all they can to economically develop these resources to meet current and projected demand for natural gas. The number of operating gas drilling rigs has more than doubled from April 1999 when gas prices were at a 5-year low. Producers are actively exploring new frontiers such as Canada, Alaska North Slope, deepwater Gulf of Mexico and coal bed methane in our Western States. And we are proactively developing and applying new technology.

However, our country's energy needs cannot be met by the producers' actions alone. A clear and comprehensive long-term approach to energy policy is needed. The energy policy decisions of today must avoid the missteps of the past and serve the long-term strategic interests of the country. Our country's economic growth is tightly linked to having reliable and competitive sources of energy.

As we look at developing a national energy policy, there are a number of areas of importance to the NGSAs producers: first, access to natural resources that underlie public lands; second, a balanced regulatory frame; and third, policies that encourage development of a diverse portfolio of energy supplies.

Now turning to the first area, access to public lands. The facts are well known. An estimated 40 percent of undiscovered natural gas is located on land owned by Federal and State governments. Access to government land is restricted. Outside of the Central and Western Gulf of Mexico, producers are prohibited access to virtually all Federal lands offshore. About 9 percent of resource bearing lands in the Rockies is completely off limits and another 32 percent is subject to significant restrictions. Worst of all, restric-

tions are increasing. The previous Administration's Executive Order to remove 60 million acres from potential development without any consideration given to possible future energy supplies is a flaw in the rulemaking process. This ruling further contributes to the loss of access to Federal lands in eight Western States where access had already declined 60 percent between 1983 and 2000. The United States is the only major consuming nation that significantly prevents access to its own energy resources. Rather than excluding resource-rich lands, the focus should be on using advanced proven technology and operating practices to increase supplies in an environmentally responsible manner.

In addition to land access, a balanced regulatory framework is needed which should be guided by certain core principles:

Primacy of markets. Supply and demand are best managed through free competitive markets and private sector initiative. **Predictability.** Government policy should create a predictable operating and investment environment for energy suppliers.

Environmental responsibility. Free-market based incentives provide the best foundation for cost-effective environmental solutions.

Efficiency. Government policy should encourage the efficient use of energy by insuring a level playing field for competing sources of energy. For example, policies that allow the government to prematurely withdraw lease permits and retain producer funds obviously undermine supply development. On the other hand, government policy that encourages market-based development and use of new technologies to increase supplies and the use of energy more efficiently and cleanly have a positive impact.

Finally, the U.S. must have policies that encourage the development of all economic sources of supply on a level playing field. Economic energy will in turn help sustain economic growth, create jobs and protect our national interests.

Exploration to expand supplies in currently available areas requires enormous investments with highly uncertain outcomes. At a minimum, market-based incentives for deep water production and technology development should be considered as apart of a national energy policy.

Last, we need support for the development of our frontier resources. For example, natural gas from Alaska has the potential, as we've discussed at this hearing, to play a significant role in meeting our nation's energy demand. However, Alaska presents huge technical and economic challenges. We need the support of the Federal Government, States, Canada, local communities and a host of other parties all working in concert to achieve success.

In conclusion, let me emphasize that we have major untapped natural gas resources here at home, resources we can access in ways that are economic and environmentally sound. To do this requires a balanced and economically sound energy policy. As you and your committee work to forge such a policy, Mr. Chairman, please be assured of the NGSAs strong support and commitment to work with you toward that end.

Thank you.

[The prepared statement of Roberta A. Luxbacher follows:]

PREPARED STATEMENT OF ROBERTA A. LUXBACHER ON BEHALF OF THE NATURAL GAS
SUPPLY ASSOCIATION

I am Roberta Luxbacher, Vice President-Americas for ExxonMobil Gas Marketing Company.

I am here today speaking as Chairperson, on behalf of the Natural Gas Supply Association, which represents major integrated and independent producers.

Mr. Chairman, the NGSA and all its members are looking forward to working with your Committee and we welcome this opportunity to present our views for developing a national energy policy.

As you know, Mr. Chairman, natural gas is one of our nation's most robust and important energy sources. Over a year ago, the National Petroleum Council estimated recoverable natural gas resources in the Lower-48 states at over 1,400 trillion cubic feet. At the current rate of domestic consumption this is equal to more than 60 years of gas supply.

Producers, of which there are over 8000 in the United States, are individually doing all they can to economically develop these resources to meet current and projected demand for natural gas.

The number of operating gas drilling rigs has more than doubled from April of 1999, when gas prices were at a five year low, to over 900 today.

Producers are actively exploring new frontiers such as Canada, Alaska North Slope, deepwater Gulf of Mexico and coal bed methane in our western states and we are proactively developing and applying new technology.

However, our country's energy needs cannot be met by the producers actions alone.

A clear and comprehensive long-term approach to energy policy is needed. The energy policy decisions of today must avoid the mis-steps of the past, and serve the long-term strategic interests of the country. Our country's economic growth is tightly linked to having reliable and competitive sources of energy.

As we look at developing a national energy policy there are a number of areas of importance to the NGSA producers.

- First, *access to natural resources* that underlie public lands.
- Second, *a balanced regulatory framework*.
- And third, *policies that encourage development of a diverse portfolio of energy supplies*.

Now turning to the first area . . . access to public lands.

The facts are well known:

- An estimated 40 percent of undiscovered natural gas is located on land owned by federal and state governments.
- Access to government land is restricted. Outside of the central and western Gulf of Mexico, producers are prohibited access to virtually all federal lands offshore. About 9 percent of resource-bearing land in the Rockies is completely off limits, and another 32 percent is subject to significant restrictions.
- Worst of all, restrictions are increasing. The previous Administration's Executive Order to remove 60 million acres from potential development without any consideration given to possible future energy supplies is a flaw in the rulemaking process. This ruling further contributes to the loss of access to federal lands in eight western states which, for instance, declined 60 percent between 1983 and 2000.

The United States is the only major consuming nation that significantly prevents access to its own energy sources. Rather than excluding resource rich lands the focus should be on using advanced proven technology and operating practices to increase supplies in an environmentally responsible manner.

In addition to land access, a balanced regulatory framework is needed, which should be guided by certain core principles.

- **Primacy of Markets:** Supply and demand are best managed through free competitive markets and private sector initiative.
- **Predictability:** Governmental policies should create a predictable operating and investment environment for energy suppliers.
- **Environmental Responsibility:** Free-market-based incentives provide the best foundation for costeffective environmental solutions.
- **Efficiency:** Government policies should encourage the efficient use of energy by insuring a level playing field for competing sources of energy.

For example policies that allow the government to prematurely withdraw lease permits and retain producer funds obviously undermine supply development.

On the other hand government policy that encourages market based development and use of new technologies to increase supplies, and use of energy more efficiently and cleanly would have a positive impact.

Finally, the U.S. must have policies that encourage the development of all economic sources of supply on a level playing field. Economic energy, will in turn help sustain economic growth, create jobs and protect our national interest.

Exploration to expand supplies in currently available areas requires enormous investments with highly uncertain outcomes. At a minimum market based incentives for deepwater production and technology development should be considered as a part of national energy policy.

Lastly, we need support for the development of our frontier resources. For example, natural gas from Alaska has the potential to play a significant role in meeting our nation's energy demand. However, Alaska presents huge technical and economic challenges. We need the support of the Federal Government, states, Canada, local communities and a host of other parties all working in concert to achieve success.

In conclusion let me emphasize that we have major, untapped natural gas resources here at home—resources we can access in ways that are economic and environmentally sound. To do this requires a balanced and economically sound energy policy.

As you and your Committee work to forge such a policy, Mr. Chairman, please be assured of the NGSA's strong support and commitment to work with you toward that end.

Thank you.

Mr. BARTON. Thank you very much.

We'd now like to hear from Mr. Walker Hendrix who is counsel for the Kansas Citizens' Utility Ratepayer Board. He's representing a consumer viewpoint. Your testimony is in the record in its entirety. We would welcome you to elaborate for 6 minutes.

STATEMENT OF WALKER HENDRIX

Mr. HENDRIX. Thank you. Mr. Chairman, members of the committee, I'm Walker Hendrix and I'm the Consumer Counsel for what they call the Citizens Utility Ratepayer Board. And I represent residential and small business customers and as you could expect, I've had a few calls this winter with the prices being what they are.

In my former life, I was also President of the Eastern Kansas Oil and Gas Association and I've been involved in natural gas litigation, so I guess I have some familiarity with property rights.

If we're looking at the winter, this winter's problems, I think it all ties back to the fact that we've had a number of mild winters and we've had low prices. And those low prices have caused at least in my State a certain amount of complacency with respect to putting into effect conservation and weatherization programs. And we had those programs in the late 1970's and the early 1980's. I don't know what caused us to abandon them, but I suspect the price had something to do with that. At the same time, drilling and exploration have declined, I think, as a result of low prices. In my State, one of the largest producing areas is the Hugoton Gas Field, one of the largest in North America. We relied on that field for a good deal of production. Unfortunately, that field is in decline. So in order to restore production, we really do have to find new areas in order to meet the increased demand for natural gas.

This year, I think the price of natural gas spiked because there was a perception about storage. I don't think storage was utilized to the extent that it could be used and I think, in part, because of the price of flowing gas there really wasn't any urgency in putting gas into storage and having a physical hedge against that price.

As you probably understand the way that they price natural gas, they do it through automatic adjustment clauses, so when that price spikes up, it's automatically passed through to the local distribution company. In turn, the local regulatory bodies pass that through automatic flow mechanisms and the consumer gets that price directly. It really has no anticipation of that price. And even if they do have anticipation of that price, they really take little care with respect to what they're going to do in an extreme environment like we've had this past winter. We made public announcements in the State of Kansas. Unfortunately, those public announcements started in August and nobody paid too much attention to it. But I still have people who call me up and say why didn't you warn us about these prices? And in fact, we don't have real good price signals with respect to natural gas and unfortunately, the consumer finds out about it after the fact and they do not begin to take conservation measures until that price spikes up.

I guess you have to deal with the demand side. I think we need to increase conservation and weatherization. We need to provide better price signals and I think one problem that we had this winter is fuel switching. Large users who had the capability of switching fuels did not switch fuels. They had been lulled into complacency and they did not have alternative fuels on hand in order to be able to shift. And we got into a situation at least in Kansas that was somewhat perilous because we didn't have our larger producers converting to other fuels. Late in December, they started to do that which eliminated some of the pressure on the price of gas, but you have to look at that.

On the supply side, I think one of the things that's going to be critical is the fact that we're building so much generation that is fueled by natural gas you could have winter heating natural gas competing with gas for electric generation especially if we expand our electric generation with natural gas. That's going to be a very interesting time. We could very well see with respect to electric generation where the summer price is higher than the winter price and that's certainly going to be a deterrent to putting gas into storage. Because of the inadequacy of the deliverability that we have in this country, we cannot simultaneously put gas in storage and also meet the needs of electric generation.

Pipeline capacity constraints, I think there needs to be an investigation to determine where those constraints are and we should alleviate them. So I encourage anyone who is willing to do an investigation to make a determination with respect to that issue.

The final issue is that I have deals with hedging. As a public official in Kansas, we've thought about hedging the price of gas. The problem with hedging it is that if we hedge the price too high, we're subject to some criticism because we've locked in a price that's too high and if the market price drops below that price, hedging becomes a difficult alternative in terms of public official response.

With those comments, I conclude. Thank you very much for your time.

Mr. BARTON. Well, the answer is not to hedge it too high. You know.

Mr. HENDRIX. You tell me which price you want to—

Mr. BARTON. No, no. That's not my job. If you do it wrong though, I'm going to comment on it.

[The prepared statement of Walker Hendrix follows:]

PREPARED STATEMENT OF WALKER HENDRIX, CONSUMER COUNSEL, KANSAS CITIZENS' UTILITY RATEPAYER BOARD

My name is Walker Hendrix. I am the Consumer Counsel for the Kansas Citizens' Utility Ratepayer Board (CURB). My office advocates for the lowest public utility rates which may be established for residential and small business customers in Kansas. Like most consumer offices, CURB has been extremely preoccupied with the concerns of ratepayers over the spiking price of natural gas during this winter season.

CURB is a long time member of the National Association of State Utility Consumer Advocates (NASUCA). NASUCA is an organization of 42 state utility consumer advocate offices from 39 states and the District of Columbia.

I. INTRODUCTION

This winter has made us aware of our vulnerability to high natural gas prices. This Committee's desire to explore various issues relating to natural gas is very timely. For the most part, we, as a nation, became extremely complacent about our natural gas supply. Mild winters and relatively low natural gas prices masked any concern which we might have had about the availability of natural gas.

With low prices and an apparent abundant supply of natural gas, utility weatherization and conservation programs which had been present in Kansas during the late 1970's and early 1980's were discontinued. This lack of conservation effort also coincided with less exploration and drilling on the part of oil and gas producers. The low prices meant that we relied on existing sources supply for the natural gas we needed. Unfortunately, the existing supplies, like the Hugoton Field in Southwest Kansas were in decline. Additionally, as the economy prospered, the demand for natural gas rose, and the country committed to using natural gas for the generation of electricity.

As the commodity markets began to recognize that there was some shortfall in the storage of natural gas going into the winter heating season, a colder than normal winter aggravated the prices which were reflected on the commodity exchanges and drove the indices to record highs. Because many of the gas purchase contracts used by the industry provided for automatic escalation based on the NYMEX or related price indices (e.g., Inside FERC), the higher prices were instantly reflected in the purchase prices paid by local distribution companies. Also, because Kansas allows local utilities to flow through the cost of gas to consumers, the ratepayers experienced dramatic increases in the cost of natural gas during the winter seasons. Despite the numerous public announcements which were made about the prospect of rising natural gas prices this winter, very few consumers took action to reduce their overall consumption of natural gas.

In the aftermath of this winter's rising natural gas prices, it is apparent that our national energy policy was not sufficient enough to permit an organized response to the conditions which existed. Because of the complexity of the issues related to stabilizing the price of natural gas, it is not an easy task to develop a comprehensive energy plan. It is the hope of CURB, however, that the committee will take careful action in attempting to minimize the impact of spiking prices on consumers.

The committee must evaluate policy options with the goal of increased supply and deliverability of natural gas as well as increased conservation efforts and efficient use of this resource. By minimizing future supply and demand imbalances, volatility in price can be reduced and price spikes like those experienced this past winter will hopefully be avoided.

II. DEMAND SIDE POLICY

While it is unavoidable that demand for natural gas will increase over time, especially given the increase in gas fired electric generation capacity, the goal of a national energy policy should be to insure efficient use of our resources, and to maintain incentives and programs that allow maximum flexibility in times of market constraints.

1. Conservation and Weatherization Incentives. Conservation of energy, while once a national energy policy priority, has diminished in stature in the last decade. Where utilities once offered energy efficiency audits, offered advice on efficient energy use and provided low interest loans for new furnaces, insulation and windows, as well as other appliances and lighting, these programs, at the local utility level,

have all but disappeared. Many of the consumers hardest hit by the spike in natural gas prices this winter live in homes that would benefit from energy efficiency improvements. We must increase our efforts to give consumers the ability, and financial support, to upgrade the energy efficiency of homes and businesses. Conservation and wise use of our natural gas resources must once again become a national policy priority.

2. Price Signals. Consumers must receive accurate and timely price signals. Consumers have shown the ability to react to high prices by adjusting consumption patterns. There is ample evidence that, in response to the high gas prices this winter, consumers lowered their thermostats, closed off unused home space, purchased additional insulation and updated their furnaces and windows. (There is also this same type of evidence of consumer reaction to increased electricity prices in the San Diego, California area) Where we have failed, even though in Kansas resources were devoted to warning consumers of impending high natural gas prices, is to get the message through to consumers before the first big gas bill hits. Much of the conservation effort was in response to gas bills that were three to seven times higher than ever before. Consumers need to receive price information early, so that consumers can act to conserve, rather than having to react after the first bill comes due.

3. Fuel Switching. One of the lessons learned this past winter is that many industrial customers and other large natural gas consumers no longer maintain an alternative fuel supply that can be relied upon as a backup when natural gas is constrained and prices are high. With natural gas prices being low for a long period of time, perhaps it was not economic to maintain a backup supply. However, the lack of fuel switching ability kept many customers in the market that historically would have moved to alternative fuels. The flexibility to move to alternative fuels has the effect of freeing up gas supply in the market, and minimizing price spikes. The lack of this flexibility was perhaps a strong contributing factor to the price spike this winter. Incentives should be provided to insure a reasonable level of fuel switching ability is maintained by large customers. Maintaining a high level of fuel switching ability will provide maximum flexibility, at a national level, in times of crisis.

III. SUPPLY SIDE POLICY

Low natural gas prices, and warmer than normal winter temperatures in the last few years have masked the failure of natural gas supply and deliverability to keep pace with increased demand. While the current high prices are a potent incentive for exploration companies to get back in the market, and should have the effect over time of bringing natural gas supply back in balance with demand, exploration alone, without the ability to deliver new supplies to market in a timely manner, is not enough. Effort must be made at a national level to insure that growth in new gas supplies, and the ability to deliver these supplies to market is maintained in an even fashion, rather than in the boom or bust type of cycle that we have experienced recently.

As a long term concern, we should also keep in mind that we are not far away in time from a point where natural gas fired electric generation facilities may be competing with traditional winter heating customers for natural gas supplies and pipeline capacity in the winter months. Not only must we be concerned with adequate supply and deliverability for traditional winter heating consumers, we must not lose sight of the fact that our future energy supply mix will likely include gas fired generation in the winter months.

1. Increased Exploration and Deliverability. Exploration for new natural gas supplies must be combined with the ability to deliver any new discoveries to market in a timely manner. While current high prices may provide enough incentive to invest in natural gas gathering facilities and pipeline capacity in the short run, in the long run, a national policy must be developed that provides an incentive to make sure exploration, gathering facilities and pipeline capacity keep pace with demand, even at times when prices are low. Incentives must be developed that will keep our supply base and deliverability growing in a consistent and reasonable manner.

2. Pipeline Capacity Constraints. A concerted effort must be made to evaluate the existing interstate pipeline facilities and determine whether physical constraints impeded delivery and artificially increased gas prices to consumers. Where constraints exist, incentives must be maintained that will insure that expansion is accomplished and constraints are minimized over time.

3. Storage Capacity. It is clear that, as a nation, we are becoming more dependant of natural gas storage facilities to meet the winter peak needs of consumers. Flowing gas is inadequate to meet demand on a peak day. Effort must be made to increase gas storage facilities as well insuring that storage is full and ready for winter

consumption. One of the contributing factors in this past winter high prices was the fact that storage levels were low compared to past levels, and withdraw of gas from storage was fairly rapid during the November and December cold snap. This created the perception, whether right or wrong, that not enough storage gas would be available to meet all of the winter needs.

IV. FINANCIAL INSTRUMENTS AND HEDGING

Hedging is an issue which has received much attention in Kansas. The principle problem which must be addressed is how to fund a plan to hedge the price of natural gas. Most consumers want the lowest possible price for natural gas and are unwilling to endorse a plan which would lock in a price which is higher than the market price. Notwithstanding, Kansas has set up a pilot program which would permit a minimal contribution on the part of ratepayers in order to build a pool of funds to purchase options which would, in turn, attempt to place a ceiling on price to be paid for natural gas during next winter's season. With this winter's spiking prices, however, the spreads on the options and the amount of protection which can be afforded appears to be extremely limited.

With respect to hedging, there is a good deal of concern that the price which is obtained will be higher than the cost of natural gas next winter. A mild winter could conceivably cause the price to decline below the strike price for the options to be purchased. Should this scenario unfold, the hedging plan would come under some attack by causing customers to pay more for natural gas than would have to be paid in the market. This would be a double whammy because customers would be picking up the cost of the options as well as paying a higher price for natural gas. Consumers could obviously provide greater protection by increasing the amount of money to be spent on options or futures, but the risk of loss is so great that it does not seem likely that CURB would support committing large sums to fund a hedging plan in Kansas.

Hedging is not a practice that allows public officials much comfort. Although there are an infinite number of approaches, the risk of losing money does not make the subject readily acceptable. This is the reason that a pilot project was selected and only a minimal amount of resources will be used to establish a hedging program in Kansas.

V. CONCLUSION

Perhaps we have been lulled to sleep after so many years of abundant, inexpensive natural gas supplies. Clearly, this winter was a wake up call. This is a unique opportunity to consider national energy policy goals and potential programs that will accomplish those goals. Prices merely reflect imbalances in supply and demand. The policy goal of minimizing supply and demand imbalances over the long term can, and must be accomplished. Maintaining consistent growth in the supply and deliverability of natural gas accompanied by incentives that encourage conservation and efficient use, as well as maximum flexibility to switch between fuels, will insure that supply and demand remain in balance over time, and that consumers will be protected from the types of prices we now know can occur when supply and demand are not in balance.

Thank you for the opportunity to offer this testimony today.

Mr. BARTON. We now want to hear from Mr. Jack Hilliard who is General Manager for the Florence Utility. And he's testifying on behalf of the American Public Gas Association which represents about 4.5 million consumers of gas that's purchased through municipalities.

Your testimony is in the record in its entirety and we would welcome you to elaborate on that for 6 minutes.

STATEMENT OF JACK HILLIARD

Mr. HILLIARD. Thank you, Mr. Chairman. I seem to be the only one with a dialect here, as a Southerner, so I'll ask the—

Mr. BARTON. Sounds good to me. And Mr. Boucher doesn't have a problem with it either.

Mr. HILLIARD. Well, I'll ask the Northern Congressmen here to listen slow and I'll ask the Southern Congressmen here to listen fast. So I'll try to get through this.

Mr. Chairman, my name is Jack Hilliard and I am the General Manager of Florence Utilities in Florence, Alabama. I'm appearing on behalf of American Public Gas Association.

Mr. BARTON. Put the microphone very closely to you, Mr. Hilliard.

Mr. HILLIARD. Okay, of which Florence is a member. APGA is a national association of approximately 1,000 publicly owned local gas distribution companies in the United States serving as you said 4.6 million natural gas customers.

We thank the chairman and the committee for the opportunity to allow the public gas perspective to contribute to the national debate on energy policy. As not-for-profit entities owned by and directly accountable to our citizens, we have a consumer perspective. APGA members still buy and resell gas, whereas many investor owned distributors have stopped doing this under retail deregulation. As smaller purchasers of energy commodities and transportation service we know first hand how market power affects consumers. I know several members of this subcommittee are very well acquainted with their public gas systems. I especially want to thank Congressman Norwood, he's not here right now, of Georgia, for the leadership that he has provided APGA on tax legislation. He introduced the Municipal Utility Fairness Act last session which is now included in Senator Murkowski's comprehensive package announced this week.

APGA joins those calling for a comprehensive energy policy. We need more natural gas in the long run. In the short run we have not experienced the natural gas supply crisis. We have had a natural gas pricing crisis. We think our first step must be to identify precisely the causes of high natural gas prices that have threatened our nation's economy. Natural gas is a linchpin to the nation's energy policy. Congress must assure Americans that it is fairly priced.

The story is this, last winter we paid a wholesale price for about \$2.50, \$2.50 per MMBtu for gas. That price rose dramatically through the year to \$6 on December 1. Then by the end of December, gas reached \$10. By March, the price has fallen to about 50 percent of that level end of December. We have never seen anything like this. This is crazy. By comparison, such a rate of increase would send gasoline prices at the pump to \$5 per gallon.

The record jump in natural gas prices is fueling inflation and Mr. Greenspan has expressed his concern about the impact on consumer demand.

In Florence, we paid \$1.1 million for our gas supply in January of 2000. And we paid \$5.4 million in January 2001. As a result, many of our customers are using all of their disposal income, plus some savings just to pay the heating bill. Just this week I received a call from an 82-year-old young lady. She told me she had the choice of either buying food, buying her prescription medicine or paying her utility bill. One of our largest industrial customers, a global industry that manufacturers ceramic tile told us last week

that if we could not get the price of gas down substantially, they were closing their Alabama manufacturing facility.

Many public gas systems that merely flow through the cost of natural gas are caught in a cash-flow squeeze. Prices increased so dramatically this winter that rates did not keep pace with prices demanded by suppliers. APGA members have depleted reserves to pay their gas supply bills.

NYMEX and new private exchanges run by mega energy companies—sorry—even prices broke records, record after record this past winter. There's been no shortage of natural gas. There have been no curtailments this winter like there were electricity blackouts in California. Every firm customer that wanted to purchase gas could only at exorbitant prices.

Cavalier explanations that this past year's roller coaster prices for gas were simply the result of operation of laws of supply and demand are really not credible. The increases in demand that we have experienced cannot justify the level of prices that we pay. The question we are asking Congress to focus on is, will additional supplies of natural gas in the future prevent the price spikes that we faced this year, this past year? I know some of you have asked that question earlier.

Congress should use its investigative powers to determine whether the market allows manipulation by speculators and today's integrated energy companies.

My testimony specifies some lines of inquiries that focus on the dramatic increase in the trading of natural gas on public exchanges like NYMEX and new private exchanges run by mega energy companies. APGA does not seek to play the Washington blame game, rather, there are serious questions about the operation of the natural gas market that should be asked and answered.

We do not seek to find a bad guy, but desire to prevent this episode from replaying itself—

Mr. BARTON. I hate to cut you off, but you're about a minute over. Could you summarize in the next 30 seconds, please, sir.

Mr. HILLIARD. Yes sir. As Chairman Barton has recognized, fuel diversity for electric generation appears to be the only sound policy for our nation. Our nation is relying almost exclusively on natural gas to fuel new electric generation needs. It may very well be that our nation has stumbled into dependence upon natural gas that is making demand fundamentally more inelastic so that prices will have a strong tendency to be excessive for a long time to come.

In conclusion, let me iterate the plain truth. Our customers, your constituents are angry. They do not understand why their natural gas costs so much. And frankly, neither do we. It is our hope that a congressional investigation will provide the country with some necessary answers that must precede the adoption of the new energy policy.

Thank you, Mr. Chairman.

[The prepared statement of Jack Hilliard follows:]

PREPARED STATEMENT OF JACK HILLIARD ON BEHALF OF THE AMERICAN PUBLIC GAS ASSOCIATION

My name is Jack Hilliard, and I am the General Manager of Florence Utilities in Florence, Alabama. I am appearing on behalf of the American Public Gas Association (APGA), of which Florence is a member. APGA is the national association of

over 572 municipal and other publicly-owned local distribution systems in thirty-six states. APGA members own and operate natural gas distribution systems serving their communities. They include municipal gas distribution systems, public utility districts, county districts, and other public agencies that have natural gas distribution facilities. There are approximately 1,000 publicly-owned local gas distribution companies ("LDCs") in the United States, serving more than 4.6 million natural gas customers.

We thank the Chairman and the Committee for the opportunity to allow the public gas perspective to be heard. We hold some views that depart from the positions held by the investor-owned LDCs. Publicly-owned gas systems are not-for-profit retail distribution entities owned by and directly accountable to the citizens they serve. Also, APGA members remain in the resale business whereas many investor-owned distributors have departed the gas acquisition function under retail deregulation.

EXECUTIVE SUMMARY

APGA joins those calling for a sound, comprehensive, environmentally responsible energy policy. We do not believe that there is one solution or a silver bullet to relieve the hardship that high natural gas prices brought to Americans over the last six months. We believe, however, that Congress can take steps that will increase the supply and deliverability of natural gas, bring down prices, and ensure that adequate and reliable supplies reach our customers when needed.

We also believe that the first step Congress should take now is to investigate the reasons why many Americans are paying natural gas prices that are 400% higher than what they paid last winter. By comparison, such a rate of increase would send gasoline prices at the pump to \$5 per gallon. The increases in the price of natural gas this past year have not been incremental—they have been breathtaking and historic. Natural gas is the lynchpin to our Nation's energy policy. Congress must assure Americans that it is fairly priced.

APGA submits that the answers go beyond the simple laws of supply and demand. Yet, APGA does not seek to play the Washington "blame game." Rather, there are serious questions about the operation of the natural gas market that should be asked and answered. We do not seek to find a "bad guy," but desire to prevent this episode from replaying itself.

IMPACT OF RECENT NATURAL GAS PRICES

Last week, the Labor Department reported that the record jump in natural gas prices drove up the cost of living by 0.6% in January; this seeming revival of inflation sent stocks plummeting. On February 13, 2001, Federal Reserve Chairman Alan Greenspan testified to the Senate Committee on Banking, Housing, and Urban Affairs that consumer demand has been depressed by higher energy prices, specifically natural gas. He said:

The sharp rise in energy costs pressed down on profit margins still further in the fourth quarter. About a quarter of the rise in total unit costs of non-financial, nonenergy corporations reflected a rise in energy costs. The 12 percent rise in natural gas prices last quarter contributed directly, and indirectly through the effects on the cost of electrical power generation, about one-fourth of the rise in overall energy costs for nonfinancial, non-energy corporations; increases in oil prices accounted for the remainder.

Energy production and consumption is inextricably tied to economic growth. High natural gas prices are a threat to our Nation's economy today and may well continue to be in the future. We are increasingly dependent upon natural gas not only to heat our homes and run our factories, but also to generate electricity.

The economic impact of excessive natural gas prices is no surprise to public gas systems that have been buying this excessively priced gas. In Florence, we paid \$1.1 million for natural gas in January 2000 and \$5.4 million in January 2001. As a result, many of our customers are using all of their disposable income, plus some savings, just to pay the heating bill. Industrial customers that rely on natural gas have seen huge increases in production costs. One of our largest customers, a global industry that manufactures ceramic tile, told us last week that, if we could not get the price of gas down substantially they were closing their Alabama manufacturing facility. Nearly all of APGA's members have the same story to tell because gas that cost less than \$2.50 per MMBtu in January 2000 cost \$10.00 per MMBtu in January 2001.

It is worth noting that many consumers have not yet seen the full impact of these higher prices. Many public gas systems have delayed passing through these costs

to cushion the price shock. Many gas distributors offer level payment plans. Those consumers will see increasing levelized payments for months to come.

These extraordinary gas prices are harmful to the distribution business. These higher prices are driving up the rate of uncollectible accounts because some consumers simply cannot pay their bill. Consistent with local "turn off" policies, thousands of consumers will be shut off after the weather warms. Some of those customers will not return. Many public gas systems that merely flow through the cost of natural gas are caught in a cash flow squeeze. Prices increased so dramatically this winter that rates did not keep pace with prices demanded by suppliers. APGA members have depleted reserves to pay their gas suppliers. Some have taken out costly new lines of credit. Some of these costs will be passed along to consumers, and some of these costs will be absorbed, thus draining the ability of the city to respond to future emergencies.

CONGRESS MUST INVESTIGATE RECENT NATURAL GAS PRICES

We have witnessed an increase in demand for natural gas that has burst the so-called "gas bubble" that kept prices low in the 1990s. We did experience cold weather this winter. This winter's prices should have been higher than last winter. But natural gas prices began their historic rise last spring. No one predicted—and no one has justified—how high prices went this winter. There is reason to question whether more than the laws of supply and demand have been at work in natural gas markets. Today, prices for March deliveries have dropped to 50% of the level of prices in January. This volatility is very suspicious.

Even as prices broke record after record, there has been no shortage of natural gas. There have been no gas curtailments this winter like there were electricity blackouts in California. There have been no natural gas shortages like there were in the 1970s. Every firm customer that wanted to purchase gas could—only at exorbitant prices. Cavalier explanations that this past year's roller coaster prices for gas were *simply* the result of the operation of the laws of supply and demand are not credible. The increases in demand that we have experienced cannot justify the level of prices that we paid. APGA believes that the absence of any real shortages in the presence of tremendous price increases suggests a very real possibility of price manipulation.

In the short run, we have not experienced a natural gas supply crisis; we have had a natural gas pricing crisis. Without question, we need more natural gas in the U.S. in the long run. The Energy Information Administration's (EIA) Annual Energy Outlook 2001 predicts a 62% increase in the demand for natural gas by the year 2020. The projected demand for natural gas for electric generation makes the need for more gas supplies in this period beyond question. The question we are asking Congress to focus on is: will additional supplies of natural gas in the future prevent the price spikes that we have faced this past year? Or will we repeat this pricing crisis that is doing great harm to our Nation's economy today?

HAS CONGRESS KEPT ITS BARGAIN?

When Congress decontrolled the price of natural gas at the wellhead, the promise was for a competitive market and lower prices. That appeared to work for a few years, but it is not working today. The United States is clearly committed to reliance upon competitive markets to allocate energy supply. Yet, as we believe the past year has demonstrated, these markets are not perfect. Nor are they typical. The demand for natural gas is fundamentally inelastic. People who heat their homes and businesses with a natural gas furnace have no real substitute for natural gas. Although APGA is not aware of any current studies, the experience of our members is that industry often does not maintain an alternative fuel source that can be substituted on the basis of price. This winter should demonstrate just how price sensitive industry is today.

Moreover, today we see the near total dependence on natural gas to serve incremental electric generation demand. This electric demand is similarly price inelastic. Many new gas-fired plants reduce costs by not installing alternate fuel capability, and the demand for electricity is great. It may very well be that our Nation has stumbled into a dependence upon natural gas that is making demand fundamentally more inelastic so that prices will have a strong tendency to be excessive for a long time to come.

We call on Congress to examine the consequences of price decontrol. If an investigation finds that the market is not protecting the best interests of consumers and the American economy, Congress must act. APGA does not advocate reimposition of wellhead price controls at this time. Rather, other creative "fixes" to market distortions should be implemented once the root causes are discovered. And, certainly, any

illegal conduct associated with these high prices must be punished. The goal should be to ensure that American natural gas consumers do not experience another year like this past year.

APGA has already asked the federal agencies responsible for regulating energy for answers. APGA requested the Department of Energy (DOE) and Federal Energy Regulatory Commission (FERC) to determine the reasons gas prices were rising so quickly in June 2000, when natural gas had only doubled in price. DOE responded that the laws of supply and demand were at work so that it had a "reasonable expectation that prices will moderate over time."¹ Chairman James Hoecker told APGA that "while I expect the market to make appropriate adjustments over time, the Commission will strive to ensure that natural gas prices are set by market forces in an open and freely competitive market."² It is time for Congress to act now.

We note that H.R. 712, which was referred to the Energy and Commerce Committee on February 14, 2001, would provide for a study by the National Academy of Sciences (NAS) to determine the causes of recent increases in the price of natural gas. APGA is not certain whether a NAS study, or a Government Accounting Office (GAO) study, would be the most efficient route. We tend to believe that Congress, itself, should use its own investigative powers to bring answers as soon as possible. Market Power Concerns

We in APGA know a thing or two about market power because of who we are. The typical municipal gas system has two overriding characteristics: the natural gas that it purchases is delivered to the community through a single interstate natural gas pipeline, so there is no competition for that transportation service; and second, the typical municipal gas system is a smaller volume purchaser that buys most of its gas in the winter months and resells it to heat homes, hospitals, and factories. Its buying power is dwarfed by users like electric generators. We are very susceptible to market power. Therefore, I would like to make a few comments about how market power is contributing to the natural gas pricing crisis.

Until approximately fifteen years ago, almost all of the natural gas in interstate commerce was purchased by interstate pipeline companies from producers and then resold to distributors and end users at regulated prices. The Federal Energy Regulatory Commission (FERC) kicked pipelines out of the sales (or merchant) business in 1993, so that distributors had to make all of their purchases of natural gas in a deregulated market. This spurred the development of new natural gas marketing companies that became dominant middlemen between producers that owned natural gas assets and distributors, like APGA members, that sell to ultimate consumers.

At the onset of this new competition, APGA members were greeted by many new market players offering to sell gas and manage pipeline capacity from many new entrants that sought to fill the void created by the federally-mandated departure of interstate pipelines from the field. Since 1993, though, the number of sellers of natural gas has declined remarkably. We now see an industry resembling the airline industry, with a handful of dominant participants that keep merging with one another. The potential for the abuse of market power is growing.

These mega-marketing companies now sell most of the natural gas consumed in the U.S. Their names are Enron, El Paso, Dynegy, Williams, Reliant, Coral, and Duke. Most of these players are the same companies that recently have extracted monopoly-type profits for power sold into California. Further, these entities now have multiple corporate interests. One affiliate sells gas, another transports it, another purchases it to generate electricity. This vertical integration may be generating excessive market power.

In the past two years many public gas systems have been told by their incumbent marketer that they were no longer interested in the municipality's business. Serving small towns with gas apparently is not nearly as profitable as selling huge quantities of gas to electric generators. Elementary economics tells us that a dwindling number of sellers will yield higher and higher prices for residents of communities served by public gas systems. APGA is concerned about this trend.

And retail deregulation is not the solution. In Ohio, Pennsylvania, and Maryland, gas marketers have dropped residential consumers this winter like hot potatoes. APGA's study of Georgia's retail gas deregulation demonstrates that prices to consumers have not declined, and most consumers wish deregulation had never been passed by the state legislature. In fact, if the past year teaches us anything about

¹ Letter of Melanie A. Kendadine, Acting Director, Office of Policy, DOE, to Leslie B. Enoch, President, APGA at p. 2 (July 6, 2000).

² Letter of James Hoecker, Chairman, FERC, to Leslie B. Enoch, President, APGA at p. (July 18, 2000).

regulation, it is that states should go slow on deregulation initiatives until their consequences are better understood.

AREAS FOR INVESTIGATION

Growing, vertically integrated energy giants are exercising market power in new and dynamic ways. The methods may not yet be clear but the proof may be in their profits. Congress should use its investigative powers to determine whether these entities have engaged in price manipulation that may have caused Americans to pay excessive prices for natural gas this past year. This investigation should focus on how prices for natural gas are established in a deregulated market. APGA suggests the following lines of inquiries.

1. Natural gas has become one of the “hottest” commodities for traders and speculators. APGA understands that the amount of gas traded on the New York Mercantile Exchange (NYMEX) is many multiples of the physical capacity of our Nation’s delivery system. There appears to be a correlation between the amount of activity on NYMEX and price volatility. Congress should determine whether this activity causes American consumers to pay excessive prices for gas. NYMEX’s own rules for trading natural gas should be evaluated.

2. NYMEX recently implemented after-hours “Access Trading.” APGA understands that a considerably smaller volume of trading can significantly move the market on Access Trading than is the case during NYMEX open trading, causing the next day’s market to open at a price significantly different from the previous day’s settlement price. APGA further understands that this has occurred with some regularity. Congress should determine whether this trading has contributed to the excessive increase in natural gas prices that the Nation has experienced.

3. Natural gas is also traded increasingly on private exchanges. Enron, Reliant, and others perform billions of dollars of energy financial transactions each year. The impact of this relatively new phenomenon on prices paid by consumers is not well understood. APGA is concerned that the largest sellers of natural gas are increasingly also making a market for gas sales, and that there is the potential for manipulation of prices through this means.

4. Much natural gas is priced under daily and monthly indices in the open market. Many APGA members, for example, purchase their gas at the so-called “Index Price.” The methods used to establish these indices is an appropriate area for investigation. If there are too few buyers and sellers, or if buyers and sellers have skewed motivations, the resulting index will be distorted.

5. For the natural gas business to grow, more reserves must be developed. APGA understands that producers lost the incentive to explore for gas when prices were depressed in recent years. Yet, the modest increase in prices experienced in the beginning of 2000 appeared to be adequate to throw the throttle wide open on exploration and production efforts. APGA understands that prices in the range of \$3.00 per MMBtu are adequate to stimulate supply efforts.³ So what accounts for the prices that are multiples of that price level? With the participation of marketers so pervasive, gas that sells for \$10 per MMBtu does not necessarily return \$10 to natural gas producers on whom we rely to explore and develop new gas reserves. And if producers retain the full price, the resulting revenue has been much more than producers could have possibly invested in new exploration, so that some are using the monies to repurchase stock rather than find new supplies. Congress should question whether the monies paid by consumers are funding adequately further exploration and development necessary to supply the Nation with natural gas in the long run.

6. Mega-marketers have affiliates in the electric generation business. As has been noted widely, our Nation is relying almost exclusively on natural gas to fuel new electric generation needs. This dependence appears to be putting quite a bit of upward pressure on prices paid by all natural gas consumers. To put it bluntly, the largest sellers of gas are increasingly our major competitors for the purchase of gas, and they may have relatively little concern for its price because of the price at which they can sell the resulting gas-fired electricity. If major purchasers of gas lack an incentive to obtain the lowest price, the impact on the market is perverse. All aspects of the use of natural gas for electric generation and the relationship of marketing affiliates should be better understood.

Finally, Congress must remember that the interstate transportation of natural gas remains subject to regulation under the Natural Gas Act for good reason. There is no workable competition for natural gas transportation services in the vast major-

³Statement for the Record of the APGA Before the U.S. Senate Committee on Energy and Natural Resources Hearing on the Status of Natural Gas Markets (Dec. 12, 2000).

ity of American markets because only one interstate pipeline renders the service there. There are no choices in those markets. Multiple pipeline connections do not necessarily eliminate pipeline market power either. Although the FERC has appeared to recognize this economic reality even as it has embraced so-called light-handed regulation in recent years, its policies are often harmful to captive shippers. Congress must exercise vigilant oversight over this agency to ensure that interstate pipelines are not permitted to exercise their monopoly power.

Congress should be alarmed at the consequences of the great consolidation of interstate pipeline companies. In the past decade, more than two dozen independent pipeline companies have been merged into a handful owned by El Paso Energy, Williams, Enron, and Duke. Some consumers have invested capital to make a new pipeline connection only to see its traditional supplier acquire the new pipeline. These issues could well be the subject of another hearing.

NEED FOR A COMPREHENSIVE ENERGY POLICY

APGA calls on Congress and the President to enact new energy legislation that will produce desirable results in the short- and long-term. We agree with Chairman Barton that all energy options must be explored. All of the policies and activities must be consistent with the following overarching goals:

- Our nation's energy policies should strive to ensure an affordable, reliable and secure supply of energy.
- Our nation's energy policies should promote the most efficient use of an energy source.
- Our nation's energy policy should rely on a balanced portfolio of source fuels.
- Our nation's energy policy should be consistent with sound environmental practices.

In the short term, Congress should commence an investigation of recent natural gas prices, as discussed above. As noted, natural gas is the key to the Nation's energy future, and it must not be subject to price manipulation. In the course of this review, it may become clear that public data on the operation of energy markets should be expanded. The Department of Energy's Energy Information Administration (EIA) may require additional resources to provide data adequate to monitor the energy market.

APGA believes that higher energy prices require an increase in funding for the Low-Income Home Energy Assistance Program (LIHEAP). APGA concurs with Senate Resolution 26 calling for supplemental appropriations for LIHEAP, and supports the goal of H.R. 683/S. 352, the Energy Emergency Response Act of 2001, to increase LIHEAP funding to \$3.4 billion for each of fiscal years 2001 through 2005.

APGA supports legislation that clarifies that long-term, prepaid purchases of natural gas by public entities can be funded with public debt. These transactions enhance reliability and yield lower prices for consumers.

The federal government also can invest in more research and development for the natural gas industry. Our Nation's energy policy should provide tax credits for distributed energy resources, including but not limited to natural gas fuel cells, turbines, microturbines, reciprocating engines, and natural gas cooling and desiccant systems. Federal government agencies should review existing rules and standards periodically to ensure that promising technologies, such as distributed energy resources that offer diversity of supply and other benefits are not discouraged from market entry.

Similarly, our Nation's energy policy should increase federal funding for research, development, and demonstration for sustained and improved natural gas system reliability and integrity, infrastructure expansion, and reasonable natural gas prices and rapid commercialization of new on-site natural-gas equipment advances that would provide lower emissions, greater North American energy reliability, and sustain America's leadership in energy technologies.

At the same time, the Congress should commence a new initiative to encourage energy conservation. Any balanced policy must create correct financial incentives to enhance energy efficiencies. Along with energy conservation goes the development of equipment so that demand can be price-responsive in a timely fashion.

Finally, we must determine the most environmentally sound methods of increasing energy supplies for our country. These are very difficult determinations, and APGA sees the debate as just beginning. Although natural gas burns cleanly, the environmental price to be paid to produce the next incremental amount may be more than the production of clean coal, or even nuclear power. The key question may be, however, assuming environmental hurdles are cleared: what entities will construct these expensive base load plants? As the franchise-based utility structure dissolves in the U.S., will other entities step in to fill that void? To date, there is

no evidence that the market will support the construction of such plants. The less costly natural gas-fired units are all that we are seeing today.

It is becoming increasingly clear that the single greatest flaw in current energy plans for the U.S. is the near complete reliance upon natural gas as the "fuel of choice" for electric generation. It appears to APGA to be folly for our Nation to build new power plants that can burn only natural gas. We cannot prudently create a giant new class of consumers whose demand is wholly price inelastic—without almost guaranteeing increases in gas prices in the market. Fuel diversity for electric generation appears to be the only sound policy for our Nation. In addition, we must ensure that there is sufficient pipeline capacity to prevent capacity constraints in key markets from causing enormous increases in the price of delivered gas controlled by marketing companies at state borders and city gates. It is important to note that we are in the beginning of this expansion of gas-fired electric generation. Only a fraction of what generation capacity is planned were operational in 2000. A new energy policy must address all available sources of energy as well as energy conservation.

In conclusion, let me reiterate the plain truth: our customers—your constituents—are angry. They do not understand why their natural gas costs so much. Frankly, neither do we. Nor have the federal agencies charged with regulating energy provided good answers. It is our hope that a Congressional investigation will provide the country with some necessary answers that must precede the adoption of a new energy policy.

Mr. BARTON. Thank you, sir.

We now want to hear from Mr. Jas Gill, who is the Vice President of Manufacturing for CYTEC Industries in Westwego, is that right, Louisiana, which happens to be in Congressman Tauzin's District. Chairman Tauzin's District. My understanding is that you're a manufacturer that produces fertilizer, is that correct?

Mr. GILL. Produces ammonia.

Mr. BARTON. Ammonia. Produces ammonia. We welcome you. Chairman Tauzin wanted to be sure that I gave you a personal welcome on his behalf since he couldn't be here this afternoon. We put your testimony in the record in its entirety and we would welcome you for 6 minutes to elaborate on it. And really be—flip that switch and speak clearly into the microphone.

STATEMENT OF JAS GILL

Mr. GILL. Thank you, Mr. Chairman, and the committee. I really appreciate the opportunity to be able to talk to you.

I'm here today to be presenting the Louisiana Chemical Association, an organization of 74 companies that are in the business of chemistry. At over 100 locations across Louisiana, we manufacture the building blocks that go into every consumer product you can imagine. We directly employ some 30,000 men and women, 24 hours a day, 7 days a week and 365 days a year and account for another quarter million jobs in the State. I have served as LCA's Chairman and remain on its Board of Directors.

Louisiana's chemistry business ships over \$20 billion worth of products annually, ranking behind Texas and New Jersey. Over one third of these shipments are exported and help narrow America's trade deficit.

We use natural gas, and we use a lot of natural gas. In fact, the industrial sector accounts for almost 10 percent of all the natural gas consumed in the United States. We use it as feedstock, sometimes called raw material, for some of the most basic building blocks in chemistry, ethylene, and for other critical production pathways like ammonia.

We also use it to efficiently and in an environmentally sound manner generate electricity and steam which in turn are used in the production of caustic soda and chlorine, one of the world's most versatile, beneficial products of chemistry. When chlorine is joined with natural gas derivatives, it appears in everything from contact lenses to prosthetic devices to computers. Chlorine and caustic soda combine to bleach paper white and are found in the bleaches used in the homes. For feedstock and generation purposes, industry of Louisiana uses nearly 1 trillion cubic feet of natural gas a year and this does not include the natural gas used in the public utilities that provide us with huge blocks of electricity.

As I mentioned earlier, natural gas is used as a raw material or feedstock for consumer product building blocks. In this context, natural gas is like wheat and flour are to a bakery shop. If Mr. Tauzin were here, he'd understand that. A baker makes bagels, bread, rolls and yes, Mardi Gras King Cakes from his raw materials. From derivatives of natural gas, industry makes dinnerware, auto parts, furniture, foam insulation, appliances, pens and pencils, pipe, paints, food wrap, roofing, house siding, safety glasses, detergents, rocket fuel, CD-ROMS and just about everything else from drilling mud conditioners to life saving pharmaceuticals.

And then there's ammonia, one of the most critical products that comes from natural gas. This portion of my testimony addresses the concerns of Louisiana Ammonia Producers. This is a group of seven companies that operate eight facilities in Louisiana that produce 40 percent of the ammonia consumed in the United States. Eighty percent of the ammonia is used in the fertilizer industry to provide food stuff and fiber for the United States and to the world.

The high demand for natural gas that has led to high natural gas prices has had devastating impact on the ammonia industry this winter. One of our processors at the CYTEC plant makes anhydrous ammonia which itself is a raw material for the manufacture of several specialty chemical products on the site I manage. Therefore, I'm very familiar with this segment of the industry.

When producers purchase natural gas to make ammonia, it is measured in British Thermal Units or BTUs. As you're aware, the price of natural gas went from approximately \$2 per million BTUs 1 year ago to around \$10 per million BTUs this past December. In other words, the price of basic raw material more than quadrupled within a year. Natural gas makes up over 80 percent of the cost of making ammonia and this does not include the additional costs associated with the purchase of gas for public power. There simply is no way that these higher costs could be absorbed or passed along in higher fertilizer prices.

As the direct result of natural gas prices, one Louisiana ammonia plant closed in the latter part of 2000. In addition, all but two of the Louisiana eight remaining ammonia facilities were completely idled for much of December, all of January and part of February. The two that continue to operate did so at reduced rates. Future construction plans are also shelved for the time being.

When our plants reduce production or are shut down completely, our employees and their families suffer economically. Beyond this, however, is the problem these curtailments portend for the nation's farmers who may face shortages of and high prices for fertilizers.

These costs will invariably reverberate in the American economy and mean high prices for essential foodstuffs.

Natural gas prices have declined to \$5 and \$6 and four of our ammonia producers have resumed partial production. The two that have continued producing are now at full capacity. One of our members continues to be completely shut down.

We have reopened to help meet farmers' spring needs for fertilizer. However, natural gas is still around three times the cost of gas prices last year and the future remains guarded.

While this winter has been a terrible time for the ammonia industry, we're deeply concerned about what will happen to natural gas prices during the heat of this summer and the cold next winter. Already, we're anticipating plants reducing production with some additional shutdowns during the summer months.

There's a continuing concern for other chemical sectors as well. Polyvinyl chloride producers of Louisiana, for example, have either curtailed production because of high gas prices or are considering to do so.

Without a reliable and stable supply of natural gas at reasonable prices, Louisiana's chemical industry cannot stay globally competitive. This is especially true when foreign governments subsidize natural gas inputs into their production processes and are able to export commodities to U.S. prices well below our manufacturing costs.

Mr. BARTON. Mr. Gill, you're about a minute over. Could you try to summarize in the next 30 seconds, please, sir?

Mr. GILL. Yes sir. We ask you to develop an energy policy that recognizes it is in the nation's interest to place high priority on natural gas by first, acknowledging the essentiality of natural gas as a feedstock, raw material, and building block that is critical to the business of chemistry and to the American economy.

No. 2, encouraging domestic exploration in previously untapped areas to enable our competitive market system to work, thus assuring an abundant supply of natural gas at rational prices.

Third, and for the longer term, creating Regional Economic Clusters. These clusters would fully develop and utilize local and regional natural resource bases so as to protect our local economies and employment and our national economic, agricultural and defense interests by leveraging technological capabilities to assure global competitiveness and the effective investment of capital.

Thank you very much.

[The prepared statement of Jas Gill follows:]

PREPARED STATEMENT OF JAS GILL, VICE PRESIDENT, MANUFACTURING, CYTEC INDUSTRIES, INC.

Mr. Chairman and members, good afternoon, and thank you for the opportunity to discuss a subject of vital concern to America's national interest in general and to the Louisiana economy in particular.

My name is Jas Gill. I am the Vice President of Manufacturing for CYTEC Industries, Inc., located at 10800 River Road in Westwego, Louisiana.

CYTEC is a specialty chemicals and materials company. Our chemical complex at Fortier that I manage has more than 550 fulltime employees working in maintenance, administration and eight different production units.

I have the privilege of being a constituent of Chairman Tauzin of Chackbay, Louisiana, and a former constituent of one of your newest members, Congressman Chris John of Crowley. My testimony will, therefore, be bi-partisan not only by desire, but by necessity.

I am here today representing the Louisiana Chemical Association, an organization of 74 companies that are in the business of chemistry. At over 100 locations across Louisiana, we manufacture the building blocks that go into every consumer product you can imagine. We directly employ some 30,000 men and women, 24/7/365, and account for another quarter million jobs in the state. I have served as LCA's Chairman and remain on its board of directors.

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For feedstock and generation purposes, industry in Louisiana uses nearly one trillion cubic feet of natural gas a year. And this does not include the natural gas used by public utilities that provide us with huge blocks of electricity.

As I mentioned earlier, natural gas is used as a raw material or feedstock for consumer product building blocks. In this context, natural gas is like wheat and flour are to a bakery shop. A baker makes bagels, bread, rolls and, yes, Mardi Gras King Cakes from his raw materials. From derivatives of natural gas, industry makes dinnerware; auto parts; furniture; foam insulation; appliances; pens; pencils; pipe; paints; food wrap; roofing; house siding; safety glass; detergents; rocket fuel; CD-ROMs; and just about everything else from drilling mud conditioners to life-saving pharmaceuticals.

And then there is ammonia, one of the most critical products that comes from natural gas. This portion of my testimony addresses the concerns of the Louisiana Ammonia Producers. This is a group of seven companies that operate eight facilities in Louisiana. *They produce 40 percent of the ammonia consumed in the United States. Eighty percent of that ammonia is used for fertilizer that farmers apply to provide food and fiber to the United States and to the world.*

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Natural gas makes up over 80 percent of the cost of making ammonia, and this does not include the additional costs associated with the purchase of gas or public power *for electricity*. There was simply no way that these higher costs could be absorbed or passed along in higher fertilizer prices.

As a direct result of high natural gas prices, one Louisiana ammonia plant closed in the latter part of 2000. In addition, all but two of Louisiana's eight remaining ammonia facilities were completely idled for much of December, all of January and part of February. The two that continued to operate did so at reduced production levels. Future construction plans at these facilities have also been put on hold.

When our plants reduce production or shut down completely our employees and their communities suffer economically. Beyond this, however, is the problem these curtailments portend for our nation's farmers who may face shortages of . . . and high prices for . . . fertilizer. These costs will invariably reverberate in the American economy and mean higher prices for essential foodstuffs.

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There is continuing concern in other chemical sectors as well. Polyvinyl chloride producers in Louisiana, for example, have either curtailed production because of high gas prices or are considering do so.

Without a reliable and stable supply of natural gas at a reasonable price, Louisiana's chemical industry cannot stay globally competitive. This is especially true when foreign governments subsidize natural gas inputs into their production processes and are able to export commodities to the US priced well below our manufacturing costs.

We ask you to develop an energy policy that recognizes it is in the national interest to place a high priority on natural gas by:

First, acknowledging the essentiality of natural gas as a feedstock, raw material, and building block that is critical to the business of chemistry and to the American economy; and

Second, encouraging domestic exploration in previously untapped areas to enable our competitive market system to work, thus assuring an abundant supply of natural gas at a rational price; and

Third, and for the longer term, creating Regional Economic Clusters. These clusters would fully develop and utilize local and regional natural resource bases so as to protect our local economies and employment and our national economic, agricultural and defense interests by leveraging technological capabilities to assure global competitiveness and the effective investment of capital.

Thank you for your attention, and I will answer any questions you might have at the appropriate time.

Mr. BARTON. Thank you, Mr. Gill.

Last, but certainly not least, we want to welcome Mr. Patricio Silva who is a Project Attorney for the Natural Resources Defense Council. And we give you the award for looking the sharpest at 5 o'clock in the afternoon. I don't know how you do that, but you look like you're fresh and ready to go. So we put your statement in the record in its entirety and we welcome you to elaborate on it for 6 minutes.

STATEMENT OF PATRICIO SILVA

Mr. SILVA. Mr. Chairman, thank you for the opportunity to appear today and I'm sure to the benefit of everyone and their relief as well, I'm going only going to take about two or three.

I am the Midwest Activities Coordinator for the Natural Resources Defense Council and my testimony or my remarks will address the contribution natural gas can make to an environmentally and economically sound national energy policy. I'm also the co-author of NRDC's recently released energy report, "A Responsible Energy Policy for the 21st Century" available on our website and attached for the record which details what we regard as a sensible, sustainable, national energy strategy.

The Natural Resources Defense Council is a national nonprofit organization of scientists, lawyers and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC serves more than 400,000 members.

Of the three fossil fuels that dominate the U.S. energy market, natural gas is by the far the cleanest burning fuel. It is therefore a key part of NRDC's energy policy—the bridge to greater reliance on cleaner and renewable forms of energy.

But natural gas is not sufficiently clean to be considered the long-term answer to America's energy needs. In particular, explo-

ration and production of natural gas can cause substantial and irreversible harm to sensitive ecosystems.

Increased energy efficiency in homes and factories not only would lower consumers' energy bills, it would free up large amounts of natural gas to help meet the needs of new highly efficient combined-cycle—combustion and steam turbine—power plants. Stronger and better-enforced building codes augmented by tax incentives for constructing buildings that exceed code requirements would pay a double dividend: lowering heating and electric bills, and providing for less pollution. For example, tax incentives for the construction of energy efficient buildings and for manufacturing energy-efficient heating and water-heating equipment could save approximately 300 trillion cubic feet of natural gas over a 50-year period.

It's important to point out that with natural gas that the issue is less about the need to find new supplies than the need to develop infrastructure to deliver existing supplies to market. Development of a safe, comprehensive pipeline infrastructure is critical. NRDC believes that pipelines should be constructed and operated in an environmentally sensitive manner with strong safety measures and oversight whenever possible along existing routes. For example, plans to construct an offshore pipeline off the Arctic National Wildlife Refuge coastal plain should be rejected. Instead, if Prudhoe Bay gas supplies are needed to serve the markets in the lower 48 States, any Prudhoe Bay natural gas pipeline should follow the Trans-Alaskan Pipeline System and the Alaska-Canadian Highway right-of-ways; undergo a thorough, new environment impact statement review; comply with all U.S. and Canadian environmental laws and incorporate the best pipeline safety and environmental measures.

Despite assertions from drilling proponents, it is not necessary to drill in sensitive areas to meet America's energy needs. For example, industry is pressing to drill in sensitive areas of the Outer Continental Shelf, including offshore Alaska, the eastern Gulf of Mexico and areas where a moratorium on drilling has been in place for many years. But such drilling is unnecessary because 70 percent of the nation's estimated undiscovered economically recoverable Outer Continental Shelf oil and gas is located outside of these areas.

In particular, the Central and Western Gulf of Mexico contains some of the largest reserves and there are no restrictions on exploration or leasing in those areas.

Domestic natural gas has rebounded from its historic lows in early 1999 as earlier testimony has indicated. Rising natural gas prices are driving the renewed interest in natural gas exploration in existing production regions, in Oklahoma, Texas and Kansas. What we hear from the industry time and again is that shortages of skilled labor and a reluctance to invest in new drilling equipment is currently one of the main constraints on increased natural gas production. This indicates that access to public land is not necessarily a chief or principal constraint.

One of the areas of highest concern for NRDC are some of the—excuse me.

I'd just like to actually wrap up. Natural gas—

Mr. BARTON. You're doing real good and you're the last one, so—

Mr. SILVA. Okay, let me go back. Remember, you asked me to do this.

Mr. BARTON. I know. We want a complete record and you've been a very patient person.

Mr. SILVA. Natural gas production on some public lands will continue to be necessary, but some areas within the Federal public land system merits special protection. Existing protections for areas such as the Rocky Mountain Front and wild National Forest roadless areas should be maintained. Other unique and irreplaceable areas also merit protection, even though they are currently open to production.

Most onshore and offshore Federal public land is the property of all Americans and are managed by the U.S. Forest Service and the Bureau of Land Management and the Minerals Management Service. Despite assertions to the contrary, onshore and offshore Federal public lands being closed, almost 95 percent of Federal public lands in the Rocky Mountains managed by the Bureau of Land Management are open today to exploration and production leasing. Similarly, more than 80 percent of estimated undiscovered economically recoverable offshore gas resources are open to exploration. Few Federal onshore lands are off limits to any harmful activity, including oil and gas leasing and development. Many have already been leased and many are being developed.

I'll wrap it up right there.

[The prepared statement of Patricio Silva follows:]

PREPARED STATEMENT OF PATRICIO SILVA, PROJECT ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL

KEY RECOMMENDATIONS:

- Maximize the benefits of existing natural gas supplies by increasing efficiency: provide tax incentives for the construction of energy-efficient buildings and for manufacturing energy-efficient heating and water-heating equipment.
- Develop and maintain infrastructure to deliver gas supplies: adopt a comprehensive pipeline approach ensuring that pipelines are constructed and operated in an environmentally sensitive manner, with strong safety oversight, full compliance with all environmental laws and, whenever possible, along existing routes.
- Reject plans to construct an offshore pipeline along the Arctic National Wildlife Refuge coastal plain.
- Plan an Alaska gas pipeline if needed to deliver Prudhoe Bay gas to the lower 48 states that follows the Trans-Alaska Pipeline System and the Alaska-Canadian Highway right-of-ways; complies with all U.S. and Canadian environmental laws; has a thorough, new environmental impact statement; and incorporates the best pipeline safety and environmental measures.
- Do not drill in sensitive offshore areas, including the moratorium areas, off Alaska and in the eastern Gulf of Mexico.
- Maintain existing protections for sensitive onshore public lands and extend protection to other special places.

My name is Patricio Silva, and I represent the Natural Resources Defense Council, where I am the Midwest Activities Coordinator on energy and air quality matters. Thank you for the opportunity to appear before you today. My testimony will address the contribution that natural gas can make to an environmentally and economically sound national energy policy.

I have been active on national energy policy issues for over seven years. Recently I have been involved with the siting of natural gas-fired combined cycle combustion turbines power plants and natural gas pipeline expansions across the United States. I am also co-author of NRDC's recently released energy report, "A Responsible Energy Policy for the 21st Century," available on our website www.nrdc.org and attached for the record, which details what we regard as a sensible and sustainable

national energy strategy. I hold a bachelor's degree in government from Colby College and a juris doctor from the University of Arizona College of Law.

The Natural Resources Defense Council is a national nonprofit organization of scientists, lawyers, and environmental specialists, dedicated to protecting public health and the environment. Founded in 1970, NRDC serves more than 400,000 members from offices in New York, Washington, Los Angeles, and San Francisco.

Of the three fossil fuels that dominate the U.S. energy market, natural gas is by far the cleanest burning fuel. It is, therefore, a key part of NRDC's energy policy—the bridge to greater reliance on cleaner and renewable forms of energy.

MANAGING SUPPLY BY REDUCING DEMAND

But natural gas is not sufficiently clean to be considered the long-term answer to America's energy needs. In particular, exploration and production of natural gas can cause substantial and irreversible harm to sensitive ecosystems. Increased energy efficiency in homes and factories not only would lower consumers' energy bills; it would free up large amounts of natural gas to help meet the needs of new highly efficient combined-cycle (combustion and steam turbine) power plants. Stronger and better-enforced building codes augmented by tax incentives for constructing buildings that exceed code requirements would pay a double dividend: lower heating and electric bills, and less pollution. For example, tax incentives for the construction of energy efficient buildings and for manufacturing energy-efficient heating and water-heating equipment could save 300 Tcf of natural gas over 50 years.¹

INFRASTRUCTURE ISSUES

It is important to point out that with natural gas the issue is less about the need to find new supplies, than the need to develop infrastructure to deliver these supplies to market.

Increasingly, it is getting the existing gas supplies to the market that is the biggest challenge. Development of a safe, comprehensive pipeline infrastructure is critical. NRDC believes that pipelines should be constructed and operated in an environmentally sensitive manner, with strong safety measures and oversight, and, whenever possible, along existing routes. For example, plans to construct an offshore pipeline off the Arctic National Wildlife Refuge coastal plain should be rejected. Instead, if Prudhoe Bay gas supplies are needed to serve markets in the lower 48 states, any Prudhoe Bay natural gas pipeline should follow the Trans-Alaska Pipeline System and the Alaska-Canadian Highway right-of-ways; undergo a thorough, new environmental impact statement; comply with all U.S. and Canadian environmental laws; and incorporate the best pipeline safety and environmental measures.

EXISTING SUPPLY

Despite assertions from drilling proponents, it is not necessary to drill in sensitive areas to meet America's energy needs. For example, industry is pressing to drill in sensitive areas of the Outer Continental Shelf, including offshore Alaska, the eastern Gulf of Mexico, and areas where a moratorium on drilling has been in place for many years. But such drilling is unnecessary because 70 percent of the nation's estimated undiscovered, economically recoverable Outer Continental Shelf oil and gas is located outside of these areas.

Some have also suggested that natural gas production is a reason to drill in the Arctic National Wildlife Refuge. In reality, industry interest in the Arctic Refuge is driven by its desire to produce oil, not gas. The Arctic Refuge is estimated to contain less than 7 Tcf of natural gas resources; about a three-month supply by the time the resources could be developed.² By comparison, the Prudhoe Bay production area is estimated to contain 32 Tcf to 38 Tcf of natural gas resources.³ Gas produced in Prudhoe Bay is currently reinjected because there is no way to transport it to market. If a natural gas pipeline were built to connect Prudhoe Bay to the lower 48

¹ Interlaboratory Working Group, *Scenarios for a Clean Energy Future* (Oak Ridge, Tennessee; Oak Ridge National Laboratory and Berkeley, California, Berkeley National Laboratory (ORNL/CON-476, LBNL-44029)) (November 2000). The "Advanced" electricity scenario shows total gas demand increasing from current levels of about 22 Tcf to 26 Tcf in 2010, while total CO₂ emissions are reduced.

² John Schuenemeyer, USGS, *Assessment Results, The Oil and Gas Resource Potential of the Arctic National Wildlife Refuge 1002 Area, Alaska*. USGS Open File Report 98-34 (1999). Chapter RS Table RS14.

³ T.J. Glauthier, deputy secretary of energy, testimony before the Senate Committee on Energy and Natural Resources, September 14, 2000.

states it would take at least 30 years before all of the natural gas could be brought to market.

Domestic natural gas exploration has rebounded from historic lows in early 1999, when 371 natural gas drilling rigs were reported in service as wellhead prices fell below \$2 per Tcf. As wellhead gas prices recovered, and then doubled, natural gas exploration surged; 840 natural gas drilling rigs were reported in service in November 2000.⁴ Rising natural gas prices are driving the renewed interest in natural gas exploration in existing production regions in Oklahoma, Texas and Kansas.⁵ Shortages of skilled labor and reluctance to invest in new drilling equipment currently are limiting natural gas production, indicating that access to public lands is not a constraint.

Most onshore and offshore federal public lands, the property of all Americans, are managed by the U.S. Forest Service, the Bureau of Land Management and the Minerals Management Service.⁶ Despite oil industry assertions that onshore and offshore federal public lands are closed to exploration and production of oil and natural gas, 95 percent of federal public lands in the Rocky Mountain region managed by the Bureau of Land Management are open to exploration and production leasing.⁷

Similarly, more than 80 percent of estimated undiscovered, economically recoverable offshore gas resources are open to exploration. Few federal onshore lands are off limits to *any* harmful activity, including oil and gas leasing and development. Many have already been leased and developed.

SPECIAL PLACES AT RISK IN THE WESTERN UNITED STATES

The areas of focus for natural gas exploration in the lower 48 states onshore include the Rocky Mountain region, where in addition to reserves associated with oil deposits, unconventional resources such as tight sands and coalbed methane are attracting particular attention. The Bureau of Land Management, as of July 2000, had issued 12,000 drilling permits for coalbed methane exploration in the Wyoming Powder River Basin to 112 companies, with 6,000 wells drilled and 2,500 in production. This amount of activity significantly exceeds forecasts for coalbed methane exploration and production. According to a 1995 BLM forecast, approximately 5,000 coalbed methane exploration wells would be drilled; two years ago the forecast jumped to 10,000; and last year, to 15,000. By mid-1999, the forecast hit 30,000, and, by the spring of 2000, 50,000 to 70,000 wells were projected for the Powder River Basin on private, state and federal lands.

When widespread oil and gas leasing occurs in the Rockies, the result is heavy-duty industrialization. Well fields, which can cover extensive acreage, are accompanied by a dense web of power lines, pipelines, waste pits, and new or upgraded roads, along with processing plants and other production facilities. All this activity displaces deer, antelope and other wildlife species from their native ranges and has ruined wilderness values on millions of acres. Every year, visibility is significantly impaired in many places on many days by emissions from industrial operations. These same emissions have contributed to acidification of sensitive bodies of water.

Natural gas production on some public lands will continue to be necessary, but some areas within the federal public lands system merit special protection. Existing protection for areas such as the Rocky Mountain Front and wild National Forest roadless areas should be maintained. Other unique and irreplaceable areas also merit protection, even though they are currently open to exploration and production.

For example, hidden away in the southwestern part of Wyoming, the Red Desert boasts a unique and spectacular landscape—one of the most remarkable in North America. The area has stunning rainbow-colored rock formations, towering buttes, prehistoric rock art and outstanding wild lands. It is home to the largest pronghorn antelope herd in the lower 48 states as well as a rare desert elk herd. For centuries, the Red Desert has been a sacred place of worship for the Shoshone and Ute tribes and it contains remnants of the Oregon and Mormon Pioneer trails. Oil wells, pipe-

⁴Energy Information Administration, *Annual Energy Outlook 2001*, DOE/EIA-0383(2001) (December 2000), pp. 30-32.

⁵Jim Yardley, "Oil Patch Comes To Life As Natural Gas Prices Climb," *New York Times*, December 16, 2000 pp. A1, A16. In December 2000 some 1,090 drilling rigs were reported in service, with more than 800 drilling rigs exploring for natural gas, a significant increase over a year ago when fewer than 400 drilling rigs were reported in service, but still modest in comparison to the 1970s and 1980s when more than 4,500 drilling rigs were reported in service.

⁶The Bureau of Land Management is responsible for administering oil and gas exploration and production leasing on all onshore BLM lands, while the Mineral Management Service of the Department of Interior manages oil and gas leasing on the outer continental shelf surrounding the US coastline. They are separate sections of the Department of Interior.

⁷The Rocky Mountain region consists of Colorado, Montana, New Mexico, Utah and Wyoming—the five Western states that are significant oil and gas producers.

lines, excessive roads and other industrial facilities already mar some of the surrounding desert land. In response to industry applications to lease, the Interior Department recently committed the BLM to develop a proposal that focuses on protecting the area's outstanding natural, cultural and aesthetic wonders.

Another example, Utah's famed red rock country, is one of the last unspoiled wilderness areas outside of Alaska. Its red-hued massive cliffs, arches, towers and other rock formations support bighorn sheep, mountain lion, pronghorn antelope, peregrine falcons, golden eagles and other wildlife species as well as ancient Native American ruins. Last year BLM attempted to lease more than 30,000 acres of sensitive, irreplaceable wild lands in red rock country—bringing them closer to industrialization and the certain destruction of their wilderness, wildlife and other values.

Still another special place is the area in and around Vermillion Basin in north-west Colorado—one of the state's most stunningly beautiful and isolated regions. Its wild landscape is dotted with banded cliffs, desert mountains and rugged badlands. The area is surrounded by oil and gas development that threatens to encroach into Vermillion Basin. Despite the passage of time, the area looks much as it did when the Ute Indians' ancestors first hunted and lived there. If oil and gas development pressures are permitted to intrude further on the unique *de facto* preserve, the landscape will be changed forever.

OFFSHORE LEASING, EXPLORATION AND DEVELOPMENT

From Big Sur to the spectacular coast of Maine, to the Florida Keys and back to Alaska's Bristol Bay, some of America's most important national coastal treasures have been protected so far from offshore oil and gas development by Congress and by two presidents—George H.W. Bush and Bill Clinton.

Large reserves of natural gas are located in the federal waters of the central and western Gulf of Mexico, which are open to oil and gas leasing. This area is estimated to contain 60 percent of the undiscovered economically recoverable oil resources and 80 percent of the undiscovered economically recoverable gas resources estimated to be available in the entire United States Outer Continental Shelf (OCS), according to the Minerals Management Service.⁸ Thus, protecting sensitive offshore areas, including the moratorium areas, offshore Alaska and the eastern Gulf of Mexico still leaves the vast majority of the nation's Outer Continental Shelf oil and gas available to the industry.

Some argue that natural gas development on the Outer Continental Shelf should be promoted, including in the moratorium areas, most notably off the Atlantic and the west coast of Florida. They argue that the risk of oil spills is negligible, and that environmentally sound development can take place. Their argument ignores the reality that oil spills are not the only environmental concern related to OCS development. Offshore gas development, like oil development, causes substantial environmental damage. Furthermore, leases for natural gas exploration also could open the door to oil development.

Beginning in the George H.W. Bush administration and continuing throughout the 1990s, the Interior Department emphasized the need to proceed on a consensus basis with OCS activities. NRDC strongly agrees with this approach and submits that consensus has been clearly established on the appropriateness of OCS activities in most areas of the country. This consensus has been reflected in the consistently broad, bipartisan support for the existing congressional moratoria on leasing outside the central and western Gulf of Mexico. The moratoria have been endorsed by an array of elected officials from all levels of government and diverse political persuasions, from former Gov. Christine Todd Whitman of New Jersey to Gov. Jeb Bush of Florida and Gov. Gray Davis of California.

Political support for the moratoria in the affected states stems from concern over the severe environmental, social, economic and cultural damage associated with offshore oil and gas development, including:

Onshore damage: The onshore infrastructure associated with offshore oil or gas cause significant harm to the coastal zone. For example, OCS pipelines crossing coastal wetlands in the Gulf of Mexico are estimated to have destroyed more coastal salt marsh than can be found in the stretch of land running from New Jersey

⁸U.S. Department of the Interior, Minerals Management Service, *Outer Continental Shelf Petroleum Assessment 2000* (2000) p. 5, and *Gulf of Mexico Assessment Update*. Assumes mean estimates of undiscovered, economically recoverable resources at \$18/barrel oil, \$2.11/Tcf gas.

through Maine.⁹ Moreover, the industrial character of offshore oil and gas development is often at odds with the existing economic base of the affected coastal communities, many of which rely on tourism, coastal recreation and fishing.

Oil spills: If offshore areas are leased for gas exploration there is always the possibility that oil also will be found, creating the risk of oil spills. According to MMS statistics, some 3 million gallons of oil spilled from OCS oil and gas operations in 73 incidents between 1980 and 1999.¹⁰ Oil is extremely toxic to a wide variety of marine species, including marine birds, mammals and commercially important species of fish. In the wake of the devastating Exxon Valdez oil spill, scientists at the National Marine Fisheries Service's Auke Bay Lab found that concentrations of polycyclic aromatic hydrocarbons (PAH)—the most toxic component of oil—as low as 1 part per billion were toxic to juvenile pink salmon.

Water pollution: Drilling muds are used to lubricate drill bits, maintain downhole pressure, and serve other functions. Drill cuttings are pieces of rock ground by the bit and brought up from the well along with used mud. Massive amounts of waste muds and cuttings are generated by drilling operations—an average of 180,000 gallons per well.¹¹ Most of this waste is dumped untreated into surrounding waters. Drilling muds contain toxic metals, including mercury, lead and cadmium. Significant concentrations of these metals have been observed around drilling sites.¹²

A second major polluting discharge is “produced water,” the water brought up from a well along with oil and gas. Offshore operations generate large amounts of produced water. The Minerals Management Service estimates that each platform discharges hundreds of thousands of gallons of produced water every day.¹³ Produced water typically contains a variety of toxic pollutants, including benzene, arsenic, lead, naphthalene, zinc and toluene, and can contain varying amounts of radioactive pollutants. All major field research programs investigating the fate and effects of produced water discharges have detected petroleum hydrocarbons, toxic metals and radium in the water column down-current from the discharge.¹⁴

Air pollution: Drilling an average exploration well generates some 50 tons of nitrogen oxides (NO_x), 13 tons of carbon monoxide, 6 tons of sulfur dioxide, and 5 tons of volatile organic hydrocarbons. Each OCS platform generates more than 50 tons per year of NO_x, 11 tons of carbon monoxide, 8 tons of sulfur dioxide and 38 tons of volatile organic hydrocarbons every year.¹⁵

CONCLUSION

Natural gas is the cleanest burning fossil fuel. NRDC supports increased utilization of natural gas in high efficiency combined combustion turbine for the generation of electricity. Energy efficiency should be the primary source of this incremental natural gas supply to the power sector. NRDC supports responsible expansion of natural gas pipeline infrastructure where needed. NRDC opposes, and sees no need for, natural gas development in sensitive areas.

Mr. BARTON. Thank you. You're very conscientious. You hit it right on the button.

The Chair is going to recognize himself for 5 minutes in the question period and we are going to hold everybody to 5 minutes, but if you want to ask additional questions, we'll certainly try to do that.

My first question is a general question. According to EIA numbers that I have, we are importing about 20 percent of our natural gas. How many people think that it would be a good policy to adopt a goal of being self-sufficient in terms of natural gas production and consumption? In other words, that we actually produce the natural gas that we consume in this country?

⁹Boesch and Rabalais, eds., “The Long-term Effects of Offshore Oil and Gas Development: An Assessment and a Research Strategy.” A Report to NOAA, National Marine Pollution Program Office at 13-11.

¹⁰MMS, 2000. Gulf of Mexico OCS Oil and Gas Lease Sale 181, Draft Environmental Impact Statement (DEIS), pp. IV-50.

¹¹MMS, 2000. Gulf of Mexico OCS Oil and Gas Lease Sale 181, Draft Environmental Impact Statement (DEIS), p. IV-50.

¹²*Id.*

¹³*Id.*, p. IV-32.

¹⁴*Id.*, p. IV-32-33.

¹⁵*Id.*, p. IV-40.

Who wants to take a shot at that? Ms. Luxbacher?

Ms. LUXBACHER. I'll be glad to.

Mr. BARTON. Just turn that on.

Ms. LUXBACHER. Just turn it on? We're importing, as you know, natural gas from our neighbor to the north, Canada, so we have very good relations.

Mr. BARTON. And LNG.

Ms. LUXBACHER. And then a small bit of LNG that comes obviously from many places around the world. So directionally, there's a cost if you say I want to become 100 percent energy efficient and produce all of our natural gas from here. We in the base case have a land access issue.

So generally, we would say that's not the goal. The goal should be to have policies that promote and allow us to produce economically our resources here in this country and to work with our neighbors to the north and potentially to the south on increasing the gas flow back and forth between the two countries, because Canada now and into the future is going to be a very viable supply for this country.

Mr. BARTON. Mr. Jordan, do you want to—

Mr. JORDAN. Yes sir. I believe that we all recognize that we're now importing over 55 percent of our oil and while I believe that we have to look at our gas situation as a North American box, so to speak, so that we're talking about both Canada and the United States and of course, as well as Alaska, lower 48 and—

Mr. BARTON. That just means the House is going out of Session.

Mr. JORDAN. Thank you. I think it's important that we adopt long-term policies that encourage getting our supplies mainly from that North American area. I think that while we obviously have to have the LNG we have today and I know there's some LNG projects that are already now on the books and they're being financed, probably as we speak, I'm sure some of those are going to be necessary, but I would hate to see the day that our domestic industry would be saddled for natural gas like we are for oil, so that I think that it's very important and we're so far from doing it now, I think it's very important that we emphasize North America to the extent possible.

Mr. BARTON. Without answering the question whether we should do it as a national policy, if it were adopted as policy to be self-sufficient in natural gas, could we do it?

Mr. JORDAN. I believe that the National Petroleum Council study shows us that we could do it and I think the industry studies show that we could do it, but we'd have to have the right kind of—

Mr. BARTON. But we couldn't in oil.

Mr. JORDAN. That's right.

Mr. BARTON. We just don't have the capability in oil, but the Panel would agree we do. Whether we should or not is an open question, but that we could be self-sufficient in natural gas?

Mr. JORDAN. It looks to us like we could. Now there's better experts than I am.

Mr. BARTON. Now on the economics of the Alaska Gas Pipeline, my guess would be those that support it would want to do a pipeline that was actually a pipeline all on land and we didn't have to liquify at Valdez and then transport that. Can we do a natural gas

pipeline from Alaska that is totally—well, obviously, we can't, be totally on U.S.—we have to go through Canada at some point in time.

Is the route that was certificated in the 1970's, is that the most economic route or would we want to look at a different route that would go more toward the east through a larger part of Canada?

Who wants to answer that question? Ms. Luxbacher?

Ms. LUXBACHER. I'll be glad to answer that. Right now we have a joint producer group in Alaska looking at that very question, what is the most economic pipeline that can be built from the Alaskan North Slope to bring that gas in through Canada and then into U.S. markets. And not only the most economic, but along with the least environmental impact, the goal being to deliver the gas competitively into the marketplace. And it can come over land. There's two primary routes, a southern route that goes south through Alaska and that's the Alaskan Highway route and then there's a northern route that goes through Beaufort and down through the McKinsey Valley of Canada.

Mr. BARTON. And if you choose a northern route, then we'd have to do additional legislation or an additional environment impact statement?

Ms. LUXBACHER. It's our understanding at this time that that would not be necessary. FERC has indicated and I think Chairman Hébert's comments are they believe they have the ability and are willing to look at that route also.

Mr. BARTON. My time has expired. I've got one more question. According to EIA, the next 20 years we're going to need 393 gigawatts of additional generating capacity for electricity in this country. I think a gigawatt is a thousand megawatts. Is that right?

So I tried to convert that, gigawatts to megawatt power plants and I came up that we need, if you assume a 500 megawatt power plant, we need to build 800, approximately 800 500-megawatt power plants which is approximately 40 per year. EIA says that 92 percent of those are going to be fired by natural gas.

Now EIA may be right. EIA may be wrong, but their base case is nuclear power is not an option and coal is not an option because of environmental concerns. But assuming that EIA is right, do we have the production capacity in this country to produce enough additional natural gas to fire 40 additional 500-megawatt natural gas combined cycle power plants per year each year for the next 20 years?

Who wants to answer that question? Mr. Jordan?

Mr. JORDAN. I again refer to the National Petroleum Council's study. I believe that if we had the right kind of policy—what we've done is we put all our eggs in the natural gas basket and we've closed the lid of the basket so that we do not—so that we're not able to access some of the larger areas that we need to access and it's a multitude of—it's not one policy or one decision that locks us off from that acreage. It's a combination of endangered species issues, roadless policies, monument designations, etcetera. All these decisions have blocked us off from that. We can't do it we don't make the right kind of balance. And the thing that I think we have to change our philosophy on is we can, we sent people to the moon, etcetera. We're a can do country. We can both produce

the gas that we have and protect the environment to the extent even further than advocates want to.

Mr. BARTON. It just seems that like if EIA is even close and they're a very conservative agency in their assumptions that we're sucking up all our natural gas for power generation and not leaving any for Mr. Littlefair to power his vehicles. We're not leaving any for Mr. Hilliard to heat his homes and cook their food and we're not leaving any for Mr. Gill to use in his ammonia process. I mean we really need to think through this because that's a lot of electricity and saying that natural gas is going to fire it all, we have the question, can we produce it in an environmentally responsible way that Mr. Silva is concerned about. There's just a lot of issues here.

I'm going to recognize Mr. Boucher for 5 minutes.

Mr. BOUCHER. Thank you very much, Mr. Chairman. I want to join with you and simply say a word of welcome to this Panel and to thank each of you for your patience and for taking the time to educate this committee. You've done an excellent job and the material you've presented to us will be extremely helpful as we evaluate this set of issues.

Ms. Campbell, I want to give you, just if you would, briefly to recap gas prices as they stand today and according to current projections, what gas prices will be next year and perhaps through the year 2005. They're roughly at \$5, \$6, I think, at the present time and where do you see those going over the course of the next 5 years?

Ms. CAMPBELL. The forecast for this year, 2001, is approximately \$5. And then there's a decline that's expected for the year 2002 to about \$4.50. At this point in time we do have projections for those prices to continue to decline through the rest of the decade and then to begin to resume a slight increase over—out to the 2020 time period.

Mr. BOUCHER. You say a decline over the balance of the decade. That's some number lower than \$4.50.

Ms. CAMPBELL. Yes.

Mr. BOUCHER. What is the valley that you expect these prices to achieve?

Ms. CAMPBELL. Actually, the forecast at this time sees some falling to the \$3 range and then resuming.

Mr. BOUCHER. What year do you expect them to reach the \$3 range?

Ms. CAMPBELL. We actually expect it to reach below \$3 in approximately 2004 and then to build again.

Mr. BOUCHER. Okay, why do they build again?

Ms. CAMPBELL. Well, they build again because in response partly to the earlier comment by the Chairman, we do have a very strong forecast for demand and increased electricity generation. We do expect that is the area in which demand will grow most and natural gas will, I think, take a market share of approximately 36 percent by the end of our forecast period, 2020, where it is now something in the order of 16 percent of electricity generation. So that's a very strong additional source of demand.

Mr. BOUCHER. And did the Chairman correctly cite your statistic when he said that the projection is that 90 percent of the new elec-

tricity generating capacity will be gas-fired? Is that your conclusion?

Ms. CAMPBELL. Yes, that is correct. However, I should note that in the year 2020, I'm glad you confirmed the Chairman, in the year 2020, coal will still be our leading fuel for electricity generation.

Mr. BOUCHER. I'm sorry, will you say that again?

Ms. CAMPBELL. Coal will still be our leading fuel for electricity generation in the year 2020.

Mr. BOUCHER. And so I guess you would say that the other 10 percent of new generating capacity is fueled by something else. Is that coal?

Ms. CAMPBELL. Coal has a small increase in its market share as well and I think there's an expectation of new alternative renewable resources.

Mr. BOUCHER. I'm a little bit surprised at your pessimism with regard to coal as a fuel for new electricity generation.

I personally know of a number of large investor-owned utilities that are now looking very seriously at coal as the fuel for new plants that they are planning. There are a number of independent power producers that are now planning to build coal-fired facilities and I think you might want to take another look at that projection because we're going to have a hearing on that very subject and examine coal as a fuel and I think you will see there is a considerable body of opinion that coal is going to be a more substantial fuel for new coal-fired, new electric-generating plants than perhaps your numbers suggest.

Well, thank you very much. I appreciate your testimony today.

Mr. Hilliard, I want to give you an opportunity to talk a little bit more about the concerns that you have that perhaps the significant increase in gas prices has not been driven entirely by the legitimate supply and demand equation. As you have suggested in your testimony that perhaps there's been some market manipulation and you've suggested a course of inquiry for this committee to examine whether or not that manipulation is taking place and we appreciate that suggestion.

Let me ask you if you have any evidence or examples or if you want to even talk about hearsay, you know, this is not a court, you're entitled to do that. You're not under oath.

We would be interested in knowing what you believe may be happening in the market as a way, perhaps, to enlighten the inquiry that we could undertake.

Mr. HILLIARD. I know that when the AGA, for instance, for an example, when you see an AGA storage report come out and it shows us that we have very little gas in storage and if the weather looks like we're able to put gas into storage, the market goes up. And if we see the weather turning warm where we're looking at, maybe some electric generation going on, we see the market pricing go up. And so those are some of the things that we see that lead us to believe that there might be some market manipulation going on. And certainly an increase in price from what we've seen, \$2.50 to \$10 is more than, certainly much, much more than it takes to see the drilling rig activity going. In fact, we were seeing drilling activity go at \$4 and \$5, turn on real strong.

Mr. BOUCHER. So your evidence is really more anecdotal and you're just suggesting that perhaps there's a problem. You don't have any direct allegation of a problem?

Mr. HILLIARD. I don't have a direct allegation, but I think that's something that we need to look at, that Congress needs to look at to make sure that we're not carrying forward a problem in the national energy policy. We need to understand what happened in the marketplace and if there was some manipulation in the market, we need to fix that before we carry it forward in a national energy policy.

Mr. BOUCHER. Thank you, Mr. Hilliard. Thanks, Mr. Chairman.

Mr. BARTON. Before we recognize Mr. Bryant, Mr. Jordan, if you came back out of this hearing and went back to Ohio and were fired up to drill more natural gas wells, how long would it take you to get a rig to drill an existing site? If you called your contractor tomorrow and said, I want a rig, how long would it take?

Mr. JORDAN. Unfortunately, I'm not characteristic. Ohio is a very small oil and gas patch and we have a fairly good situation. There aren't very many people drilling and I could probably get a rig probably within 60 days.

Mr. BARTON. In Texas, it's about 6 months right now, 4 to 6 months.

Mr. JORDAN. I realize that and I've heard that from our members. And we've drilled—

Mr. BARTON. So I should come to Ohio and rent your rig up there and then haul it down to Texas because I could get it in 2 weeks.

Mr. JORDAN. I wouldn't be surprised. But it varies. It's very localized and it depends on where your rigs are and I know how bad it is for people like in Midland and East Texas where there's a lot of activity and I've heard lots and lots of—

Mr. BARTON. And Louisiana.

Mr. JORDAN. And Louisiana, that's right.

Mr. BARTON. I know Mr. Hilliard is not implying that people would withhold rigs from the market, but it's very difficult now because prices were so low, now that they're back up, people want to drill sites can't get the equipment and I know one site in Louisiana that somebody's been trying to get drilled for several years and nobody was interested because of the economics. Now that the economics are right, they can't get a rig. So it's kind of a self-defiant purpose.

Mr. Bryant for 5 minutes.

Mr. BRYANT. Thank you, Mr. Chairman. I too would like to follow up with Mr. Hilliard a little bit. I don't think there's any question that the long-term situation that we're all talking about today beginning with our Chairman and the first Panel and all of you agree, well, maybe an exception or so here, agree that long term, our demand is going to dramatically increase and I guess how we address that in terms of the supplies is at issue. But if I might devote a little bit of time to what Mr. Hilliard mentioned and Mr. Boucher followed up on, I've had the same type of complaint from some of the distributors back in my District about this possible manipulation and I'm just—Mr. Hilliard, your association, you're president of what association?

Mr. HILLIARD. No sir, I'm not the president. I'm just representing—

Mr. BRYANT. Okay, how many members are in that association?

Mr. HILLIARD. There's about 572 members of the association. There's about 1,000 municipal systems in the country.

Mr. BRYANT. And these are the people who distribute the gas to the individual houses?

Mr. HILLIARD. Yes, that's right.

Mr. BRYANT. During this time we're talking about in December, January, did anyone actually have a shortage or was there always gas to purchase?

Mr. HILLIARD. I'm not aware of any shortages of firm gas, of someone who was purchasing gas on a firm basis. I'm not aware of any shortages of natural gas on that basis if you were willing to pay the price.

Mr. BRYANT. That's what I was told by one of the biggest purchasers in Tennessee that in times past, when there were shortages, they literally could not keep the gas flowing through the pipes. But this time there was gas to be purchased, but then again you had to pay a premium price for that.

Is anyone here familiar with an example of where there actually was a shortage that nobody could purchase power?

Mr. Hendrix?

Mr. HENDRIX. I think in the latter part of December in the mid-continent area if you went out and tried to buy gas, it was very difficult. You might have been able to buy it at \$13 an Mcf. And those were the initial bids that came in at the beginning of the trading day. If you didn't buy it on those bids, the price would probably relax itself back down to \$10, but because the people with alternate fuel capabilities weren't switching at the tail end of December, if we had gone into January and had the same extreme cold that we had at the tail end of December, it probably would have had to have been some curtailments because there just was no gas available in the mid-continent area or at least in the Kansas City area and that's based on talking with the LDCs that were out in the market every day. But it didn't transpire and once the fuel switching capability did start kicking in, and the weather moderated in January, we were home free.

Mr. BRYANT. I would agree, I think, with Mr. Hilliard and I don't know—Mr. Boucher is gone, but it's possible that we might have that as a future, some consideration for future hearing just to look at that.

I think we all know how the markets work and the mercantile exchange. Certainly I was told by someone who used to trade in that commodity that that's what happened in this case. He's pretty confident—of course, he's not there anymore so I don't know. Obviously, there are all kinds of other factors that figure into opinions by people. But certainly, hopefully, just a one time situation and I know we're here today to talk about the bigger picture. And I was glad to hear Mr. Boucher. I don't have coal in my State, in Tennessee, that much, but Mr. Whitfield next to me stepped out and he always is a defender of coal. I think again from your calculations, I think the possibility, the probability of using coal in the fu-

ture to help, I think, is perhaps underestimated and I certainly hope so. I think coal is a very viable product, fuel for future use.

I had a question also, Ms. Campbell, for you, just for my clarification. I noticed in some of your numbers you had on the \$9 cost percentage on a dollar, the breakdown, like 35 percent was the cost of the gas. Do you remember those numbers? And 47 percent was the cost of the distributor's tariffs and so forth and then 18 percent was a long-haul on the dollar.

Ms. CAMPBELL. I think you're referring to material that was prepared and presented in this brochure?

Mr. BRYANT. It could have been. It's in a document like this in my material.

Ms. CAMPBELL. Yes. We prepared a number of these brochures early in the fall and have updated them accordingly, trying to determine exactly what the components of residential consumer costs are. That may be what you're referring to?

Mr. BRYANT. Could you explain to me? Mr. Reiten, I think is gone, but he said, if I understood correctly, that this was kind of a pass through for the distributors? I understand local distributors don't make a lot of money. They recapture some of their investment, but what is this—are they the ones that are paying, account for 47 percent of the dollar? What is that 47 cents?

Ms. CAMPBELL. Those charges change over time. We have had to update the estimates of exactly how much of the residential consumers bill is accountable for the commodity price versus the interstate shipping price and how much of it is from the local distribution companies charges and the taxes and things of that type.

So it has changed over the course of the last few years and in the last year, particularly. When we did this looking at the winter of 1999, of course, the prices of natural gas were quite low, the commodity cost was very low. And that meant that the shipping costs and the local distributions costs were much higher proportion of the total cost for the consumer. But this has changed this winter. That's what has happened.

Mr. BARTON. The gentleman's time is expired. The gentleman from Oklahoma, Mr. Largent is recognized for 5 minutes.

Mr. LARGENT. Thank you, Mr. Chairman. Mr. Campbell, I have a question for you. If we were to turn back the clock to December 1999 or January 2000, what was the EIA predicting the gas, the price of gas for February of 2001?

Ms. CAMPBELL. I need to phone a friend. Higher, but not this high is what they advised me.

Mr. LARGENT. Give me a range, \$3?

Ms. CAMPBELL. Certainly, I would have thought that it would have been no higher than that, given what we had seen in the previous winter, this year.

Mr. LARGENT. Mr. Wadlington, I had a question for you. You have your chart up here and we appreciate that. I guess I just need an explanation because it seems as if there's an apparent conflict here because I'm reading Mr. Silva's testimony and here he says "despite oil industry assertions that onshore and offshore Federal public lands are closed to exploration and production of oil and natural gas, 95 percent of Federal public lands in the Rocky Mountain region managed by the Bureau of Land Management are open to

exploration and production leasing.” And that Rocky Mountain area is in the footnotes, consists of Colorado, Montana, New Mexico, Utah and Wyoming. And yet, your chart kind of leads one to believe that there’s 137 trillion cubic feet that is at least restricted, if not inaccessible because of Federal regulations.

Mr. WADLINGTON. That is correct. The Rocky Mountains have significant deposits of natural gas and the National Petroleum Council has estimated at 137 trillion cubic feet is unavailable because of restrictions for drilling.

Mr. LARGENT. So does that mean that you just can’t drill there or you just can’t drill there economically because of the restrictions?

Mr. WADLINGTON. It means you can’t drill there because of the restrictions. If they remove the restrictions, you could economically develop the gas.

Mr. BARTON. I’ve been told that in New Mexico in the San Dugrane Basin the problem is not the drilling permit. The problem is to build a road to the site to bring the pipe in. But the Bureau of Land Management won’t let them build a road. So it may be some of this is, Mr. Silva is correct and it’s not off limits for drilling permits, but because of the various permits on transportation and infrastructure improvement, you just can’t get those. Would that be a possible answer?

Mr. WADLINGTON. I think it’s all of the above, would be the way to categorize it. You have the inability to drill for environmental reasons. You have the inability to build roads for environmental reasons. You have—

Mr. BARTON. Because if you can’t get to it, it doesn’t matter if you’ve got the permit to drill.

Mr. WADLINGTON. Right.

Mr. LARGENT. Mr. Silva, that would lead me to you to say wouldn’t this statement in your testimony be a little misleading to say 95 percent is open for drilling, but when in reality it’s open, you can go drill there, but you can’t transport it out of the drilling site or you can’t even get equipment to the drilling site because there’s no roads that are allowed to be built. There’s a restriction. As the Chairman said, you can’t even build a road to get the equipment in there. Wouldn’t that be a little bit misleading, this 95 percent figure then?

Mr. SILVA. Not in the context of the actual applicable regulations and what a developer wants to drill in the area has to apply.

Mr. LARGENT. Wait, that sounds like a lawyer answer.

Mr. SILVA. I’m sorry, I am a lawyer.

Mr. LARGENT. I’ve met more lawyers that apologize for being lawyers, but go ahead.

Mr. SILVA. It’s that season. First of all, I’d be happy to provide written detailed explanation from the staff that specializes in this issue.

Mr. LARGENT. Thank you.

Mr. SILVA. But my understanding with it is that there is development on many Federal public lands and there are different sets of regulations for National Forests Service properties and for Bureau of Land Management. The restrictions vary depending on which re-

gion and what the management plan status is for oil and natural gas development.

In many cases, there are very few restrictions and I'd just like to note on the NPC chart there, the footnote actually specifies that approximately of that, 137 that they—31 Tcf are closed to development and then a note that 112 are available with restrictions.

Now I haven't reviewed the NPC natural gas study, but if they're calling, having to file for a permit, getting it approved and then the separate road construction permit, if they're defining this as being restrictions, meaning that they impede immediate access within a 60 or 90 or 120 day period, then that statement, I guess, would be accurate, the way they put it, but if you're actually recognizing that there are, and this applies also to offshore leasing, most of the permits are actually handled within about 180 days.

Now whether there are ancillary permits that they have to go through and I'm totally passing right by State and off the top of my head, Colorado, Montana, New Mexico have quite different regulations.

Mr. BARTON. I am told and I haven't verified this, but on Federal lands in the west, you have to get 321 different permits. That's a number I've been told, 321. Now if that's even half true, you know, in a technical sense we have a lot of the sites that are accessible, but in a real sense if you have to get that many permits and each permit takes so many months, then they're really not available.

Mr. LARGENT. This will be my last question too, Mr. Chairman, but I guess that would lead me to this question, Mr. Silva, and I'd appreciate you getting back with me on this, two things. Would you agree and your organization agree with me that it's permissible to drill, but in reality you can't get a permit to get to the drilling site, would your organization agree that that is not accessible gas?

Second of all, would you agree that if you have to get 321 permits before you can drill that that also would be deemed unaccessible reserves?

Mr. SILVA. Just as an aside, I would be fascinated to find out where the 321 figure comes from because that's—I think it's quite obvious that if you can't get physical access to a lease area to get the equipment on there. Now, I do know—

Mr. LARGENT. So you're saying even you would think that's not accessible?

Mr. SILVA. That would not be accessible. I do know of regions where there have been leases granted where there actually—the geography doesn't provide for a road into the area and they have been forced to helicopter the equipment in and how they got the gas out or oil or whether or not it was simply for purposes for drilling an exploratory well to find the periphery of a particular deposit or for other seismic research purposes, I'm not aware. But I know there have been a few examples of those in the literature. But certainly, in both cases, that's not accessible.

Mr. LARGENT. Thank you. Thank you, Mr. Chairman.

Mr. BARTON. The gentle lady from California is recognized for 5 minutes.

Ms. BONO. Thank you, Mr. Chairman, and also thank you all and the Panel for staying so long. My question is for Mr. Jordan. What

would be the impact of cost plus price controls on the independent producers?

Mr. JORDAN. I think we have a history. Any price controls have a history of basically creating a shortage. We have a great deal of history that shows us that. That's what developed. I got to go through the last natural gas situation back in the 1970's where there really truly was a shortage and was created by the price controls under the Natural Gas Act which were later rescinded.

The price controls basically stifle the very thing we have to have which is more drilling. And what we did when price controls were taken off back in 1978, but actually price controls had sort of slipped away even before that, what we did was we started drilling so many wells that we created what we called in our industry the so-called gas bubble and that gas bubble just about killed all of us because we essentially were, people were going broke all over the country. And I'll show you a graph here which shows, it's my favorite graph because it shows that the number of so-called registered and oil operators in this country, the people that get the permits in Ohio, Pennsylvania, West Virginia, California, etcetera, fell from about 13,000 in 1984 to 2,000 in 1999. The reason for this and I'm always asked why it is, it's mergers, acquisitions, bankruptcies and obituaries and if our industry is so great and we're running off with so much money, why have we had this result? And until that graph showed that increase and we started to drill again, and we started to improve the number of wells drilled, this was going to continue and that's what created this crisis and if we had price controls we would go right back into this same situation.

Ms. BONO. Second question also for Mr. Jordan. In your testimony you say that capital markets have not shifted to supporting the energy sector. In your opinion, what are the reasons for this when prices for natural gas are at an all time high?

Mr. JORDAN. What I was basically saying was that for small and medium sized producers capital access still remains a very difficult situation. I'm not quite sure why. For a long time it was because the returns in our industry did not measure up to returns from other investments, especially during the dot com period. And we basically couldn't get capital. Now I believe most of the time we drill essentially off our cash-flow. The problem is that the small and medium size producers don't have that much cash-flow and they often have a bigger appetite. And the little guys drill a lot of the wildcats, even when the big guys do some great geology, they often get the little guys to go and take the chances, ultimately to drill those wildcat wells. And those are the people that have the capital formation problems today, not necessarily the whole industry.

Ms. BONO. Thank you. Are there tax reforms that are specific to marginal wells and can you explain why marginal wells operate on a different financial basis than large producers?

Mr. JORDAN. Yes, I can. Is that addressed to me?

Ms. BONO. Yes sir, it is.

Mr. JORDAN. I welcome the opportunity. We have a lot of our reserves for old, marginal, very low producing wells in this country. They're very low. When prices fall to very low levels, those wells tend to get plugged or abandoned or essentially fall into disrepair.

If we do not—if we have what I would call a triggered marginal well tax credit, for instance, and there are a lot of ways you can do it, which would only apply if the price of natural gas fell to some relatively low level and it would essentially move to protect those wells to keep them from being plugged prematurely because once that old well is plugged, those reserves that remain and those wells may produce forever. Ohio has the largest number of—of what we call stripper gas wells of any place in the Union, so I'm very familiar with those kind of wells.

We keep them alive by tender loving care, but when times get as bad as they were about 2 to 3 years ago, we couldn't even, there are just not enough economic incentives to keep the wells going. So the reason that the margin well tax credit has been suggested as a way to keep those wells from being prematurely plugged is because it's about the only thing we can do to protect them.

I personally don't like tax gimmicks to do things, but I think this is a realistic way to protect marginal wells and for that reason I certainly support the position of our membership that supports that.

Ms. BONO. Thank you. Thank you, Mr. Chairman.

Mr. BARTON. That concludes our questions. I am very tempted with this many experts and me the only one with Congresswoman Bono to have at you again, but it's almost 6 o'clock and you all have planes to catch and dinner to eat.

I do want to challenge you with one thing. We're going to do a series of energy hearings in this subcommittee in the next 2 months and at the conclusion of that we are going to attempt to come up with a comprehensive energy strategy in conjunction with the Senate and the President. So I want you to go back to your associations and think through the role that natural gas should play in a comprehensive energy strategy. Some of the questions that I ask, should we try to become self-sufficient in natural gas production? Should we make some specific allocations for end uses? What do we need to do in the capital market? Are speculators such a large part of the natural gas futures market that we need to work with the SEC and the markets to try to put some limits on who plays in those markets?

On the environmental side, I hope our environmental community will work with us to look at some tradeoffs here. I think you can make an argument that the production sector is some of the most environmentally sensitive folks in the country and if we can be met halfway by environmental allies, we can probably come up with a way that both sides feel that they're in a win-win situation.

Natural gas is in the envious position as far as I know there's not too many folks that object to increased use of natural gas because it is an environmentally benign fuel source. We don't have that situation with coal. We're going to have to work very hard to bring coal back in a big way. We certainly don't have that with nuclear power. We're going to have to work very hard to bring nuclear power in as an option. We don't have the luxury on the oil side to actually say okay, we want to become independent. Can't happen. But natural gas is the one thing that's on the table right now, it's 23 percent of our energy consumption. The resource base is there. The environmental issues are much clearer and much easier to

work with, so this is one that short term and long term has a lot of potential.

So think through some of these issues with your associations, check with Mr. Boucher and myself, any member of the subcommittee on either side of the aisle that you feel comfortable with because in anybody's calculus, this is going to be a big part of our energy strategy.

With that, I want to thank you. We'll probably have written questions. We hope that you answer them expeditiously because the President's Task Force on Energy wants to make its recommendations to the President within the next 2 months.

This hearing is adjourned.

[Whereupon, at 5:42 p.m., the subcommittee was adjourned.]

[Additional material submitted for the record follows:]

PREPARED STATEMENT OF THE AMERICAN CHEMISTRY COUNCIL

The American Chemistry Council¹ welcomes the subcommittee's examination of the nation's highly volatile natural gas markets and hopes this hearing marks the beginning of a much-needed and long overdue focus on developing a long-range national energy policy.

The business of chemistry supports energy policies that will achieve two major goals: ensure environmental protection, now and for future generations; and provide reliable and affordable energy to all Americans.

A comprehensive national energy policy is vitally important to the business of chemistry. Natural gas and other energy inputs are the lifeblood of our industry. We use natural gas and other energy products as raw materials that go into thousands of products that make people's lives better, safer, and healthier and to fuel our operations. In fact, the business of chemistry converts some \$20 billion in energy inputs into more than \$200 billion in products found in every American home, office, and automobile.

Many of the products we make from natural gas and other energy inputs help to make the nation more energy-efficient. Insulation materials and lightweight plastics are two examples of energy-saving products made from energy raw materials. The business of chemistry will play a vital role in making America a more responsible energy-using nation.

Reliable and affordable energy has helped make America's business of chemistry globally competitive. *We are the nation's largest export industry.* Selling into global markets supports nearly one-third of the one million Americans employed by the business of chemistry.

Unstable markets and rising domestic energy prices are pricing key segments of the business of chemistry out of world markets. In the span of one short year, America's business of chemistry balance of payments (trade surplus) has shrunk by 60 percent and may result in extended plant shutdowns and layoffs.

Here a few examples of how recent volatility in natural gas and electricity markets is disrupting operations at chemistry facilities across the country.

- A chemical plant in Chicago has recently seen dramatic increases in natural gas prices. In the year 2000, natural gas spending was 6.5% of the manufacturing budget and today, with nearly the same output natural gas, now consumes 20% of the plant's manufacturing budget. Spending on natural gas has now overtaken the plant's spending on wages.
- A small Louisiana electro-chemicals producer eked out a modest operating profit of about \$700,000 dollars in 1999. In 2000, the producer lost about \$500,000. In 2001, if the plant operates at budgeted rates throughout the year, it will lose at least \$6,000,000. The cause of the mounting operating losses is rapidly esca-

¹The American Chemistry Council represents the leading companies engaged in the business of chemistry. Council members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. The Council is committed to improve 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 business of chemistry is a \$460 billion enterprise and a key element of the nation's economy. It is the nation's largest exporter, accounting for ten cents of every dollar in US exports. Chemistry companies invest more in research and development than any other business sector.

- lating energy costs. The plant's cost of power increased by 32% in 2000 and is expected to increase by another 40% in 2001, and there is no relief in sight.
- Because of the exceedingly high cost of electricity in the Seattle Washington area, local production of liquid nitrogen and oxygen via an Air Separation Plant was shut down. On some days the cost of power spiked to more than 35 times the normal price. Without local production, hospitals and industry in general are faced with shortages. Oxygen and nitrogen are products vital to public health and the safe operation of many industries such as the refining and chemical industries. Many end users of oxygen and nitrogen in the western United States who can get industrial gases are faced with surcharges, distribution fees, and shortages.
 - An elemental phosphorus plant near Pocatello, Idaho, employing 440 employees and many contract workers, scaled back operations because of high electricity costs. The plant uses four huge electric arc furnaces to melt rock in extracting phosphorus during the production process. Approximately 100 employee and contractor jobs were displaced. Normally the plant's annual electricity cost is \$45 million which translates to \$125,000 per day. If the plant were to operate at full production today, which it cannot afford to do, that electricity cost would be approximately \$750,000 per day or \$275 million on an annualized basis.
 - A composites manufacturer (produces unsaturated polyesters) experienced utility costs of \$513,653 in January 2000. In January 2001 its costs were \$1,067,095. That's an increase of \$554,342. Almost all of this is due to the price of natural gas. Styrene is the manufacturer's number one raw material—the USA has gone from being the low-cost supplier to the high-priced supplier in under 5 months, mainly driven by increases in natural gas prices. The same company's emulsion plant experienced a 67% increase in energy cost mainly due to natural gas. In January 2000, the company paid \$305,600 for natural gas purchases. In January 2001, the bill was \$759,600.

Last year will be remembered as the year the economics of natural gas fundamentally and dramatically changed. Short-term conditions (largely weather related) can be blamed for prices quadrupling in the span of months and gas stocks falling to one-third of historic levels.

The short-term crisis in gas markets has masked the beginning a long-term structural shift in the economics of natural gas. The Energy Information Administration projects that demand for natural gas for generating electricity will triple over the next two decades even as other uses for gas (residential heating, industrial processing) also grows.

- Total natural gas demand is expected to increase from 21.4 trillion cubic feet in 1999 to 34.7 trillion cubic feet in 2020, about 3.2 trillion cubic feet higher than projected in *AEO2000*.
- The expected increase in natural gas demand through 2020 is primarily due to projected rapid growth in demand by electric generators, which is expected to triple between 1999 and 2020, excluding cogenerators.

It's easy to understand why power-generators are increasing their use of gas to make electricity. It is a clean-burning fuel, and gas-powered electricity generation can be built for far less than other fuel sources.

Supplies of natural gas are simply not keeping pace with demand. Stocks are at historic lows. According to a leading investment house, "... for the next 18 months to two years, we believe we're in a \$5 MMBtu world simply because the gas industry can't grow output."

If this forecast comes true, key segments of the business of chemistry will be forced out of business. According to a report prepared by Chemical Market Associates, Inc. and Purvin and Gertz, Inc., "... domestic natural gas prices that remain above \$4.00 per MMBtu will severely damage US-based chemical producers' ability to participate in world trade... Additional plant closures, loss of direct and indirect sector employment, reduced investment in US capacity and an increase in imports would dominate the domestic scene."

What is happening in domestic gas markets is unique to North America. Other markets have enjoyed stable energy prices.

The time has come to restore long-term balance to US energy markets. The American Chemistry Council supports a comprehensive national energy policy that ensures environmental protection and promotes a diverse, flexible, and affordable energy supply.

We recommend the following actions:

- **Balance supply and demand for energy products.** Natural gas is a remarkably efficient and clean-burning fuel source. Not surprisingly, it is in high-demand to heat homes, fuel factories, and create electricity. Today, there is simply

- not enough natural gas to go around. New supplies must be responsibly developed, and new energy-efficiency incentives are needed to ease demand growth.
- **Develop all available and viable energy sources.** The US needs a diverse and flexible energy supply base. The nation should encourage research and investment in clean and efficient coal, nuclear, and natural gas technology while increasing investment in non-traditional and renewable energy sources.
 - **Encourage the development of efficient power generation.** Government policies should encourage the production of electric power by high-efficiency methods such as cogeneration. Existing statutes with this intent, such as the Public Utilities Regulatory Policies Act, should be maintained through the transition to competitive utilities markets.
 - **Improve energy distribution and transmission channels.** Our energy distribution infrastructure is inadequate to the task at hand. New intra- and inter-state pipelines for natural gas are needed. The interstate transmission grid for electricity needs to be upgraded and expanded.

The business of chemistry will play a vital role in bringing balance to America's energy markets. We will build on a 25-year record of achievement by making our manufacturing processes even more energy-efficient. We will make the nation's energy supply more secure by expanding our investment in advanced electricity cogeneration technology. Additionally, we will help the nation become more thrifty in its energy use by developing next-generation, energy-conserving materials, such as insulation products and lightweight plastics.

We stand ready to work with the subcommittee to formulate a comprehensive national energy policy that will insure all Americans have access to reliable and affordable energy.

PREPARED STATEMENT OF TERRY SMITH, CHAIRMAN, CALIFORNIA INDEPENDENT
PETROLEUM ASSOCIATION

Mr. Chairman, distinguished members of the committee, thank you for allowing me to share my thoughts on this issue of critical importance to California's economic health and well-being.

I am submitting testimony to the committee today on behalf of the California Independent Petroleum Association—a non-profit trade association representing over 450 independent producers of oil and natural gas, service companies, and royalty owners operating in California. California produces about 40% of the oil it needs, the remainder comes from Alaska and foreign producers. California is the fourth largest producing state behind only Louisiana, Texas and Alaska and has the largest untapped reserve base for oil production in the lower 48 states. We believe that given the right conditions, we could produce more.

Today's topic is of critical importance to the members of my association. For many independent producers in California, electricity accounts for over 60% the cost of doing business. California oil is costly to produce because it requires steam injection driven by natural gas to get it out of the ground. California producers also use a lot of electricity to pump the oil out of the ground. Environmental rules prevent them from using crude oil to make electricity so they use natural gas or electricity fired by natural gas. High natural gas prices and unreliable supplies of electricity have resulted in making California crude costly to produce—and are threatening to severely curtail the amount of oil California produces on an annual basis.

What happened to California's electrical system that has resulted in the problems we see today? As someone representing large consumers of electricity, I would offer the following insights.

The problem, in essence, comes down to heavy-handed regulation by the CPUC, exceptionally stringent environmental siting guidelines and a low return on investment that kept new power plants from being built in California during the past twelve years. Over the past ten years, few people anticipated the strong demand for electricity brought about by a surging economy and technology infrastructure. California policymakers thought that other neighboring western states would sell us their excess power if California couldn't keep up with its own demand. They didn't anticipate the growth of neighboring states' economies and the fact that neighboring states might want to keep their power for their own use.

In 1996, when the California Legislature passed legislation deregulating California's electrical market, it did so only partially. Not all of the market was deregulated, just the generation portion. Utilities like PG&E were required to sell their generation so they wouldn't be seen as competing with independent power producers or holding back the new electricity market. In addition, the law imposed a mandatory rate freeze that has been in effect during the past couple of years. The rate

freeze was intended to allow the utilities to recover, from businesses and consumers like you and me, all the past costs of purchasing infrastructure and facilities. This also shielded ratepayers from the true cost of providing electricity.

This arrangement worked as long as wholesale power costs were lower than the rates utilities were allowed to collect from customers. But, when wholesale power costs rose, the utilities tried to get the rate freeze removed by the California Public Utilities Commission so they could pass along the true cost of wholesale power to their customers. Except for a small rate increase, the Governor, Legislature, and the CPUC have all rejected this appeal thereby forcing the utilities to continue assuming the price differential of how much they purchase power for and how much they can recover.

To compound the problem, the new regulatory structure set up by AB 1890—the legislation that created the deregulated market—put a price cap on what independent power producers could charge for their power and restricted the ability of these same producers and the utilities to enter into long term contracts.

Finally, all of these factors converged at the same time *natural gas prices began reaching historically high levels*. Higher than expected demand throughout the west, reduced supplies, and disruptions on major pipelines serving California all served to drive prices up, further exacerbating the generators' cost of producing electricity.

All of these trends have manifested themselves into the current crisis facing the committee today.

Having identified the problem as we see it, *where do we go from here? California's independent producers believe we can be part of the solution if allowed the proper opportunities*. As companies based and operating in California, we believe we are uniquely situated to mitigate the strains that are being placed on the supply side of the energy equation. Given the proper combination of regulatory relief and incentives, we believe we can increase our levels of both oil and natural gas production beyond their current levels.

According to the California Division of Oil and Gas, California continues to have some of the largest proved reserves of oil and natural gas anywhere in the United States. Proved reserves over several trillion cubic feet (tcf) have been identified along the West Coast of the United States while over 3 tcf of proved onshore reserves have been identified to date. With the advent of new, increasingly accurate technology, new reserves of oil and gas are being found throughout the state in areas previously thought to be unproductive.

Despite the presence of such substantial reserves and the state's rapidly growing demand for increased supplies of natural gas, in-state production in California today accounts for only 10—15% of the state's total annual natural gas needs. In the past, California production has accounted for as much as 25% of the state's total needs.

Although much this trend can be contributed to some of the same factors I referenced earlier' stringent environmental laws, high drilling costs, historically low gas prices throughout the 1990's and labor shortages—many experts believe a large part of the decline can be tied directly to the policies of the state's two major utilities: Pacific Gas and Electric (PG&E) and the Southern California Gas Company (SoCal Gas).

Existing law provides the utilities with almost exclusive authority in setting the terms and conditions under which pipeline connections for new natural gas wells are accommodated. Historically, many producers have felt that the utilities have used this authority to stifle California production and limit competition in favor of taking larger supplies of gas from out of state sources such as Canada, the Rocky Mountains, and the Southwest.

For the past ten years, independent producers throughout the state report experiencing delays of six months to a year before receiving utility approval to install a new pipeline interconnect for newly completed wells. Overly burdensome and expensive terms of conditions imposed by the utilities as a condition of new interconnections are now thought to be the rule rather than the exception. In many cases, producers have elected to simply abandon new exploratory projects rather than try to meet the demands being imposed by the utilities.

One of the largest impediments to increasing gas production in California are the utility's own management policies relative to its existing pipeline infrastructure. Representatives from PG&E recently announced that the company would no longer be adding any new metering systems along its pipeline system in Northern California. If enacted, the new PG&E policy would require all new wells to be connected through an existing metering site along the pipeline—requiring, in some cases, miles and miles of new pipelines to be constructed in order to connect a remote exploratory well. Given such terms and conditions, most exploratory projects would become automatically unfeasible. In an related move, PG&E has also recently embarked on an ambitious plan of "retiring" large sections of its pipeline gathering and

delivery systems—further limiting the potential points of interconnection for new gas wells. Many of the sections being targeted by the utility continue to remain in operational condition. The companies that will be hardest by these new policies are in the Northern Sacramento Basin—one of the most proliferate dry gas fields in the United States and the source of over one-third of all the natural gas produced in California.

Significant evidence suggests that much of California’s long-term gas needs could be addressed by expanding production and reforming the regulatory relationship between the independent producers and the utilities. Suggested reforms that could help accomplish this goal include:

- Strengthening the California Natural Gas Policy Act by establishing mandatory timeframes under which a utility must respond to a producer’s request for a pipeline interconnection.
- Encouraging new exploration activity by requiring the utility to install new metering sites, rather than requiring producers to construct miles of new pipeline for every exploratory well.
- Allowing producers to expedite the installation of new interconnects by authorizing them to shoulder costs such as pipeline construction and labor costs if the utility’s workforce is already overburdened.
- Facilitating the development of new pipeline gathering infrastructure that enables more gas to get to market.
- Requiring the utilities to sell off existing gathering systems to interested producers and co-ops and to provide the producers the authority to maintain and service the gathering systems.

By making some of these minor changes that will facilitate the ability of California producers to get their gas to market, we believe we can begin to help mitigate at least one element of the problems driving our state’s current crisis.

In closing, independent oil and gas producers are price takers and have no ability to set the price of crude at the wellhead where we produce it. Independent oil and natural gas producers are like energy farmers. We take our commodity out of the ground and sell it for the market price set by OPEC and other producing countries, usually to an independent refiner or integrated oil company who then refines it into products like gasoline. As such, our members are extremely vulnerable and can be dramatically impacted by any combination of events that force their costs to suddenly rise. We appreciate the committee’s attention to this extremely serious matter and stand ready to work with you in finding the proper solutions.