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VOLATILITY IN THE NATURAL GAS MARKET: THE IMPACT OF HIGH NATURAL GAS PRICES ON AMERICAN CONSUMERS

HEARING

BEFORE THE

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

OF THE

COMMITTEE ON
HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

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VOLATILITY IN THE NATURAL GAS MARKET: THE IMPACT OF HIGH NATURAL GAS PRICES ON AMERICAN CONSUMERS

MONDAY, FEBRUARY 13, 2006

U.S. SENATE,
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS,
COMMITTEE ON HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS.
Washington, DC.

The Subcommittee met, pursuant to notice, at 8:30 a.m., at the James J. Hill Reference Library, 80 West 4th Street, St. Paul, Minnesota, Hon. Norm Coleman, Chairman of the Subcommittee, presiding.

Present: Senator Coleman.

Staff Present: Leland Erickson, Counsel, Andy Burmeister, Luke Friedrich, Bill Huepenbecker, Carl Kuhl, Shain Bestick, David Bowell, Tom Steward, Gary Wertish (Senator Dayton).

OPENING STATEMENT OF SENATOR COLEMAN

Senator COLEMAN. This hearing of the Permanent Subcommittee on Investigations is called to order. I'm going to welcome everybody here. Mother Nature has provided a nice setting for us today, it's cold outside, and we had a relatively mild winter, but we can't escape it forever and we're seeing it a little bit today and we'll see it later in the week.

Let me note that Senator Dayton had intended to be here, in fact I spoke to him last week, he was very much looking forward to being part of this conversation. I believe he got stuck in DC, never made it back, there was a big snowstorm there, so we'll have this hearing today without him. I know his staff member, Gary Wertish, is around. Gary, thank you, and please let Senator Dayton know I appreciate the opportunity to work with him and we will follow up with what comes out of this hearing.

Let me thank everybody, by the way, for attending today's hearing. We've all seen the news reports about spiking prices of natural gas over the last few months. These spiking prices have put businesses in jeopardy and burdened families with significantly higher heating bills. The tragedy is that many of the folks who are suffering most in our community are the most vulnerable, and today hopefully we'll put a human face on the impact of high energy costs.

Take the story, for instance, of Lori Cooper, who cannot be with us today. She's a working professional, wife and mother of a 21-

month-old baby. We were supposed to have the hearing on Friday but because of scheduling conflicts in Washington, we were stuck in Washington on Friday, we had to reschedule and she couldn't make it today, but she told us her story. She lives in St. Paul, struggling to make ends meet. Things got even worse when Mrs. Cooper's husband lost his job and was diagnosed with cancer, had to scrape by on her salary alone. Even though they received an energy assistance grant from the government, paying off the heating expenses has became a great difficulty. For instance, paying last year's winter heating bills took months and months and, according to Mrs. Cooper, "it took us all summer to pay it off." Finally they got caught up on last year's energy bill but then they got hit by this year's heating bill, which was significantly higher, 37 percent higher. And for the Cooper family, a 37 percent hike is a huge problem and it clearly put them in serious financial jeopardy.[1]

Unfortunately, stories like the Cooper family are all too common. Again, while Mrs. Cooper could not attend this hearing and detailed her story in written testimony, two other Minnesotans will join us today to share their stories about how price hikes in natural gas have real consequences on our citizens.

Deidre Jackson is a single mother, a working professional, a college student, I think she does it all, and has three wonderful kids. Her heating bill was increased over 100 percent this December versus last December.

Lucille Olson—Ms. Olson, thank you for being with us. She is a senior trying to live with the high cost of health insurance and prescription drugs and paying a heating bill that represents 30 percent of her monthly income. When we were chatting a little while ago she said, this is not just about seniors, I think she was referencing Mrs. Jackson and others, saying this is about everybody, we're all impacted by this.

One of my hopes is to take the testimony of folks like Ms. Jackson and Ms. Olson and bring that back to Washington so my colleagues understand the personal effect and put a human face on this issue.

Since November I've asked the Permanent Subcommittee on Investigations, which I Chair, to examine price manipulation in the natural gas market. For decades the price of natural gas ranged from $2.30 to $2.50 per million BTUs, British thermal units. Since 2000, prices of natural gas have generally fluctuated between $2 and $10 per million BTU. Energy market projections estimate record high natural gas prices this winter. We're seeing a bit of that. In December the NYMEX, which regulates natural gas as a commodity, trading, natural gas futures closed above $14 per million BTU. Later on I'll have a chart on which you can see the steady rise in the price, the cost of natural gas.

As prices have increased in recent years we have all heard stories and allegations of price manipulation. We've heard concern that suppliers are withholding gas supplies from the market. To be fair, it is clear that the natural gas supply has been limited by other circumstances. For instance, Hurricanes Rita and Katrina caused more than a dozen natural gas processing plants to go off-

[1] Exhibit No. 5 appears in the Appendix on page 155.

line and damaged gas pipelines. This is particularly significant because about 20 percent of all the natural gas produced in the United States comes from the Gulf of Mexico. At the same time, oil industry profits have nearly tripled over the 3 years to $87 billion last year. In the first 9 months of 2005, the five largest oil companies made $84 billion in profits. Just last week Exxon Mobile Corp. reported that its 2005 earnings totaled $36 billion, which is the largest annual profit ever for a U.S. company, according to the *Washington Post*. The company's annual profit was up 43 percent from the year before. So we're seeing rising prices, we're seeing record profits by oil, the oil industry, and I have concern, I know that folks are concerned about paying double what they were paying last year in heating bills.

As part of my concerns for market manipulation, I sent Chairman letters to five of the top producers of natural gas asking for information regarding their operations, profits, and capital expenditures to increase domestic supply. In addition, the Subcommittee has had multiple briefings with representatives from each of these companies. At this point it's important to note that some of the market factors that have contributed to high and volatile natural gas prices in recent years, we see them, we see the increase in demand combined with declining supply, and this contributes to rising natural gas prices.

Second, the Nation's ability to increase imports has been limited, which has also contributed to high gas prices, and we'll talk about that later in the hearing today. Market manipulation may also be contributing to this problem. As a result of my concern on that issue, I've asked the Subcommittee to look into it. I've also asked the GAO to examine market manipulation, and their results should be available in the spring, so we're not going to get to the bottom of this today, the issue is still out there. It is of concern, and we continue to be involved in reviewing the impact of market manipulation.

Bottom line is, given the impact that higher prices are having on Minnesotans and businesses, I will continue to look at this issue. I think the key is to do what we can to ensure that natural gas prices are fair and appropriate.

Mrs. Cooper's story and the stories we will hear from Mrs. Jackson and Mrs. Olson show that increased costs take a toll on the American families, businesses and the economy at large. In Minnesota, natural gas is used to heat most homes and, therefore, rising costs have directly affected most families. The Department of Energy found that for 1999, 2000 and 2004, residential heating prices rose an astounding 73 percent. Prices should skyrocket even further, according to Department of Energy forecasts, which projected that residential households are expected to pay 41 percent more on average for natural gas this winter. CenterPoint Energy, the largest provider of natural gas in Minnesota, said that last year's average customer spent $720 to heat their homes during the months of November through March. This year officials at CenterPoint indicated that the same customer could spend $1,070 by the time that winter is over. A quick calculation on my part is it's almost a 50 percent, 40-something percent increase. Again we've so far benefited from a mild winter, but Minnesota winter is

subject to change about every 10 minutes, and we're seeing that this week.

I am concerned when families have to spend more money on the heating bill and thus have to choose between paying for heat, medicine, food, clothing, and the problem is not limited to families. Natural gas prices paid by Minnesota's manufacturers have increased nearly 150 percent since 1999. It's a serious drag on our economy and hamstrings our businesses trying to compete with countries where energy costs are far less. In fact, the United States pays significantly higher prices for natural gas than anywhere else in the world. Even countries that produce no natural gas, like Japan, have lower natural gas prices than the United States of America.

In response to concerns about the effect of high energy costs, I continue to be a supporter of the Low Income Home Energy Assistance Program, otherwise known as LIHEAP. This program helps families struggling to pay their heating bills. Most recently I cosponsored a motion in November to include $2.92 billion in additional funding for LIHEAP. Unfortunately this increase, this effort did not lead to an increase in funding. As a result, I worked with Senators Snow and Collins and demanded a firm commitment from the Senate leadership to provide $2 billion in additional funding for LIHEAP, but we're actually working on finalizing that right now. We had a bill last week that would have added a billion dollars up front, and we actually tried to what we call hotline that bill; in other words, we've got a bill, it's been approved by leadership, we've moved 2007 money to 2006 so we have the money this year, and we worry about the extra billion for next year but we get the money right away, and I think—I have to turn to staff—but it's about $30 million for increases just for Minnesota, so it's a significant increase, but we need it. It's not really—it's making sure that we can make ends meet.

In light of the home energy crisis that families face, a couple other things we can do. I'm coauthor of the Home Energy Savings Incentive Act of 2005. This is really providing legislation which provides tax breaks for homeowners making energy upgrades. Upgrades may include simple items such as using energy efficient light bulbs and weather stripping, or more substantial items such as purchasing an energy efficient furnace or windows. Residents can receive up to $5,000 in tax credits that will immediate reduce heating bills resulting from energy efficient upgrades. I will tell you I went through my house and changed all the light bulbs. My wife is not sure that we get the same amount of light, but I think we do, and it's certainly more efficient. These efficiency upgrades are just one part of the solution to our Nation's problem.

Another part of the solution is a necessary commitment to conservation and use of alternative fuels. And I'm proud to represent Minnesota, a State that really leads the Nation in renewable fuels like ethanol, biodiesel, wind, energy derived from livestock waste. Minnesota's work in renewable fuels makes good sense because those homegrown, clean-burning fuels provide cleaner air and water, promote greater energy independence, lower our fuel costs and foster economic development through jobs. The production and use of renewable fuels will always be a top priority of mine, but it's really a top priority of Minnesota, it's what we're good at. And

the good news is the President mentioned the need for renewable fuels in the State of the Union, and my colleagues in Washington get it. Now we'll be doing some hearings in the next couple weeks, Senator Domenici, Chairman of the Energy Committee—I just spoke with him last week—is going to be doing hearings on renewables, and so we're going beyond the energy bill. We're going to have, I think, a whole new phase of opportunities for renewables.

This morning we're going to focus on the recent price increases of natural gas and the effect they have on American consumers. As I mentioned earlier, we'll have the pleasure of hearing from two Minnesotans, Deidre Jackson and Lucille Olson, who will describe the effects of high prices on their lives. I look forward to hearing their experiences and I want to thank them for attending.

In addition, I look forward to hearing from Cargill, headquartered right here in Minnesota, to understand how high natural gas prices affect their business. Similarly the University of Minnesota is going to discuss how the University is dealing with high energy costs and what effects prices have on the school's educational mission.

The bottom line is that we either pay as consumers directly or indirectly. We pay directly for our bill; we'll pay indirectly for the significant increases companies like Cargill have and that it impacts us, or the University of Minnesota. I presume there are choices being made between heating a classroom and what you do with tuition or other things, and you've got to heat the classroom, and as a result we get hit one way or another.

I look forward to hearing from the Minnesota Department of Commerce and the Minnesota Public Utilities Commission with respect to any recent trends that are affecting residents during this winter heating season, as well as any recommendations that each agency may have.

Last, I'm eager to hear from the Federal Energy Regulatory Commission with respect to the factors that are driving up today's prices, their oversight in monitoring natural gas prices and what the Commission is doing to ensure that prices are just and reasonable.

And, finally, the Government Accountability Office is going to talk about their analysis of the factors affecting prices, including whether price manipulation is contributing to higher prices, as well as what additional steps we can take to ensure that prices are determined in a competitive and informed marketplace.

I look forward to hearing from all our panelists this morning. I know that we will learn a great deal today. I should note, one other item, this hearing, as I said before, was originally scheduled on Friday. Because of the Senate's schedule, it votes, Senate had votes that day, we continued it to today, so I do appreciate everyone for their flexibility in adjusting their schedules to be available today.

I would like to now welcome our first panel of witnesses to today's hearing. We will hear this morning from Lucille Olson and Deidre Jackson, both residents of St. Paul. Additionally we will hear from LaRaye Osborne, the Vice President of Cargill based here in Minneapolis, as well as Kathleen O'Brien, Vice President of the University Services at the University of Minnesota. I appreciate your attendance at today's hearing and look forward to hear-

ing about the impact higher natural gas prices is having on families and businesses.

I would like to note that for the record we had anticipated additional witnesses on this panel but again, because of the rescheduling from last Friday, two of our witnesses were unable to rearrange their schedule. I'm sorry they were not able to make it this morning but I would like to include their statements in the record. I'm including the statement of Lori Cooper, resident of St. Paul,[1] and Joseph Carrabba, the President and Chief Operating Officer for Cleveland-Cliffs of Cleveland, Ohio.[2]

Before we begin, pursuant to Rule 6, all witnesses before the Subcommittee are required to be sworn in. At this time I would ask you to please stand and raise your right hand. Do you swear the testimony you're about to give before this Subcommittee is the truth, the whole truth, and nothing but the truth, so help you, God?

(Witnesses respond to oath affirmatively.)

Senator COLEMAN. Ms. Olson, we'll kind of go from this order. We'll start with you and then we'll go to Ms. Jackson, Ms. Osborne and then finish with Ms. O'Brien.

After we've heard all the testimony, I anticipate that I will have questions for the panel, and your full testimony will be entered into the record. I would like you to limit your oral testimony, if you can, to 5 minutes. I don't know if we have a clock here, but someone is going to have to keep track of time. My staff will give me the high sign, and that's what this big gavel is for, so we'll start with Ms. Olson.

TESTIMONY OF LUCILLE OLSON[3]

Ms. OLSON. Good morning, Senator Coleman. My name is Lucille Olson. At 75 years of age I am like many seniors who are widowed and trying to live on fixed income with high costs for health insurance and prescription drugs. My expenses for the most basic needs are rising far faster than my income, and my heating costs are no exception.

I married my husband, Ken, in 1959. We purchased our home the following year. I have lived there ever since. Our home was built in the early 1920s. Kenny was a Teamster with Murphy Motor Freight Lines, and I worked for White Manufacturing when we married. After our daughter was born I decided to quit my job and care for my family. Several years ago the copper water pipes in our home started leaking and we were told they needed to be replaced. Ken and I took out a $50,000 home equity loan and used the money to replace our water pipes and remodel our home. After that Ken went blind from macular degeneration, and I cared for him. Following a series of other health-related problems Ken passed away last October. When Ken died, I lost his pension and social security income, which had been $1,772 per month. I am now trying to live on my social security, which is $1,022 a month.

I have a number of prescriptions that my doctor has prescribed for several health problems I have. If I had no insurance, my pre-

[1] The prepared statement of Ms. Cooper appears as Exhibit 5 in the Appendix on page 155.
[2] The prepared statement of Mr. Carrabba appears as Exhibit 7 in the Appendix on page 160.
[3] The prepared statement of Ms. Olson appears in the Appendix on page 43.

scriptions would cost me $877 a month. My health insurance under Medicare is $104 per month, and I am required to make copays on my prescriptions, which range from $6 to $25. My total copays can run as high as $101 per month, so before I even buy food, make a mortgage payment and my home equity loan, or pay my heating bill, I have already spent about 20 percent of my monthly income on my health needs.

Last December my heating bill for the month was $274, and in December it was $366. That is a 34 percent increase and represents over 30 percent of my monthly income. The $366 bill does not include what I would have to pay if I were not receiving energy assistance through Low Income Home Energy Assistance Program.

Things have gotten so bad for me financially that I am getting a reverse mortgage on my home so I can pay my bills. I would prefer to leave my home to my daughter but there is not any option for me. If you have any questions, I would be pleased to answer them.

Senator COLEMAN. Ms. Olson, thank you. Thank you for your courage coming today.

Ms. OLSON. Thank you.

Senator COLEMAN. It's very important and it will have an impact.

Ms. OLSON. Thank you very much.

Senator COLEMAN. Ms. Jackson.

TESTIMONY OF DEIDRE JACKSON[1]

Ms. JACKSON. Good morning, Senator Coleman, my name is Deidre Jackson. I'm a single mother and a working professional and also a college student. Each is really a full-time profession and I am trying to juggle all three. I am like so many other single mothers who struggle to raise their children, work and attend school. I am sure you know raising children properly is very expensive, and I am no exception in that I want the best that I can provide for my children. I have three children, ages 14, 8 and 6. I work full-time for the Minnesota Department of Human Services as a health care claims specialist. In my position I'm responsible for processing health care claims for the medical assistance program. I also attend the Metropolitan State University where I'm studying business administration.

I bought my home on the east side of St. Paul in February 1998. It is an older home which was built in 1910. In the fall of 1999 the Lead Program came and replaced windows in my home, and also in the fall of 1999 the Weatherization Program came and did some weatherization to my home, which included insulation and weather stripping and some other things they added to the windows and the other areas of my home that were losing heat. Even with the improvements to my home's insulation, my heating bill keeps going up. In December 2004 my heating bill was $309. This December it was $649. My bill has increased over 100 percent in spite of the energy efficient improvements that I have made to my home.

I am already receiving energy assistance through the energy assistance program, and my bill would be much higher without the assistance. My December bill does not include over $2,000 that I

[1] The prepared statement of Ms. Jackson appears in the Appendix on page 44.

owe Xcel Energy for past heating bills. I expect that I will have to use most of my income tax refund to pay my heating bill. I would like to do other things with my income tax refund, like pay for my children's education where they attend school and continue my education, which this is having an impact on because I'm deciding if I should continue on in college or if I should get a second job and pay for the costs of keeping my home up, which is mostly the heating bill. Other than replacing my furnace, I do not know what more I can do to try and save money on my heating bill. I have asked EnergyCents to come and do another energy audit of my home, which is scheduled for February 22, I believe.

These increasing gas prices are really putting a squeeze on my family, and I would like any help that you can provide to help us with this at this time. Thank you, Mr. Coleman.

Senator COLEMAN. Thank you, Ms. Jackson, and, Ms. Olson, thanks for putting a very personal face on the real impacts of the choices that a mom has to make and the impact it has on families. It's important and very helpful to me and, hopefully, to my colleagues.

Ms. Osborne.

TESTIMONY OF LaRAYE OSBORNE,[1] VICE PRESIDENT, ENVIRONMENT, HEALTH AND SAFETY, CARGILL, INCORPORATED

Ms. OSBORNE. Chairman Coleman, my name is LaRaye Osborne, and I'm the Vice President of Environment, Health and Safety for Cargill, and we are headquartered in Wayzata, Minnesota. Cargill is an international provider of food, agricultural and risk management products and services.

We appreciate the opportunity to offer our thoughts on natural gas prices and the impact they've had on Cargill's operations, and we appreciate the diversity of the panel that you have before us. Thank you.

My testimony will focus on three areas: First, our energy requirements; second, our efforts to conserve energy and reduce our reliance on natural gas; and, third, suggestions for additional lines of inquiry that the Subcommittee might want to proceed with.

First, allow me to give a picture of Cargill's energy consumption. We consume about 65 million MMBTUs of natural gas globally, approximately 50 percent of which is consumed in our U.S. operations. Of the nearly 60 countries in which we operate, North America is the highest cost gas region in the world, with current prices hovering around $8.50 per MMBTU.

For this fiscal year, Cargill budgeted more than $1 billion for energy purchases necessary to run our global operations. Unfortunately, skyrocketing natural gas prices have negatively affected our performance against that budget. In the United States we've seen a 38 percent increase in natural gas costs for the first 6 months of this fiscal year compared to the first 6 months of the last fiscal year, and that amounts to approximately $32 million in additional costs for natural gas for our U.S. operations.

Increased natural gas costs have ripple effects throughout our energy portfolio however. Natural gas is used to generate elec-

[1] The prepared statement of Ms. Osborne appears in the Appendix on page 45.

tricity. In fact, the last 15 moderate-to-large-sized electrical power plants built in the United States are gas-fired generators. Consequently, at least in part as a result of increased natural gas costs, our global energy electrical use costs have increased 15 percent for the first 6 months of the fiscal year compared to last year. As more and more natural gas is burned for electricity production we believe that gas prices will continue to increase for all consumers and that electricity prices will follow suit.

Now let me describe our strategy for addressing these costs. First, we set very aggressive energy conservation goals for the company. In 2000 we set a goal to improve our energy efficiency by 10 percent by the end of our fiscal year 2005. We achieved that goal and we've set a new goal to improve energy efficiency by yet another 10 percent by 2010. To support these goals, $100 million, in addition to usual business unit capital allocations, was made available for energy projects last fiscal year, and that money was spent very quickly. Achieving these goals is also supported by quarterly reporting of performance against goals and the sharing of best practices across our global operations. In fact, as we faced unprecedented increases in energy costs early this winter season, our chairman and CEO communicated directly with all U.S. based employees about the need and opportunity for energy conservation at work, but also what they could do to assist in managing their energy prices at home.

The second aspect of our strategy relates to the use of renewables. Currently 6 percent of our energy needs come from renewable resources, or roughly twice industry average. We established a goal of increasing that percentage to 10 percent by the end of year 2010. In the United States we have several examples of renewable energy resources being substituted for natural gas use. Each of our beef processing plants has placed covers over wastewater treatment lagoons. These covers capture naturally occurring methane. This methane is then conditioned and used in the processing plant boilers, displacing 21 percent of the aggregate natural gas demand for these locations. In addition, several of our oilseeds processing locations have implemented similar projects, but they capture methane from the landfills in the communities in which they operate, methane that would otherwise escape into the atmosphere or be burned in flaring systems that have no energy benefit. Finally, at our operating locations we have developed and permitted the capacity to switch from natural gas to biobased energy sources like soybean oil or the animal fats that we produce. The ability to optimize our energy dollars by switching to animal fat and oils during these periods of peak natural gas pricing saved Cargill more than $1 million in this fiscal year alone, and we're only about 7 months into that fiscal year.

The third aspect of our strategy relates to committing significant resources to switch fuels to those that are in more abundant supply and at lower cost and to cogeneration. I'll provide two examples.

Our wet corn milling plant in Blair, Nebraska represents the largest single corporate capital investment in that State. Cargill has invested more than a billion dollars in the plant over the last 13 years and employs more than 460 individuals. The plant produces high fructose corn syrup, ethanol, animal feed and biobased

plastics from the corn grown by local farmers. Corn wet milling requires thermal energy to break down the corn supplied by the farmers into its component parts. Our existing boiler operates on natural gas. As those costs continue to rise, the competitiveness of this plant is threatened. Consequently, we recently decided to convert from gas to coal as the primary fuel. The new boiler will utilize the latest emissions control technology and provide us with an affordable and safe source of thermal energy for the long term.

We also work hard to maximize cogeneration through the use of combined heat and power systems. These systems at industrial and commercial locations give the most bang for our energy buck, generating both steam and power from the same fuel. On a global basis we cogenerate 7 percent of our total electrical demand, and in some locations we export power back to the grid. While these systems are a proven technology, a majority of such systems operate outside of the United States, and for Cargill, cogeneration applications are some of our greatest opportunities to improve energy efficiency, reduce the environmental impact of our energy use and enrich our communities.

I'll finish my testimony by responding to the Subcommittee's request for Cargill's perspectives on addressing the high cost of natural gas, and I'll touch on the supply side issue first.

As the Permanent Subcommittee is aware, there are many opportunities under discussion for increasing gas supply, including the development of additional terminals and distribution infrastructure for imported liquefied natural gas and expanded exploration and drilling for natural gas along the Outer Continental Shelf. Each possibility that has been subject to public discussion has pros and cons, and Cargill is focusing on managing its own energy demands optimally and is not taking a position on these difficult issues of public policy. We trust that Congress, which has the broadest national perspective, will appropriately balance all of the issues and interests in determining how to address supply issues.

We do, however, encourage Congress to consider means for facilitating use of renewable fuels and cogeneration. The flexibility to use renewable fuels as an alternative gas during peak price periods usually requires changes to air emission permits. These permits are usually issued by individual State or regional authorities under the umbrella of the Federal Clean Air Act. Our experience is that the technology for timely fuel switching exists and its positive impact on air emissions has been demonstrated. Consequently, we would encourage the Federal Government to partner with State and regional environmental authorities to streamline the process by which these flexible permit features are authorized. Cargill also believes that Congress has a role to play in encouraging greater use of cogeneration applications to improve the energy efficiency of the economy overall. Opportunities include creating incentives for public utilities and transmission system operators to purchase and introduce into the grid that excess electrical energy that's generated by these investments. There's also opportunity for accelerated depreciation for cogeneration equipment investments and for equipment converted from natural gas use to other energy alternatives.

With that, Senator Coleman, I'll close my remarks, and thank you once again for inviting us to this hearing.

Senator COLEMAN. Thank you, Ms. Osborne, very helpful.

Ms. O'Brien.

TESTIMONY OF KATHLEEN O'BRIEN,[1] VICE PRESIDENT FOR UNIVERSITY SERVICES, UNIVERSITY OF MINNESOTA

Ms. O'BRIEN. Thank you, Senator Coleman. Good morning and thank you for the opportunity to be present today. I'm Kathleen O'Brien, Vice President for University Services at the University of Minnesota. I'm responsible for the nonacademic campus operations, including utilities, on the Twin Cities campus and four campuses and research centers of the University across the State.

To give you some context, the University of Minnesota has more than 800 buildings, encompassing 28.5 million square feet, more than downtown Minneapolis and St. Paul combined. The Univesity of Minnesota is large, old and complex, with every type of building from classrooms and offices to athletic venues, research labs, clinics, animal barns and greenhouses.

The University manages its utility operations to maximize our performance on these three principles; reliability, environmental stewardship, risk and cost control. I would like to briefly address how the University is working on each of these principles and then respond more specifically to the challenges the University faces with the volatility of natural gas prices.

Reliability. We are a 365 24/7 operation. We are responsible to make sure the daily teaching continues to our student enrollment of over 60,000, that critical and central research of over $500 million annually is protected and secured, and the life critical care at the University-Fairview Hospital and Clinics is maintained. In short, we cannot fail. To this point we have made significant utility infrastructure investments, are updating our utility master plan, and are at work with our energy provider partners to secure and maintain reliable service.

With regard to environmental stewardship, the University achieves environmental stewardship through energy conservation, efficiency in production, and the use of alternative energy sources. The University has conducted ongoing energy conservation programs for many decades. These efforts have ranged from installing high-efficiency fluorescent lighting systems, such as you did in your home, to a campus-wide conservation program aimed at changing behavior patterns, to the installation of direct digital controls that allow equipment to be controlled from a central campus site. The University has made significant investments to utilize more efficient boilers that have reduced the amount of fuel we need in order to heat the campus. In tandem with our energy conservation efforts, since 1994 the University has been able to reduce the number of BTUs per gross square foot required to heat the campus by over 20 percent. The University is working very hard to utilize alternative energy sources to meet utility needs. In the late 1990s, when the University renovated its major steam plant in southeast Minneapolis, it installed a Circulating Fluidized Bed boiler that is

[1] The prepared statement of Ms. O'Brien appears in the Appendix on page 48.

capable of burning multiple fuel types. After 4 years of work, this spring we anticipate approval of a major permit amendment that will allow us to burn oat hulls, the residual from Cheerios, a biofuel that is currently priced substantially lower than current natural gas prices.

Last spring the University of Minnesota-Morris campus completed a wind turbine that is now producing wind energy. This turbine is reducing the cost to the campus for electricity overall and the amount of fossil fuel-based energy. Also at our Morris campus an initiative is underway to establish a biomass gasification system that will focus on using corn stoves as the primary fuel source to provide up to 75 percent of the heating and cooling loads for the campus from alternative energy. It is intended to reduce the use of natural gas and fuel oil as the campus energy source.

As a University system, we have an overall utility budget of $150 million. On the Twin Cities campus for heat and electricity alone we are budgeting nearly $90 million to purchase and deliver these utilities for our next fiscal year. The Twin Cities campus generates its own steam heat through two plants for close to 22 million square feet of building space. Annual steam production is enough to heat and cool 55,000 average homes, or the equivalent of the city of St. Cloud.

Your concerns regarding natural gas prices are especially important to the Twin Cities campus, as it is currently required by permit to produce 70 percent of its steam plant BTUs through the burning of natural gas. Therefore, we have been significantly impacted by both the overall increased costs for natural gas and the great volatility in the markets. As recently as June 2003, the University purchased natural gas for $3.12 per million BTUs. Contrast this with projections this winter that went as high as $15 dollars per million BTUs.

For the current fiscal year, the Twin Cities plant has spent $12.3 million to purchase natural gas. Because of the great volatility in pricing, it was difficult to project our actual final costs. For a point of reference, if the Twin Cities campus needed to pay $1 more per million BTU for all of its natural gas usage for a complete year, it would cost an additional $2 million. Because of the efforts by the University to conserve energy and buy smarter, we have limited our expected cost increase next fiscal year to $4 million, roughly a 1 percent increase in tuition.

How are we buying smarter? The University has developed a team to monitor the energy market and to contract for natural gas purchases in the future in order to lower our expected costs and to increase price certainty for our planning and budgeting purposes.

I've spoken this morning about the University's operations and management of our principles; reliability, environmental stewardship and cost controls. The University also has an extensive research initiative sponsored by President Bruininks on renewable energy and the environment, and you might want to hear from those researchers at sometime in the future.

Thank you for your interest in this critical issue and its impact on our State, its university and our communities.

Senator COLEMAN. Thank you very much, Ms. O'Brien.

To the entire panel, by the way, from the personal touch to Cargill, I think we almost got a primer on various forms of energy and energy opportunities, and listening to you, Ms. O'Brien, I think we're also hearing about the future.

If we look at Exhibit 2,[1] the chart that talks about Henry Hub spot price volatility, really reflects probably what you talked about. Going back, if you look from 1995, look at around 2000, you're looking at around $2 per million BTUs cost of natural gas, and what you see, and there are a couple of spikes, one of them is Katrina—I think you can see that—and a couple of other spikes. But what you notice is even with the spikes in coming down, even coming down it's still rising, so it's not settling to where it was. It spikes up, then drops a little lower, spikes up, then drops down a little lower than before it spikes up, and the concern clearly is, and we're going to hear others talk about rising demand without rising capacity, rising production, and so we can anticipate that. And so to me it's very heartening just to listen to some of the things that are going on in terms of renewables.

Out of curiosity, you talked about the Morris campus producing wind energy, I think a 1.65 MW turbine, is a large turbine. One of the concerns that I have about wind energy is its capacity, can it really make an impact. Can you give me a sense of what wind energy does at the Morris campus, how helpful that is?

Ms. O'BRIEN. The wind turbine at the Morris campus provides about 60 percent of the electricity needed on the Morris campus today, so it has had a very significant impact on that campus.

Senator COLEMAN. And I think sometimes we underestimate the impacts of that. That's a good object lesson to say that in this facility the impact is significant. I would also note, Ms. O'Brien, as we look to the future, as we look to the call from Cargill and others to be looking at renewables—and Congress will be doing that, my colleagues get it—but the University of Minnesota has a unique role to play with, because of where we are with renewables in this State, and I would anticipate that the governor has talked about centers of excellence in terms of dealing with Ford and some of the auto industries looking at renewables, and I take it that the University would be ready, willing, and able to play a major role in that?

Ms. O'BRIEN. Absolutely.

Senator COLEMAN. Ms. Osborne, as I said before, on various forms of energy and energy opportunities, Cargill is almost a primer. You talked about methane and getting energy out of ethanol, you talked about gas to coal, cogeneration, biofuels, etc. It's interesting, I had a chance to visit a dairy operation, Haubenschild operation up in Princeton, Minnesota, and they capture methane gas and use it to produce energy and that's one little operation, but I take it you're looking at that.

Ms. OSBORNE. We've done it at all of our beef processing plants. In addition, we're trying to roll that opportunity out to people in our value chain, our customers, who provide products to our locations globally. It's simple technology.

[1] Exhibit No. 2 appears in the Appendix on page 124.

Senator COLEMAN. What about the cost efficiency, one of the challenges with renewables is in order to use wind production you need the tax credits to really make it economically viable. I'm wondering, as the cost of oil goes to $50, $60, and $70 a barrel, does that have an impact on the cost efficiency of some of these alternative fuels you're looking at?

Ms. OSBORNE. Sure it does. I talked about our ability to switch fuels to, from natural gas to soybean oil when natural gas prices spike up, and in making the decision to make those switches we do look at the economics of the two fuel sources. In a lot of the renewable work that we're doing we have some advantage because the renewable feed stock hitchhikes into our plants with the stuff that we actually process. So we have a soybean or, excuse me, a sunflower plant in the Ukraine, for example, we're burning the hulls while we're processing the seeds. So we have a bit of an economic advantage in that sense, we don't have to transport the stuff in. We don't have to buy it.

Senator COLEMAN. One of the things that I've seen in my travels around the State looking at ethanol operations, we're seeing in southern Minnesota, I think in Albert Lea and some other areas, you have ethanol operations and then you have some of the byproduct of that now used to convert to energy, which again in the past may not have been cost efficient. But if we could, actually one of the other charts, if you could put Exhibit 1[1] up there—that's what I'm looking for—you also mentioned about the cost in the United States, I think you said the North American market, the costs are the highest in the world. One of the things that we find—and this may not be your expertise—that I find frustrating is in this chart we have costs being $13, almost $14 per BTUs for natural gas in the United States, and places like Japan, which don't have any natural gas production, significantly less than half of that. Do you have any—and I'm not an economist—but as you look at the cost of natural gas in the world, can you give me kind of Cargill's overview of what you see impacting that?

Ms. OSBORNE. I wish I could, I'm not an economist either. I'm a lawyer who manages environment, health, and safety, so I really am not competent in the financial issue.

Senator COLEMAN. I'm not going to push you, we'll have some others to talk a little bit about that. I'm going to come back perhaps to both Ms. Osborne and Ms. O'Brien—but, first, Ms. Jackson. Ms. Olson, as I said, thanks for being here. I really think it's important.

Ms. Olson, as I listened to you talk, I've got one of those homes that was built in the early 1920s, great old homes, but they cost to heat.

Ms. OLSON. Yes.

Senator COLEMAN. So I listened just to your personal story and I know that's a challenge. As I listened to what you talked, you talked about 20 percent of costs for health, 30 percent heat, so you're talking about 50 percent of your income is gone before you deal with food or anything else?

Ms. OLSON. Yes, it is.

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[1] Exhibit No. 1 appears in the Appendix on page 123.

Senator COLEMAN. You've got 50 percent of your income going to keeping warm and taking care of your health?

Ms. OLSON. That's right. I try to keep the thermostat down but I just can't, I can't take the cold. So I try to keep it down as much as I can, so I try to save, but it doesn't seem that it makes any difference.

Senator COLEMAN. And, Ms. Jackson, you talked about some choices that you may have to make, which I find, I know it must be difficult. You're a student, you want to advance in the future, and now you're talking about whether you're going to have to give that up in order to just take care of your family. Both of you take advantage of the LIHEAP Program, is that correct? Low Income Heating Assistance Program?

Ms. OLSON. Yes.

Ms. JACKSON. Yes.

Senator COLEMAN. Could you tell me how you became aware of that, how you accessed that program?

Ms. OLSON. Are you talking to me?

Senator COLEMAN. Both—either of you. Ms. Olson first, then Ms. Jackson. Because I would like others who may not, who are in the same position, I would like to get some information to them about how they can, there's help available, and I just want to figure out how you knew there was help available, and how you connected with that help.

Ms. OLSON. Well, I tried several times, several years ago to try to get some help, because it was large then, but it never was as large as it is now. And my husband then at the time, or both of us, our income was $2,100 a month and—but my health care for myself was $609 a month, because I do take a lot of prescription drugs prescribed by my doctor. But they didn't take that into consideration. They had their guidelines and they didn't take into consideration that my husband was getting $775 a month pension from Central States, he was a truck driver. So you take $775, that was our total premium for U–Care. We were living on approximately $1,300, and it was very hard. Then I got some help from Catherine, and I talked to her and I talked to a reporter.

Senator COLEMAN. Catherine being?

Ms. OLSON. I don't know what Catherine's last name is.

Senator COLEMAN. Working with what group?

Ms. OLSON. Oh, through Energy——

Senator COLEMAN. OK.

Ms. OLSON [continuing]. Resource. And so then they sent me out an application this year and when I took it in there, and because I didn't know—my husband was in the hospital then and I was still getting his $775 plus his social security, but my income was $400, my social security was $433 a month, and I didn't really know what to do. I called up to see if I could get some help, and they said I had too many assets. And to me, I don't know where the assets come, but I did have a policy on my husband, a life insurance policy, and when he passed away that was an asset. I had a few thousand dollars left of that. But I did take my forms down, had them filled out, and they helped me a lot, and then I had people that I talked to, and I don't know what I would do without the help of Energy Resource, because what the bills are now, I couldn't af-

ford it. I would have to give up something. But I did get on it, and I was hoping that more people, elderly people, they don't know that there's help out there. Most of the time they're turned down at first, but a squeaking door gets attention.

Senator COLEMAN. You've got to stay at it. Ms. Jackson, who did you connect with to get some help?

Ms. JACKSON. I'm from Minnesota, so I'm very aware of the help that Minnesota offers. So I knew where to go, I knew that there was an energy assistance program for people that needed assistance. I just knew, but it's very informal. They're on the Internet, I know the energy assistance is, and they also sent me an application this year because I was an applicant last year.

Senator COLEMAN. I'm trying to get—is it Catherine Fair?

Ms. JACKSON. Yes.

Senator COLEMAN. That's what I wanted to make sure, it's Catherine. Ramsey Action, Ramsey Community Action Program is for those—I just wanted to make sure this is RAP. When I was mayor I worked with these folks a lot and they're very good. My point being is that there are programs out there.

Ms. JACKSON. Yes.

Senator COLEMAN. Ramsey County, through the county themself, or the Ramsey County Action Program, and they were the ones who helped you kind of work through the process, figure out to get what you're entitled to, and I take it you found that help to be positive?

Ms. OLSON. Wonderful.

Senator COLEMAN. Ms. Jackson.

Ms. JACKSON. Yes. Ms. Fair from the RAP program, she also has called Xcel Energy for myself to explain to them my situation so that they would not cut me off. She did this around the end of September because the Cold Weather Rule was not in effect at that time. So she has been very helpful.

Senator COLEMAN. Catherine, by the way I see her in the audience. Catherine, you're with Ramsey County Action Program? So if folks have questions afterwards, they can talk to her.

As I understand the community action program, they administer the LIHEAP program throughout the State. So we get the Federal money, we get it to the State, but then it's administered at the local level. Thank you.

If I can just come back to Ms. O'Brien and Ms. Osborne, just a little bit about where we go in the future with renewables and what some of the opportunities are. Ms. Osborne, you talked about a concern about a permitting process. Could you amplify that a little bit?

Ms. OSBORNE. Yes, I can. Several years ago when natural gas prices started to spike we decided it made some sense to look at some of our locations that produce soybean oil or produce animal tallow as a byproduct to see if those were suitable substitutes for natural gas burning, and we worked with local authorities to determine permitting requirements. We completed the necessary air emission tests, and we were able to get permits to introduce those fuels on a flexible basis when the economics of natural gas dictated it. Perhaps we were lucky in that the States that we were working with at the time were ready for that kind of innovative thinking,

but we're not seeing that occurring consistently across the Nation, and we think that this is an opportunity for the Federal Government to take some initiative and examine the Federal Clean Air Act and introduce more flexible measures that will encourage State and regional authorities to step up and be courageous on these sorts of opportunities.

Senator COLEMAN. And what I'm hearing you saying is if we can do those things to prevent less barriers to moving into renewables it would be helpful.

Ms. OSBORNE. Yes, very much.

Senator COLEMAN. Ms. O'Brien, I know you're not a scientist, but could you talk a little bit about where you see us going with renewables, what type of things that the U is looking at? Where is the cutting edge of technology and what can Minnesota add to it?

Ms. O'BRIEN. Senator Coleman, I would like to start out by reinforcing the point that Ms. Osborne just made. It took us 3 years to secure the permit we expect in the next month for oat hulls. Right now the PCA will grant a permit for wood and allow us to burn many different kinds of wood, but for biofuels, we need to seek a permit for an individual type of biofuel. That's a lengthy process, and one that makes us less competitive in the marketplace in other States or other nations in terms of the use of biofuels, so I believe that this is a point that is a very germane point to address.

Senator COLEMAN. I appreciate that, and I appreciate your reiterating that, and particularly the way you phrase it, a lengthy permitting process making us less competitive. It's not just educational institutions, but for businesses, and for America itself, so I appreciate that point and I will certainly—I am very sensitive to it. Please continue.

Ms. O'BRIEN. With regard to, and I'll just speak briefly to the President's initiative on renewable energy and the environment. In the College of Biological Sciences, the Institute of Technology, scientists are working together with the private sector to really determine what fuel sources, biofuel sources we have in Minnesota and how we might utilize them, whether it's wind or biofuels in western Minnesota and how we might actually transport those to the large population centers. And as Ms. Osborne said, she wasn't a lawyer (sic), I'm not a scientist, so I won't go any further than that. I'm a historian.

Senator COLEMAN. Well, folks, historians in 20 years will look back on the cutting edge. I just think there's great opportunity. I've worked with the U, I worked with President Bruininks on these issues, and Minnesota is in a unique place. I think now we have the largest number of farmer-owned ethanol coops in the nation. We're on the cutting edge of soybean biodiesel technology, we're on the cutting edge now of coal gasification, one of the first States looking at the creation of a new coal gasification operation in northern Minnesota, which will cut down on emissions and generate greater energy out of a resource which we have in this Nation, I think a 250-year supply. Wind energy, I think we pride ourself of being the Saudi Arabia of wind in southwest Minnesota. So I think there's great opportunity, and I know the U is really posi-

tioned to help us take advantage of that, and I simply want to express my thanks to you for that.

This panel has been very helpful. Again for the personal stories I want to say thanks. For others out there, if you're listening, check out the Community Action Programs, in Ramsey County it's Ramsey Action. I think there are 38 such programs like that around the State, they're very important. And to all the panelists I want to say thank you.

With that we will now have our second panel. It's my pleasure to welcome Leroy Koppendrayer, Chairman of the Minnesota Public Utilities Commission, and Edward Garvey, Deputy Commissioner of Energy and Telecommunications, Minnesota Department of Commerce.

Gentlemen, I appreciate your attendance at today's hearing and look forward to hearing your testimony, and particularly interested to hear about any recent trends or issues that may negatively affect Minnesotans during this winter's heating season. I would also like to explore your recommendations and solutions you may have with respect to the energy crisis and the administration of the LIHEAP program.

As you're aware, witnesses before this Subcommittee are required to be sworn. I would ask you to please stand and raise your right hand. Do you swear the testimony you're about to give before this Subcommittee is the truth, the whole truth, and nothing but the truth, so help you, God?

(Witnesses respond to oath affirmatively.)

Senator COLEMAN. Thank you, gentlemen. Mr. Koppendrayer, we'll have you go first, followed by Mr. Garvey. After the testimony we'll turn to questions. Your written testimony will be presented into the record in its entirety. I would like you to limit your oral testimony to 5 minutes, and with that you may begin.

TESTIMONY OF LeROY KOPPENDRAYER,[1] CHAIRMAN, MINNESOTA PUBLIC UTILITIES COMMISSION

Mr. KOPPENDRAYER. Thank you, Senator Coleman. On behalf of the other four Public Utilities Commissioners, also on their behalf, I want to thank you for holding this hearing. And we, as the commission, put together, as you've said, a statement that's in the record. I'll go through and just pick some highlights from that to probably discuss orally and stimulate some questions, if you have those, perhaps.

One of the issues that has already been talked about, the use of natural gas for electric energy, is one of the main concerns that concerns us as a commission, and I know that it also concerns commissioners across the country because it's being talked about at regional and national meetings such as NARUC.

I've noted that natural gas will soon pass nuclear energy as a base load energy. I personally think that's regrettable to see natural gas as a, which is used for all the other uses that we've just heard stated in the previous panel, to be—surpass nuclear energy as a base load. And I appreciate, Senator Coleman, your efforts in

[1] The prepared statement of Mr. Koppendrayer with attachments appears in the Appendix on page 51.

the Senate to help us resolve the nuclear waste issue so that form of energy can go forward. We appreciate that.

The Public Utilities Commission, one of the primary tools that we use for ensuring all natural gas rate payers are paying a fair price is an annual review of local distribution companies, gas purchasing practices known as the Annual Automatic Adjustment process, and in that we require a monthly summary of the rate mechanism used to recover fuel costs, a reconciliation of monthly rate mechanisms with the actual cost of gas purchased, a report on fuel procurement policies, including a summary of actions taken to minimize costs, and an annual auditor's report and an annual estimate of future fuel costs. Included in that, the purchasing practices of the fuel companies which we audit, are the tools that they have is the spot market, buying on the spot market, withdrawal of gas put into storage during the summer, index price supplies and fixed price markets.

We also have in the recent years encouraged hedging. Of course, hedging is trying to bet against the weather and the market and do a better job than buying all fixed costs or spot price gas. While we encourage companies to do that, and that can levelize some of those peaks that you show on that graph, and mitigate some of the peak prices to the consumer, it also—hedging has a cost. If you bet wrong and you have a warm January, you're going to see that there's cost to the hedging. And on the Commission we've been cognizant of that and want to allow companies to pass those costs through as well; otherwise, you can't have the good side and not pay some price for when it doesn't go your way.

Another important tool that the Commission uses to protect the consumer is the Minnesota's Cold Weather Rule. The Cold Weather Rule is what you were alluding to earlier, and that is no one can be disconnected between October 15 and April 15. If a customer is subject to disconnect, the utility must provide the customer with a Cold Weather Rule packet explaining protections available and the sources of financial weatherization assistance. If the utility and the consumer reach a mutual agreement on a payment plan, the process is over; if not, the utility customer can appeal to the Public Utilities Commission, and during the appeal the customer is provided heat until a decision is made. All household income requirements are based on total household income and all persons residing in the household, excluding amounts received from energy assistance. The total household income must be less than 50 percent of the State median income.

And you asked earlier about who informs people. One of the things that the Public Utilities Commission requires is that utilities are required to send the Cold Weather Rule applications to each residential customer at the onset of the heating season, which would be in late summer, early fall. They're required to put in their billing a flyer telling folks about the Cold Weather Rule. And you alluded in your questions to CenterPoint Energy being one of the largest providers of heating fuel. CenterPoint Energy, as you are aware, we had, last winter, over a thousand customers that were not reconnected as of December 15. CenterPoint Energy has since revised their system of notifying customers. It has this past fall and this winter, we believe, according to the reports that we've got-

ten and the lack of complaints that we've gotten, has done a far better job in notifying customers what their rights are under the Cold Weather Rule.

Part of the problem that we became aware of was that customers obviously are responsible for their heating bill, but they were not responsible to pay their entire heating bill before they were reconnected. What they were responsible for was to be, enter into a payment plan with the utility, and that payment plan, it's important to note, also in Minnesota, that payment plan cannot exceed 10 percent of their income. So even if there's an amount owed in arrears, when they enter into a payment plan for this coming heating season, and the heating season that we're in, that payment plan doesn't exceed 10 percent of their income.

We also, in the Public Utilities Commission, encourage conservation, which is handled through Mr. Garvey's, Commissioner Garvey's department, and we have entered into agreements with all of the companies on distributed generation connection, so that if they're using other types of generation, biofuels, wind, etc., we have agreements with the companies as to how those people using alternative renewable fuels would be treated in their interconnection policy, how the metering will be handled, and we just finished the last hearing this week, as a matter of fact, on the last company to enter into an agreement for distributed generation, so we encourage conservation and renewable energy use.

I would note that if you get the handout that we put together, Minnesota is first in its commitment to new wind. Minnesota is first in its biggest commitment to new biomass. We have the strongest commitment to renewables outside of electric restructuring, and Minnesota ranks first. We were second in renewable, in the renewable markets. We have the second largest wind farm in the United States, and the most renewables as a share of total electric sales were third only to Massachusetts and Connecticut, and with that I'll conclude my comments.

Senator COLEMAN. Thank you, Mr. Koppendrayer. Mr. Garvey.

TESTIMONY OF EDWARD A. GARVEY,[1] DEPUTY COMMISSIONER FOR ENERGY AND TELECOMMUNICATIONS, MINNESOTA DEPARTMENT OF COMMERCE

Mr. GARVEY. Mr. Chairman, Members of the Subcommittee, I appreciate the opportunity to discuss with you the issues surrounding the recent volatility and historic highs in natural gas prices and their effects on Minnesota consumers. I want to extend my sincere thanks on behalf of Governor Pawlenty and Commissioner Wilson to you, Senator Coleman, for your aggressive and continuing leadership in these kinds of issues, especially securing additional LIHEAP funding. That kind of funding is very important to Minnesota. It provides direct help to those who are adversely affected by the high heating costs that we are confronted with today.

The Department of Commerce serves four primary roles that are of interest to the Subcommittee today. First, we're the State's chief policy developer and advocate. We provide also regulatory oversight

[1] The prepared statement of Mr. Garvey with attachments appears in the Appendix on page 68.

and staffing for the Public Utilities Commission, we are the State's energy office, which implements the Weatherization Program, and we are the administrator of the LIHEAP program.

Walking very quickly through some of those issues, Mr. Chairman. The Department of Commerce closely monitors natural gas prices and supply because of its roll as an advocate for all natural gas consumers and the broad public interest in matters before the Public Utilities Commission. After the devastating events of Hurricanes Katrina and Rita, many consumers were aptly concerned with how much natural gas would cost them and if there would be enough gas available to get through the winter. In November 2005, Minnesota customers were paying an average of $12.02 per Mcf. Based on this increase in price, the Department projected that the average heating bills would be 70 percent higher than last winter. Luckily Mother Nature has been kind to us this winter. Last month was the warmest January since 1846 in the Twin Cities and the warmest on record for International Falls and Duluth. As a result of the lower demand and the recovering delivery capacity in Louisiana, February natural gas prices in Minnesota are on average $9.38 per Mcf, or $3 less. Based on price predictions last fall, this appears to be very good news for Minnesota consumers. However, it is important to keep in mind that the heating season is not over, as you've already noticed, and as this week's weather will indicate. Even with mild weather to date and $9.38 gas, average heating bills in January are still expected to be 30 percent higher than they were last year.

Responding to the historically high natural gas prices, last November Governor Pawlenty announced his Heating Security Initiative aimed as assisting customers most impacted by the high natural gas prices. There are three components to this initiative. First was to expand the Cold Weather Rule in order to basically assure that no low income customer would be shut off this winter by their utility. Six major utilities in this State have joined in this agreement.

The second portion of the initiative was to provide greater heating financial assistance to those in need. Governor Pawlenty has infused the LIHEAP program with $13 million of State funds. This is the largest contribution of State money to the program in our history. That additional funding will allow the Department of Commerce to serve an additional 26,789 households. In addition, because of the higher energy costs, the Department of Commerce has increased the average assistance amount households receive by 25 percent over last winter, so that, on average, each household receives at least $500. That's above an average of $400 last year.

The third component rounding out the Governor's Heating Security Initiative is lowering utility bills through energy conservation. Through the State's Energy Conservation Improvement Program—CIP, as we refer it to—the Department of Commerce has approved natural gas utility proposals to spend an additional $2.1 million this year on energy conservation on top of the $14 million that they are already expending. This, of course, is an effort that I think you, Senator Coleman, pays a lot of attention to, to your credit, through your Home Energy Savings Incentive Act of 2005.

The fourth component, of course, of the Governor's Heating Security Initiative is to lead by example, and through an executive order he has ordered a 10 percent reduction of energy consumption at the State's buildings.

The Department of Commerce reviews the regulated natural gas utilities' charges to assure that they charge their customers the same price that the utilities pay to gas producers for the gas that they buy. Utilities only make profit on the cost of operating their business. Normally these business operations costs account for approximately 10 percent of a customer's bill, which means the natural gas cost is 90 percent of that bill. Since the price of natural gas itself is such a large portion of the customer's bill, we, working with the Public Utilities Commission, are constantly reviewing natural gas prices charged to Minnesota consumers by the State-regulated natural gas utilities.

The Department's analysis is geared towards ensuring that the utility is charging reasonable prices to its consumers. If the Department finds an exception, it provides its analysis to the Public Utilities Commission and recommends that the Commission uses statutory authority, as Chairman Koppendrayer has already indicated, to prevent unreasonable or imprudent costs from being charged to customers.

Let me turn very quickly to the administration of the LIHEAP program and Weatherization. To date, total State and Federal LIHEAP funds available in Minnesota equal $101 million. These funds are used to direct heating assistance, additional funds in crisis situations, and furnace repair or replacement for low income households. With this funding, it is projected that the Department will serve 145,800 Minnesota households with primary heating assistance. That's significantly up from last year when we served 117,689 households.

The Weatherization Program provides assistance and informs, as you've already heard from Deidre Jackson, the ability of a household to come in and provide energy conservation steps. Last year the total budget of that program, including State and Federal funds, was $14 million, with $13 million of it spent directly for homes, and we were able to provide assistance to 4,000 homes that were weatherized at an average cost of slightly over $3,000.

To conclude, Mr. Chairman, high natural gas prices appear to be here to stay, at least for the foreseeable future. We at the Department of Commerce, working with the Public Utilities Commission, and with you and with the natural gas utilities, are diligent in using the tools at their disposal to provide consumers with reasonable priced natural gas service. Congress has already taken some steps on this issue with the passage of the Federal Energy Policy Act of 2005. Also the President's recent State of the Union address called for further energy efficiency and innovation. We applaud these actions and are ready to help achieve our common goals.

Let me make a couple recommendations that I have before I conclude. First and foremost, the importance of a hearing like this and the showing of Federal vigilance and congressional vigilance and the Subcommittee's vigilance and, most importantly, your vigilance, Mr. Chairman, to protect consumers from market manipulation is very important. It is a national issue, gas prices are set at a na-

tional level, and without your oversight we at the States level are handcuffed.

Assuring adequate LIHEAP funding, you have been aggressively working with that. We are very pleased to be helping you do that, and very proud of your work on that.

Third, promoting aggressive energy conservation acts, you've already taken a leadership role in that area. I think continuing that and working with your colleagues in any way that you can to increase those efforts is important.

And I think the fourth component, and you've already heard testimony on that, is promoting the development and use of renewable energies, particularly ethanol and biodiesel, and perhaps some of those fuel switching options that you've heard is very important because natural gas is priced shadowing petroleum and a fuel switching for petroleum.

So, Mr. Chairman, those are the final thoughts that I have. I hope I did that in the time to allow you enough time for questions.

Senator COLEMAN. Thank you very much, Mr. Garvey.

Mr. Garvey, looking at the data that you've provided us, if you're looking from the year 2000 through 2005, in 2000 there were 110,000 households served by LIHEAP, 2004–05, 117,000. All of a sudden this year it's 145,000. That's one of the largest increases in quite a while. Do you have any explanation for why there is such a significant increase in the number of households needing LIHEAP this year?

Mr. GARVEY. Mr. Chairman, the number of households who are eligible for the Low Income Heating Assistance Program roughly stays approximately the same at about 400,000 households. The reason those numbers, as you've indicated, move is our ability to provide assistance to them, which is directly related to the amount of funding available. The reason we are able to fund and provide assistance this year more than we've done in past years is because of the funding that you've been able to secure to fund the LIHEAP program, as well as the infusion of Governor Pawlenty's $13 million.

Senator COLEMAN. So the needs are out there, it's really just a question of whether the dollars can match the needs?

Mr. GARVEY. Correct.

Senator COLEMAN. Mr. Koppendrayer, I think good news by the way, you mentioned earlier in your testimony, you talked about using natural gas for electricity, natural gas surpassing nuclear in terms of providing for energy. I believe this year for the first time, as of a couple weeks ago there were at least five new permits nationally that have been applied for for nuclear, and I think that number may even have doubled by now, so I think one of the things that you're seeing is, and we saw, certainly the last couple years, operations, including Excel right in St. Paul, going from coal to natural gas, but what I think the good news is—and that was all done since environmental reasons certainly hit at the center of that—but I think a lot of that was done before we saw these huge spikes in prices, but the good news is is that there are, for the first time, I believe, a number of new nuclear operations. We still have the waste issue which is out there, but in addition to that there's

also some folks looking at some new technology down the road that will limit that. Can you comment at all on that issue?

Mr. KOPPENDRAYER. Well, I think the short answer is we know what to do with the waste, we know where to put the waste, we just have to get the votes eventually to get the job done. The new nuclear technology, of course, it includes recycling the fuels that we have. It should not be considered a waste and put in a geological repository and then blown up and left there. It's a resource. And finally now we are starting to recognize that's a resource. And in the recycling processes that are being worked on now, the actinides are going to be left with the uranium so that you don't get a pure plutonium, weapons-grade plutonium. So the proliferation of nuclear weapons is not a concern under the new process. And under the new process the hundred-million-year half life could be brought down to 500 years, and of course it needs a whole lot less storage space for the waste that's left over.

Senator COLEMAN. I know we're looking a little bit into the future here, but that future is very real. Even my colleagues get it. Can you give an estimate about how far down the road? Are we talking 20 years, 30 years, or 15 years before we can move to a situation where, in fact, that what is seen now as waste really becomes a recyclable material that could produce more energy?

Mr. KOPPENDRAYER. The latest that I've seen in the trade journals and meetings I've been at is it's 15 years that we're looking at, probably 15 years.

Senator COLEMAN. And having a 16-year-old daughter, that 16 years is——

Mr. KOPPENDRAYER. Went quick.

Senator COLEMAN. A blink of the eye, I can tell you.

Mr. KOPPENDRAYER. But in other technology that we shouldn't fail to mention that you've been a huge part of in Minnesota that's coming, and the Public Utilities Commission approved $10 million towards the IGCC, the integrated combined cycle coal gasification. You know that coal is the largest energy resource that the United States has, and the key will be to using it in an environmental friendly way as we can, and that is the huge next step that we're going to be taking.

Senator COLEMAN. What's interesting about that is that a few years when we forwarded the Minnesota project and we had a loan guarantee in the energy bill, I think that was the only coal gasification of the next generation. I believe in last year's energy bill there were at least five coal gasification projects nationwide and even more, so there are a number of folks seeing what we've seen, but the good news is that I believe we've been out in front in Minnesota on that technology and are moving forward.

Let me ask you another question about spot markets. You talked about buying in the spot market. Isn't that one of the problems that we're facing, that consumers face, that when folks buy on the spot market they're subject to these spikes in prices?

Mr. KOPPENDRAYER. Sure it is, but there's a phrase that I like to use. When you're trying to contract for enough gas and you're trying to hit the market right, and you're trying to do that based on the weather, you use what we've come to call random variables. You take all of these variables, you pick from them and choose

from them, and then you try to forecast next year what's the weather going to be, and based on that weather forecast how much fuel am I going to need, and a forecast, well, you and I have both watched weather forecasts. They're better every year but never perfect, and you can never anticipate a year ahead, 6 months ahead, 3 months ahead where that next spike is going to be in cold weather, and that's what hits us really hard when you don't have enough on fixed contract and you have to buy on the spot market.

Senator COLEMAN. But most of Minnesota's natural gas is bought on the spot market, is that correct? It's not?

Mr. KOPPENDRAYER. No, not most of it. Most of it is through contracts.

Senator COLEMAN. OK.

Mr. KOPPENDRAYER. And spot market is kept as minimal as possible. But if you overcontract you're going to end up with gas purchases that you don't need and you're going to pay the price for that.

Senator COLEMAN. Mr. Garvey, what do you say to Minnesotans who say that the folks out there are ripping us off, the cold weather and prices are being gouged, they're going through the roof, how do you respond to that?

Mr. GARVEY. Mr. Chairman, thank you for that question. The Minnesota utilities pass through to retail customers the wholesale price that they pay. We at the Department of Commerce make sure that they do that, that they don't make a penny more on the retail cost than their wholesale charge. Working with the Public Utilities Commission, we're very confident that is exactly how that works.

The question then becomes the fairness and appropriateness of that wholesale market price, and that's where Subcommittee hearings like this and your vigilance and examination of the wholesale marketplace is so important. We look at it. While we don't see manipulation from our perspective, we have a very narrow State perspective. We don't see the national marketplace. What I now can say to that person, because of Subcommittee hearings like this and because of examinations that are going on by Members of Congress and our Federal agencies, that they will make sure that those kinds of things are not happening.

Senator COLEMAN. And we'll hear, right after you, FERC and the GAO will talk a little bit about that. One of the things you mentioned in your testimony, you talked about natural gas prices kind of shadow some of the oil prices, and this whole discussion of renewables says that if we can lessen dependence on oil, Middle East oil, oil generally, that will have a beneficial impact, even though natural gas is mostly domestically produced. You see, though, the headlines scream out about gas companies making huge, huge, huge profits, and some of that profit, I presume, is generated from things that happen in local gas stations right here in our community. Could you respond, kind of shifting a little away from natural gas to just the overall cost of the gas, has the Department looked at the issue of price gouging when it comes to other energy products, gasoline particularly?

Mr. GARVEY. Mr. Chairman, thank you for that question. The three energy sources: (1) Electricity, the Department of Commerce and the Public Utilities Commission has extensive regulatory re-

view and authority over. (2) Natural gas energy providers we have extensive regulatory review over. We have little authority over the wholesale market of natural gas. (3) When you move to petroleum, we have no regulatory oversight of either the retail or the wholesale marketplace. Having said that, the retail and the wholesale marketplace for petroleum is aggressively examined by our States' attorney generals and those folks.

And, the other thing you need to know, sir, in Minnesota we always have, as a rule, some of the cheapest gasoline prices in the country. I mean you drive around today, it's $2.07. And the reason for that is that we have a very competitive retail marketplace. We get most of our petroleum from Canada, we have several very important local refiners, we have low gas taxes, and we have ethanol and biodiesel mandates. When you put those components together, gasoline is still expensive, but it's relatively cheaper here than it is across the country.

Senator COLEMAN. We talked about—let me shift gears a little bit—dealing with the Cold Weather Rule. There was an action, and you made some references, Mr. Koppendrayer, I think it was CenterPoint Energy. I believe that there was a concern about willful and repeated violations of the Cold Weather Rule. Is it your testimony today that those concerns have been taken care of?

Mr. KOPPENDRAYER. Mr. Chairman, as I mentioned, that was last winter, and the complaints this winter are at a bear minimum.

Senator COLEMAN. Can you tell us what happened and why it happened?

Mr. KOPPENDRAYER. Well, that's as varied as the people that were affected, and there were a lot of people affected, as to what they were told and what they weren't told. As I mentioned earlier, everybody gets a flyer and everybody gets the rules as to what apply to them. The difference comes in when they call the company, for example, and say, I can't pay my bill and I want to be reconnected, what transponds between, as far as an oral conversation, and for the most part what came to the surface was the main part of the problem was that the company's representatives were telling the consumer that you have to pay, you are responsible for your full bill, and that was true, they were responsible for the entire bill. However, what didn't immediately follow, or was not picked up by the consumer, is in a payment plan you don't have to pay more than 10 percent of your income, so here is a payment plan, and that wasn't clearly explained to the consumers and there was a lot of confusion and a lot of people weren't hooked up because they thought they had to pay their entire bill before they could enter into that agreement, which wasn't true.

And I understand that the Attorney General's Office, who pursued this, and to enforce the rules that we have, entered into a settlement with CenterPoint Energy for last year's issues. But I have to say again, that hasn't been repeated this year. And the other companies, we've all learned from that and we've clarified the rules and we've clarified when it's supposed to be sent, and other companies have learned from that. We've clarified it for all the companies.

Senator COLEMAN. To both gentlemen—what's the single biggest complaint that Commerce gets, Mr. Garvey, and what the PUC

gets from consumers regarding energy and energy costs? What are folks worried about right now?

Mr. KOPPENDRAYER. I got an e-mail from a former school superintendent just the other day and what he said was, look, in 2000 I paid this, in 2001 I paid this, and now in 2005 I'm 90 percent higher than in 2000. And it's not, the consumer out there doesn't understand, or hasn't had the opportunity to completely be informed of what Commissioner Garvey just said, the companies here are passing, the distribution company is passing through the wholesale cost of gas and not profiting from that cost of gas, they're only profiting from the distribution end of it. That's not understood.

As a matter of fact, I've never seen before this morning a map like that. I'm going to get a copy of that, if I might, and ask a lot of questions about why the United States is $13 and Japan is $5, and Japan doesn't have natural gas and we do.

Senator COLEMAN. That's a question that a lot of my colleagues asked and the next panel will touch on it, I hope. Mr. Garvey, what about you, what are people complaining about?

Mr. GARVEY. Mr. Chairman, the biggest complaints sort of fall under the general rubric of the cost of their bills. And if I may, Mr. Chairman, even though much of the winter season is behind us—Punxsutawney Phil saw his shadow, so we're supposed to still have 6 to 8 more weeks. More LIHEAP funding will allow for us to provide greater assistance to a larger number of families. Even the assistance that we can give, even the increase of $500, is still significantly less than 50 percent of their total bill. We would be allowed to not only serve more families but raise that amount. We would be able to provide additional assistance to those homes, those homeowners whose furnace blows out and has a crisis. We could provide greater weatherization.

I want to just make sure we enforce what I think you already know. Just because we're into mid-February, don't let folks say we don't need to and let this issue go by, because it's still very important. And just because spring is around the corner, those bills will still be due. You've heard testimony that they roll through the summer into next fall.

Senator COLEMAN. And I can assure you that we will be moving very aggressively. And winter is not over. We're seeing that this week, we'll see it next week, and coming from Minnesota, winter may not be over in March, going into April. I think even when we talk about mild winters, people forget that it's, so if it's a mild winter, instead of being minus 10, it's 15 or 20 degrees. Well, you've still got to get another 45 degrees of heat into your house at prices that are a 100 percent higher than they were 5 years ago, double what they were a year ago, 40 percent, whatever it is. For folks on fixed and limited income, that's a big jump. I mean that's a big hurdle to overcome. So I think even when we talk mild winter, we forget the impact here. You've still got to get up to 60 or 65 degrees or you're not going to be healthy. So I am very hopeful that when we get back we'll at least fill some of the needs for this year, and there should be hopefully another billion dollars that we'll be getting through the Committee.

I want to thank you for your testimony, and please tell that to the Governor, too. Mr. Garvey, you laid out, in a way it's a pretty

simple but pretty basic formula; you've got to do oversight, you've got to provide funding for LIHEAP. We forget conservation. For folks who are listening, conservation, conversation, conservation. Whether you're Cargill or U of M or a single mom, there are things we can do in conservation, or State offices. It makes a difference. And then renewables, which the good news is that we will have another energy bill, and my colleagues are getting that renewable is going be a big part of it.

I tout the story of Brazil, fifth largest country in the world, half the population of Latin America. At the end of 2005, I think they were not dependent on any foreign oil. Sixty percent of the new cars in Brazil run on flex fuel engines, they can run on 100 percent ethanol or gasoline, and the technology—is it expensive? The largest car manufacturer in Brazil this year I think is General Motors. So it's technology we have that can go a long way, so I think we're moving forward in the right direction.

I appreciate your testimony. Mr. Koppendrayer.

Mr. KOPPENDRAYER. If I might, Commissioner Brownell from FERC was here on Friday and left her testimony with me and then I gave it to your aide. I don't know if there is somebody from FERC here this morning, but her testimony is here.

Senator COLEMAN. I appreciate that, and we're going to—clearly, FERC, for those who are listening, they play a role in the wholesale level, and so they have to do their job, their role is absolutely critical, and so we'll hear a little bit of that today. I think it's important for folks who are local to understand here that the companies are really, they're passing through, they make a certain set profit but they're not making massive windfall profits that, I think, are people looking at their own bills and they see these huge profits and they wonder, am I getting ripped off and what are we doing about it. We'll talk a little bit about the wholesale prices with the next panel.

Gentlemen, thank you very much for your testimony.

I would like to welcome our final witnesses to today's hearings: James Wells, Managing Director of the Energy Team of the Government Accountability Office in Washington, DC, and Susan J. Court, the Director of the Office of Market Oversight Investigations at the Federal Energy Regulatory Commission, FERC, who will be accompanied by Steven J. Harvey, the Deputy Director of FERC's Office of Market Oversight and Investigations. So again we are thrilled to have you here.

As Commissioner Koppendrayer noted, we anticipated having FERC Commissioner Nora Mead Brownell testify, but because of the last minute rescheduling of the hearing Ms. Brownell was unable to arrange her schedule. I'm sorry that she won't be with us but we'll include her full testimony in the record as Exhibit No. 6.[1]

But certainly, representatives from FERC are here. I appreciate your presence. I look forward to looking at this issue of monitoring any evidence of price manipulation as well as explore some long-term solutions to the energy crisis.

As you've seen, witnesses before this Subcommittee, pursuant to Rule 6, have to be sworn. I would ask you to please stand and raise

[1] Exhibit No. 6 appears in the Appendix on page 156.

your right hand. Do you swear the testimony you're about to give before this Subcommittee is the truth, the whole truth, and nothing but the truth, so help you, God.

(Witnesses respond to oath affirmatively.)

Senator COLEMAN. Mr. Wells, we'll have you go first followed by Ms. Court. Then after we have the testimony we'll open it up to questions, and your written testimony will be presented into the record in its entirety, so if we can stay within the 5-minute rule, that would be very helpful.

TESTIMONY OF JAMES WELLS,[1] MANAGING DIRECTOR, ENERGY TEAM, GOVERNMENT ACCOUNTABILITY OFFICE

Mr. WELLS. Thank you, Senator Coleman. We are pleased to be here today to discuss natural gas prices. Accompanying me today is my colleague, Jon Ludwigson, he's our GAO energy expert, and hopefully he'll take all of the hard questions for me.

As you know, in early December 2005 wholesale gas prices topped $15, more than double the prices seen last summer, and seven times the prices common throughout the 1990s. I want to refer to the chart.[2] You see 20 years worth of natural gas prices. Look at it in terms of the first decade, 10 years, the most recent 10 years, and then we're going to talk, when we get to our conclusions, about what the next 10 years is going to look like.

For the 2006 winter heating season, the residential household heating with natural gas will pay at least $260, 35 percent more on average this winter than last winter. Mr. Chairman, consumers in your Midwest here are expected to witness even greater increases, paying 41 percent more than last winter. You have the distinction of being the one part of the country, the highest part in the entire Nation.

You've asked GAO to discuss three questions: Why natural gas prices are so high, the impact on the consumers, and what is the Federal Government's role.

Demand has clearly expanded faster than supply. Since 1999 wholesale gas prices have clearly trended steadily upward, as you referred to earlier. They bounce up, they rocket up in price and float back down like a feather, but they're still higher than where they started. You can see the peaks in late 2005 here, there's two twin peaks there as two hurricanes smashed into the Gulf Coast where we have major gas production facilities. 90 percent of that production that you see there in the Gulf Coast was taken off-line. Mr. Chairman, it's still not totally recovered, and daily production levels will still not be back to normal before the hurricane until sometime this summer, so we today are still feeling the impact of the two hurricanes.

On the supply side, our U.S. gas industry has been producing at near capacity, and our ability to increase imports has reached its limit currently, given available infrastructure. There's no more magic bullet to bring more gas in because we don't have anywhere to bring it in. Tight supplies have set the stage for extreme price spikes. Clearly I will tell you today that everyone will say the easy

[1] The prepared statement of Mr. Wells appears in the Appendix on page 90.
[2] The chart referred appears in the Appendix on page 98.

answer is it's all about supply and demand, but clearly there are many other factors that you've heard about today that will continue to affect wholesale prices such as market manipulation.

Although you gave us an investigation charge and we're continuing with that, we have not found any market manipulation to date. We continue to look at the futures trading in natural gas and for signs of market manipulation, and we plan to report to you and your Subcommittee the results of that work later this summer.

For the individual consumer sitting behind me here in this room, how much their gas bill will rise today will depend on large measure on how much of their supply is purchased, as you've heard, from the wholesale spot markets. By buying in the spot market when prices are rising, it clearly is expensive. Some of the largest natural gas utilities in at least three States expect to buy at least 70 percent of their gas this winter at spot market prices. Mr. Chairman, we'll continue our investigation, but we understand that Minnesota does buy a tremendous amount on the spot market. The utility clearly has and will continue to pass these prices on to their customers.

For others, gas utilities and consumers that use a process call hedging, that's buying gas at fixed prices in long-term contracts, or storing the gas that they purchased when prices are relatively low to be used during times when prices are high, may this winter be able to see their price rise at a little less degree than if they were buying on the spot market. While hedging may not guarantee the lowest price, it clearly does allow consumers to have greater price stability. Our preliminary work shows that natural gas utilities in more than half of the States have hedged at least 50 percent of their supplies for this winter. Mr. Chairman, we did analyze the market back in 2002, and our results at that time indicated that the marketplace was hedging about 20 percent across the country, so the trend is upwards.

I think you have to ask questions of the public utilities that are administering their programs how conservative they've been and whether they're using some of the newer, sophisticated techniques to help ensure that the consumers have the best price advantage of natural gas.

As we've clearly heard today, unfortunately the impact of these high gas prices have clearly meant hardships. The lower income residents may not be able to absorb the price increases, and they are clearly having difficulty paying their bills, as we've heard today. Mr. Chairman, I hope we get a chance to have questions talking about LIHEAP where we can talk more about it because I think it is an extremely important program.

Industrial consumers, like Cargill Company that you've heard today, the chemical, the fertilizer manufacturers, are not able to compete with foreign companies that have access to gas at lower prices, a dollar and 60 cents out of Trinidad, and therefore may reduce operations or close U.S. plants. We are clearly moving some of our industry and jobs overseas.

I want to turn a minute to the Federal Government's role. Clearly two Federal agencies, Susan here on my right from FERC, and Commodities Futures Trading Corporation, they do play key roles

in trying to keep the level playing field with competitive prices in an informed marketplace.

FERC is responsible for ensuring that prices are determined competitively at the wholesale level. We need to hold FERC accountable, and clearly they've been doing a lot of aggressive things that they have not necessarily done in the past. One example, one company agreed to pay a settlement of over $1.6 billion in California relating to some of the heating season in 2002. Clearly the industry is being put on notice that they can't perform badly in the marketplace that has the impact that we saw in California in 2002.

Similarly, the CFTC is responsible for ensuring that fraud, manipulation and abusive practices do not occur. They have prosecuted 46 energy companies or individuals and have assessed penalties over $300 million. They're not alone. There is still the Securities Exchange Commission, the Federal Trade Commission, the Department of Justice, these are all the Federal regulatory agencies that are supposed to be looking out for wrongdoings, and I think hearings like this are another example where we can hold these Federal regulatory agencies responsible.

Mr. Chairman, I'm going to stop here and just say there's no doubt that we can't live without natural gas. In the near term there may be relatively little that folks can do to avoid the pain, although there are things that they can do, and I do hope to address some of those in the questions.

The stage is set for the future price spikes. We haven't changed the fundamentals of the marketplace; future price spikes will continue, people will still have trouble affording natural gas tomorrow and in the future. The key industries may be lost, along with jobs they bring, particularly here in Minnesota relating to some of the fertilizer industries. Meeting the future demand for this energy source, changing this less-than-desirable scenario will be a challenge for the consumers, for the utilities, and the U.S. Congress. Holding this hearing is another step in keeping informed and seeking the best possible solutions. Mr. Chairman, I thank you and welcome your questions.

Senator COLEMAN. Thank you for your testimony, Mr. Wells. Ms. Court.

TESTIMONY OF SUSAN J. COURT DIRECTOR, OFFICE OF MARKET OVERSIGHT AND INVESTIGATIONS, FEDERAL ENERGY REGULATORY COMMISSION

Ms. COURT. Good morning, Mr. Chairman. My name is Susan Court, and I am the Director of the Office of Market Oversight and Enforcement Investigations at the Federal Energy Regulatory Commission. I am accompanied this morning by my deputy, Steven Harvey. We appear today as Commission staff witnesses speaking with the approval of the Chairman of the Commission. The views we express are our own and not necessarily those of the Commission or any individual commissioner.

We thank you very much for this invitation to discuss the natural gas market and recent price trends. The Commission takes very seriously the high natural gas prices, and I hope that we will be able to answer your questions regarding what has driven current prices and what the Commission is doing to monitor them to

ensure that they are not the result of manipulation or the abuse of market power. My written testimony covers the six issues that were identified in your letter of invitation, so I'm just going to highlight some points at this time.

First, you asked what factors have contributed to high and volatile natural gas prices in recent years. There are three factors in particular. First, the balance between supply and demand for natural gas in North America has been tightening throughout the decade. Production has slightly increased or even declined while the economy has increased demand. The gas bubble prevalent in the late 1980s and early 1990s started to shrink at the end of the last century.

Second, the summer of 2005 was abnormally hot, the hottest on record according to the National Climatic Data Center. With the addition of natural gas-fired generation to the electric system over the past decade, increased electric demand drove increases in natural gas demand. Generation from natural gas, for example, increased by 20 percent for June and July of last year compared to the year before.

Third, the price of oil rose 21 percent from $9.40 an MMBTU in early April to over $11.40 just before the hurricane struck. Although the relationship between oil products and gas prices differs across the country depending on how easily fuels can be switched, oil and gas prices have been loosely related for many years. As a result, increasing oil prices last summer put upward pressure on gas prices above and beyond the effects of the increased electric demand.

You've also asked what effect the hurricanes have had. As you and other witnesses have pointed out, the hurricanes had and still have significant effects on the entire natural gas industry in the Gulf Coast, which accounts for about 20 percent of the United States supply. Overall, about 10 Bcf of production from the Gulf of Mexico and Louisiana was shut in, representing almost one-fifth of the U.S. average daily production. That number is fortunately now down to about 2.5 Bcf. Since the hurricanes, prices have risen and fallen based on weather. Given the strains on U.S. domestic natural gas supplies represented by the hurricanes, as others have pointed out, including yourself, Senator, we have been very fortunate to have experienced a milder-than-normal winter. Nonetheless, the longer term tightness between supply and demand exacerbated by increased electric demand is likely to reassert itself with more normal weather. As a result, current futures prices for natural gas suggest that prices are likely to rise from current levels into the summer, though they are likely to remain below the crisis levels seen after the hurricanes.

Next you asked what is FERC doing to respond to high natural gas prices, especially with respect to its enforcement responsibilities. As an initial matter, as you may know, and I need to point out here, the commission has very limited jurisdiction over gas as a commodity, over wholesale sales of natural gas, due to the Natural Gas Decontrol Act of 1989.

That said, starting in the fall of last year we have encouraged conservation, as did other Federal and State agencies. For our part we made a concerted effort to distribute information on the State

of the natural gas market. We have, for example, on our web page a feature called "Gas Basics," and we brought copies of the latest edition with us. We did this to help consumers understand what is happening so that they can make informed decisions.

More to the point, the Commission is committed to assuring that the high natural gas prices caused by the loss of supply from Hurricanes Katrina and Rita do not go higher still because of market manipulation. We have done this in several ways. The Commission actively monitors natural gas markets to determine whether price movements are the result of market manipulation or market fundamentals. Our market oversight and enforcement staff is continually reviewing market activity for any possible manipulation that might also affect prices. In close coordination with enforcement staff, market oversight staff performs a detailed review of natural gas prices and market activity on a daily basis with the intent of identifying areas of possible manipulation. If we identify price anomalies that are not explained by market fundamentals, my office is authorized by the Commission, to begin an investigation.

Furthermore, to assist our monitoring effort, the Commission has entered into a Memorandum of Understanding with the CFC to assure the smooth flow of information between the two agencies. The Commission also acted quickly to exercise the new anti-manipulation authorities in the Energy Policy Act. On January 19, the Commission issued rules to prevent market manipulation by any entity, not just companies traditionally subject to Commission jurisdiction, with respect to jurisdictional natural gas and electric sales and transportation. The new rules, in conjunction with the new civil penalty authority in the Energy Policy Act, will provide a strong deterrent to market manipulation. Under our new civil penalty authority, the Commission can impose a penalty up to $1 million per day for a violation of the Commission's anti-manipulation rules.

You've also asked finally whether or not there is any extra authority we would need. The Commission at this time has not articulated any additional authorities that we need. We have many new responsibilities under EPAct of 2005, but we would surely welcome the opportunity to be asked again once we have a better understanding of how our new responsibilities are playing out. Thank you very much.

Senator COLEMAN. Thank you very much, Ms. Court. Some of my colleagues question whether we're doing enough to vigorously monitor market manipulation. Your testimony today is that you're involved in a continuous review of market manipulation and that it is quite vigorous; is that a fair representation of what you've just stated?

Ms. COURT. Yes, sir, it is.

Senator COLEMAN. Let me back up. First, that chart over there,[1] we're looking at cost of natural gas in the United States; natural gas being something that we have domestic production, and you have places like Japan that don't have domestic production and it's less than half, Trinidad a dollar sixty. Can someone explain that chart to me? Why is there a wide gap, why does the United States have the highest natural gas prices in the world?

[1] Exhibit No. 1 appears in the Appendix on page 123.

Ms. COURT. I would like to just note to start with, the chart is dated October 26, and the United States is listed at $13.90. Of course, that was right at the time of the hurricane. Currently they're running between $8 and $9, so I think that's probably a fairer statement of natural gas prices vis-a-vis the world natural gas prices, because of the date of this particular chart. That said—and I'll let others comment on this as well as perhaps the situation with Japan. Japan, of course, relies on LNG as it doesn't have any domestic production. It is my understanding that Japan has their LNG committed under long-term contracts so that they were able to lock in a price at an earlier time.

A couple weeks ago, Senator, I was able to participate in a conference in Paris sponsored by the International Energy Agency and the International Gas Union. The concern for all of the nations represented, and there were at least 30 nations represented at that conference, was the higher natural gas prices. Those countries were especially concerned because so much of their natural gas comes from countries like Russia, gas from other countries where there's production but where the production is owned by the governments themselves. So I think it is a fair statement, Senator, that every country is concerned, industrialized countries in particular, about higher natural gas prices.

We are now in a global market for natural gas, there's no question about it. Currently 84 percent of our natural gas consumption comes from domestic supplies, but we anticipate that is going to change in the near future. As a consequence, the Commission, with the support of Congress, with EPAct, has now some very important responsibilities and authority to ensure that we can site LNG terminals throughout our country in order to take advantage of supplies from other countries as our domestic supplies decrease. And we've stated in our testimony, for example, some of the steps that FERC has taken, again with some support of EPAct and Congress, with respect to LNG supplies.

We lost, by the way, several LNG shipments this winter to Europe. Spain will pay whatever price they need to pay in order to get the gas coming in to Spain. Likewise, in the UK, there is an LNG facility downstream from London at the Grain Island, and the UK also took LNG shipments away from the United States this past winter because they were willing to pay a price higher than Henry Hub. Basically it's Henry Hub plus a dollar that they were willing to pay to get those LNG. Now I think that things are probably going to balance out more as we get more LNG facilities in the United States and the liquefaction facilities elsewhere in the world improve. Right now the ratio is a little bit off. There is fewer liquefaction facilities than there are gasification facilities, and as that balances out I think the United States is going to be fairly well-poised to be able to receive LNG shipments.

Senator COLEMAN. And I understand Japan, by the way, but I'm now looking at a place like China that has an insatiable appetite for energy, and still the price is lower. Ms. Court, perhaps you could give a primer to folks in the—I studied this stuff a little bit, and it's still hard for me to kind of understand the layout, why, even if it's $8 to $10, still double, a hundred percent, a hundred and fifty percent, some other areas that have, again I use China

now as an example. Can you give me a one, two, three? Mr. Wells, do you want to weigh in as to why in this country prices are still so high?

The other observation is this: Natural gas, though it may be a global market—petroleum is a global market. We're impacted by what happens with Middle East oil, Venezuelan oil, etc. Natural gas is still principally domestic. I mean we have, as you say, 85 percent, and I'm going to touch upon the LNG, because I think Mr. Wells made the comment about supply, "we can't bring it in," I want to talk about that. But can you give me one more shot, one more time to explain to the folks sitting back there who aren't experts in this and don't work for FERC, why prices in the United States are significantly higher, U.S. and Canada, than just about anywhere else in the world?

Mr. HARVEY. Senator, if I could give it a shot——

Senator COLEMAN. Mr. Harvey.

Mr. HARVEY [continuing]. I would be glad to. Part of it is what we've seen is not just high prices this last winter in the United States, but a lot of volatility in prices. That's not surprising. We've seen a lot of volatility in weather after the hurricanes took out a great deal of productive capacity. We had abnormally warm Novembers and Januaries. And these prices have come down significantly from the levels that are on this particular map at this point, and actually in the last week or two, down into the mid $7 range at Henry Hub. That's likely, and that is, in fact, likely to be characteristic of natural gas markets in the United States at this point, given the dependencies and the relative tightness of supply and demand.

These different markets behave in different ways, and as Ms. Court pointed out, during the course of the winter, the winter was extremely cold in northern Europe, and as a result prices went very high in northern Europe. Now the markets don't function exactly the same way that ours do necessarily, and so these prices for, in effect, spot gas, function a little bit differently. The spot market dominates the United States, and we talked about that a little bit, and the volatility that exposes our customers to. Spot markets don't dominate in many of these countries. They are longer-term contracts. Many of these contracts were written up in times that we can see in this graph that were earlier in that process.

So, for example, the United Kingdom has a much larger, and really all of Europe has a much larger, long-term relationship. Much of their LNG then is also purchased by large State companies who tend to buy based on oil prices as opposed to any particular spot market within their country. We buy only based on the spot market in our country for spot purchases. As a consequence, January was the lowest LNG delivery month in the United States since, I believe, April 2003, and that's fine. We've got plenty of gas right now because of the warm January. It was a reasonable economic response.

As I look at a couple of other places, though, within the last month we know, or a month and a half, I guess, we know that the relationship of Russian supplies of natural gas heading into Europe have changed and, in fact, the Ukrainian gas price became a very

material international political issue when the Russians began to change that price based on contractual issues between those countries that I won't pretend to understand, but that price has come up significantly and is likely to come up significantly again, mainly based again on oil prices, which tend to be the benchmark there.

Many of the other countries referred to there are producing areas, Trinidad. Trinidad, in fact, was the source of much of the LNG that was delivered in January in the United States. Many of the Middle Eastern countries. China is interesting, it's a strongly emerging economy, many, many energy demands, but China, unlike the United States, has focused very strongly on their growth in electricity on coal, and this begins to raise various climate issues, given the aggressive coal plans that they have, and not a lot of clarity about exactly what environmental controls will be there.

So I don't know if that helps, but it gives you a sense that these are very different markets in very different positions across the world. Having said that, obviously it's important for us to figure out how to get the most cost-effective energy we can to remain competitive.

Senator COLEMAN. One of the comments Ms. Court made that's been referenced here a number of times is the relationship between oil and gas, and that as prices rise in one there's somewhat of a mirror. What I'm trying to understand there is the kind of market forces to me seem so different between oil and gas, again one being clearly international, the other not. Where oil prices are skyrocketing for a range of reasons and we see this mirroring, is there a potential there for market manipulation and how do you oversee that? How do you stop that from happening?

Mr. HARVEY. What we've seen historically is sort of a loose relationship with oil, and it differs again locationally, as was in Ms. Court's testimony. The one thing, for example in New York, where we have a lot of oil product prices, we can see it fairly clearly. The lower grade of oil tends to be a floor on prices for natural gas delivered into New York. And at this point actually today, when we have extraordinarily high levels of natural gas storage inventories in place today, the spot price is still in a $7 to $8 kind of range mainly, I think, because of that oil price, because of oil prices now in the low $60s after some drops last week.

The amount of fuel switching capability differs radically across the country. In New York there actually is a fair amount of fuel switching capability in some heating applications and in some electric generation applications. It's still not very large, and we are entering again, in the very short term, a period where we're going to have and where we do have a lot of gas compared to the demand. January was an extraordinary month in terms of history, where it looked more like an April than it looked like a January typically, and it has put us in a very different position in terms of supply and demand balances. But that price has not moved down through the oil level yet. It's not completely clear. We don't have great statistics on how much fuel switching capability is there, but one of the things we will be watching is, to the extent gas inventories remain high or get higher, at some point that relationship needs to break, because it just doesn't make sense. There's just not enough

oil demand to kind of keep it from there, and that's one of the kinds of things that we do look for and we look at in our daily oversight activities within the Commission is when those relationships seem to need to change, they need to change.

Now because of the activity of different participants in the market, it's not just immediate supply and demand; it's people's worries about the future, it's their considerations of other things that get folded in there. So there isn't an exact time or place. But, again, it's the kind of thing that you can look for that trend, you can kind of examine that. If things don't happen the way we would expect them at some point we can begin to investigate in more detail. That is an example of one of those cases where we are watching for that.

Senator COLEMAN. I am one of those who have difficulty understanding the relationship between oil, it just doesn't seem to be that logical, and the concern I have, and I know Mr. Wells said it's something the GAO is continuing to look at. We talked about market manipulation and gas as a commodity. At what point where do you draw the line between the legitimate impact of people's fears versus using those fears to gouge, price gouge? That's the average citizen, that's what they look at. They say we've had a hurricane—gas is, using gasoline, all of a sudden it's $5 a gallon in Georgia. At what point, when is fear a legitimate factor and when is fear used as a market manipulation, price-gouging factor? Where is the line drawn and how do you, who identifies that? Who deals with that? Ms. Court.

Ms. COURT. Well, Senator, as far as natural gas is concerned, it is the responsibility of the FERC to monitor the market drivers to see whether or not, in fact, particular high prices are understandable from market basics, or whether or not they might be reflecting some type of manipulation or behavior on the part of market participants. And so with respect to natural gas prices, that is our responsibility, that is FERC's responsibility.

Of course, oil prices are deregulated, have been since 1981, and so there are other Federal agencies that may be looking at that, or State agencies, perhaps under antitrust laws, for example. The U.S. Department of Justice and the FTC are charged with that type of responsibility. And then in natural gas futures, as you mentioned, Mr. Wells mentioned, the CFC is responsible for that. So there are a lot of watch dogs out there, both at the Federal level, including, of course, the U.S. Department of Justice Antitrust Division, and also on the State level, to watch for that type of bad behavior in the marketplace.

Senator COLEMAN. Mr. Wells, thank you for your response—but you made the comment about tight supply and "we can't bring it in." Can you talk about why we can't and what recommendations you have to change that?

Mr. WELLS. OK. We currently are operating with approximately four port facilities that have the capability to handle the LNG tanker imports of which we are bringing in, 3 percent of our usage right now is LNG. These facilities are basically operating in excess of 90 percent capacity. I know there's a permitting process, an application process underway. The record is showing at least 14 applications for the future in terms of development, but these facili-

ties are not built yet. There's a lot of NIMBY activity in terms of not in my backyard. There's concern about the safety of LNG that needs to be factually assessed and make determinations, but right now, even when we talk about proposals to bring natural gas out of the North Slope, we're talking about issues, even if we brought it here, where would it go. Infrastructure needs are a high priority that needs to be assessed in terms of its capability to bring it on line fairly quickly. This stuff doesn't come on line in less than a year, so the verdict is still out.

I do want to mention just quickly, there is clearly a fear premium that exists in the oil marketplace. I think if you look at the last 10 years of natural gas, the price volatility that exists lends itself to believe that there's no reason to think there's not a fear premium that exists in the marketplace in natural gas. I think clearly the Federal Government in the last five or 6 years is just now beginning to realize that they need to gear up to look at market oversight and monitoring, and we hope that the regulatory agencies are putting the necessary resources in place to determine whether or not the marketplace is operating fairly.

Unfortunately as an auditor, as an investigator, the verdict is still out because we haven't seen any results yet. I know there's restrictions in terms of discussion about what is ongoing, but until some of this information becomes public, we don't know for sure yet whether, in fact, we do have due diligence in watching the marketplace.

Senator COLEMAN. Let me just follow up. You mentioned the gas reserves in the North Slope. There was an article in the *New York Times* recently that talked about that. I think there are some lawsuits going on, competing proposals, one building a pipeline from the North Slope to Alberta to Chicago, another is to expand current LNG facilities, and my staff has looked into that, we've talked to the oil company folks. Has GAO at all looked at this issue?

Mr. WELLS. Senator Coleman, we work for the Congress, we have not been asked to look at this. We know there is an antitrust lawsuit that has been filed. So we don't have anything to report on the status of that.

Senator COLEMAN. You mentioned, you touched upon, and you said maybe we can pursue the question about what can folks do to limit the pain. Can you respond to that? Can you provide some advise, some direction?

Mr. WELLS. Absolutely. I want to touch a minute on the consumers and the utilities and even the Federal Government. The consumer can do things, like we've heard today. They have consumer choice in many States where they can actually seek a different supplier of natural gas. In a competitive marketplace they can look for a supplier that's doing a better job of delivering gas at a lower price. Individual consumers can work with the utilities on budget plans to spread out their payments as opposed to getting the big spikes in the winter. Clearly, take action, lower thermostats. There are things that, I know Ms. Jackson mentioned it today, she is one of the smart consumers that asked for an energy audit. Surprisingly, many consumers don't even realize that for free they can have someone come into their home and assist them in identifying where they can identify the most advantageous ex-

penditure of a resource to save energy. Clearly education in terms of LIHEAP. You touched on it. How did these people, how did the consumers even realize that they were eligible. There's a lot of things that can be done for the consumer once they become informed, and I think the Federal Government also has the responsibility to keep the consumers informed about what's out there.

I think to the utilities GAO would say we need to look at their storage practices, maybe their storage policy. They need to look at the fixed price contract buying that they're doing, derivatives, hedging, how do you manage risk. There's a lot of sophistication in today's marketplace. Unfortunately, we see a lot of utilities and State commissions that haven't necessarily come up to speed on some of the sophistication techniques that may exist in the marketplace to assist the consumers, so we would encourage them to work on that.

Even at the Federal Government level, clearly we need to make some decisions and we need to take action. It's been said many times, but we need to diversify. We've talked a little bit about fuel switching, it's beginning to occur. We've heard even some of the electric generation from natural gas, using natural gas and switching over to coal in the future. We need to diversify. Unfortunately, we need it all. We need to modernize, technology, R&D. I think we need a better partnership between the Federal Government and the utilities and the States and the industry. We need to get everybody in the room and start talking about solutions. Leadership, and I think that's where the Federal Government can provide some leadership to send the right signals so that we can move forward into the 21st Century and meet our energy demands.

Senator COLEMAN. That's very helpful, Mr. Wells, thank you.

Ms. Court, can I turn to you and from your vantage point—you're dealing with the wholesale, the big picture stuff.

Ms. COURT. Right.

Senator COLEMAN. Where else do you think we have to go to give consumers a better sense of confidence that their concerns about market manipulation are being addressed?

Ms. COURT. Well, I think that it will, it behooves us to keep them informed, to make sure that as we go through the investigations and, of course, as Mr. Wells indicated, an ongoing investigation by its very nature has to be kept nonpublic, but I think it helps the consumer to know that the people that they are counting on, the Federal Government, and also the State government, are on top of the matter, and that we should publicize the results of these investigations on a regular basis. We have done that, by the way, Senator.

Last March, for example, the FERC submitted a report to Congress even before we had our EPAct authority which has expanded our authority so much where we listed all the various investigations and the results of those investigations and the nature of those investigations, and the dollar penalties or disgorgement of profits that we were able to get on behalf of the consumers. So I think that will help. I think that that will be an assistance to the consumer and to the customers, natural gas customers.

Senator COLEMAN. That's very helpful. I would hope that, one, you continue to remain committed to vigorous oversight, it's criti-

cally important, and I would like for the purposes of this record for you to submit to us any documentation or other things you have that will help us get out the message that this is what's being done and this is how we're doing it.

Ms. COURT. We would be more than happy to do that, Senator.

Senator COLEMAN. That would be very helpful. I want to thank everyone for their participation. I'm going to keep the record open for 7 days, there may be some follow-up, additional questions. I hope this has been helpful from the personal perspective of how individuals are affected. We didn't get into details, Mr. Wells, you talked about fertilizer. But, for an agriculture-focused State, this is important to Minnesota. The cost of the fertilizer has gone through the roof and it has a direct impact on farmers' abilities to take care of themselves and families, and some of the competitive challenges of losing those operations, so there are a lot of questions that are still out there, but we need vigorous oversight. We're going to continue to work with GAO and waiting for, I think, the discussion about market manipulation and trading futures and things like that, which will come out in two thousand and——

Mr. WELLS. Early this summer.

Senator COLEMAN. Oh, this summer.

Mr. WELLS. And also I want to say that I'm actually flying to Japan next week, we're doing some work related to terrorist activity and security of LNG, and that will be high on my list to ask questions about how they can sell gas at——

Senator COLEMAN. Let me ask you one last question before we finish. We did make changes this year in the energy bill that dealt with the "not in my backyard" with respect to LNG. Have you had a chance to look at those, Mr. Wells? Are they sufficient or are there additional things we need to do?

Mr. LUDWIGSON. My understanding is that those provisions are still being phased in the FERC oversight of the licensing process.

Ms. COURT. Actually, Senator, the tools that Congress gave us in EPAct I think will go a long way. We're pretty confident that they're going to help us a lot. For example, the EPAct made FERC the lead agency for all of the Federal authorizations that are required. You've also given us exclusive jurisdiction, for example, over LNG. That was a major issue, for example, with some of the coastal States and, in fact, one large lawsuit was dropped right after EPAct was enacted. So I think we've pretty much put everything in place. We have rules now implementing every one of the EPAct responsibilities that Congress gave us to facilitate the siting of LNG facilities, and also some of those provisions go to our infrastructure generally, not just with LNG, but with our interstate grid.

One of the things with respect to the interstate grid, one of the advantages that we have vis-a-vis other countries is that we have the most sophisticated interstate natural gas grid in the world, and so that even though other countries right now may have a lower wellhead price, or they may even be able to get some LNG shipments, one of the advantages that we have is that once the gas gets to our country, we do have a grid that will be able to disperse it throughout the country.

Senator COLEMAN. Well, let's make sure we keep that grid safe. I want to thank you all. The hearing will be kept open for 7 days. With that, this hearing is now adjourned.

(Whereupon, at 10:48 a.m., the Subcommittee was adjourned.)

APPENDIX

Statement Of
LUCILLE OLSON
before the
U. S. Senate Permanent Subcommittee on Investigations
St. Paul, Minnesota Field Hearing
Hearing On
Volatility in the Natural Gas Market:
The Impact of High Natural Gas Prices On American Consumers
February 13, 2006

Good morning Senator Coleman, my name is Lucille Olson. At 75 years of age, I am like many seniors who are widowed and trying to live on a fixed income with high costs for health insurance and prescription drugs. My expenses for the most basic needs are rising far faster than my income and my heating costs are no exception.

I married my husband Ken in 1959 and we purchased our home the following year. I have lived there ever since. Our home was built in the 1920s. Ken was a teamster with Murphy Motor Freight Lines and I worked for White manufacturing when we married. After our daughter was born, I decided to quit my job and care for my family. Several years ago, the copper water pipes in our home started leaking and we were told that they needed to be replaced. Ken and I took out a $50,000 home equity loan and used the money to replace our water pipes and remodel our home. After that Ken went blind from macular degeneration and I cared for him. Following a series of other health-related problems, Ken passed away last October. When Ken died, I lost his pension and social security income which had been $1,772 per month. I am now trying to live on my Social Security which is $1,022 a month.

I have a number of prescriptions that my doctor has prescribed for several health problems I have. If I had no insurance, my prescriptions would cost me $877 per month. My health insurance under Medicare is $104 per month and I am required to make co-pays on my prescriptions which range from $6 to $25. My total co-pays can run as high as $101 per month. So before I even buy food, make a mortgage payment on my home equity loan or pay my heating bill, I have already spent about 20 percent of my monthly income on my health needs. Last December my heating bill for the month was $274 and this December it was $366. That is a 34 percent increase and represents over 30 percent of my monthly income. The $366 bill does not include what I would have to pay if I were not receiving energy assistance through the Low Income Home Energy Assistance Program.

Things have gotten so bad for me financially, that I am getting a reverse mortgage on my home so I can pay my bills. I would prefer to leave my home to my daughter but that is not an option for me. If you have any questions, I would be pleased to answer them.

# # #

Statement Of
DEIDRE JACKSON
before the
U. S. Senate Permanent Subcommittee on Investigations
St. Paul, Minnesota Field Hearing
Hearing On
Volatility in the Natural Gas Market:
The Impact of High Natural Gas Prices On American Consumers
February 13, 2006

Good morning Senator Coleman, my name is Deidre Jackson. I am a single mother, a working professional and a college student. Each is really a full time profession and I am trying to juggle all three. I am like so many other working single mothers who struggle to raise their children, work and attend school. As I am sure you know, raising children properly is a very expensive proposition and I am no exception in that I want the best that I can provide for my children.

I have three children ages 14, 8, and 6. I work full time for the Minnesota Department of Human Services as a health care claims specialist. In my position, I am responsible for processing health care claims for medical assistance. I also attend Metropolitan State University where I am studying for a degree in business administration.

I bought my home on the East side of St. Paul in February 1998. It is an older home and in the Fall of 1999, the Weatherization Assistance Program replaced my weather stripping and added insulation. I also had my windows replaced. I have an old furnace in my home and would like to replace it with a new energy efficient model, but I simply cannot afford it.

Even with the improvements to my home's insulation, my heating bills keep going up. In December 2004 my heating bill was $309 and this December it was $649. My bill has increased over 100 percent in spite of the energy efficiency improvements that I have made to increase my home's energy efficiency. I am already receiving assistance through an energy assistance program and my bill would have been higher without that assistance. My December bill does not include over $2,000 I owe Xcel for past heating bills. I expect that I will have to use most of my tax refund this year to pay off my outstanding heating bill. I would much prefer to spend my tax refund money on my children, but I have to heat my home.

Other than replacing my furnace, I do not know what more I can do to try and save money on my heating bill. I have asked EnergyCents to come to my home and do an energy audit. These increasing gas prices are really putting the squeeze on my family and any help you can provide would be appreciated. Thank you and I would be glad to answer your questions.

# # #

TESTIMONY BY LaRAYE OSBORNE

Vice President, Environment, Health and Safety
Cargill, Incorporated

Senate Homeland Security and Government Affairs Committee
Permanent Subcommittee on Investigations

Hearing on Natural Gas Market and Recent Trends of Increasingly High and Volatile Prices
February 13, 2006
James J. Hill Reference Library
St. Paul, Minnesota

Chairman Coleman and members of the Permanent Subcommittee, my name is LaRaye Osborne and I am the Vice President of Environment, Health and Safety for Cargill, Incorporated, headquartered in Wayzata, Minnesota. Cargill is an international provider of food, agricultural and risk management products and services.

We appreciate the opportunity to offer our thoughts on natural gas prices and the impact they have on Cargill's operations. A copy of my oral testimony has been submitted for the Permanent Subcommittee's record.

My testimony will focus on three areas: First, Cargill's energy requirements; second, Cargill's efforts to conserve energy and, in the United States, to reduce its reliance on natural gas resources; and third, Cargill's suggestions for additional lines of inquiry as the committee grapples with this issue that has so critically affected residential and manufacturing consumers of natural gas.

First, let me provide a picture of Cargill's energy consumption. Cargill consumes over 65 million MMBTU's of natural gas globally, approximately 50% of which is consumed in our U.S. operations. Of the nearly 60 countries where we operate, North America is the highest cost gas region in the world, with current prices near $ 8.50 per MMBTU.

For this fiscal year, Cargill budgeted more than $1 billion for energy purchases necessary to run our global operations. Unfortunately, skyrocketing natural gas prices have negatively affected our performance against that budget. In the United States, we have seen a 38% increase in natural gas costs for the first six months of this fiscal year compared to the first six months of our last fiscal year. That amounts to approximately $32 million in additional costs for natural gas for our U.S. operations.

Increased natural gas costs have ripple effects throughout our energy portfolio. Natural gas is used to generate electricity. In fact, the last 15 moderate-to-large sized electrical power plants built in the United States are gas-fired generators. Consequently, at least in part as a result of increased natural gas costs, our global electrical energy costs have increased 15% for the first six months of this fiscal year compared to last year. As more and more natural gas is burned for electricity production, we believe that gas prices will continue to increase for all consumers, and that electricity prices will follow suit.

Next, let me describe Cargill's strategy for dealing with increasing energy costs and, more particularly, natural gas costs in the United States.

First Cargill set aggressive energy conservation goals for the company. In 2000, we set a goal to improve our energy efficiency by 10% by 2005. We achieved that goal and have set a new goal to improve energy efficiency by yet another 10% by 2010. To support these goals, $100 million, in addition to usual business unit capital allocations, was made available for energy projects last fiscal year. That money was spent. Achieving the goals is also supported by quarterly reporting of performance against goals and the sharing of best practices. In fact, as we faced unprecedented increases in energy costs early in this winter season, our Chairman and CEO communicated directly with all U.S. based employees about the need and opportunity for energy conservation at work and at home.

The second aspect of Cargill's strategy relates to use of renewables. Currently, 6% of Cargill's energy needs come from renewable resources, or roughly twice the industry average. We established a goal of increasing that percentage to 10% by the end of 2010. In the United States, we have several examples of renewable energy resources being substituted for natural gas use. Each of our beef processing plants has placed covers over waste water treatment lagoons that capture naturally-occurring methane. This methane is conditioned and used in the processing plant boilers, displacing 21% of the aggregate natural gas demand of these locations. Several of our oilseeds processing locations have implemented similar projects, capturing methane from the landfills in the communities in which they operate – methane that would otherwise escape into the atmosphere or burned in flaring systems that have no energy benefit. Finally, at several of our operating locations we have developed and permitted the capacity to switch from natural gas to bio-based energy sources like the soy bean oil or animal fats we produce. The ability to optimize our energy dollars by switching to animal fat during periods of peak natural gas pricing saved Cargill more than $1 million in this fiscal year alone.

The third aspect of our strategy relates to committing significant resources to switch fuels to those in more abundant supply at lower cost and to co-generation. I'll provide two examples.

Our wet corn milling plant in Blair, Nebraska, represents the largest single corporate capital investment in the state of Nebraska. Cargill has invested more than $1 billion in the plant over the past 13 years. It employs more than 460 individuals who produce high fructose corn syrup, ethanol, animal feed, and bio-based plastics from the corn grown by local farmers. Corn wet milling requires thermal energy to break down the corn supplied by farmers into its component parts, each of which is used in one of the products just listed. Our existing boiler operates on natural gas which cost the plant over $49 million per year. As natural gas costs continued to rise, the competitiveness of the operation was threatened. Consequently, we recently decided to convert from gas to coal as the primary fuel. The new boiler will utilize the latest emissions control technology and provide us with an affordable and safe source of thermal energy for the long-term.

Cargill also works hard to maximize co-generation through the use of combined heat and power systems. These systems at industrial & commercial locations get the "most bang

for the buck" generating both steam and power from the same fuel. Cargill on a global basis co-generates 7% of our total electrical demand and in some locations exports power to the grid. While combined heat and power systems are a proven technology, a majority of such systems operate outside the U.S. For Cargill, co-generation applications are some of our greatest opportunities to improve energy efficiency, reduce the environmental impact of energy use and enrich our communities.

I'll finish my testimony by responding the Committee's request for Cargill's perspectives on addressing the high cost of natural gas.

Let's tackle the supply issue first. As every member of this committee is aware, there are many opportunities under discussion for increasing gas supply, including development of additional terminals and distribution infrastructure for imported liquefied natural gas, or LNG, and expanded exploration and drilling for natural gas along the Outer Continental Shelf. Each possibility that has been subject to public discussion has pros and cons, Cargill is focusing on managing its own energy demands optimally, and is not taking a position on these difficult issues of public policy. We trust that Congress, which has the broadest national perspective, will appropriately balance all of the issues and interests in deciding how to address supply issues.

Cargill does encourage Congress to consider means for facilitating use of renewable fuels and co-generation. Use of renewable fuels as an alternative to gas in existing boilers usually requires changes to a boiler's air emission permits, permits that typically are issued by individual state or regional authorities under the umbrella of the federal Clean Air Act. Our experience is that the technology for timely fuel-switching exists and its positive impact on air emissions has been demonstrated. Consequently, we would encourage the federal government to partner with state and regional environmental authorities to streamline the process by which these fuel switches are authorized. Quick turn-around times for permit issuance will invite greater application of alternatives to natural gas in industrial operations.

Cargill also believes that Congress has a role to play in encouraging greater use of co-generation applications to improve the energy efficiency of the economy overall. Opportunities include creating incentives for public utilities and transmission system operators to purchase and introduce into the grid excess electrical energy generated by these investments and accelerated depreciation for co-generation equipment, or equipment converted from natural gas use to other energy alternatives,

With that I'll close my remarks. I'd like to again thank Senator Coleman and the members of the Permanent Subcommittee for holding this hearing and for allowing us to express our thoughts on this topic of great importance.

Thank you.

Testimony by VP Kathleen O'Brien
Vice President for University Services, University of Minnesota

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Mr. Chairman, good morning and thank you for the opportunity to present today.

I am Kathleen O'Brien, Vice President for University Services at the University of Minnesota. I am responsible for the campus operations, including Facilities Management and Utilities on the Twin Cities Campus and for oversight of construction and health and safety for the 4 campuses and multiple research centers of the University across the State.

To give you some context, the University of Minnesota manages more than 800 buildings, encompassing 28.5 million square feet (more than 11 Mall of America's). We have a large, old and complex set of facilities, ranging from classrooms and offices to athletic venues, research laboratories, student unions, animal barns and greenhouses.

The University manages its utility operations to maximize our performance on these 3 principles:

- Reliability
- Environmental Stewardship
- Risk and Cost Management

I would like to briefly address how the University is working on each of these principles and then more specifically respond to the challenges the University faces with the volatility of natural gas prices.

Reliability:
We are responsible to make sure:

- That daily teaching continues to our student enrollment of over 60,000,
- That critical and sensitive research of over $500M is protected and secure,
- And that life critical care at the University-Fairview Hospital and Clinics is maintained.

In short, we cannot fail. To this point we have made significant utility infrastructure investments, are updating our utility master plans and we work with our energy provider partners to maintain secure and reliable service.

Environmental Stewardship:

The University makes environmental stewardship a central principle in its utility management, through energy conservation, efficiency in production and the use of alternative energy sources.

1. **Energy Conservation**
   The University has conducted ongoing energy conservation programs for many decades. These efforts have ranged from installing high efficient florescent lighting systems, to a campus-wide conservation campaign aimed at changing behavior patterns, to the installation of direct digital controls that allow equipment to be controlled from a central campus site.

2. **Efficiency in Production**
   The University has made significant investments to utilize more efficient boilers that have reduced the amount of fuel we need in order to heat the campus. In tandem with our energy conservation efforts, since 1994, the University has been able to reduce the number of BTUs required to heat the campus by over 20%.

3. **Alternative Energy Sources:**
   The University is working very hard to utilize alternative energy sources to meet its utility needs.
   a. In the late 1990s, when the University renovated its major steam plant, it installed a Circulating Fluidized Bed boiler that is capable of burning multiple fuel types. After several years of work, we are very near an approved major permit amendment that would allow us to burn oat hulls, a biofuel that is currently priced substantially lower than current natural gas prices (est. $2 - $3/MMBTU)

   b. In March 2005, the University of Minnesota's Morris campus completed a wind turbine that is now producing wind energy. This 1.65 MW turbine is reducing the cost to the campus for electricity overall and the amount of fossil fuel based energy.

   c. Also at our Morris campus, an initiative is underway to establish a biomass gasification system that will focus on using corn stoves as the primary fuel source to provide up to 75 percent of the heat and cooling loads for the campus from alternative energy. It is intended to reduce the use of natural gas and fuel oil as the campus energy source.

Risk and Cost Management:

As a University system, we have an annual overall utility budget of $150 million. On the Twin Cities campus for heat and electricity alone, we are budgeting nearly $90 million to purchase and deliver these utilities for our next fiscal year.

The Twin Cities campus generates its own steam heat through 2 plants for close to 22 million square feet of building space and more than 200 buildings. Annual steam production is approximately 1.6 billion mlbs, enough to heat and cool 55,000 average

homes (or the equivalent of the city of St. Cloud). Your concerns regarding natural gas prices are especially important to the Twin Cities campus is required by its permit to produce at least 70% of its steam plant produced BTU's through the burning of natural gas, wood and hopefully soon other biofuels.

Therefore, we have been significantly impacted by both the overall increased cost for natural gas and the great volatility in the markets. As recently as June 2003, the University purchased natural gas for $3.12 per million BTU. Contrast this to projections this winter that went as high as $15 per million BTU.

For the current fiscal year the Twin Cities planned to spend $12.3 million to purchase natural gas. Because of the great volatility in pricing, it is difficult to project our actual final cost. For a point of reference, if the Twin Cities campus needed to pay $1 dollar more per million BTU for all of its natural gas usage for a complete year, it would cost an additional $2 million. Because of efforts by the University to "buy smarter", we have limited our expected cost increase next fiscal year to $4 million, roughly a 1% increase in tuition.

How are we buying smarter? The University has developed a team to monitor the energy market and to contract for natural gas purchases in the future in order to lower our expected costs and to increase price certainty for our planning and budgeting purposes.

Thank you for your time and I will take any questions you have.

United States Senate
Permanent Subcommittee on Investigations

Report of the Minnesota Public Utilities Commission
Presented by
Chairman LeRoy Koppendrayer

February 13, 2006
St. Paul, Minnesota

Mr. Chairman . . .

Natural gas prices, like nearly every other commodity in our economy, are determined by the forces of supply and demand. In my statement today, I am hoping to explain how those forces play out in Minnesota and what the Minnesota Public Utilities Commission is doing to ensure the interests of the Minnesota ratepayers are protected.

According the Energy Information Administration, annual average wellhead prices for natural gas in 2005 were 45 percent higher than in 2003 and 91 percent higher than in 2000 [*EIA, Annual Energy Outlook, 2006*]. This trend results from the interplay of demand forces that are expected to grow due to increased gas-fired electric generation, and supply sources that are more expensive to develop than in earlier decades.

The cost of supplying natural gas has increased because the most accessible, lowest cost domestic resources have already been developed. Domestic reserves available for future development are not keeping up with forecasted demand, according to the EIA. [*EIA Annual Energy Outlook, 2006*] Therefore, meeting expanding demand must come from more remote, more expensive resources, including importation (particularly, importation of liquefied natural gas).

Minnesota is very familiar with the idea of importing natural gas. Minnesota imports 100% of the natural gas used in the State. At current prices, that amounts to about $4 billion annually flowing to our primary sources of supply; i.e., Kansas, Oklahoma, Texas, and Canada. While these supply sources have been stable, they too will have to work harder to develop new reserves.

Another factor affecting Minnesota's natural gas supply is pipeline capacity. The vast majority of the gas consumed in Minnesota is transported here via one pipeline company system. Moreover, the primary lines supplying Minnesota are operating at full capacity during the winter months. Obviously, assuring adequate pipeline capacity is critical for assuring adequate gas supplies in any state. It is especially important for a cold weather state that relies on strictly imported natural gas for approximately 60 percent of its heating needs. [*Minnesota Department of Commerce*]

As a nation, it appears that, with advancements in recovery as well as greater importation, natural gas supply will be adequate to meet projected demand well into the 21st Century. However, the need to meet this demand from less accessible resources also means that prices all the more sensitive to changes in demand.

Demand for natural gas is affected by several factors: 1) the general level of economic activity; 2) the relative price of alternative fuels; 3) electric generation; and, of course, 4) weather.

The use of natural gas for electric generation has emerged as a significant new factor in recent years. Projections by the Energy Information Administration show that the share of electricity generation fired by natural gas will increase from 18 percent in 2004 to 22 percent around 2020; surpassing nuclear generation by the end of this decade, and becoming second only to coal as a source of electric generation. [*Attachment A, EIA, Annual Energy Outlook,*

2006]. This increased use of gas will intensify upward pressures on prices. Moreover, competition between electric utilities and gas distribution utilities, especially during the summer electric peaking period, when gas distribution companies are seeking gas for storage, will intensify the volatility of natural gas prices.

Of course, weather is the dominant factor affecting demand for, and therefore, the price of, gas. This stems from the wide-spread use of natural gas for heating homes and businesses. Seasonal weather patterns across the nation have a very clear and direct effect on natural gas prices. [*Attachment B – FERC, Winter 2005-2006 Natural Gas Market Update, January 19, 2006*]

Extreme weather changes, as with destructive hurricanes like Katrina and Rita, have disrupted supply sources in the Gulf region this year. These events fostered a gas price surge that rippled across the country. [*For more information, see FERC, Winter 2005-2006 Natural Gas Market Update, December 15, 2005*] However, most of Minnesota's supply sources are in regions which were out of the path of the storms. Therefore, the effects of the storms in Minnesota were indirect; namely, adding to upward pressure on natural gas prices.

As these comments suggest, the factors that affect natural gas prices are largely beyond the direct influence of state regulators. However, the Minnesota Commission has taken measures to protect Minnesota households against the adverse affects of natural gas price swings, as well as to try to alter the conditions that contribute to the volatility of natural gas prices.

The Commission's primary tool for ensuring <u>all</u> natural gas ratepayers are paying a fair price is the annual review of local distribution companies' gas purchasing practices, known as the Annual Automatic Adjustment process. Under this process, gas distribution companies must file an Annual Automatic Adjustment

report every year. The report is extensive and includes the following:

- A monthly summary of the rate mechanism used to recover fuel costs
- A reconciliation of monthly rate mechanisms with the actual cost of gas purchased
- A report on fuel procurement policies, including a summary of actions taken to minimize cost
- An annual auditor's report
- An annual estimate of future fuel costs

In addition, the Minnesota Department of Commerce prepares a comprehensive review and analysis of the utilities' annual reports for the Commission and provides extensive comment on related topics it believes are important. The Commission's duty is to approve cost recovery for *prudently* acquired gas supplies as well as the pipeline capacity necessary to provide reliable service on the coldest days.

Local distribution companies have a variety of tools for acquiring gas supplies. These include: the spot market, withdrawal of gas put into storage during the summer, index priced supplies, and fixed price markets. In addition, local distribution companies are now using financial contracts (futures and options) to reduce the risks associated with volatile gas price swings. However, because factors affecting all of these markets can change quickly from one year to the next (e.g., due to weather), the lowest cost strategy in one year might produce quite different results when conditions change. That is why the Annual Automatic Adjustment process oscillates between over-recovery and under-recovery. [*Attachment C, Minnesota Department of Commerce, Report on Annual Automatic Adjustments, 2005*]

The Commission has also approved fixed-bill programs for its two largest LDCs that allows residential consumers to choose between a guaranteed (and probably more

expensive) monthly bill and the normal monthly bill that fluctuates based on the amount and price of the gas used each month.

In addition to the annual review of gas purchasing, the Commission has convened public forums and technical conferences from time to time over the last several years to be briefed on gas price and supply issues. The Commission had one such briefing in the wake of September 11th. Also, in September of 2003, the Commission convened a technical conference on natural gas in conjunction with a proceeding that sought conversion of two existing metro area electric generating plants fueled by coal to natural gas. Finally, just last October, in the midst of the dramatic upward trend in gas prices, the Commission convened a public forum to call on local gas providers and pipeline companies to discuss price and supply adequacy issues heading into the 2005-2006 heating season. All of these sessions, helped the Commission and, we hope, its stakeholders better understand the conditions of those times.

Another very important tool the Commission uses to protect households is the Cold Weather Rule. The Rule protects those households least able to pay rising natural gas prices by restricting disconnection of their primary heat source from October 15th through April 15th. The Rule offers various options to address the varying circumstances of the household involved. [*Attachment D, Office of Consumer Affairs, Minnesota Public Utilities Commission*] However, under each option the following requirements apply:

- If a customer is subject to disconnection, the utility must provide the customer a Cold Weather Rule packet explaining protections available and sources of financial and weatherization assistance.
- If the utility and consumer reach a mutual agreement on a payment plan, the process is over. If not, the utility or the

customer can appeal to the PUC. During the appeal, the customer is provided heat until a decision is made.

- All household income requirements are based on total household income of all persons residing in the household excluding amounts received from Energy Assistance. The total household income must be less than 50 percent of the state median income.

The Cold Weather Rule covers a large number of Minnesota households. All gas and electric utilities regulated by the Commission must follow the rule. These companies have over 2.2 million residential accounts. Although municipal utilities and cooperative associations are not rate regulated at the state level, they are required to follow customer service requirements similar to the Cold Weather Rule. These organizations serve approximately 825,000 residential customers. Delivered fuel providers, i.e., fuel oil, propane, and firewood, are not covered by any formal cold weather law in Minnesota.

An important part of administering the Cold Weather Rule is outreach. Each fall, as the heating season approaches, staff members from our Consumer Affairs Office meet with utilities, community organizations, basically, anyone who will listen, to explain the program and answer their questions. Also, utilities are required to send Cold Weather Rule applications to each residential customer at the on-set of the heating season.

In addition, the Commission's Consumer Affairs Office has partnered with the Minnesota Department of Commerce to better coordinate the Cold Weather Rule with the closely related Energy Assistance Program. This joint effort combined the application processes for the two programs and automated communications with affected utilities. This streamlining effort has saved money and greatly increased exposure of the Cold Weather Rule to eligible households. For example, requests for Cold Weather Rule

protection increased by a factor of four after implementing these changes. Going forward, the Commission and Department are researching other programs with matching eligibility criteria to consolidate individual application processes.

Administration of the Cold Weather Rule also involves enforcement. Generally, this has gone smoothly. In fact, the number of appeals has dropped off dramatically since the mid 1990s, due, in part, to greater outreach efforts. As a result, utilities and participants have a better understanding of what's possible and what's not possible under the Rule and the likelihood of unwarranted disconnection is reduced. However, that does not mean the Commission has not had challenges. One such instance occurred prior to last year's heating season.

In the fall of 2004, the Commission's Consumer Affairs Office detected patterns of non-compliance with the Reconnection Plan portion of the Cold Weather Rule by CenterPoint Energy. The Reconnection Plan is available to customers who are disconnected going into the heating season, apply for reconnection, meet income requirements, and pay the current month's bill as well as arrearages in monthly installments of not more than 10% of monthly household income until the end of the heating season. Of particular concern in this case was the continued disconnection of over 1,000 households by CenterPoint Energy as late as December 16th.

The Commission called an emergency hearing to review CenterPoint Energy's compliance with the requirements of the Reconnection Plan. A formal Commission investigation was subsequently initiated and, at the request of the Commission, carried out by the Office of the Attorney General. Fortunately, occupants in many of the disconnected households subsequently were contacted and, when the requirements of the Reconnection Plan were met, service was restored. Furthermore, the Office of

the Attorney General and CenterPoint Energy have recently announced a settlement in principle that, we hope, will address the root causes of the problem.

Finally, the Commission has contributed to the State's efforts to dampen conditions that create volatile natural gas prices. As noted earlier, regulators can't do much about developing new supply; and we certainly can't do a thing about the weather. However, we are pursuing policies to encourage the wise use of natural gas and alternative means of meeting energy needs.

The Department of Commerce (Deputy Commissioner Edward Garvey) has discussed (or will undoubtedly discuss) the state's utility conservation programs. I will just say that this program, known as the Conservation Improvement Program, is the state's primary conservation program for natural gas. The success of the program over the years has put Minnesota among the top six states for energy efficiency measures. This designation comes from the American Council for an Energy Efficient Economy. The Conservation Improvement Program is a critical component in the State's strategy for use of critical energy resources.

Besides conservation, the Commission has played a key role in Minnesota's nationally recognized efforts in developing renewable energy. Development of renewable resources helps relieve price pressure on natural gas as well as price volatility by creating alternative fuels for electric generation.

Minnesota has a number of programs that support the development of renewable energy. I will list just a few:

- Renewable energy objective: The REO requires each utility to make a good faith effort to generate or procure renewable energy so that 10 percent of the energy provided to retail

customers in Minnesota by 2015 is generated by eligible renewable technologies.

- Green pricing: This is a voluntary customer choice program that allows electricity consumer to purchase power generated from renewable sources.

- Renewable Energy Tradable Credits: Creating a system to identify and track electricity generated by renewable sources is a necessary condition for the creation of a market for tradable renewable energy credits. Such credits are increasingly needed to satisfy renewable energy or environmental standards. Commissioner Reha of the Minnesota Commission has played a leadership role in fostering the creation of the Midwest Renewable Energy Tracking system.

- Wind energy: Minnesota ranks 4th in terms of installed wind capacity. [*American Wind Energy Association*] This success is the result of a variety of legislative initiatives and agency programs.

And the list goes on. Suffice to say, Minnesota understands the importance of developing renewable energy and is recognized nationally for its leadership in this area. [*Attachment E, Union of Concerned Scientists*]

Minnesota's leadership in the areas of conservation, development of renewable energy, as well as distributed generation was recently recognized nationally when the United States Environmental Protection Agency (EPA) and the National Association of Regulatory Utility Commissioners (NARUC) announced that Minnesota was one of six states chosen for the EPA-NARUC Energy Efficiency and Renewable Energy project. This project is aimed at exploring approaches that will ensure the full benefits of

energy efficiency, renewable energy, and clean distributed generation are realized in the electricity policy arena. As noted, strides made in this arena have significant spill-over benefits for the natural gas industry as well. [*Attachment F, Fact Sheet regarding the partnership*]

Conclusion:

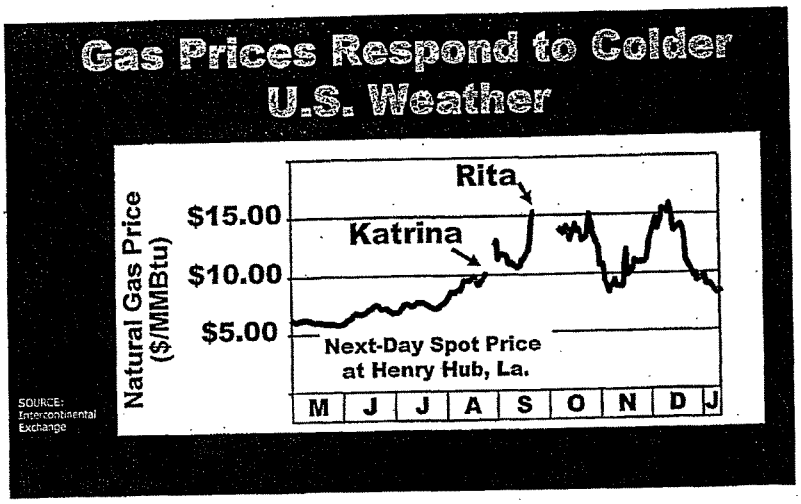
Annual Energy Outlook 2006 (Early Release)
Release Date: December 12, 2005
Next Release Date: December 2006
(Full report available early 2006)

ATTACHMENT A

Figure 5. Electricity Generation by Fuel, 1980-2030 (billion kilowatthours)

	Coal	Petroleum	Natural Gas	Nuclear	Rnwble/other	Total	% Natural Gas
1980	1161.562	245.9942	346.2399	251.1156	284.6883	2289.6	15%
	1203.203	206.4208	345.7772	272.6735	269.8987	2297.9732	15%
	1192.004	146.7975	305.2597	282.7732	317.5378	2244.3722	14%
	1259.424	144.4986	274.0985	293.6771	341.7472	2313.4454	12%
	1341.681	119.8079	297.3936	327.6335	332.9496	2419.4656	12%
	1402.128	100.2023	291.946	383.6907	295.035	2473.002	12%
	1385.831	136.5849	248.5084	414.0381	305.5081	2490.4705	10%
	1463.781	118.4926	272.6208	455.2704	265.1226	2575.2874	11%
	1540.653	148.8996	252.8007	526.973	238.0851	2707.4114	9%
	1583.779	164.518	352.6289	529.3547	325.3326	2955.6132	12%
	1594.011	126.6211	372.7652	576.8617	357.2381	3027.4971	12%
	1590.623	119.7516	381.553	612.5651	357.7735	3062.2662	12%
	1621.206	100.1542	404.0744	618.7763	326.8578	3071.0687	13%
	1690.07	112.7882	414.9268	610.2912	356.7073	3184.7835	13%
	1690.694	105.901	460.2187	640.4398	336.6609	3233.9144	14%
1995	1709.426	74.55406	496.0579	673.4021	384.7981	3338.23816	15%
	1795.196	81.41123	455.0556	674.7285	422.9577	3429.34903	13%
	1845.016	92.55487	479.3987	628.6442	433.6361	3479.24987	14%
	1873.516	128.8002	531.2571	673.7021	400.4241	3607.6995	15%
	1881.087	118.0608	556.3961	728.2541	398.959	3682.757	15%
	1966.265	111.221	601.0382	753.8929	356.4786	3788.8957	16%
	1903.956	124.8802	639.1291	768.8263	294.9461	3731.7377	17%
	1933.13	94.56739	691.0057	780.0641	351.2509	3850.01809	18%
	1973.737	119.4056	649.9075	763.7327	363.2168	3869.9996	17%
2004	1976.333	117.591	699.6097	788.5556	358.7669	3940.8562	18%
	2040.913	115.4264	751.8189	774.0726	375.8663	4058.0972	19%
	2053.946	109.7433	722.1852	787.3575	417.4477	4090.6797	18%
	2090.634	99.4194	725.8341	805.575	449.3746	4170.8371	17%
	2134.022	99.98054	754.6882	806.8735	453.6913	4249.25554	18%
	2190.444	102.454	750.6163	808.3152	459.4001	4311.2296	17%
	2217.555	104.8182	773.8234	808.6948	475.7432	4380.6346	18%
	2230.314	104.1582	813.4306	809.7852	475.3756	4433.0636	18%
	2261.083	107.4043	874.5002	810.7452	472.8003	4526.533	19%
	2263.503	106.4061	930.3772	811.0017	478.0052	4589.2932	20%
	2270.726	107.783	972.3061	818.1606	483.4392	4652.4149	21%
2015	2277.48	104.0893	1018.003	829.4448	490.859	4719.8761	22%
	2304.385	103.7832	1049.787	842.6063	498.6478	4799.2093	22%
	2341.738	103.6529	1066.696	856.8495	503.2932	4872.2296	22%
	2388.54	103.2758	1085.577	865.8569	504.6904	4947.9401	22%
	2433.577	106.1605	1103.337	870.3209	508.995	5022.3904	22%
	2504.786	106.6799	1102.762	870.698	515.1523	5100.0782	22%
	2572.9	106.8029	1102.939	870.698	518.6944	5172.0343	21%
	2652.576	106.8846	1091.721	870.698	525.6105	5247.4901	21%
	2729.935	105.9052	1085.289	870.698	529.6313	5321.4585	20%
	2817.129	107.0319	1078.153	870.698	536.4583	5409.4702	20%
	2896.088	108.1568	1069.813	870.698	539.0564	5483.8122	20%
	2984.825	111.5103	1059.032	870.698	545.4047	5571.47	19%
	3084.922	113.3243	1040.018	870.698	548.3367	5657.299	18%
	3194.04	114.0298	1019.134	870.698	552.3258	5750.2276	18%
	3302.396	114.4383	993.7275	870.698	554.2954	5835.5552	17%
2030	3380.674	114.6741	992.7706	870.5909	559.1335	5917.8431	17%

ATTACHMENT B



ATTACHMENT C

Percent Over-Recovery/(Under-Recovery)
FYE96 through FYE05

Utility	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	10yr-Ave	2004-2005[5] Cum.
GMG								13.98	(5.60)	(2.42)	1.99	(3.75)
Great Plains												
Crookston	Not Available		2.03	(8.21)	0.29	(2.66)	(0.32)	0.38	2.91			
North-4	Not Available		(0.65)	(3.99)	(0.60)	(2.57)	0.73	1.80	4.06			
North[6]									1.52	(1.94)	(0.70)[7]	(2.16)
South	3.64	0.03	0.48	5.59	4.15	5.04	2.37	8.06	4.38	(0.92)	3.28	(0.59)
Interstate Gas	2.28	(7.32)	(7.28)	4.13	(1.74)	(1.70	(2.20)	(0.85)	(2.96)	(2.36)	2.00	(2.67)
NMU	7.08	(7.29)	(4.48)	0.31	1.69	5.37	5.80	2.39	(0.24)	2.60	1.32	2.17
Peoples												
Northern	4.00	1.46	2.22	(1.51)	(0.07)	3.26	8.44	0.65	(0.66)	2.46	2.03	1.89
Great Lakes	3.13	(5.47)	7.51	(2.61)	0.67	3.35	(5.28)	(3.44)	5.78	2.07	0.91	2.59
Viking	(8.54)	(0.68)	2.40	(6.40)	0.78	2.14	0.06	(2.41)	3.80	3.56	-0.53	3.95
CenterPoint Energy												
Northern	3.59	1.29	(2.38)	(2.60)	(3.26)	0.54	(0.94)	0.42	0.52			
Viking	11.27	6.48	0.25	4.34	(3.63)	(0.24)	(1.66)	1.94	(0.79)			
Consolidated										(0.61)	0.15[8]	(0.58)
Xcel Gas	3.59	0.32	(4.49)	(4.44)	(3.76)	(3.82)	(2.30)	2.73	(1.23)	(1.77)	(1.52)	(2.05)

ATTACHMENT D

Cold Weather Rule Options:

1. **Payment Schedule:** This option is available to a customer at any income level. The customer must pay any outstanding bill plus the current bills through next October 15 (unless the customer and the utility agree on a different date) under the plan. These installments need not be equal each month, but may be based on other factors such as lump sum payments or payments that reflect expected income.

2. **Inability to pay:** This option is available to an income-qualified, heat-affected residential customer that establishes a payment schedule for the remainder of the heating season. Customers who are fully paid up or making reasonably timely payments under a payment schedule as of October 15 qualify for the greatest protection. Customers who have fallen behind on their payments also qualify for some protections.

3. **Ten Percent Plan:** This option is available to those who meet income requirements, pay 10% of their monthly household income, OR the full amount of the current bill, whichever is less. If the customer misses a payment, they may be disconnected. Missing a payment may subject the customer to disconnection of service.

4. **Reconnect Plan:** This option is available to customers who are disconnected as of October 15, apply for reconnection under this plan, meet income requirements, pay the current month's bill AND arrearages in monthly installments of not more than 10% of the monthly household income arrangements negotiated to retain service.

ATTACHMENT E

Union of Concerned Scientists – Clean Energy

Minnesota rankings

- ***Biggest Commitment to New Wind:*** First
- ***Biggest Commitment to New Biomass:*** First
- ***Strongest Commitment to Renewables Outside of Electricity Restructuring:*** First
- ***Biggest New Renewables Markets:*** Second, behind Texas
- ***Largest Wind Farm in the World:*** Second, behind Iowa
- ***Most New Renewables as a Share of Total Electricity Sales:*** Third, behind Massachuesetts and Connecticut.

ATTACHMENT F

-- Fact Sheet --

EPA and NARUC Announce Energy Efficiency and Renewable Energy Projects with Six States

In recent years, states that have aggressively pursued energy efficiency, renewable energy and clean distributed generation are realizing a host of benefits, including reduced natural gas prices, reduced environmental impacts, and economic development. However, there are many more states that can benefit from increased use of these clean energy resources to address growing concerns about reliability, rising customer energy prices, and environmental impacts.

The EPA-State Energy Efficiency and Renewable Energy (EERE) Projects are a joint initiative between the U.S. Environmental Protection Agency (EPA), the National Association of Regulatory Utility Commissioners (NARUC), and individual state utility commissions aimed at exploring approaches that will ensure the full benefits of energy efficiency, renewable energy, and clean distributed generation are realized in the electricity policy arena.

EPA estimates that if all states were to implement comprehensive clean energy-environment policies, the expected growth in demand for electricity could be cut in half by 2025. This would mean savings of over 480 billion kWh of electricity per year, enough to power 42 million households, and a reduction of emissions equivalent to that of 70 million passenger cars, while saving approximately $35 billion in annual energy costs.

What Kinds of Efforts Will the EPA-State EERE Projects Pursue?

The projects may explore a range of approaches that are expected to result in lower energy bills and improved reliability through encouragement of clean energy resources. Effective approaches may include the following:

Rate Design. Many utilities are regulated in a manner through which they lose revenue if they undertake energy efficiency programs. Pilot efforts will investigate ways to address this unintended consequence through revenue "decoupling" mechanisms combined with performance-based incentives designed to better align utilities' interests with greater use of energy efficiency.

Resource Planning. There is an opportunity to better recognize the value of clean energy resources more fully in utility resource planning processes. The pilots will be designed to provide key information about the fuel diversity, congestion relief, reliability enhancement and cost-savings benefits that clean energy resources offer to the electricity system over both the short- and long-term.

Transmission and Distribution Planning. Geographically-targeted clean energy resources can provide least-cost solutions to transmission and distribution challenges like load pockets and areas with reliability concerns. The pilots will explore "non-wires" planning

approaches that consider clean energy resources on equal footing with traditional transmission and distribution investments.

What Results Are Expected?

The EPA-State EERE Projects are expected to take one to two years to realize results in terms of changed policies and up to three years before results can be seen in the form of expanded use of clean energy technologies. When implemented, these technologies will lead to lower energy bills, greater electric system reliability, reduced natural gas demand, and reduced air emissions from power plants.

Who Is Involved?

The U.S. Environmental Protection Agency

EPA works with businesses, organizations, governments, and consumers to reduce emissions of the greenhouse gases that contribute to global climate change by promoting greater use of energy efficient and other cost-effective technologies. EPA estimates that if all states were to implement comprehensive clean energy-environment policies, the expected growth in demand for electricity could be cut in half by 2025. This would mean savings of over 480 billion kWh of electricity per year, enough to power 42 million households, and a reduction of 90 MMTCE, equivalent to the emissions of 70 million passenger cars, while saving approximately $35 billion in energy costs.

For more information: **http://www.epa.gov/cleanenergy**

The National Association of Regulatory Utility Commissioners (NARUC)

The National Association of Regulatory Utility Commissioners (NARUC) is a non-profit organization founded in 1889. Its members include the governmental agencies that are engaged in the regulation of utilities and carriers in the fifty States, the District of Columbia, Puerto Rico and the Virgin Islands. NARUC's member agencies regulate the activities of telecommunications, energy, and water utilities.

For more information: http://www.naruc.org/

State Contacts:

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Richard Morgan, Commissioner
District of Columbia Public Service Commission

Carlito P. Caliboso, Chairman
Hawaii Public Utilities Commission

Phyllis Reha, Commissioner
Minnesota Public Utilities Commission

Shirley Baca, Co-Chair
New Mexico Public Regulation Commission

Event Information

Announcement of the Partnerships will be made at a joint session of the **Electricity** and **Energy Resources & the Environment** committees during NARUC's Winter Committee Meetings being held in Washington, DC, February 13 – 16, 2005, at the Hyatt Regency Hotel, 400 New Jersey Avenue, NW.

Joint Committee Session of **Electricity** and **Energy Resources & the Environment**

Session Topic:	Energy Efficiency and Demand Response
Date:	February 16, 2005
Time:	10:30 a.m.
Room:	Yorktown/Valley Forge

For more information: **http://winter.narucmeetings.org/**
Karl Stellrecht
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(202) 898-8193

Written Testimony of

EDWARD A. GARVEY

Deputy Commissioner for Energy & Telecommunications
Minnesota Department of Commerce

Before
The Senate Permanent Subcommittee on Investigations
of the Committee on Homeland Security and Governmental Affairs
February 13, 2006

Mr. Chairman and members of the subcommittee, I appreciate the opportunity to discuss with you issues surrounding the recent volatility and historic highs in natural gas prices and their effects on Minnesota consumers.

I want to extend my sincere thanks to you, Senator Coleman, for your aggressive and continuing efforts to secure additional LIHEAP funding. That funding is very important to Minnesota. It provides direct help to those who are most adversely affected by the higher heating costs.

Natural Gas Prices

The Minnesota Department of Commerce closely monitors natural gas prices and supply because of its role as an advocate for all natural gas consumers and the broad public interest in matters before the Minnesota Public Utilities Commission.

After the devastating events of Hurricanes Katrina and Rita, many consumers were aptly concerned with how much natural gas would cost them and if there would be enough gas available to get through the winter. In November, Minnesota customers were paying an average of $12.02/Mcf. Based on this increase in price, the Department projected that average heating bills would be 70 percent higher than last year. Luckily, Mother Nature has been kind to us this winter— last month was the warmest January since 1846 in the Twin Cities, and the warmest on record for International Falls and Duluth. As a result of the lower demand and the recovering delivery capacity in Louisiana, February natural gas prices in Minnesota are, on average, $9.38/Mcf.

Based on price predictions last fall, this all appears to be very good news for Minnesota consumers. However, it is important to keep in mind that the heating season is not over, and even with mild weather to date and $9.38/Mcf gas, average heating bills in January are still expected to be 37% higher than they were last January.

Department of Commerce Response

Governor Pawlenty's Heating Security Initiative
In response to the historically high natural gas prices, last November Governor Pawlenty announced his Heating Security Initiative aimed at assisting customers most impacted by

the high natural gas prices. The Department of Commerce is charged with implementing the initiative's three main goals:

1) **Keeping the heat on for low-income customers through no shut off agreements with major utilities.** Six major utility entities have joined the agreement.
2) **Providing greater heating financial assistance to those in need.** Governor Pawlenty infused the LIHEAP program with $13 million. This is the largest contribution of state money to the program in our history. The additional funding will allow the Department of Commerce to serve an additional 26,789 households. In addition, because of the higher energy costs, we have increased the average assistance amount households receive by 25% to $500 per household (last year the average LIHEAP grant was $400).
3) **Lowering utility bills through energy conservation.** Through the state's energy Conservation Improvement Program (CIP), the Department of Commerce has approved natural gas utility proposals to spend an additional $2.1 million this winter. These programs will increase rebates for heating system tune-ups and replacements for residential homes, schools, nursing homes, hospitals and public buildings. Some of these programs also offer fully-funded furnace tune-ups and replacements to low-income energy consumers and fully-funded boiler system tune-ups to schools. Finally the state is leading by example: pursuant to Governor Pawlenty's Executive Order 05-16 we are reducing the energy consumption of state buildings by 10%.

Natural Gas Price Review and Regulation

Minnesota's regulated natural gas utilities charge their customers the same price that they pay to gas producers for the gas that they buy. Utilities only make a profit on their costs of operating their business. Normally these business-operation costs account for approximately 10% of a customer's bill. Since the price of the natural gas itself accounts for the largest portion of a customer's bill, the Department of Commerce is constantly reviewing natural gas prices charged to Minnesota customers by their state-regulated natural gas utilities.

The Department's analysis is geared toward ensuring that the utility is charging reasonable prices to its customers. If the Department finds an exception, it provides its analysis to the Public Utilities Commission and recommends that the Commission use its statutory authority to prevent unreasonable or imprudent costs from being charged to customers.

Public Education and Outreach

The State Energy Office in the Department of Commerce distributes energy conservation information and materials to the public through a variety of methods, including: providing background information and comments for print and broadcast media; staffing information booths at energy fairs, trade shows, conferences, and other public events; responding to telephone inquiries; and maintaining the Department website.

Administration of LIHEAP and Weatherization

Low Income Heating and Energy Assistance Program (LIHEAP)
To date this winter, total state and federal LIHEAP funds available in Minnesota equal $101.5 million. These funds are used to provide direct heating assistance, additional funds in crisis situations and furnace repair or replacement for low-income households. With this funding, it is projected the Department will serve 145,800 Minnesota households with primary heating assistance. (The Department served 117,689 households last year.)

In addition to its efforts to serve more households, the Department has improved the administration of the LIHEAP program. Last year, the Department successfully developed and launched a new computer system called eHEAT. eHEAT centralized data collection and payments, thus increasing the efficiency of service provision for both local providers and energy vendors. For consumers, eHEAT reduced the time between application processing and receipt of the benefit.

Weatherization Assistance Program (WAP)
The Weatherization Assistance Program provides conservation services to low income households throughout Minnesota. In contrast to LIHEAP, which assists in paying low-income customers' immediate energy bills, WAP provides weatherization services such as weather-stripping, insulation and furnace tune-ups or replacements. These services will assist low-income consumers in lowering their energy bills for years to come.

WAP is federally funded through the US Department of Energy (DOE) and through US Health and Human Service's LIHEAP program. Minnesota supplements WAP funding with revenues from its petroleum inspection fee and propane excise tax. Additionally, Minnesota utilities provide some funding for weatherization through low-income Conservation Improvement Programs.

WAP's total budget for 2004-2005, including both state and federal funds, totaled $14.28 million dollars. Of those funds, $13.24 million were spent for program work, resulting in 3,952 homes being weatherized at an average cost of $3,350.

Conclusion and Recommendations

- High natural gas prices appear to be here to stay, at least for the foreseeable future. The State of Minnesota and its natural gas utilities are diligent in using the tools at their disposal to provide consumers with reasonably-priced natural gas service. Congress has also taken steps to address this issue in their passage of the Federal Energy Policy Act of 2005. Also, the President's recent State of the Union Address called for further energy efficiency and innovation measures. The Minnesota Department of Commerce applauds these actions and is ready to help achieve our common goals.

Thank you again for the opportunity to be here today. Thank you again, Senator Coleman for your hard work to secure LIHEAP funding. With that funding and through the efforts of Governor Pawlenty's Heating Security Initiative, we are providing greater energy assistance to more Minnesotans this winter than ever before; just when they need it.

Governor Pawlenty's Heating Security Initiatives

- Assisting more people
- Providing more resources
- Saving more energy

Presentation to:
U.S Senate Permanent Subcommittee on Investigations
Of the
Committee on Homeland Security and Governmental Affairs
Chair: Senator Norm Coleman
10:00 a.m. James J. Hill Reference Library
80 West 4th Street, Saint Paul, Minnesota
February 10, 2006

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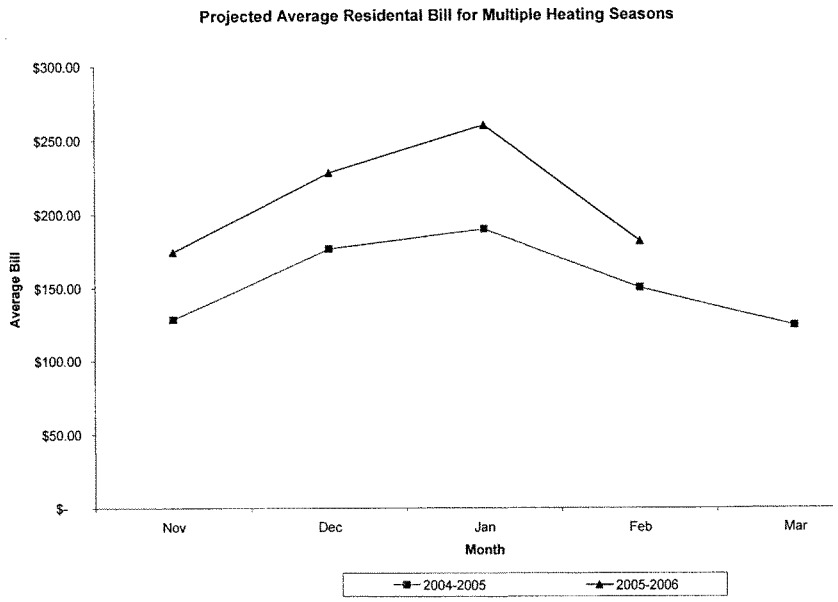
Natural Gas Prices in Minnesota



Average Heating Costs for the past 7 winters			
	Amount of Gas used (MCF)	Cost of Gas used ($/MCF)	Total Bill
Nov-05	12.5	$12.02	$185.00
Dec-05	17.9	$11.18	$227.78
Jan-06	20.5	$11.54	$271.90
Feb-06	16.2	$9.38	$181.13
Mar-06			
Nov-04	12 5	$8 48	$128 31
Dec-04	17.9	$8.16	$176.34
Jan-05	20.5	$7.60	$189.61
Feb-05	16.2	$7.52	$149.65
Mar-05	13.4	$7.42	$123.33

NOTES: **Amount of Gas** -- based on average usage during **normal weather** conditions for a CenterPoint Energy residential customer
Cost of gas – Based on average costs obtained from MN regulated natural gas utilities (numbers have been rounded)
Other costs include all other residential charges including non-gas margin and customer charge (CenterPoint Energy tarrifs)

SOURCE Minnesota Department of Commerce, Energy Division February 2006

Factors affecting the cost of natural gas

Weather
Weather has probably the biggest impact on the size of customers' natural gas bills. Weather can affect both the supply and the demand side of natural gas. A good example of supply impacts is the devastation wrought by Hurricane Katrina, which abruptly closed down resources and destroyed production facilities in and around New Orleans. This sudden loss in supply has translated to increased prices until the damage is assessed and the resources are rebuilt. On the demand side, both winter and summer weather conditions impact the cost of natural gas. Winter weather always requires more gas to heat our homes. Unexpected cold snaps anywhere in the country can cause our heating bills to rise since natural gas is priced on a national market basis.

High oil prices
More and more, natural gas prices are mirroring the price of crude oil; so, as crude oil prices spike and fall, we see natural gas prices following suit. Part of the reason for this is that many large industrial customers can switch between using natural gas or petroleum products, depending on the price of each fuel. As a result, when oil prices go up industries tend to choose natural gas, which in turn increases the demand for natural gas and raises the price.

Increased price volatility
Because there is such a delicate balance between supply and demand, any single event (either domestic or international) can quickly affect the daily or monthly price of natural gas. Local gas distribution companies (LDCs), like Xcel Energy or Center Point Energy, purchase natural gas from suppliers which, in turn, purchase from producers or marketers. The amount an LDC pays for natural gas supplies is passed dollar-for-dollar through to its customers. Most LDCs have a mixed portfolio with different length contracts and financial hedging instruments. They also have the ability to purchase natural gas on the open or "spot" market when a better price is available or when additional supplies are needed. In addition, many LDCs purchase gas in advance and place it in storage for use during periods of peak demand in the winter. Although residential customers are somewhat insulated from rapid ups and downs in the price of natural gas by the purchasing practices of utility companies, bill payment options and state oversight, customers ultimately pay for what they use.

Background: Infrastructure and Regulation

Where our natural gas comes from
The majority of Minnesota's natural gas supply comes from the mid-continent basins located in Oklahoma, Kansas, and Texas. The remaining balance comes from Canada. Natural gas is transported to Minnesota by three major interstate pipelines: Northern Natural Gas which transports about 90 percent of the natural gas into Minnesota, Viking Gas Transmission and Great Lakes Gas Transmission which transport the rest.

Local natural gas utility companies deliver natural gas to customers. In Minnesota there are six investor-owned companies that are regulated by the State Public Utilities Commission and over twenty municipal LDCs that are regulated by cities. The investor-owned utilities serve 95 percent of Minnesota's natural gas customers.

Minnesota's LDCs have the role of providing safe, reliable natural gas service at reasonable rates. They are responsible for:

- Meeting the winter peak demand needs of their ratepayers.
- Identifying the needs of their customers.
- Purchasing gas supplies to meet the needs of customers in a wholesale market that is not regulated.
- Arranging transportation of gas on interstate pipelines that are regulated by the Federal Government.
- Distributing the gas on their own systems to consumers.

Who regulates what
The Federal Energy Regulatory Commission (FERC) regulates the cost of transporting the gas through the three major interstate pipelines that serve Minnesota. Minnesota regulators include the Public Utilities Commission (PUC), the Department of Commerce and the Residential and Small Business Utilities Division of the Office of the Attorney General.

- The PUC approves the rates that consumers pay and reviews the adequacy and cost of LDC's supplies to ensure that the companies make prudent decisions in buying natural gas for their customers.

- The Department of Commerce advocates for all natural gas consumers and the broad public interest in all matters before the PUC and makes recommendations. If a cost appears to be unreasonable, the Department of Commerce will recommend that the PUC not allow such costs to be passed on to consumers.
- The Office of the Attorney General focuses its advocacy on residential and small business gas consumers.

The price of the natural gas itself is not regulated. The going price of natural gas is market driven, meaning the price goes up or down according to the balance between supply and demand.

Department of Commerce's Role in Natural Gas Price Review and Regulation
Minnesota's regulated natural gas utilities charge their customers the same price that they pay to gas producers for the gas that they buy. Gas utilities make no profit on the gas commodity itself or on the costs of transporting it to Minnesota or storing it for future use. Utilities only make a profit on their costs of operating their business. Normally these business-operation costs account for approximately 10% of a customer's bill. The Department of Commerce reviews all of these various types of costs to ensure that customers are charged reasonable prices for their gas service.

Since the price of the natural gas itself accounts for the largest portion of a customer's bill, the Department of Commerce is constantly reviewing natural gas prices charged to Minnesota customers by their state-regulated natural gas utilities. This review is conducting in a number of ways:

- The Department constantly monitors Minnesota gas utility information, natural gas industry actions, natural gas price and supply indexes such as the Department of Energy's Energy Information Administration (EIA) as well as industry information and world events that may impact regional, national or global gas pricing.
- The Department receives and analyzes monthly information from state regulated utilities concerning the price and amount of natural gas charged to customers.
- The Department receives and analyzes information from each utility at the beginning of each of each heating season on the utility's plans to provide service to its customers during peak-use times in the coming winter.
- The Department annually receives data and information that it analyzes and formulates an annual report to the Commission on all aspects of the regulated utilities gas purchasing practices, price-stabilization strategies and resulting overall costs charged to customers.
- In all of its different types of utility information review, the Department's analysis is geared toward ensuring that the utility is charging reasonable prices to its customers. If the Department finds an exception, it provides its analysis to the Public Utilities Commission and recommends that the Commission use its statutory authority to prevent unreasonable or imprudent costs from being charged to customers.

OFFICE OF GOVERNOR TIM PAWLENTY
130 State Capitol ♦ Saint Paul, MN 55155 ♦ (651) 296-0001

NEWS RELEASE

FOR IMMEDIATE RELEASE:
January 5, 2006

Contact: Jeff Falk
(651) 296-0001

St. Paul – Governor Tim Pawlenty announced today he has reached agreement with the major utility companies that guarantees that income eligible families who contact the utility will not have their heat shut off this winter. Representatives of Centerpoint and Xcel Energy joined the Governor as he announced the agreement and introduced a package of energy policies aimed at helping families, schools, nursing homes and hospitals deal with high energy prices and Minnesota's cold winter.

"Keeping families warm in winter is not just about comfort, it's about the health and safety of our citizens," Governor Pawlenty said. "No one should be without heat, and a person's financial hardship should not put their heat at risk."

This agreement reduces some of the more onerous elements of the cold weather rule.

In addition to the agreement with the utility companies, Governor Pawlenty also announced the infusion of $13 million of emergency funding into the state heating assistance program for low-income families, income-eligible seniors and low-income disabled Minnesotans. This new money will be in addition to the $70 million in energy assistance funding already received this September through the Low Income Home Energy Assistance Program (LIHEAP).

Minnesota LIHEAP helps pay home heating costs for households with the lowest incomes and highest energy costs. Last year the program served 118,000 households with an average assistance amount of $400 per household.

The additional money will enable the program to serve 126,000 households this year (a 7% increase) with an average assistance amount of $500 per household (a 25% increase).

"With cold weather approaching and energy prices rising, it's important we make this money available to families immediately," Governor Pawlenty said. "This plan will put more money in the hands of more families when they need it most."

The additional $13 million for LIHEAP would come from the federal Temporary Assistance for Needy Families (TANF) dollars the state received in September for its outstanding performance in program outcomes (job entry performance; success in the workforce; increase in participation of low-income working families in food stamps).

In addition to home heating assistance funding, the Governor also announced three other initiatives to address this winter's high heating costs:

Promotion of energy programs and kits provided by Minnesota's utility companies

Governor Pawlenty also took the opportunity to promote the various programs available to Minnesota's utility customers to help them save money and energy. Programs include weatherization kits, energy audits and weather stripping. The weatherization kits include tips and

items that can help conserve energy in the home such as compact fluorescent light bulbs and energy efficient shower heads.
Each utility has their own unique program or kit and Minnesotans can contact their energy provider for information on how to access them. Most programs are offered to consumers free of charge.
"Minnesota families should check with their utility to see what programs they offer – energy conservation really does begin at home," Governor Pawlenty said.

Making more money available for energy conservation in homes, schools and nursing homes
Governor Pawlenty is asking the utilities to explore ways to accelerate spending on energy conservation and efficiency. The money could be used to help households pay for energy savings such as furnace tune-ups (or replacement with high efficiency furnaces), insulating attics, sealing window drafts, and programmable thermostats. These improvements will noticeably increase comfort and reduce the amount of energy needed to heat our homes.
The additional money will also help schools and nursing homes receive heating system tune-ups and make sure our nursing homes, hospitals and other public buildings are as energy efficient as they can be.
"Minnesota has one of the nation's most effective home heating conservation and efficiency programs with our natural gas utilities spending $14 million dollars each year," Pawlenty said. "But we can do more and we can do better."

State buildings to lead by example by cutting energy usage by 10%.
Governor Pawlenty issued an executive order requiring all state buildings to reduce their energy use by 10%. This will be accomplished through several short and long-term energy conservation measures such as lowering the heating temperature set points and raising the cooling set points in state buildings, implementing energy efficiency improvements in existing buildings, and re-commissioning existing state buildings making use of utility company rebates.
In addition, the state will improve energy procurement methods through forward pricing mechanisms and procure alternative fuels during summer months when prices are lower.
Implementing these measures is expected to produce over$1 million in cost savings that will offset anticipated fuel increases. The Governor also encouraged the University of Minnesota and MnSCU buildings to achieve the same goal.
"State Government consumes a lot of energy and we can lead by example by cutting our energy usage by 10%," Pawlenty added.

EXECUTIVE ORDER 05-16

I, TIM PAWLENTY, GOVERNOR OF THE STATE OF MINNESOTA, by virtue of the authority vested in me by the Constitution and applicable statutes, do hereby issue this executive order:
WHEREAS, energy prices including the costs for electric power, natural gas, heating fuel are predicted to rise significantly this year; and
WHEREAS, state government is a major consumer of energy and should be a leader in adopting energy conservation practices, thereby furthering fiscal, environmental and economic development goals, and
WHEREAS, conservation of energy resources are an effective means for mitigating against the demand pressures for energy consumption and for reducing state costs related to increases in energy prices; and
WHEREAS, state agencies are in a unique position to demonstrate to other governmental entities, businesses, organizations and individuals the cost and environmental benefits of energy conservation; and
WHEREAS, reduction and conservation of energy resources is consistent with other executive branch initiatives including Executive Order 04-10 which provides for the use of alternative fuels for the state's fleet and travel needs and Executive Order 04-08 which provides for state departments to take actions to reduce air pollution in daily operations.
NOW, THEREFORE, I hereby order:

1. All state agencies will take measures including, but not limited to the measures set forth in this order, to reduce energy usage in state owned buildings by 10% over the next calendar year.
2. All state agencies must immediately implement the following operational changes to conserve energy and reduce state energy costs:
    a. Heating temperatures will be set at the following maximum temperatures:
        i. 68° F to 70° F for all occupied areas and cafeterias;
        ii. 65° F to 67° F for all lobby corridor and restroom areas;
        iii. 60° F to 62° F for all building entrances, storage areas and tunnels;
        iv. Temperature settings for all of the above referenced spaces must be lowered to 60° F to 62° F during non-working hours;
        v. 55° F for all unoccupied spaces;
        vi. 55° F for all vacated spaces.
    b. Cooling temperatures will set at the following minimum temperatures:
        i. 76° F to 78° F for all occupied space excluding reheat systems;
        ii. Temperatures settings for air-conditioning turned off or raised to 85° F during nights and weekends.
    c. Computer rooms, research facilities and special care facilities are exempted from these requirements. Additional building spaces may be exempted from all or part of these requirements, pursuant to the approval of the Commissioner of Administration.
3. State agencies will pursue long term energy conservation measures, which may require capital funding, in state owned buildings utilizing the procedures set forth in Minnesota Statutes, Sections 16C.144 and 16B.32, subdivision 3, including:
    a. Incorporating Minnesota Sustainable Guidelines for new construction to reduce the long-term cost of operating and maintaining state buildings.
    b. Incorporating energy efficiency programs provided by utility companies for all new construction.

   c. Implementing energy efficiency improvements in existing buildings through partnering with energy services companies and funding the projects through lease purchase agreements, or other appropriate means.
   d. Re-commissioning existing state buildings to maximize utility company rebates.
4. State agencies will adopt prudent energy procurement strategies including:
   a. Procuring alternate fuels for heating during summer months when prices are lower.
   b. Procuring natural gas and other fuels through Minnesota Statute 16C.143, energy forward pricing mechanisms, beginning fiscal year 2007.
5. For purposes of this executive order, state agencies means any agency as defined in Minnesota Statutes 2004, Section 16B.01, Subdivision 2 which occupies state owned or leased buildings.
6. The University of Minnesota and the Minnesota State Colleges and Universities are strongly encouraged to implement effective strategies to reduce energy consumption and energy costs at their facilities. The Commissioner of Administration will make efforts to share information regarding the strategies implemented pursuant to this order.
7. The Commissioner of Administration with the assistance of the Commissioner of Commerce will be responsible for:
   a. Communicating the requirements of this order to state agencies;
   b. Developing procedures to measure the reductions in state energy usage and to monitor compliance with this executive order;
   c. Developing additional strategies for energy conservation and communicating those strategies to state agencies; and
   d. Providing information regarding state energy conservation actions to other interested governmental entities, businesses, organizations and individuals.

Pursuant to Minnesota Statutes 2004, Section 4.035, Subdivision 2, this order will be effective fifteen (15) days after publication in the State Register and filing with the Secretary of State and will remain in effect until it is rescinded by proper authority or it expires in accordance with Minnesota Statutes 2004, Section 4.035, Subdivision 3.

Implementation of Governor Pawlenty's Heating Security Initiatives

1. Keeping the Heat On through Utility "No shut off" agreements
Governor Pawlenty worked with major Minnesota utilities to reach an agreement that guarantees that income-eligible families who contact their utility will not have their heat shut off this winter. Utilities that have joined the agreement as of February 1, 2006:

- Xcel Energy
- CenterPoint Energy
- Aquila
- Minnesota Power
- City of Duluth Natural Gas
- Minnesota Municipal Utilities Association Board of Directors

2. Increased Funding for LIHEAP
In November, Governor Pawlenty announced the infusion of $13 million of emergency funding into the Low Income Home Energy Assistance Program (LIHEAP). The additional funding will allow the Department of Commerce to serve an additional 26,789 households and increase the average assistance amount to $500 per household (a 25% increase).

3. Increased Energy Conservation
A. Conservation Improvement Program
Through the state's energy Conservation Improvement Program (CIP), Minnesota natural gas utilities will spend an additional $2.1 million in 2006 to deliver energy conservation programs to Minnesota customers most impacted by high natural gas prices. These programs will help residential customers, schools, nursing homes, hospitals and public buildings be as energy efficient as possible.

The Minnesota Department of Commerce has approved the accelerated CIP spending proposals to provide the following energy conservation measures in 2006:

Aquila – Northern Minnesota Utilities (NMU) - Serving Cloquet and communities in northern Minnesota

- Heating system tune-up incentives (up to $50 per system) for residential homes;
- 100% rebate for boiler tune ups (up to $1,500 per building) for schools, non-profits and governmental customers; and
- Increased incentives for boiler tune ups in other commercial and industrial customers (50% up to $500).

Aquila – People's Natural Gas (PNG) - Serving Eagan, Rochester and other communities in the southern half of Minnesota

- Heating system tune-up incentives (up to $50 per system) for residential homes;
- 100% rebate for boiler tune ups (up to $1,500 per building) for schools, non-profits and governmental customers; and
- Increased incentives for boiler tune ups in other commercial and industrial customers (50% up to $500).

CenterPoint Energy - Serving Minneapolis and its suburbs as well as other communities throughout Minnesota

- Heating system tune-up or replacement for approximately two-thirds of the utility's participants in the Low Income Weatherization Project;
- Hot water heater boiler replacements for low-income customers;
- Increased incentives for boiler tune-ups in K-12 schools;
- Increased incentives for energy audits and engineering assistance for total heating system revamps in K-12 schools; and
- Energy Conservation Seminars to educate customers on energy conservation opportunities.

Great Plains Natural Gas Co. - Serving Fergus Falls, Crookston, Breckinridge and other communities around Minnesota

- Increased incentives for residential furnace rebates;
- 100% boiler tune up costs (up to $400) for schools, nursing homes, hospitals, clinics and other public buildings; and
- Energy conservation education meetings to educate customers on energy conservation opportunities.

Interstate Power and Light - Serving Albert Lea and other communities in southern Minnesota

- New comprehensive energy audit for residential customers; and
- Outreach to all public buildings to encourage implementation of energy conservation improvements through the utility's shared savings program.

Xcel Energy -Serving St. Paul and its suburbs as well as other communities throughout Minnesota

- Increased consumer education;
- Increased rebates for residential furnaces, boilers and water heaters;
- Reduced co-payments for residential home energy audits;
- Incentives for sealing attic bypasses and adding insulation;
- Weatherization kits for low-income gas customers;
- Increased emergency furnace replacements for low-income customers;
- Water heater replacements for low-income customers;
- Increased furnace rebates for small business customers;
- Increased incentives for commercial/industrial boiler system replacements; and
- Increased incentives (up to $1000 per boiler) for boiler tune ups in schools, nursing homes, hospitals and public buildings.

B. Public Education and Outreach

The State Energy Office in the Department of Commerce distributes energy conservation information and materials to the public through a variety of methods, including: providing background information and comments for print and broadcast media; staffing information booths at energy fairs, trade shows, conferences, and other public events; responding to telephone inquiries; and maintaining the Department website.

C. Reducing Energy Use in State Buildings

The Department of Administration and the Department of Commerce, State Energy Office have been working jointly to implement Executive Order 05-16, in which the Governor called for a 10% reduction in energy consumption in state buildings. The following is a summation of activities to date and future plans.

Actions by Facility Managers:

- Reduced building temperatures during heating season.
- Increased building temperatures during cooling season.
- Incorporating Minnesota Sustainable Design Guidelines into new state buildings to reduce the long-term cost of operating and maintaining the building.
- Benchmarking buildings to ascertain which buildings need help first, maximizing state funds.
- Increasing partnerships with energy services companies to service more energy efficiency needs in existing buildings.
- Increasing the number of re-commissioned buildings in the state, maximizing utility company rebates.

Actions by State Employees:

- **Saving Energy E-Letter.** A periodic e-mail newsletter has been sent to all state employees, highlighting information about the EO and providing tips for ways that state workers can help to implement the order. Also included is a link to the Saving Energy website. Two issues have been distributed so far, with additional e-letters scheduled for every six weeks.
- **Saving Energy Website.** A simple website has been created (www.savingenergy.state.mn.us) that provides the complete EO, general energy saving tips, and links to energy conservation resources—both within the state system and externally. A "Suggestion Box" e-mail link is also included, where workers can send their suggestions for energy saving in state buildings. The responses to these suggestions are presently being compiled into a FAQ page for the website.
- **Energy Fairs.** The State Energy Office will hold several energy fairs at state building locations, distributing information on ways to save energy—at home as well as at work. Materials to include print-outs of the EO, selected Energy Guides, and consumer CDs.

Specific Initiatives:

Several energy saving proposals are being considered that may involve new products or new procedures, including computer sleep and shut down options, Vendormisers/timers for reducing energy use from vending machines, replacement of incandescent lamps with CFLs or LEDs, motion sensors for lighting in infrequently used spaces, replacing appliances/equipment with ENERGY STAR rated appliances, switchplate cover and other stickers that remind people to turn lights and other equipment off when not in use.

Weatherization Assistance Program

The Weatherization Assistance Program (WAP) provides conservation services to low income households throughout Minnesota. WAP is federally funded through the US Department of Energy (DOE). Priority for program services is given to the elderly, disabled individuals and households with high heating costs. WAP services are provided through a delivery network that consists of 24 community action agencies, 6 tribal governments, a housing rehabilitation authority and one local nonprofit organization. Weatherization services may include installing insulation, sealing air leaks, increasing the efficiency of the heating and heat distribution systems, safety improvements on the dwelling's mechanical system and client energy education. To be eligible for this program, the household must be at or below 50% of the Minnesota median guidelines.

Funding
Weatherization is provided by annual Congressional appropriation. Over the past five years an average of $9.25 million in DOE WAP funds has been allocated to Minnesota; over the past ten years the average is $6.235 million. A maximum of ten percent of the funds received by the state may be used for administration. Currently local program administrators receive 6.7% while the state uses 3.3% for program administration, which includes training and technical assistance for the local administrators.

WAP also receives funding from the Low Income Energy Assistance Program (LIHEAP). Historically, the Minnesota LIHEAP program sets aside 5% of its budget for weatherization work (0-20% is allowed by the federal program), understanding that doing weatherization measures on homes may help to permanently bring down energy costs for a home. In this current year, the WAP received $3.87 million from LIHEAP.

Minnesota also supplements WAP funding with revenues from its petroleum inspection fee and propane excise tax. In the current fiscal year, these funds will provide approximately $600,000 for weatherization activities in homes heated with oil or propane.

Other means of weatherization
One other source of weatherization in the state comes through the utility low-income Conservation Improvement Programs. In 2005, utilities worked with the various community action agencies, tribes and nonprofits to provide $1.65 million for use in weatherization activities.

Background on LIHEAP

The Minnesota Energy Assistance Program (EAP) is a federal block grant funded through the Low-Income Home Energy Assistance Program (LIHEAP). The block grant legislation (Title XXVI of the Omnibus Budget Reconciliation Act of 1981, Public Law 97-35, as amended) gives States broad latitude to develop programs that assist low income households meet their immediate home energy needs. On the federal level, the program is administered in the U.S. Department of Health and Human Services. (See Health and Human Services' web site at http://www.acf.dhhs.gov/programs/liheap/.)

Program components required or allowed by the LIHEAP Act are:

- Outreach
- Assistance with home energy costs
- Intervention in energy crisis situations
- Provision of low-cost residential weatherization and cost-effective energy-related home repair and
- Planning, developing, and administering the State's program, including leveraging programs.

Federal LIHEAP Intentions

The LIHEAP Act lists the following program intentions:

- "to assist low-income households, particularly those with the lowest incomes, that pay a high proportion of household income for home energy, primarily in meeting their immediate home energy needs."
- to reserve "a reasonable amount based on data from prior years . . . until March 15 of each program year for energy crisis intervention."
- to "conduct outreach activities designed to assure that eligible households, especially households with elderly individuals or disabled individuals, or both, and households with high home energy burdens, are made aware of the assistance available under this title."

Source: Title XXVI of the Omnibus Budget Reconciliation Act of 1981, Public Law 97-35, as amended

State EAP Intentions

The Policy and Procedure Manual for the Minnesota Energy Assistance Program lists the following program intentions, as developed by the EAP Task Force in 2001:

- To meet energy needs through collaboration
- To administer a universally recognized and accepted program
- To provide safety and comfort to eligible households
- To empower participants
- To offer simple access to program services
- To provide quality service
- To reach those who qualify

Service Delivery

In Minnesota, EAP is administered by the Office of Energy Assistance Programs in the Minnesota Department of Commerce (DOC). DOC has statewide administrative authority over EAP including program and policy development, training and disbursing financial resources as well as monitoring for compliance, data collection and reporting.

The services are delivered by local providers who contract with DOC to determine eligibility, approve payments and provide advocacy, outreach and referral services. 38 local agencies comprising community action program, counties, Indian Tribes and non-profits cover all areas of the State.

Services
In Minnesota, eligibility is 50% of the State Median Income. For a family of four, that is $38,364. In Minnesota, as well as nationally, LIHEAP serves about 1/3 of the eligible population. LIHEAP targets seniors, disabled and families with children 5 year old and under.

LIHEAP helps eligible households meet their energy needs by providing grants to lower their energy burden. Grants range from $100-$1200 depending on family size, income and fuel consumption. The average grant last year was $403. The average grant for this winter is planned for $500 to offset rising energy costs. Related services include additional funds in crisis situations and limited funds for furnace repair or replacement. Advocacy services to do outreach, referral and advocacy are also available.

Improvements for FFY2005
Last year DOC successfully developed and launched a new computer system called eHEAT. eHEAT centralized data collection and payments, increasing the efficiency of service provision for both local providers and energy vendors. Maybe more importantly to the customers, eHEAT reduced the time between application processing and receipt of the benefit.

Improvements for FFY2006
- **eHEAT**--numerous enhancements to eHEAT will increase efficiencies ((for example reducing application processing from 8 steps to 4 steps)
- **Centralize consumption data collection**--With full eHEAT implementation this year, collection of energy consumption data (one of the key factors in developing the benefit amount) for most households is now centralized and automated.
- **Primary Heat Benefit Amount Increase**--The average Primary Benefit amount will increase from $400 to $500. This is the first increase in several years.
- **Scheduled Payments**-- Most households will receive four payments spread over four months rather than bulk payment.
- **Energy Related Repairs**-- FFY2006 introduces an average expenditure limit for Energy Related Repairs of $2,000 per household. The Statewide average for FFY2005 is $1260.
- **Crisis**-The Crisis program introduces incentives for households to develop and maintain payment plans and sign up for the Cold Weather Rule. Basic crisis benefit amount will be up to $300. Additional up to $200 for a total up to $500 will be available to households meeting the incentives.
- **Assurance 16**-Funding for Assurance 16 activities increases from 3% to 5% (a 66.6% increase. This year Assurance 16 activities focus on supporting households' efforts to pay a reasonable amount each month to their energy vendors.
- **Administration**-- A change in the distribution of administration funds between State and local service providers moving .37% from the local service providers to the State.

Budget for Low Income Home Energy Assistance Program

Federal Fiscal Year 2006 (October 1, 2005- September 30, 2006)

Line Item	Budgeted Amount	Percentage
Primary Heat	$72.9M*	71.8%
Crisis	$6.0M	5.9%
Energy Related Repairs	$6.0M	5.9%
Reach Out for Warmth	$.4M	0.4%
Weatherization Transfer	$3.9M	3.8%
Assurance 16	$4.1M	4.0%
Total Administration	$8.2M	8.0%
State Administration	*$1.7M*	*1.6%*
Local Service Provider Administration	*$6.5M*	*6.4%*
TOTAL	**$101.5 Million**	

* The $72.9 million available for direct billing paying assistance in the winter of '05-06 is the total from the following sources:

$53.1M of the $81.7M in LIHEAP funds MN received through January 12, 2006.
$13.4M Governor Pawlenty dedication of TANF funds to LIHEAP
$ 6.4M Carry-over and internal reallocation of funds within the LIHEAP program
$72.9M

Cost Category Descriptions

Primary Heat: Direct payments provided to utilities on behalf of the households

Crisis: Direct payment provided to utilities to households in "no heat" or "threaten no heat" situations.

Energy Related Repair: Energy Related Repair is direct financial assistance to households for home heating plant repair and replacement.

Reach Out for Warmth: Reach Out for Warmth (ROFW) provides matching funds- 2 for 1- for locally raised donations. Eligibility is 60% of State Median Income. Direct payments to utility on behalf of the households.

Weatherization Transfer: This is a transfer of LIHEAP funds to the Weatherization program for low cost conservation and other energy related repairs. Services are provided directly to the home of eligible households.

Assurance 16: Funds provided to local service providers for outreach, referral and advocacy services.

Administration: Up to 10% of the available regular grant is available for administrative costs. Administrative costs for LIHEAP are all activities other than direct household services. 8% is available for local service providers and 2% is available for state activities.

LIHEAP in Minnesota: A History

Winter Heating Season	Total LIHEAP Funding Awarded	Total spent on direct heating bill payments	Average Household Heat Bill Payment	Total Household served
2005-06	**$81.7M** (as of 2/2/06)	**$72.9M***	**$500**	**145,800****
2004-05	$84.7	$47.5	$404	117,698
2003-04	$72.1	$49.6	$445	111,257
2002-03	$78.3	$50.0	$408	122,327
2001-02	$69.3	$47.0	$420	111,625
2000-01	$61.1	$58.9	$534	110,204
1999-00	$65.0	$34.8	$414	84,105
1998-99	$45.9	$25.7	$286	89,924
1997-98	$39.2	$25.8	$316	81,486
1996-97	$52.6	$41.6	$462	89,280
1995-96	$42.1	$28.0	$322	87,080

* The $72.9 million available for direct billing paying assistance in the winter of '05-06 is the total from the following sources:

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$ 6.4M Carry-over and internal reallocation of funds within the LIHEAP program
$72.9M

**Projected

Households Given Financial Assistance by Percentage of Poverty Level [1]

Winter Heating Season	Total Households Served[2]	Under 75% poverty[3]	75%-100% poverty	101%-125% poverty	126%-150% poverty	Over 150% poverty
2004 -	117,698	36,221	25,216	20,068	16,207	19,986
2003 -	111,257	32,121	24,700	18,793	15,368	20,275
2002 -	122,327	35,704	27,264	20,395	16,514	22,450
2001 -	111,625	33,107	26,080	19,319	15,268	17,851
2000- 2001	110,204	34,227	29,909	20,481	14,042	11,545
1999 -	84,105	25,877	22,911	15,677	10,764	8,876

[1]The Household Report is a required report submitted to the U.S. Department of Health and Human Services in draft on September 1 and as a final version on December 15.
[2]Number of households who received the basic Energy Assistance payment (called Primary Heat).
[3]The Energy Assistance Program uses the poverty guidelines published during the previous Federal Fiscal Year.

Eligibility

To be eligible for EAP in Minnesota, households' incomes must not exceed 50% of the federally defined State Median Income. The LIHEAP Act also stipulates that all households with incomes of 110% or less of the Federal Poverty Guidelines must be income eligible. This year, 110% of Poverty exceeds 150% of the State Median Income for households with 16 or more members, as shown by the following table.

HH Size	50% SMI	110% Poverty	100% Poverty	150% Poverty	200% Poverty
1	$19,948	$10,527	$9,570	$14,355	$19,140
2	$26,088	$14,113	$12,830	$19,245	$25,660
3	$32,224	$17,699	$16,090	$24,135	$32,180
4	$38,364	$21,285	$19,350	$29,025	$38,700
5	$44,504	$24,871	$22,610	$33,915	$45,220
6	$50,640	$28,457	$25,870	$38,805	$51,740
7	$51,792	$32,043	$29,130	$43,695	$58,260
8	$52,944	$35,629	$32,390	$48,585	$64,780
9	$54,096	$39,215	$35,650	$53,475	$71,300
10	$55,244	$42,801	$38,910	$58,365	$77,820
11	$56,396	$46,387	$42,170	$63,255	$84,340
12	$57,548	$49,973	$45,430	$68,145	$90,860
13	$58,700	$53,559	$48,690	$73,035	$97,380
14	$59,848	$57,145	$51,950	$77,925	$103,900
15	$61,000	$60,731	$55,210	$82,815	$110,420
16	$64,316	$64,317	$58,470	$87,705	$116,940

Sliding Scale Benefits for FY05 Minnesota Energy Assistance Program

Consumption used was the average for the EAP Population for the fuel type last winter

Household Size = 1

% of State Median Income	Annual Income	Natural Gas Benefit	Liquid Propane Gas Benefit
25% or less	$ 9,975 or less	$ 560	$784
> 25% to 30%	$9,976 - $11,970	$ 467	$654
> 30% to 35%	$11,971 - $13,965	$ 373	$523
> 35% to 40%	$13,966 - $15,960	$ 280	$365
> 40% to 50%	$15,961 - $19,950	$ 187	$261

Household Size = 4

% of State Median Income	Annual Income	Natural Gas Benefit	Liquid Propane Gas Benefit
25% or less	$19,183 or less	$ 560	$784
> 25% to 30%	$19,184 - $23,019	$ 467	$654
> 30% to 35%	$23,020 - $26,856	$ 373	$523
> 35% to 40%	$26,856 - $30,694	$ 280	$365
> 40% to 50%	$30,695 - $38,366	$ 187	$261

Households Given Financial Assistance by Targeted Category[1]

Winter Heating Season 2004 - 2005	60 years or older[2]	Disabled[3]	Age 5 years or under[4]
2004 - 2005	36,331	29,974	24,194
2003 - 2004	35,016	21,929	27,490
2002 - 2003	35,651	19,102	32,004
2001 - 2002	33,020	16,524	29,959
2000- 2001	35,904	21,501	28,885
1999 - 2000	27,565	16,480	22,123

[1]The Household Report is a required report submitted to the U.S. Department of Health and Human Services in draft on September 1 and as a final version on December 15.

[2]The Low Income Energy Assistance Act targets elderly and defines that as 60 years or older. This data is the age of the household member on the date of the application

[3]The Low Income Energy Assistance Act targets households containing at least one disabled person. Applicants for EAP in Minnesota declare their disability.

[4]The Low Income Energy Assistance Act targets households containing at least one child under 6 years of age. This data is the age of the household member on the date of the application.

Fuel Source Used by Households Served[1]

Winter Heating Season	Natural Gas	Electricity	Oil	Propane/ LP	Municipal Steam	St.Paul District Heating	Wood	Other
2004 – 2005	70,841	12,534	12,328	18,772	385	194	1,306	1,274
	60.22%	10.66%	10.48%	15.96%	0.03%	0.02%	1.11%	1.08%

[1]The fuel type declared by the household to be the primary heat source

United States Government Accountability Office

GAO

Testimony

Before the Permanent Subcommittee on Investigations, Committee on Homeland Security and Governmental Affairs, United States Senate

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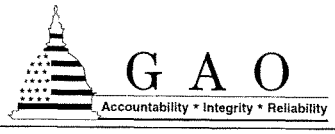
NATURAL GAS

Factors Affecting Prices and Potential Impacts on Consumers

Statement of Jim Wells, Director
Natural Resources and Environment



GAO-06-420T

February 13, 2006

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Highlights

Highlights of GAO-06-420T, a testimony before the Permanent Subcommittee on Investigations, Committee on Homeland Security and Governmental Affairs, United States Senate

NATURAL GAS

Factors Affecting Prices and Potential Impacts on Consumers

Why GAO Did This Study

In early December 2005, wholesale natural gas prices topped $15 per million BTUs, more than double the prices seen last summer and seven times the prices common during the 1990s. For the 2005-2006 heating season, the U.S. Energy Information Administration predicts that residences heating with gas will pay 35 percent more, on average, than they paid last winter.

This testimony addresses the following: (1) the factors causing natural gas price increases, (2) how consumers are affected by these higher prices, and (3) the roles federal government agencies play in ensuring that natural gas prices are determined in a competitive and informed marketplace.

This testimony is based on GAO's 2002 published work in this area, updated through interviews, examination of data, and review of relevant publications. GAO's new work was conducted from December 2005 through February 2006 in accordance with generally accepted government auditing standards.

www.gao.gov/cgi-bin/getrpt?GAO-06-420T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Jim Wells at (202) 512-3841 or wellsj@gao.gov.

What GAO Found

Since 1999, wholesale prices for natural gas have trended upward because of expanding demand and supply that has not kept pace. The domestic natural gas industry has been producing at near capacity, and the nation's ability to increase imports has been limited. Tight supplies have also made the market susceptible to extreme price spikes when either demand or supply change unexpectedly. Prices spiked in August 2005 when hurricanes hit the Gulf Coast, disrupting a substantial portion of supply and again later when demand was pushed higher because of, among other reasons, colder-than-expected temperatures in early December. Although prices have dropped, they remain higher than last year. Other factors—such as market manipulation—may also have affected wholesale prices. We are currently examining futures trading in natural gas markets for signs of manipulation and expect to report on our results later this year.

While most consumers' gas bills are rising, the degree of the increase depends, in part, on how much of their supply is purchased from wholesale spot markets. Consumers who directly, or indirectly, buy their natural gas mainly from spot markets will see prices that reflect both recent price spikes and the longer-term trend toward higher prices. Our work shows that some of the largest natural gas utilities in a few states expect to buy at least 70 percent of their gas at spot market prices this winter. These companies generally pass these prices on to their customers. On the other hand, consumers and suppliers that have reduced exposure to spot market prices because some of their gas has been purchased through a process called hedging may be insulated from price spikes and may postpone their exposure to even gradual price hikes. In this regard, utilities in more than half the states have hedged at least 50 percent of their supply for this winter by entering into long-term fixed-price contracts and other techniques. This will help stabilize prices for their customers. Nonetheless, high gas prices will hit some consumers hard, including lower-income households and companies that depend heavily upon natural gas, such as fertilizer manufacturers.

The Federal Energy Regulatory Commission (FERC) and the Commodities Futures Trading Commission (CFTC) play key roles in ensuring that natural gas prices are determined in a competitive and informed marketplace. Both agencies monitor natural gas markets and investigate instances of possible market manipulation. Since 2002, FERC has settled a number of investigations involving natural gas market manipulation; for example, one company agreed to pay a settlement of $1.6 billion after FERC found it had exercised market power over natural gas prices in California during the 2001-2002 heating season. From 2002 through May 2005, CFTC investigated over 40 energy companies and individuals, filed over 20 actions, and collected over $300 million in penalties, most of which were natural gas related.

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss natural gas prices. As you know, last fall two powerful and destructive hurricanes, Katrina and Rita, tore through the Gulf of Mexico and several states bordering it—an important area for the supply of natural gas. By early December 2005, wholesale natural gas prices topped $15 per million BTUs, more than double the prices seen last summer and seven times the prices common throughout the 1990s. For the 2005-2006 winter heating season, the Energy Information Administration estimated in January 2006 that residential households heating with natural gas will pay $257 (35 percent) more, on average, than last winter. Consumers in the Midwest are expected to witness even greater increases—paying 41 percent more than last winter.

This is not the first time that natural gas prices have sharply increased. In 2000-2001, prices rose steadily and remained high for nearly a year. We examined this phenomenon in 2002 and found that prices went up mainly because supplies could not keep pace with rising demand.[1] We also reported that federal agencies responsible for overseeing aspects of the natural gas market were actively investigating whether market participants had violated market rules or manipulated prices.

Concerned about the recent increases in natural gas prices and the implications of these increases on consumers in the United States, you asked us to address the following: (1) the factors causing natural gas price increases, (2) how consumers are affected by these higher prices, and (3) the roles federal government agencies play in ensuring that natural gas prices are determined in a competitive and informed marketplace.

Our testimony today is based on our prior reports, interviews, and a review of recent reports published by others. Prior related GAO products are listed at the end of this statement. To update our findings from those reports, we conducted interviews with federal agencies that included the Energy Information Administration, the Federal Energy Regulatory Commission, and the Commodities and Futures Trading Commission. We also interviewed the state commissions that oversee natural gas utilities, selected trade associations representing the natural gas industry, and other potentially affected industries. Further, we examined data on the

[1]GAO, *Natural Gas: Analysis of Changes in Market Price*, GAO-03-46 (Washington, D.C.: Dec. 18, 2002).

natural gas industry, including prices, consumption, and supplies. In addition, we reviewed relevant reports and other documents published by others. We conducted our work from December 2005 to February 2006 in accordance with generally accepted government auditing standards.

Summary

Since 1999, wholesale prices for natural gas purchased from the short-term, or spot, market have trended steadily upward because demand has expanded faster than supply. The domestic natural gas industry has been producing at near capacity, and, to date, the nation's ability to increase imports has reached its limits, given currently available infrastructure. Tight supplies have also made the market susceptible to extreme price spikes when either demand or supply change unexpectedly. Prices spiked in late 2005 when two hurricanes hit the Gulf Coast region, disrupting a substantial portion of our natural gas supply. This supply disruption was compounded by high demand due to, among other reasons, colder-than-expected temperatures in early December. As a result, December wholesale prices spiked further. Although prices have dropped from these highs, they remain higher than last year because some natural gas wells and pipelines damaged by the hurricanes remain inoperable and because the margin between demand and supply remains narrow. Other factors—such as market manipulation—may also have affected wholesale prices. We are examining futures trading in natural gas and other energy markets for signs of market manipulation and we plan to report on the results of that work later in 2006.

While the upward trend in natural gas prices is causing higher gas bills for most consumers, the degree to which they see their bills rise because of high wholesale prices depends on how much of their supply is purchased from wholesale spot markets. Consumers who buy most of their natural gas from spot markets, or consumers whose suppliers do so on their behalf, are likely to see price increases commensurate with both recent price spikes and the longer-term trend toward higher prices. According to our preliminary work with the state commissions that oversee natural gas utilities, some of the largest natural gas utilities in a few states expect to buy at least 70 percent of their gas this winter at spot market prices. The utilities generally pass these prices on to their customers. Gas utilities and consumers that do not obtain their gas through utilities can reduce their exposure to spot markets through a process called hedging, which includes such techniques as buying gas at fixed prices in long-term contracts or storing gas purchased when prices are relatively low to be used during times when prices are high. While hedging may not guarantee the lowest price, it allows consumers to have greater price stability. Our

preliminary work shows that the natural gas utilities in more than half of the states hedged at least 50 percent of their supplies for this winter. How consumers are affected by rising natural gas prices also depends on the consumer; some consumers are more sensitive to price changes than others. For example, lower-income residents may not be able to absorb the price increases and may have difficulty paying their bills. According to trade associations, industrial consumers that are heavily dependent upon natural gas, such as chemical and fertilizer manufacturers, may not be able to compete with foreign companies that have access to gas at lower prices and therefore may reduce operations or close U.S. plants.

Three federal agencies—the Federal Energy Regulatory Commission (FERC), the Commodities Futures Trading Commission (CFTC), and the Energy Information Administration (EIA)—play key roles in ensuring that natural gas prices are determined in a competitive and informed marketplace. FERC is responsible for ensuring that wholesale prices for natural gas sold and transported in interstate commerce are determined competitively. It carries out this responsibility by, among other actions, monitoring the markets in which natural gas is traded and investigating instances of possible market manipulation. Since 2002, FERC has settled a number of investigations involving natural gas market manipulation; for example, one company agreed to pay a settlement of $1.6 billion after FERC found it had exercised market power over natural gas prices in California during the 2001-2002 heating season. Since prices spiked in the fall of 2005, FERC has received complaints and identified areas of concern regarding high prices. Agency officials told us they investigate such matters where appropriate and that regulations governing FERC's activities prevent them from disclosing whether any investigations are under way. Similarly, CFTC is responsible for ensuring that fraud, manipulation and abusive practices do not occur in federally regulated financial markets such as the New York Mercantile Exchange (NYMEX), where some natural gas contracts are traded. CFTC monitors the markets for attempted market manipulation and takes enforcement actions, when it deems appropriate, such as initiating legal proceedings and imposing financial penalties. From 2002 through mid-2005, CFTC investigated more than 40 energy companies or individuals and assessed penalties totaling over $300 million, most of which concerned natural gas-related settlements. FERC and CFTC recently signed a memorandum of understanding in an effort to work together more effectively. EIA publishes information about natural gas markets, including aggregate estimates of supply and demand and average prices.

Background

Natural gas is a colorless, odorless fossil fuel found underground that is generated through the slow decomposition of ancient organic matter. In some cases, the gas, composed mainly of methane, is trapped in pockets of porous rock held in place by impermeable rock. In other cases, natural gas may occur within oil reservoirs or in coal deposits.[2] Natural gas is extracted via wells drilled into the porous rock. The natural gas is then moved through pipelines and processing plants to consumers.

Historically, domestic natural gas production has occurred largely in Texas, Oklahoma, and Louisiana. In more recent years, as older fields have been depleted, the Rocky Mountain region, Alaska, and areas beneath the deeper waters of the Gulf of Mexico are becoming increasingly important in supplying natural gas; however, in many cases these supplies are not near pipelines and other infrastructure needed for getting the gas to markets, which increases the costs of gas obtained from the newer fields.

Natural gas consumers include

- residential users living in houses, apartments, and mobile homes;
- commercial users such as stores, offices, schools, places of worship, and hospitals;
- industrial users covering a wide range of facilities for producing, processing, or assembling goods, including manufacturing, agricultural, and mining operations;
- entities that use natural gas to generate electricity and provide that electricity to others, such as regulated electric utilities and competitive suppliers of electricity; and
- the transportation sector, including pipeline companies, which use natural gas to operate the pipeline networks, as well as those using natural gas to power cars and buses.

Most residential and commercial consumers rely on natural gas utilities to supply their gas. Industrial consumers and electricity generators obtain their gas through a variety of means, including buying it directly from spot markets and natural gas utilities.

[2]Natural gas occurring within oil deposits is referred to as "associated natural gas " Natural gas found in coal deposits is referred to as "coal-bed methane."

The demand for natural gas in the United States has generally been seasonal, with peak demand during the winter heating months. From April through October, companies typically purchase natural gas and place it into underground storage facilities located around the country. Later, as the seasonal demand increases, these stored supplies of natural gas are used to augment the supplies provided via pipelines. According to EIA, natural gas demand during winter months is usually 1.5 times greater than monthly natural gas production in other months.

Over the past 25 years, the wholesale natural gas supply market has evolved from a highly regulated market to a largely deregulated market, where prices are mainly driven by supply and demand. While the regulated market ensured stable prices, it also caused severe gas supply shortages because, with artificially low prices, producers had no incentive to increase production and consumers had no reason to curtail their demand. Before implementation of the Natural Gas Policy Act of 1978, which began deregulation of wholesale natural gas prices, the federal government controlled the prices that natural gas producers could charge for the gas they sold through interstate commerce. Under this regulatory approach, producers located natural gas reserves, drilled wells, gathered the gas, and sold it at federally controlled prices to interstate pipeline companies. After purchasing the natural gas, pipeline companies generally transported and sold the gas to local distribution or gas utility companies. These companies, under the oversight of state or local regulatory agencies, then sold and delivered the gas to their consumers, such as homeowners.

In today's restructured market, the retail prices that consumers pay are still regulated in many states and reflect the prices paid by their suppliers to acquire the natural gas. However, the federal government does not control the wholesale price of natural gas. Since the removal of federal price controls, the wholesale price of natural gas decreased initially and has become more volatile. Producers still locate and gather natural gas, but they now sell the gas at market-driven prices to a variety of companies, including marketers, broker/trader intermediaries, and a variety of consumers. New market centers have emerged, including a market center referred to as the Henry Hub, located in Henry, Louisiana. Henry Hub

prices are reported on a daily basis, and trades made at that market are often used as benchmarks for other natural gas trades.[3]

The various players in the market may sell gas back and forth several times before it is actually delivered to the ultimate consumers. In some cases—in spot markets, for example—natural gas is sold for immediate delivery.[4] In other cases, it may be sold for delivery in the future, through a variety of what are called futures markets. In addition, several types of financial derivatives related to natural gas—contracts whose market value is derived from the price of the gas itself—can be bought and sold through numerous sources by entities that are interested in protecting themselves against increases in the price of natural gas. Derivatives include natural gas futures and options, and derivative prices typically move in parallel with the spot market.[5] Derivatives markets include exchanges such as the New York Mercantile Exchange, which is regulated by the CFTC; and the Intercontinental Exchange, which operates as an exempt commercial market without CFTC oversight but over which CFTC has anti-manipulation and anti-fraud authority; and off-exchange and over-the-counter (OTC) markets, which are not subject to general federal regulatory oversight.

[3]The Henry Hub is the largest centralized point for natural gas spot and futures trading in the United States. The New York Mercantile Exchange (NYMEX) uses the Henry Hub as the point of delivery for its natural gas futures contract. NYMEX deliveries at the Henry Hub are treated in the same way as cash-market transactions. Many natural gas marketers also use the Henry Hub as their physical contract delivery point or their price benchmark for spot trades of natural gas.

[4]According to the American Gas Association, the term spot market refers to a market in which natural gas is bought and sold for immediate or very near-term delivery, usually for a period of 30 or fewer days.

[5]A futures contract is an agreement to buy or sell a commodity for delivery in the future at a price, or according to a pricing formula, that is determined at initiation of the contract. An obligation under a futures contract may be fulfilled without actual delivery of the commodity by, for example, an offsetting transaction or cash settlement. An option gives the buyer the right, but not the obligation, to buy or sell a commodity at a specific price on or before a specific date.

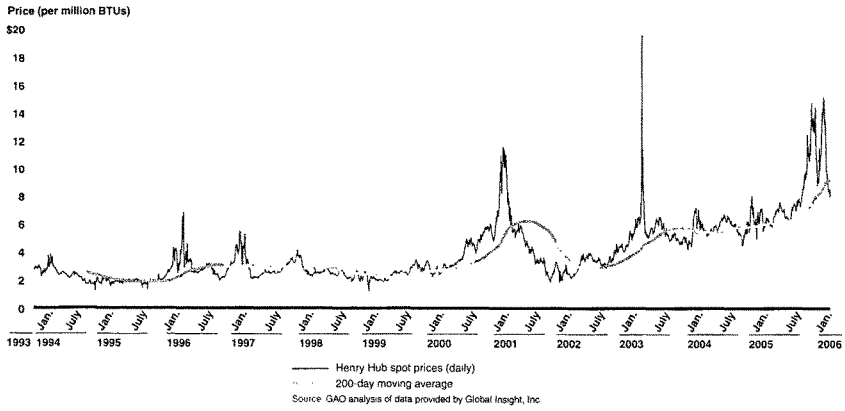
Increasing Demand and Tight Supply Have Driven Up Prices and Made Extreme Price Spikes Possible

Since 1999, wholesale prices for natural gas have trended steadily upward due to expanding demand—largely for electricity production—and supply that could not expand as quickly because the industry is already operating at near capacity. This tightness in the demand and supply balance has also made the market susceptible to extreme price changes in times when either demand or supply change unexpectedly. One such period of extreme price changes occurred in late 2005, when two hurricanes hit the Gulf Coast region, disrupting a substantial portion of the domestic supply of natural gas. Prices spiked to high levels and, although they have since dropped, they remain unusually high today.

Trend toward Higher Prices in Recent Years Is Due Largely to Market Forces

Since 1999, wholesale natural gas prices have risen steadily, as demonstrated by the moving average in figure 1. Previously, in the early and mid-1990s, prices were generally low, usually ranging from $2 to $3 per million BTUs, adjusted for inflation. From January 1999 through July 2005, however, average wholesale prices increased by over 200 percent, rising from about $2 to $6.75 per million BTUs. Most recently, in the last half of 2005, prices rose to over $15 per million BTUs, sevenfold higher than prices seen in the early 1990s.

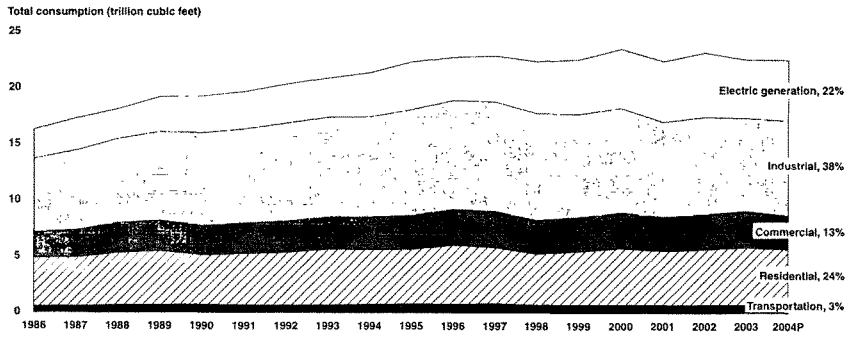
Figure 1: Wholesale Natural Gas Prices at Henry Hub, in 2004 dollars



Source: GAO analysis of data provided by Global Insight, Inc.

A combination of market forces has caused the upward trend in wholesale natural gas prices since 1999. Demand for natural gas has been growing rapidly since the mid-1980s, with total consumption increasing by about 38 percent from 1986 through 2004. Figure 2 illustrates the extent to which consumption of natural gas has risen in the United States over the past 2 decades and the relative amounts used by each of the five types of consumers: residential, commercial, industrial, electricity generators, and transportation.

Figure 2: Consumption of Natural Gas by Sector, 1986-2004 (with 2004 Percentage of Total)



Source: GAO analysis of Energy Information Administration data.

A significant share of the increased demand in recent years has resulted from increased use of natural gas to generate electricity. Out of concern regarding the supply of natural gas and other factors, construction of power plants using oil or natural gas as a primary fuel was restricted from 1978, when the Powerplant and Industrial Fuel Use Act (Fuel Use Act) took effect, through 1987, when it was repealed. After the Fuel Use Act's repeal, use of natural gas by the electric generation sector increased by 79 percent from 1987 through 2004. Newer gas-powered plants produce low levels of pollutants, compared with many existing plants. This characteristic, as well as the long period of low prices in the 1990s and other factors, has made natural gas the primary fuel in new power plants.

The supply of natural gas, however, has not kept pace with the increased demand. Historically, most of the natural gas used in the United States—85 percent in 2003—has been produced here. However, as older natural gas fields have been depleted, additional drilling for natural gas has been required in order to maintain domestic production. This additional drilling has not necessarily resulted in immediate additional supplies in part because development of new wells and supporting pipeline infrastructure can take time. Overall, from 1994 through 2003, domestic annual production held steady at about 19 trillion cubic feet. In 2003, EIA reported that the domestic natural gas industry had produced nearly all of the natural gas that could be produced on a monthly basis from 1996 through 2001—the most recent data then available. Furthermore, EIA reported that at times there was virtually no spare capacity in some parts of the country and forecasted that these tight supply conditions would continue, despite EIA's projection for a significant increase in drilling activity.

In recent years, imports of natural gas have become increasingly important. Net imports of natural gas have increased steadily, rising by over 250 percent from 1987 through 2004. In 2004, the United States imported about 15 percent of the total natural gas consumed here. Nearly all of the imported gas comes from Canada via pipeline, and those imports constitute virtually all of Canada's production not used in that country. In addition, a small share—about 3 percent of total U.S. supply—has been shipped on special ocean tankers as liquefied natural gas (LNG) from countries such as Trinidad and Tobago, Nigeria, and others. These imports have increased significantly in recent years; however, it is not clear if we have the capacity to handle further increased shipments, in part because only five facilities in the United States are able to receive and process LNG imports. Moreover, because of limited international supplies and high prices in other markets, it also is not clear how much additional supply is available to the United States.

Extreme Price Spikes Resulted from Tight Demand and Supply Conditions

The tight demand and supply balance has made the market for natural gas more susceptible to extreme price changes when demand or supply changed unexpectedly. As we previously reported, prices spikes occur periodically in natural gas markets because neither the demand side nor the supply side can quickly adjust to changes in the marketplace. On the demand side, some customers are able to react to changes in prices. For example, some industrial entities may be able to switch fuels or reduce their production. However, many other customers, such as residential customers, may have few fuel-switching options and little firsthand

knowledge of spot natural gas prices—and understand the costs of their natural gas consumption only when they receive their bill. On the supply side, suppliers are slow to respond to price changes. For example, they may be delayed in responding to high prices because, as noted earlier, existing domestic sources of natural gas are already operating at near full capacity—often above 90 percent in the United States in recent years, according to EIA. In these circumstances, because little excess supply is readily available, it must be added, generally by drilling new wells and connecting those wells to existing pipelines, which can take time. For example, receiving regulatory approval can take a year or more, and the time to drill the well and connect it to the pipeline network can take another 6 to 18 months. Because neither the suppliers nor many consumers can react quickly to price changes, even small unexpected increases in demand or disruptions in supplies can cause sudden and significant price increases.

High Prices in Late 2005 Resulted from Supply Disruptions Caused by Hurricanes Katrina and Rita

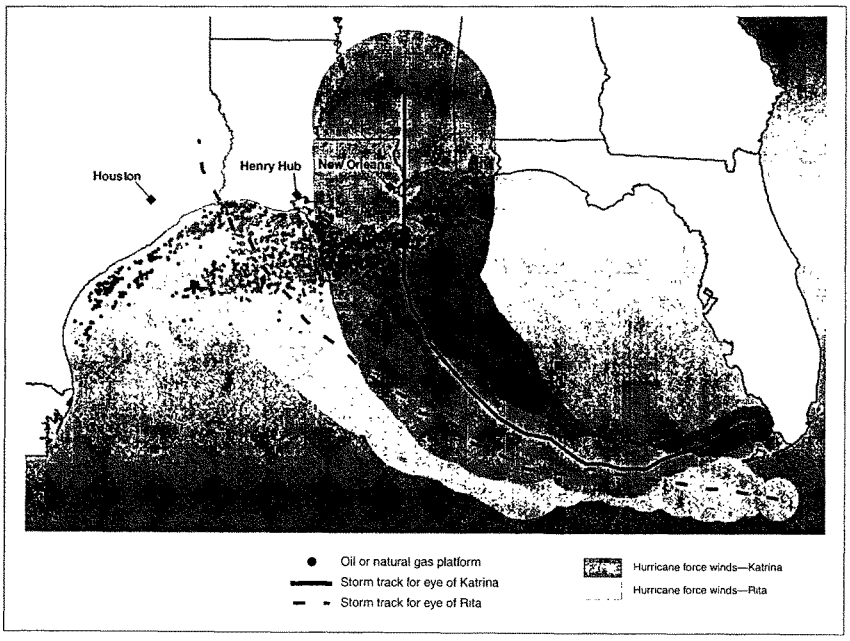
Most recently, prices rose sharply following the landfall of two hurricanes in the Gulf region. It appears that the price spike was caused by the unexpected decrease in the supply of natural gas in late 2005 following Hurricanes Katrina and Rita, exacerbated by factors that raised demand. Because of the damage caused to production, processing, importing, and transporting infrastructure in the Gulf region, wholesale prices climbed to a high of $15 per million BTUs by December 2005. Other factors—such as market manipulation—may also have affected wholesale prices. Our ongoing work examining futures trading in natural gas markets will address this issue later this year.

The Gulf region produces about 20 percent of the U.S. natural gas supply. The region's extensive natural gas-related infrastructure includes about 4,000 platforms that extract natural gas from beneath the ocean floor; two of the five terminals that import LNG into the United States; plants that remove impurities from natural gas to prepare it for sale and use; and an extensive network of pipelines, linked by hubs such as the Henry Hub, that transport natural gas to other parts of the United States.

The paths of Hurricanes Katrina and Rita, in relation to Gulf region natural gas infrastructure, are shown in figure 3. The hurricanes forced operators to evacuate about 90 percent of the oil and gas platforms in the Gulf for safety reasons, rendering them unable to produce natural gas; shut down one of the two LNG importing terminals for about two weeks; damaged processing plants; and damaged several pipelines and their connecting hubs, delaying transmission of natural gas from supply facilities that were

still operational. For example, the Henry Hub, a major gas market center, was closed by flooding for a total of 11 days following Katrina and Rita.

Figure 3: Path of Hurricanes Katrina and Rita Relative to Oil and Natural Gas Production Platforms

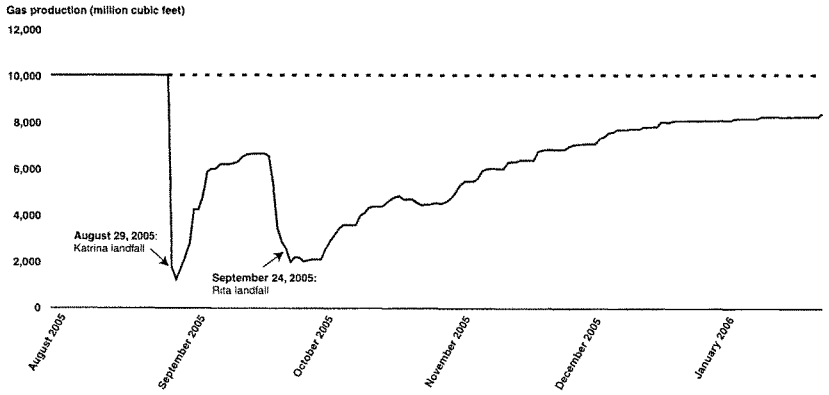


Source. GAO analysis of data provided by the National Weather Service and the Minerals Management Service.

As a result of all of these factors, the hurricanes had a significant impact on the supply of natural gas. Figure 4 shows the impact of Hurricanes Katrina and Rita on the production of natural gas from the Gulf region. Hurricane Katrina disrupted about 8 billion cubic feet of natural gas

production per day immediately following its landfall—amounting to about 80 percent of daily production from the Gulf and about 16 percent of total daily U.S. production of natural gas. Lost production from Katrina was in the process of being restored when Hurricane Rita struck—again reducing production of natural gas from the Gulf region to levels similar to those immediately following Katrina. As a result of the severity and timing of these two hurricanes, the Gulf region produced less than half its usual amount of natural gas for about 9 weeks after Hurricane Katrina struck. By comparison, nearly all of the lost production that resulted from Hurricane Ivan in 2004 was restored within 9 weeks and amounted to about 20 percent of that caused by Katrina and Rita. By the end of January, only about 80 percent of the natural gas supplies that had been disrupted by Katrina and Rita had been restored, leaving the overall market tighter than it was prior to the hurricanes and leaving the U.S. vulnerable to future unexpected interruptions in supply or increases in demand—either of which could result in higher prices.

Figure 4: Daily Natural Gas Production from the Gulf of Mexico Following Landfalls of Hurricanes Katrina and Rita

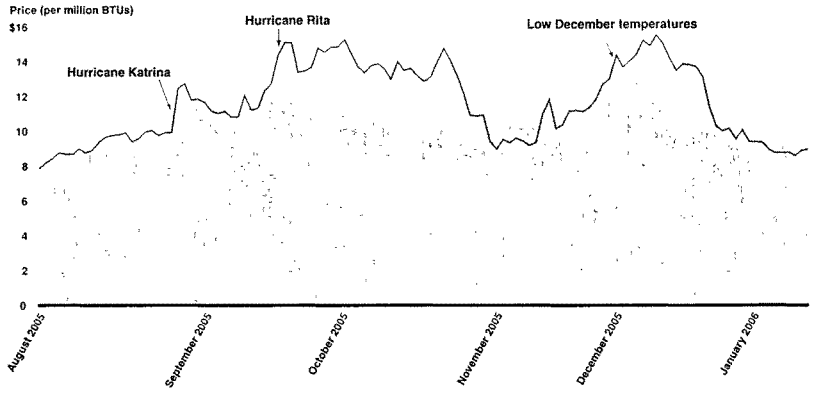


Source. GAO analysis of data provided by Energy Information Administration and the Minerals Management Service.

The high natural gas prices that followed the Katrina and Rita supply disruptions came at a time when demand for natural gas was already high. Higher-than-average late-summer temperatures in August had led to increased demand for natural gas to generate electricity, particularly in the South. As a result of this high level of demand, existing supplies were stretched thin and overall price levels were high. In addition, the hurricanes struck as companies were filling their storage of natural gas in preparation for the winter heating season.

Prices for natural gas in both the spot and the futures market spiked dramatically immediately following the supply disruptions caused by the 2005 hurricanes. In September 2005, after the second hurricane, natural gas spot prices increased to over $15 per million BTUs—roughly twice as high as the average price in July 2005 of about $7.60 per million BTUs. Futures prices to deliver gas in October also doubled to $14.20 per million BTUs, reflecting traders' expectations that high spot prices could continue into the future. Futures prices closely followed spot prices until early November 2005, when spot prices fell to about $9 per million BTUs, but prices for December gas futures remained at about $12 per million BTUs, reflecting the belief by futures market traders that natural gas prices would be high in December. A brief cold spell during the beginning of December increased demand for natural gas for heating purposes, driving prices up. The arrival of warmer than normal temperatures just before the end of the year reduced demand and has contributed to the recent reduction in prices. Figure 5 shows the spikes in natural gas prices during the months of, and following, the 2005 hurricanes.

Figure 5: Prices for Natural Gas in the Spot and Futures Markets, August 2005 to January 2006



Future prices, NYMEX next month contract price (e.g., prices in August reflect trading on contract for September delivery)

Henry Hub spot prices (daily)

Source: GAO analysis of data provided by Energy Information Administration and Global Insight, Inc., and Platts.

Note: Because the Henry Hub was closed for one day on August 29, 2005, and for 10 days from September 23 through October 6, 2005, prices for these dates were based on estimates taken either from a nearby natural gas hub or from the previous day's price.

Price Spikes in 2001 and 2003 Were Caused by Unexpected Increases in Demand

Two other instances of price spikes—caused by unexpected increases in demand—have occurred since 1999. First, coincident with the western electricity crisis, from mid-2000 through early 2001, wholesale prices for natural gas rose substantially and remained relatively high for nearly a year. This period witnessed significant increased demand for natural gas by the electric generation sector in order to meet electricity demand across the West during a year of diminished availability of hydroelectricity, a situation compounded by high demand through the winter and lower-than-normal storage levels. In a second instance, wholesale prices rose sharply in February 2003 during a period of high demand because of unusually cold winter temperatures; however, prices returned to normal relatively quickly.

Impact on Consumers of Higher Wholesale Natural Gas Prices Depends on the Extent to Which They Buy from Spot Markets and on Other Factors

How higher wholesale natural gas prices are affecting consumers depends largely on the degree to which the consumers or their suppliers may have purchased gas on the spot market—which reflects current wholesale prices—or may have taken steps to reduce their exposure to these prices.[6] The effect of higher prices also depends on the consumer's sensitivity to price changes. Some consumers, such as low-income residents and certain industries, are more sensitive to price changes than others.

Higher Wholesale Prices May Lead to Significant Increases in Energy Expenditures for Consumers Exposed to Spot Markets

The impact of recent increases in natural gas wholesale prices on consumers depends on how much of the natural gas they use is purchased in spot markets. Those with the greatest reliance on spot markets are hit the hardest when prices rise or spike. For example, some natural gas utilities that relied on spot markets are spending significantly more on energy this winter, which may translate into higher gas bills for residential and commercial consumers. According to our preliminary work with the state commissions that regulate natural gas utilities,[7] 10 states reported that at least some of the natural gas utilities they regulate were highly exposed to spot market prices. Furthermore, in a few states, some of the largest natural gas utilities projected they would purchase 70 percent or more of their natural gas supplies for this winter from the spot market.

Participants in the market, such as industrial consumers who purchase gas directly from the market or natural gas utilities that purchase gas on behalf of their customers, can hedge against high spot market prices for natural gas in three main ways: (1) by purchasing and storing gas for use during times when prices are high; (2) by signing fixed-price contracts for delivery of the gas in the future; and (3) by purchasing financial instruments, such as options or derivatives, that increase in value as natural gas prices rise. Since the winter of 2000-2001, some state public utility commissions (PUCs) have encouraged the natural gas utilities they regulate to hedge some part of their gas purchases in order to help stabilize prices, according to the American Gas Association. According to

[6]Other costs reflected in consumers' retail bills, such as transportation and pipeline maintenance, compose a substantial part of the final retail bill but are relatively stable.

[7]The preliminary work is part of a larger effort that we will complete later this year.

the state commissions, 27 states reported that the utilities they regulate will acquire at least half of their expected winter natural gas needs at a known price, generally ranging from $7 to $10 per million BTUs. In that regard, last November, Commissioner Donald Mason of Ohio told Congress that customers around Dayton, Ohio, have saved about $3 per million BTUs as a result of hedging, including use of long-term, fixed- price contracts. Gas utilities are also taking other approaches to keep down or stabilize their customers' costs. For example, in some states, utilities offer "level" payment programs and show customers how to use energy wisely through energy-efficient appliances. In Minnesota, in 2005, all state-jurisdictional gas utilities are required to spend at least 0.5 percent of their gross operating revenues on conservation improvement efforts such as weather audits, weatherization, and rebates for purchases of energy-efficient appliances. While some gas utilities have made efforts to reduce their exposure to spot prices by increasing their use of hedging, as some did after the price spike in 2000-2001, some states and municipalities still discourage the use of hedging, according to the association that represents the public utility commissioners.

While hedging allows consumers to obtain greater price stability, it has costs and risks, and utilities may lack incentives to undertake it. Storing gas for later use, for example, entails up-front costs such as the cost of placing it into and keeping it in storage. Market participants face risks if, for example, they purchase gas in advance under a fixed-price long-term contract and prices drop. For that reason, some natural gas utilities may be reluctant to enter into long-term contracts when prices are relatively high, according to a trade association that represents municipal gas utilities. Furthermore, absent specific PUC guidance to hedge purchases, gas utilities may have few incentives to hedge since they are generally able to pass along increased costs associated with purchases of natural gas. Moreover, some state regulators may not allow gas utilities to financially benefit from using hedging but hold them financially responsible if the hedge proves unnecessary. Furthermore, while under some circumstances hedging can reduce or eliminate the impact of a price spike, it may offer little benefit during prolonged periods of price changes. For example, a utility that signed a 5-year commitment to purchase natural gas at a predetermined price may witness no change in the cost of acquiring the natural gas during the period of the contract but would again face market prices (either higher or lower) when it came time to replace this gas supply at the end of the contract. In this sense, hedging may serve to delay until the contract term ends, but not prevent, the effect of higher or lower prices on consumers.

Some Consumers Are More Sensitive to Price Changes

Because energy costs account for a relatively large share of overall costs for some consumers or because they are heavily dependent on natural gas, any price increases can present significant difficulties. In particular, low-income residential consumers and some highly energy intensive industries appear likely to encounter the greatest impact.

The effect of high natural gas prices has already been especially severe on low-income individuals. According to representatives from a trade association representing publicly owned natural gas utilities, a utility in Philadelphia, Philadelphia Gas Works, has billed $42 million more than they have collected so far this winter, representing an increase of 2 percent in uncollectible heating bills this winter compared with last winter. In Kentucky, utilities this winter have witnessed the highest number of complaints and the greatest number of problems faced by customers. Furthermore, federal assistance to low-income households in meeting heating expenditures provides only limited assistance. According to the National Association of State Energy Officials, the Low Income Home Energy Assistance Program (LIHEAP)[8] currently serves only 20 percent of the eligible population, with average payments of $311 per family designed to help families pay projected natural gas heating expenditures of $1,568 this winter. Additionally, despite several years of increases, LIHEAP funding in fiscal year 2005 is only 67 percent of what it was in fiscal year 1982, adjusted for inflation.[9] However, some states have increased funding for low-income individuals recently. For example, in December, Minnesota began distribution of an additional $13.4 million in funding designed to assist an additional 26,000 households in paying for heating.

Electricity generators are also sensitive to higher prices because of their dependence on natural gas. This is true especially in the eastern United States, where, according to FERC, electricity generators rely heavily on natural gas. Furthermore, the region has many of the newer gas-fired electric power plants that have less flexibility to switch to other fuels,

[8]LIHEAP is a federally funded program that helps low-income households with their home energy bills. The federal government does not provide energy assistance directly to the public, generally providing funding to state-run programs. State-run LIHEAP programs may offer bill payment assistance, weatherization, and energy-related home repairs or other types of assistance.

[9]Data reflect LIHEAP and weatherization appropriations, supplemental or emergency appropriations, and REACH funding.

such as oil-based fuels, according to the National Petroleum Council and others. As a result, some consumers may see higher electricity bills.

High natural gas prices are also adversely affecting industrial consumers. As we reported in 2003, some industrial consumers shut down production facilities[10] because of higher energy costs in 2000 and 2001. Industry representatives expect recent high prices to have a similar effect. A recent survey by a trade association representing large energy consumers showed that more than half of 31 member companies surveyed are decreasing their demand for natural gas an average of 8 percent to 9 percent this winter compared with last winter, leading the association to conclude that higher prices have forced industries to curtail production in the United States. The association expects that further cutbacks will occur if prices remain high this year.

According to an association that represents industrial consumers, high natural gas spot prices have been particularly detrimental to specific industries in the United States that rely on natural gas, such as fertilizer and chemical manufacturers, that compete in international markets. As we reported in 2003,[11] natural gas expenses can account for 90 percent of the total cost of manufacturing nitrogen fertilizer. The high cost of domestic natural gas has made it difficult for U.S. producers of nitrogen fertilizer to compete with foreign nitrogen fertilizer producers, who can buy natural gas at lower prices and export their products to the United States. For example, in 2004, Trinidad and Tobago was the largest supplier of anhydrous ammonia,[12] a type of nitrogen fertilizer, to the United States. Prices of natural gas are sharply lower in Trinidad and Tobago, where, according to the Fertilizer Institute, prices were about $1.60 per million BTUs in 2005. The U.S. fertilizer industry, which typically supplied 85 percent of its domestic needs from U.S.-based production during the 1990s, now relies on imports for nearly 45 percent of nitrogen supplies, according to a trade association representing fertilizer companies.

[10]GAO, *Natural Gas: Domestic Nitrogen Fertilizer Production Depends on Natural Gas Availability and Prices*, GAO-03-1148 (Washington, D.C.: Sept. 30, 2003).

[11]GAO-03-1148.

[12]Anhydrous ammonia is the source of nearly all nitrogen fertilizer produced in the world. Nitrogen fertilizer is composed of three basic components—nitrogen, potassium, and phosphorus—and of these components, nitrogen is the most important component of fertilizer. Natural gas is a key component in the production of nitrogen, and the cost of natural gas can account for up to 90 percent of nitrogen fertilizer production costs.

Furthermore, other industries can be affected. In the fertilizer industry, according to a trade association representing fertilizer companies, costs are passed on to U.S. farmers, which have witnessed a dramatic increase in the cost of nitrogen fertilizers. The prices paid by farmers for the major fertilizer materials reached a record during the spring of 2005—on average, 8 percent higher compared with the same period in 2004, according to a trade association representing fertilizer companies.

The Federal Government Has a Limited, but Important, Role in Overseeing Natural Gas Markets

In today's restructured market, the federal government does not control the price of natural gas or directly regulate most wholesale prices. However, three federal agencies—FERC, CFTC, and EIA—play key roles in overseeing and supporting a competitive and informed natural gas marketplace.

FERC's Oversight Activities

Under federal law, FERC is responsible for regulating the terms, conditions, and rates for interstate transportation by natural gas pipelines and public gas utilities to ensure that wholesale prices for natural gas, sold and transported in interstate commerce, are "just and reasonable." FERC's jurisdiction over retail natural gas sales is limited to domestic gas sold by pipelines, local distribution companies, and their affiliates. The commission does not prescribe prices for these commodity sales. FERC's regulatory authority applies to the physical markets for energy commodities, such as natural gas, and not to futures markets.

In December 2002, we reported that as energy markets were restructured, FERC had not adequately revised its regulatory and oversight approach to respond to the transition to competitive energy markets. FERC agreed that its approach to ensuring just and reasonable prices needed to change: from one of reviewing individual companies' rate requests and supporting cost data to one of proactively monitoring energy markets to ensure that they are working well to produce competitive prices. That year, the commission established the Office of Market Oversight and Investigations to actively monitor energy markets and, when necessary, undertake investigations into whether any entity had or was attempting to manipulate energy prices. As we previously reported, in 2002, FERC staff undertook several studies and investigations to determine whether there had been

attempts to manipulate upward prices for natural gas delivered to California during 2000-2001.

FERC's ability to monitor the natural gas markets has been enhanced in several regards recently. First, the Energy Policy Act of 2005, passed last September, contains several enforcement provisions that increase the commission's ability to punish wrongdoers that harm the public. In particular, the act provides FERC with the authority to impose greater civil penalties on firms that commit fraud. In addition, FERC has taken steps to strengthen its efforts to protect energy consumers. These actions include establishing a telephone hotline that individuals can call to report market abuse or other problems. FERC also has begun actively monitoring natural gas markets to determine whether price movements are the result of market manipulation or market fundamentals. The staff reviews market activity for any possible manipulation that might also affect prices and performs a detailed review of natural gas prices and market activity on a daily basis with the intent of identifying areas of possible manipulation. If the staff identifies price anomalies that are not explained by market fundamentals, they investigate.

Since 2002, FERC has settled a number of investigations involving natural gas market manipulation. For example, 10 companies agreed to pay settlements totaling approximately $84 million. In addition, a FERC administrative law judge found that another company exercised market power over natural gas prices in California during the 2001-2002 heating season, and the company subsequently agreed to pay a settlement of $1.6 billion. FERC officials told us that, since early fall of last year, it has received complaints, expressions of concern, and requests to investigate with respect to high natural gas prices through its enforcement hotline and from public officials and the general public. Additionally, FERC has identified areas of concern through its daily market oversight process. FERC officials told us that all complaints and concerns are taken seriously and actively investigated, where appropriate. However, since ongoing investigations are considered nonpublic under FERC's regulations, officials said they could not comment further on any ongoing investigations of the natural gas market.

CFTC Oversight of Related Financial Markets

A large part of CFTC's mission is to protect market users and the public from fraud, manipulation, and abusive practices related to the sale of commodity futures and options, including natural gas. CFTC does this for federally regulated exchanges such as NYMEX, and it has limited authority over certain other futures markets. It does not have general regulatory

authority for other over-the-counter markets, including some used for trading natural gas futures or options.[13] In fulfilling its regulatory role, CFTC conducts market surveillance to identify situations that could amount to attempted or actual futures market manipulation and to initiate appropriate preventive actions. For instance, to protect the futures market from excessive speculation that could cause unwarranted price fluctuations, CFTC or an exchange impose limits on the size of the transactions that may be held in futures or options of a commodity. In the natural gas futures market, these transaction limits are placed on trading that occurs during the spot month.[14] To monitor these transaction limits, the commission has about 45 market surveillance staff and economists to do policy and economic analysis of energy trading issues.

As part of its regulatory role, CFTC also enforces various laws prohibiting fraud, manipulation, and abusive trading practices. CFTC's enforcement group investigates and prosecutes alleged violations of the Commodity Exchange Act. From 2002 through May 2005, CFTC investigated over 40 energy companies and individuals, filed over 20 actions, and collected over $300 million in penalties. Most of these actions were related to natural gas. For example, in July 2004, Coral Energy Resources, L.P. (Coral), a Houston-based firm that marketed gas to consumers across the United States, was ordered to pay a civil monetary penalty of $30 million. The penalty was imposed because the CFTC found that Coral knowingly provided false, misleading, or inaccurate information concerning its natural gas transactions from January 2000 to September 2002. During that time, CFTC found that Coral employees also attempted to manipulate the price of natural gas in interstate commerce or for future delivery. Natural gas traders report their market information to firms like Natural Gas Intelligence, who in turn compile pricing and volume indexes, for instance,

[13]Under the Commodity Exchange Act, transactions in exempt commodities, which include over-the-counter energy derivatives, are exempt from most provisions of the act, although the antimanipulation and certain antifraud provisions are applicable and can be enforced by CFTC. To qualify for the exemption, the markets must be limited to institutional participants, and if a market should function like an electronic exchange, the exemption requires that the exchange limit transactions to participants trading for their own accounts, notify the commission of their activities, keep records, submit to CFTC's subpoena authority and information requests, and publicly report trade data when the products begin to serve a significant price discovery function.

[14]The "spot month" is defined in many different ways, but generally refers to the nearest futures month beginning on a date near the first business day of the month in which the futures expires or on a date near the first day that delivery notices can be tendered. Some spot-month limits apply to both hedge and speculative positions.

that are used by market participants to settle their transactions. Submitting incorrect information could affect the price of natural gas in interstate commerce and could affect the futures or options prices of gas.

FERC and CFTC Taking Action to Better Coordinate Oversight Efforts

FERC and CFTC have recently signed a memorandum of understanding to create a more effective and efficient working relationship between the two agencies. The agreement covers the sharing of information and the confidential treatment of proprietary energy-trading data. FERC officials told us that if either agency needs information about trading within the other agency's jurisdiction, then the other agency must provide it. The understanding is to contribute to better coordination of enforcement cases.

EIA Collects, Disseminates, and Analyzes Information about the Market

The Energy Information Administration (EIA) is charged with collecting information about energy markets, including natural gas. The information reported by this agency is important in promoting efficient natural gas markets and public awareness of these markets. In our 2002 analysis of natural gas markets, we identified that most elements of EIA's natural gas data collection program inadequately reflected some of the changes in the market. For example, with some exceptions, EIA's current natural gas data collection program remains primarily an annual effort to obtain comprehensive information on natural gas volumes and prices, while markets have evolved to require more timely and detailed data. However, beginning in the spring of 2002, EIA began to provide more real time market information that traders and other gas industry analysts use as an indicator of both supply and demand. For example, on May 9, 2002, EIA began releasing weekly estimates of natural gas in underground storage for the United States and three regions of the United States. According to EIA, these data are valued by market participants and are a key predictor of future natural gas price movements. EIA has also undertaken efforts to better understand derivatives markets and the effectiveness of energy derivatives to manage price risk. In addition, EIA's weekly natural gas data releases are published each Thursday, and according to EIA officials, these releases have been well received by natural gas market participants.

Concluding Observations

Natural gas has become an essential element in our national energy picture. Ironically, however, natural gas markets may be suffering from the growing popularity of this versatile fuel. Rising demand and tightening supply appear to have contributed to both the general rise in prices over the past several years as well as the price spikes, such as that following

the hurricanes in 2005. Moreover, the stage seems set for future price spikes if either demand is higher than expected or supplies are unexpectedly interrupted.

To the extent that the higher prices persist and price spikes are possible, natural gas markets could pose significant challenges for our country. Many people may have to pay a larger percentage of their income for home heating and other uses of natural gas, such as electricity—not just this year, but every year. Some may not be able to afford it. Further, because some key industries have historically relied on low natural gas prices to be competitive, we may lose some of these industries along with the jobs that they provide.

These are weighty issues that require concerted actions reaching across not just the natural gas industry but also across the energy sector and related financial markets. The American consumer wants secure, affordable, reliable, and environmentally sound energy. Meeting this demand will be a challenge. This hearing offers another important step in the process of overseeing the regulators—FERC and CFTC—charged with ensuring these markets operate as intended.

Mr. Chairman, this concludes my prepared statement. I would be pleased to respond to any questions that you or other Members of the Subcommittee may have at this time.

Contact and Staff Acknowledgments

If you have any questions about this testimony, please contact me at (202) 512-3841 or wellsj@gao.gov. Other major contributors to this testimony include Karla Springer (Assistant Director), Lee Carroll, Michael Derr, Patrick Dynes, Elizabeth Erdmann, Philip Farah, John Forrester, Mark Gaffigan, Mike Hix, Chester Joy, Jon Ludwigson, Kristen Sullivan Massey, Cynthia Norris, Frank Rusco, Jena Sinkfield, Rebecca Spithill, John Wanska, and Kim Wheeler-Raheb.

Related GAO Products

Meeting Energy Demand in the 21st Century: Many Challenges and Key Questions. GAO-05-414T. Washington, D.C.: March 16, 2005.

Natural Gas: Domestic Nitrogen Fertilizer Production Depends on Natural Gas Availability and Prices. GAO-03-1148. Washington, D.C.: September 30, 2003.

Energy Markets: Additional Actions Would Help Ensure That FERC's Oversight and Enforcement Capability Is Comprehensive and Systematic. GAO-03-845. Washington, D.C.: August 15, 2003.

Natural Gas: Analysis of Changes in Market Price. GAO-03-46. Washington, D.C.: December 18, 2002.

Energy Markets: Concerted Actions Needed by FERC to Confront Challenges That Impede Effective Oversight. GAO-02-656. Washington, D.C.: June 14, 2002.

Testimony of

Susan J. Court
Director, Office of Market Oversight and Investigations
Federal Energy Regulatory Commission

Before the

Permanent Subcommittee on Investigations

Committee on Homeland Security and Governmental Affairs

United States Senate

February 13, 2006

Mr. Chairman and Members of the Subcommittee:

Good morning. My name is Susan Court, and I am Director of the Office of Market Oversight and Investigations at the Federal Energy Regulatory Commission. I am accompanied today by my deputy director, Stephen J. Harvey. We appear today as Commission staff witnesses speaking with the approval of the Chairman of the Commission. The views we express are our own and not necessarily those of the Commission or of any individual Commissioner.

Thank you for the invitation to appear before you today to discuss the natural gas market and recent price trends. The Commission takes the high current price of natural gas very seriously, and I hope that we will be able to help answer your questions regarding what has driven these prices, and what the Commission is doing to monitor them to be certain that they are not the result of manipulation or the exercise of market power.

I will cover each of the six issues identified in your letter of invitation. But first, I'd like to summarize the current state of natural gas prices.

Over the past several years, wholesale spot natural gas prices have increased significantly, from lows in a range from $2.00 to $3.00 per million British Thermal Units (MMBtu) during late summer of 2001 to almost $17.00/MMBtu shortly after Hurricane Rita in 2005. More recently, wholesale spot prices have retreated to the $8.00 to $9.00/MMBtu range. In general, prices at their heights in late 2005 were about twice the previous year's level, and close to five times the level of 10 years ago.

Price increases of this magnitude will have real and undeniable effects on the larger U.S. economy, as well as the economies of vital regions like Minnesota. As President Bush stressed last week in his State of the Union, "[k]eeping America competitive requires affordable energy." To the extent that the price increases we have recently experienced truly and legitimately reflect the ongoing interplay of forces of supply and demand, the market is sending customers, suppliers, and policymakers important signals needed to plan our energy future. This would indicate a workably competitive market in natural gas, which Congress committed the Nation to using when it deregulated all wellhead prices in the 1980s. For its part, the Commission has a fairly limited role where legitimate market forces are acting on prices.

On the other hand, if these prices instead reflect inappropriate market activity, prices could send a misleading message. The Commission's job is to be certain that high prices are not the result of manipulation or the exercise of market power. It accomplishes this in two ways: through the regulation of rates for interstate natural gas transportation and storage services, and through the active enforcement of rules designed to prevent manipulation or the exercise of market power in natural gas markets.

Against this backdrop, let me respond to your questions.

(1) Discuss the factors that have contributed to high and volatile natural gas prices in recent years, including a discussion of demand and supply, and the extent, if any, of price manipulation or the unreasonable exercise of market power.

During 2005, the U.S. experienced extraordinary increases in prices for all types of energy, including natural gas, even before hurricanes Katrina and Rita. Natural gas prices had already risen by a third from the mid-$7.00 level in early April to almost $10.00/MMBtu before Katrina struck. Three factors appear to have been most significant in driving pre-hurricane natural gas price increases.

First, the balance between supply and demand for natural gas in North America has been tightening throughout the decade. Production has seen slight increases or outright declines, while a recovering economy has increased demand. The gas "bubble" prevalent in the late 1980's and early 1990's started to shrink by the end of the last century.

Second, the summer of 2005 was abnormally hot, the hottest on record, according to the National Climatic Data Center. With the heavy addition of natural gas-fired generation to the electric system over the past decade, increased electric demand drove increases in natural gas demand. Generation from natural gas increased by 20 percent for June and July compared to 2004.

Third, the price of oil rose 21 percent from about $9.40/MMBtu in early April to over $11.40 per MMBtu just before the hurricanes struck. Although the exact nature of the relationship between oil products and gas prices differs across the country depending on how easily the fuels can be switched, oil and gas prices have been loosely related for many years. As a result, increasing oil prices last summer put upward pressure on gas prices above and beyond the effects of increased electric demand.

By some standards, gas price volatility has also increased. As a percentage of price, volatility has remained fairly stable, but with higher price levels generally, price changes are magnified and have become large in absolute terms.

(2) Discuss what effect Hurricanes Katrina and Rita had on natural gas prices, and what gas prices are likely to be this winter.

Hurricanes Katrina and Rita had and still have significant effects on the entire natural gas industry in the Gulf Coast, which accounts for 20 percent of U.S. supply. These storms shut-in a significant amount of gas production, severely damaged natural gas processing plants, and wrought havoc on major parts of the transportation infrastructure. The hurricanes even shut down the key natural gas trading point at Henry Hub for some time in both August and September.

After Hurricane Katrina, the Minerals Management Service reported the immediate loss of close to 9 Bcf/d from the offshore Gulf of Mexico. Quick action returned all but about 3.5 Bcf/d by the time Rita hit at the end of September. Rita increased the loss of offshore Gulf production to almost 8 Bcf/d. That level of shut-in offshore gas has now dropped to about 2 Bcf/d. In addition, the Louisiana Department of Natural Resources reports another 2 Bcf of outages from the State of Louisiana immediately after Rita. That figure is now down to about a half a Bcf. Overall, about 10 Bcf/d of production from the Gulf of Mexico and Louisiana was shut in, representing a little less than one-fifth of U.S. average daily production. That number is now down to about 2.5 Bcf/d.

Since the hurricanes, prices have risen and fallen based on weather. Given the strains on U.S. domestic natural gas supplies represented by the hurricanes, we have been fortunate to experience unseasonably mild winter weather.

After price peaks due to hurricanes Katrina and Rita and brief early cold in late October, prices sagged to the relatively warm November. Prices peaked above $15.00/MMBtu again during a cold period in early December, only to drop with the sustained, abnormally warm weather from late December through early February. Recently, prices have ranged across the country from lows in the $7.00 range to as high as the mid $9.00s. These prices reflect supplies that are clearly adequate for the nation as a whole this winter, although severe cold weather in particular places could stress local service.

At current oil prices, it is unlikely that natural gas prices will fall much farther this winter. As I indicated, oil products compete with gas differently around the country, but oil prices do have a strong influence on gas prices. At current levels, they seem to have provided a floor at somewhere around $8.00 to $9.00/MMBtu.

Going forward, the effects of the hurricanes will continue to dissipate over time. High prices have also led to significant increases in production in some areas. There is even evidence that the high prices are encouraging reconsideration of drilling in places where low prices previously made production uneconomical. For example, in 2005, Pennsylvania issued a record number of oil and gas drilling permits, a 32.4 percent increase over the previous year's record of 4,567. Nonetheless, the longer-term tightness between supply and demand (exacerbated by increased electric demand) is likely to reassert itself with more normal weather. As a result, current futures prices for natural gas suggest that prices are likely to rise from current levels into the summer, though they are likely to remain below the crisis levels seen after the hurricanes.

(3) Discuss what the Commission is doing to respond to high gas prices to ensure that natural gas prices are a result of supply and demand, and not price manipulation and the exercise of market power.

The Commission has responsibilities in many areas of the energy sector, including regulation of interstate natural gas transportation rates and services. The Commission has limited jurisdiction over wholesale natural gas sales, and does not regulate retail sales or natural gas wellhead prices. Through the Natural Gas Policy Act of 1978 and the Natural Gas Wellhead Decontrol Act of 1989, Congress deregulated most wholesale sales of natural gas. Retail gas sales are subject to regulation by the states.

Nonetheless, the Commission has taken an active role through this winter in addressing concerns about natural gas prices and considering both the drivers of these prices and their implications. Starting at the Commission's October 12, 2005 conference on the State of Natural Gas Infrastructure and at every regular Commission meeting thereafter, my office has presented the Commission with detailed information relating to current market prices and analysis explaining those prices. The result of these presentations and the discussions among Commissioners and staff is a clear, public record of consideration of the serious natural gas market issues we are discussing today.

In the immediate wake of the hurricanes, the Commission urged state regulators and consumers groups to educate consumers on the likelihood of high natural gas prices this winter. Effective conservation must start with consumer awareness and an appreciation of the high level of gas prices. Normally, consumers receive a price signal for natural gas after the point of consumption, when they receive their monthly bill. The Commission believed that it was critical for consumers to expect high prices before consumption, so that they could increase their conservation efforts. The effectiveness of state conservation programs will be critical in moderating natural gas prices for the remainder of this winter. The Commission has encouraged its counterparts at the state level to make a maximum effort to strengthen their conservation programs. To date, there is no reliable information on the effectiveness of these programs.

The Commission has also acted to authorize more efficient use of the nation's existing gas infrastructure. The Commission has issued emergency orders to authorize exemptions and waivers for pipelines that allowed shut-in gas to flow to consumers. In two instances, the Commission issued emergency orders the same day these filings were received.

(4) Discuss the Commission's monitoring system and enforcement policy including the effect of additional enforcement abilities set forth in the Energy Policy Act of 2005, and the Commission's progress in implementing these provisions.

The Commission is committed to assuring that the high natural gas prices caused by the loss of supply from Hurricanes Katrina and Rita do not go higher still because of market manipulation. We have done that in several ways. The Commission actively monitors natural gas markets to determine whether price movements are the result of market manipulation or market fundamentals. Our market oversight and enforcement staff is continually reviewing market activity for any possible manipulation that might also affect prices. In close coordination with enforcement staff, market oversight staff performs a detailed review of natural gas prices and market activity on a daily basis with the intent of identifying areas of possible manipulation. If we identify price anomalies that are not explained by market fundamentals, my office is authorized by the Commission to begin an investigation.

The Commission's ongoing enforcement efforts are generally initiated as non-public investigations pursuant to 18 C.F.R. Part 1b, and, consequently, I cannot elaborate on active investigations related to recent market activity. As reported to Congress last March, however, the public record of completed enforcement efforts undertaken by the Commission speaks strongly to how seriously we take our enforcement responsibilities. We will be pleased to submit a copy of that report for the hearing record. Since that time, the Commission has also publicly approved settlements in the millions of dollars arising out of enforcement investigations into violations of FERC rules and regulations, including the prohibition against favoring affiliates, and the companies' own tariffs.

Furthermore, to assist our monitoring effort, the Commission entered into a Memorandum of Understanding with the Commodity Futures Trading Commission to assure the smooth flow of information between the two agencies and improve our ability to identify market manipulation. Under the Energy Policy Act of 2005, the two agencies were directed to enter into an MOU within six months of enactment. We accomplished it in two months, in part because we want to be in a position to better monitor gas markets this winter.

The Commission also acted quickly to exercise the new anti-manipulation authorities in the Energy Policy Act. On January 19, the Commission issued rules to prevent market manipulation by <u>any</u> entity, not just the companies traditionally subject to the Commission's jurisdiction, with respect to jurisdictional natural gas and electric sales and transportation. The new rules, in conjunction with the new civil penalty authority in the Energy Policy Act, will provide a strong deterrent to market manipulation. Under our new civil penalty authority, the Commission can impose a penalty of up to $1 million per day for a violation of the Commission's anti-manipulation rules. Indeed, under the Energy Policy Act, this penalty authority now extends to <u>all</u> violations of the

Commission's natural gas organic statutes, the Natural Gas Act and the Natural Gas Policy Act. With this in mind, a few months ago, the Commission issued an Enforcement Policy Statement to alert the industry to the factors the agency will consider in exercising this penalty authority.

(5) Discuss what steps the Commission has taken to promote increased LNG imports, including actions to streamline the LNG terminal approval process and foster LNG capital investment.

The Commission plays a critical role in strengthening the U.S. energy infrastructure. Since 2000, the Commission has certificated over 8,400 miles of pipeline. We have steadily improved our regulatory process, and the average length of a major pipeline proceeding is now less than a year. The Commission's December 2002 "Hackberry Policy," which removed economic regulation of LNG terminals, resulted in a significant increase in proposals to construct LNG import terminals. The Energy Policy Act codified that policy, and also gave the Commission exclusive jurisdiction over the siting, construction, expansion, or operation of LNG terminals. Since "Hackberry," the Commission has approved eight new LNG terminals, two new pipelines from the Bahamas, and expansions at two existing terminals that, if constructed, will more than quadruple our LNG import capability.

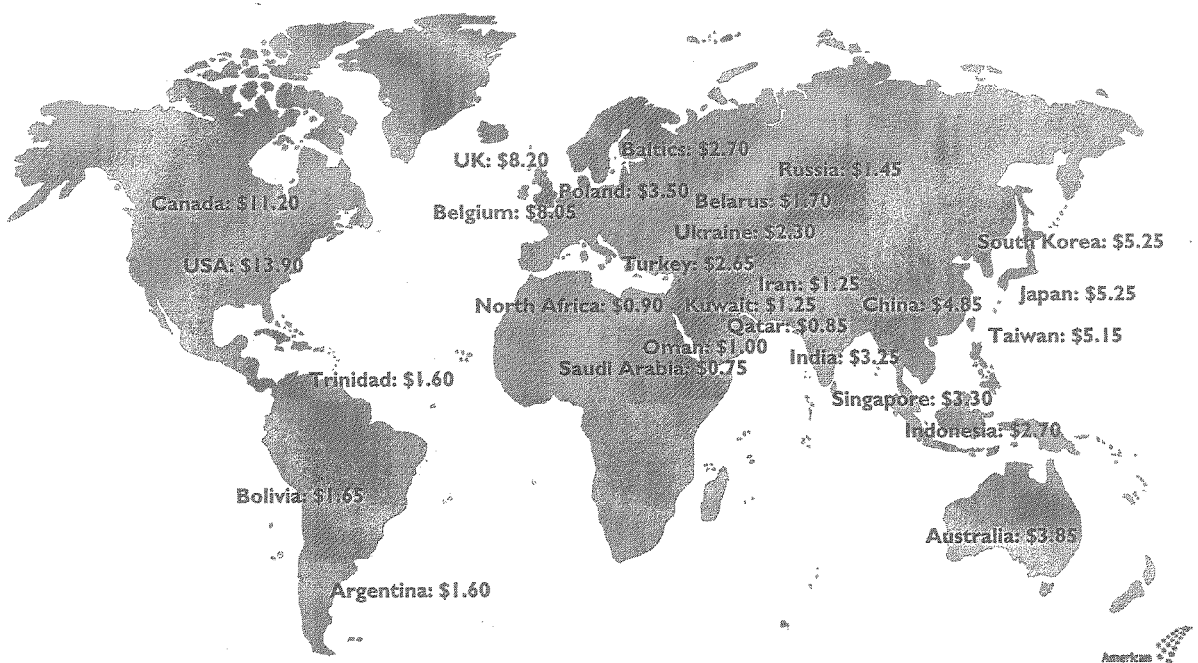
The Commission is also proposing to provide greater incentives to expand natural gas storage through pricing reform, again with additional authority from Congress in the Energy Policy Act. Since 1988, gas storage capacity has expanded only 1.4 percent, while demand has increased 24 percent. Greater storage capacity may help mitigate gas price volatility. We issued proposed rules in December to reform storage pricing in order to reduce price volatility. Pricing reform can promote storage capacity expansion, at both existing and new facilities, although it will not bring relief this winter.

(6) Discuss any recommendations the Commission may have to address the above issues.

At present, the Commission has not announced any recommendations for further legislative action. The Commission generally believes that the Energy Policy Act has delegated adequate new powers to the agency to secure improved energy infrastructure and to police bad behavior in the energy markets and prevent the abuse of market power by jurisdictional energy companies.

Thank you. We would be happy to answer any questions that the Subcommittee may have.

Natural Gas Costs around the World
($US per million BTUs)



Updated 26 October 2005

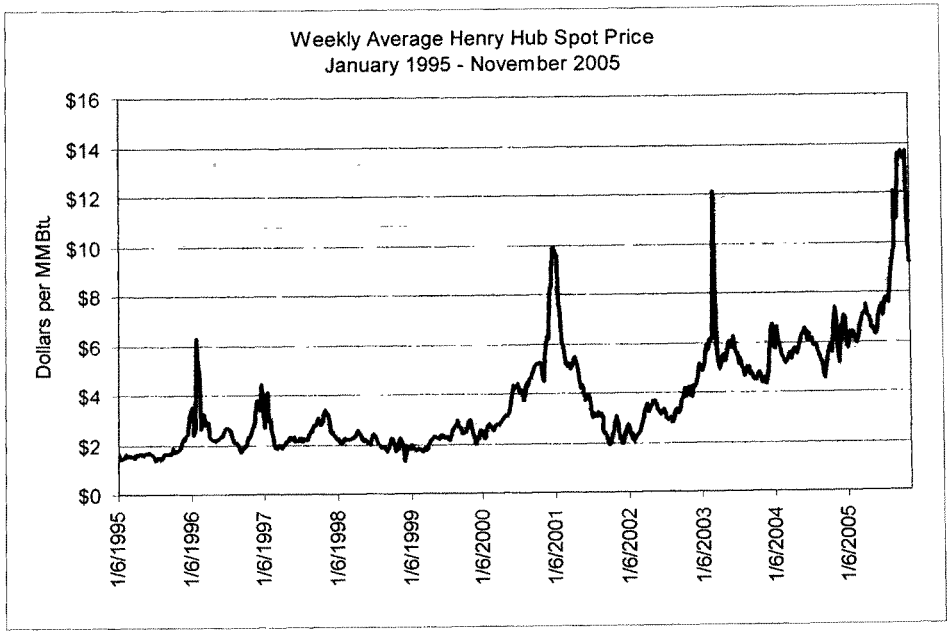
American Chemistry Council

Permanent Subcommittee on Investigations
EXHIBIT #1

Permanent Subcommittee on Investigations

EXHIBIT #2

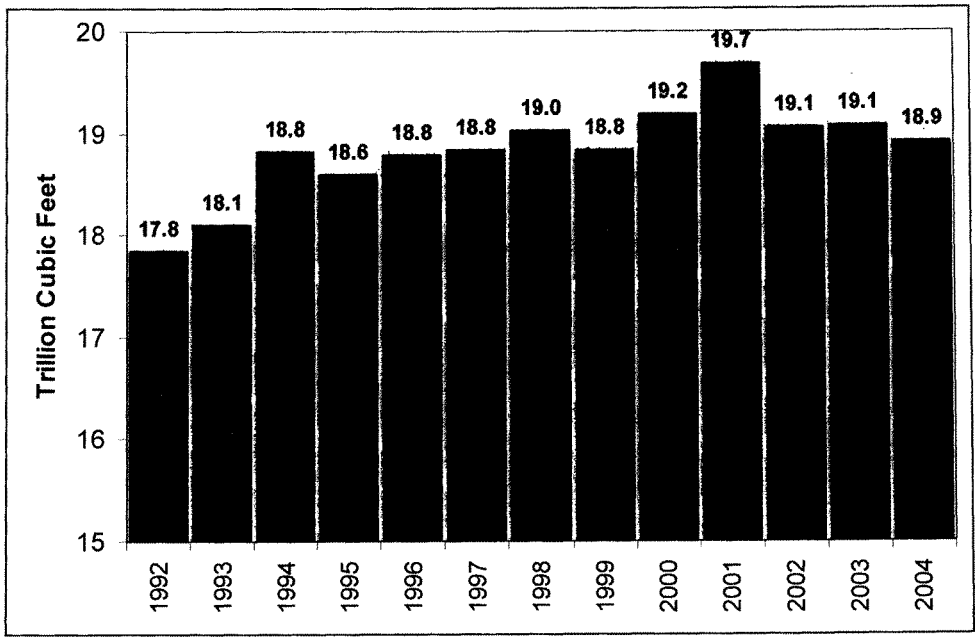
HENRY HUB SPOT PRICE VOLATILITY
Natural Gas Prices Have Been Increasing Since 2002



Source: Energy Information Administration

Permanent Subcommittee on Investigations
EXHIBIT #3

Production Has Not Responded Strongly to Increased Drilling



Sources: EIA, *Short-Term Energy Outlook*, November 2005

ENERGY MARKET OVERSIGHT AND ENFORCEMENT: ACCOMPLISHMENTS AND PROPOSAL FOR ENHANCED PENALTY AUTHORITY

Prepared by the Staff of the
Federal Energy Regulatory Commission

March 2005

Permanent Subcommittee on Investigations
EXHIBIT #4

Energy Market Oversight and Enforcement: Accomplishments and Proposal for Enhanced Penalty Authority

I. Executive Summary

In this report, the Federal Energy Regulatory Commission (the Commission or FERC) staff sets forth a proposal for amendments to the Federal Power Act (FPA), the Natural Gas Act (NGA), and the Natural Gas Policy Act of 1978 (NGPA) that will give the Commission enhanced civil and criminal penalty authority for violations of these laws and the Commission's rules and regulations based on them. This enhanced penalty authority would allow the Commission to better address market manipulation and other misconduct that is damaging to competitive markets. Moreover, it would lead to greater certainty for market participants, thereby encouraging increased participation and liquidity in those markets. Notwithstanding the limited remedies currently available to the Commission, the Commission has accomplished much of what it sought to achieve with the establishment of its Office of Market Oversight and Investigations (OMOI), the Commission's "cop on the beat." The enforcement and audit capacity of the Commission has expanded significantly. That expansion has resulted in roughly three times as many completed investigations and audits as prior to OMOI's formation and numerous multi-million dollar settlements. However, due to the Commission's narrow penalty authority, the Commission's enforcement and audit efforts often lack the most effective means of addressing serious misconduct such as market manipulation or the provision of undue preferences to affiliates.

Currently, the Commission has few remedies to address misconduct by market participants. The Commission may require that a company issue a refund or disgorge any profits earned as a result of the wrongful conduct. However, application of these remedies is restricted to situations in which an actual profit is earned as a result of the wrongful activity. Where a market participant engages in misconduct but no profit can

be proven to have resulted from that misconduct, the violative conduct may go unpunished. In addition, refunds and the disgorgement of unjust profits serve only to return the company that committed the violation to the status quo before the misconduct occurred; the remedy cannot be said to be a true penalty since it merely requires the return of any ill-gotten gains. While those remedies are important because they return monies to persons adversely affected by misconduct, they are not a highly effective means of deterring misconduct.

As an alternative to ordering refunds or disgorgement of profits, the Commission may revoke a company's authorization to charge market-based rates. Unlike the former remedies, revocation of a company's market-based rate authority can have a dramatic impact on both markets and companies participating in those markets. By revoking a company's authorization to sell at market-based rates, the Commission may effectively eliminate that company's ability to act as a seller in the competitive energy market. Because such an action may have far-reaching effects, not only for the company at issue, but also for the market in which the company operates, the Commission must take into account myriad potential ramifications to the market in deciding whether to revoke a company's market-based rate authority. In many situations, a more targeted approach in the form of civil penalties would better accomplish the twin objectives of deterring misconduct while ensuring the continued vitality of the energy markets. For example, a modest civil penalty may be more appropriate than suspending market-based rates for relatively minor violations of the rules.

In other regulated environments, such as the securities and commodities futures trading industries, Congress has long recognized that civil penalty authority is the most effective means of deterring conduct that may harm markets. Civil penalties are also necessary in the markets regulated by the Commission. Appropriate civil penalties would enhance the Commission's ability to enforce the statutes, rules, and regulations governing jurisdictional energy markets by allowing the Commission to appropriately tailor the

penalty to reflect the gravity of the act or omission at issue. To that end, Commission staff recommends that the Commission seek the following statutory changes:

- An amendment of the FPA to expand civil penalty authority to cover violations of any provision (and Commission regulations and orders under any provision) in Parts II and III of the FPA and to increase the maximum civil penalty for any such violation from not more than $11,000 per day for each violation[1] to not more than $1,000,000 per day per violation;

- An amendment of the NGA to create civil penalty authority to cover violations of any provision (and Commission regulations and orders under any provision) of the NGA up to a maximum civil penalty of not more than $1,000,000 per day per violation;

- An amendment to the NGPA to increase available civil penalty amounts up to a maximum civil penalty of not more than $1,000,000 per day per violation;

- Amendments to the FPA, the NGA and the NGPA increasing criminal penalties from a fine of up to $5,000 per day for each violation and two years imprisonment to a fine of up to $1,000,000 per day per violation and up to five years imprisonment under both statutes, and

- Amendments to the FPA, the NGA and the NGPA adding a separate civil penalty for intentional, material false statements made in any matter or filing before the

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[1] FPA section 316A provides for penalty authority up to $10,000 per day per violation. However, this amount is subject to inflation adjustment and is now $11,000 per day per violation. 18 C.F.R. § 385.1602(d) (2004).

Commission, including false statements made to Commission staff during the course of an investigation or audit.

Specific language for this proposed legislation is set out in Appendix B to this report.

II. Background and Overview

The Commission's Chairman established OMOI in August 2002. OMOI's mission is to guide the evolution and operation of energy markets to ensure effective regulation and to protect customers through understanding markets and their regulation, timely identification and remediation of market problems, and assured compliance with Commission rules and regulations. To those ends, OMOI seeks to provide vigilant oversight and vigorous enforcement of proper market rules to ensure dependable, affordable, competitive energy markets to benefit end use customers and other participants. OMOI's investigatory team of more than 70 attorneys, auditors, analysts, and engineers monitors the energy marketplace for potential problems and works to achieve corporate compliance. OMOI's analytic team of another 50 staff probes market developments to detect anomalous or suspicious activity, such as attempts at market manipulation or inappropriate communications or improper cooperation between market participants.

A. The Commission's Accomplishments

Since the inception of OMOI, the Commission has made significant progress in improving the Commission's enforcement and market monitoring capabilities. The Commission's enforcement efforts in 2004, led by OMOI, facilitated settlements in the California refund proceedings that will lead to a return of more than $1 billion to consumers. In addition, the Commission completed more than 90 separate investigations, and completed 27 financial audits that (1) uncovered over $10 million of pipeline

assessment and testing costs that were improperly capitalized, (2) affirmed FERC formula rate refund calculations totaling approximately $2.2 million, and (3) will generate about $7.3 million in refunds by seven public utilities that improperly billed costs through FERC formula rates.

The Commission has recovered through OMOI some of the largest dollar settlements in its history and has instituted stringent compliance plans in cases where companies have committed violations. In January 2005, for example, OMOI obtained agreement from a company to pay $21 million in civil penalties – the largest civil penalty ever obtained by the Commission. The Commission also has greatly increased the numbers and market relevance of investigations and audits completed. The Commission currently has underway more than three times the number of investigations that were open at FERC prior to OMOI's inception. The overall speed of these investigations, in terms of opening and closing them, has also increased.

The following are summaries of just a few of the noteworthy accomplishments in the past two years:

- In 2001, the Commission found that sales through the California centralized markets were unjust and unreasonable from October 2, 2000 to June 21, 2001.[2] In an effort to facilitate distribution of funds and to resolve remaining issues without protracted litigation, OMOI has assisted in resolving the matter with several large sellers and the California Parties.[3] Under these settlements, approved by the

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[2] *See San Diego Gas & Electric Co.* 95 FERC ¶ 61,115 (2001); *San Diego Gas & Electric Co.* 95 FERC ¶ 61,418 (2001) (Refund Proceedings).

[3] The California Parties include the California Attorney General, the California Electricity Oversight Board, the California Department of Water Resources, Southern California Edison, Pacific Gas and Electric, San Diego Gas and Electric, and the California Public Utilities Commission.

Commission, over $1 billion began flowing back to California.[4] To date, the following settlements have been achieved:

-- Williams Power Co. – Settlement for $140 million was approved on July 2, 2004. 108 FERC ¶ 61,002 (2004).

-- Dynegy, Inc. – Settlement for $281 million was approved on October 25, 2004. 109 FERC ¶ 61,071 (2004).

-- Duke Energy Corporation – Settlement for $207 million was approved December 7, 2004. 109 FERC ¶ 61,257 (2004).

-- Mirant Corporation – Settlement for approximately $458 million pending approval by the Commission.

- *Reliant Energy Services*, 105 FERC ¶ 61,008 (2003). OMOI discovered that Reliant had violated its California Independent System Operator (Cal ISO) and California Power Exchange (Cal PX) tariffs as a result of submission of certain bids above $250 per megawatt hour (MWh) in the California markets between May 1, 2000 and October 2, 2000. Such conduct qualified as "economic withholding."[5] As a result, OMOI obtained in a settlement, approved by the Commission, a total of $50 million in disgorgement of profits including: $25 million in cash and $25 million from an auction of capacity from certain of the entity's gas-fired electric generation units. All the monies recovered are to be

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[4] However, the California Independent System Operator has not yet determined the amounts of refunds owed by the sellers using a Commission-specified methodology and is not expected to have those final sums available until at least mid-2005. Further, multiple appeals have been taken by numerous parties from several Commission orders in the Refund Proceeding that are currently pending in the Ninth Circuit.

[5] "Economic withholding" is defined as "bidding available supply at a sufficiently high price in excess of the supplier's marginal costs so that it is not called on to run and where, as a result, the market clearing price is raised." *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorization*, 107 FERC ¶ 61,175 at p. 61,705 n.22 (2004).

paid into an account established by the U.S. Treasury for distribution for the benefit of California and Western electricity customers. The Commission also instituted a compliance plan to prevent future problems. The settlement further required that Reliant submit to increased oversight by OMOI for one year, including random reviews by OMOI of emails and taped telephone conversations.

- *American Electric Power Co., et al.* (2005). OMOI's investigation uncovered that AEP's Jefferson Island Storage & Hub improperly entered into a non-public agreement putting AEP Energy Services in control of natural gas injections and withdrawals. This allowed AEP Energy Services to improperly receive confidential information about non-affiliated customers. OMOI also learned that AEP's Louisiana Intrastate Gas provided undue preferences in transportation services to AEP Energy Services. Neither pipeline company is currently owned by AEP. The settlement calls for AEP to pay a $21 million civil penalty under the NGPA, the largest civil penalty ever assessed by the Commission. In addition, the agreement requires AEP, AEP Energy Services, American Electric Power Service Corp. and any AEP intrastate pipeline company, to follow a four-year compliance plan providing for continued monitoring by Commission staff for compliance with Standards of Conduct and Market Behavior rules. OMOI also shared information from its investigation of AEP with the Commodity Futures Trading Commission (CFTC) and the Department of Justice, leading to their obtaining an additional $61 million in civil and criminal penalties for AEP's illegal activities.

- *Transco, et al.*, 102 FERC ¶ 61,302 (2003). OMOI found violations of the NGA, the NGPA and the Standards of Conduct by Transco. Those violations included giving undue preference to affiliates, allowing an affiliate access to computer databases in order to optimize its transportation nomination on Transco's pipelines, and disclosing to its marketing affiliate information about a non-

affiliated shipper. Transco agreed to civil penalties of $20 million under section 311 of the NGPA. In addition, Transco was required to implement a four-year compliance plan designed to ensure marketing affiliates are not given preferential access and to ensure compliance with other Commission regulations. Limitations were also imposed on transportation that could be obtained by affiliates from Transco.

- *Dominion, Northern Illinois Gas Co., Columbia Gas Transmission,* 108 FERC ¶ 61,110 (2004). OMOI discovered that these companies had violated the Commission's Standards of Conduct and other regulations by providing non-public gas storage information that was not provided to the public at large to affiliates, as well as to select entities and individuals. The Commission obtained total refunds of $4.5 million and total fines of $3.6 million under section 311 of the NGPA, which were paid by the companies. The Dominion entities and Northern Illinois Gas Company were also required to implement extensive employee training to deter similar violations in the future. Columbia Gas Transmission was required to record and maintain for a period of one year conversations between its customer service representatives and its customers.

On other fronts, during 2004, 12 operational audits resulted in over 100 recommendations to remedy deficiencies found that were adopted and implemented by the audit targets. The Commission implemented Order 2004 relating to the new Standards of Conduct for Transmission Providers,[6] including reviews of compliance for

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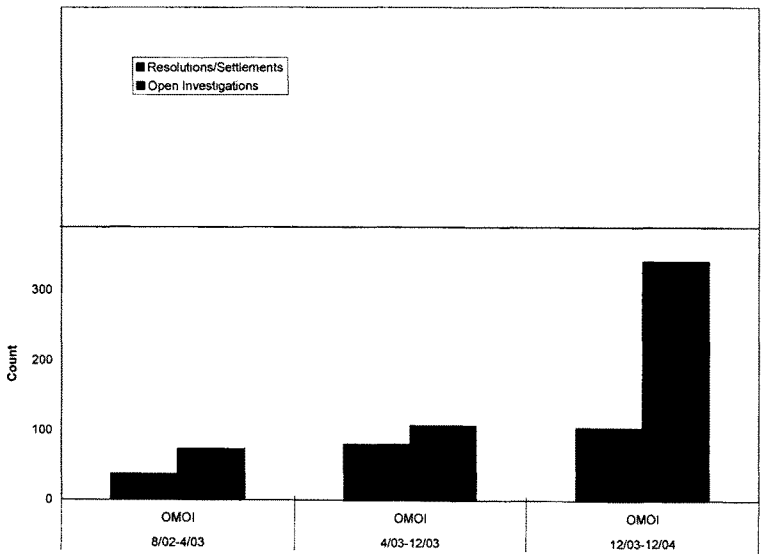
[6] *See Standards of Conduct for Transmission Providers,* Order No. 2004, FERC Stats. & Regs., Regulations Preambles ¶ 31,155 (2003), *order on reh'g,* Order No. 2004-A, III FERC Stats. & Regs. ¶ 31,161 (2004), 107 FERC ¶ 61,032 (2004), *order on reh'g,* Order No. 2004-B, III FERC Stats. & Regs. ¶ 31,166 (2004), 108 FERC ¶ 61,118 (2004), *order on reh'g,* Order No. 2004-C, 109 FERC ¶ 61,325 (2004).

over 200 companies. The Commission terminated market-based rate authority of 90 companies that are no longer active in power marketing and to provide guidance on electric and natural gas price reporting to publications for purposes of indexing.[7] Finally, the Commission handled over 286 Hotline calls.[8]

The chart below summarizes the Commission's accomplishments since the establishment of OMOI in 2002.[9]



[7] *See also* Foster's *Natural Gas Report*, December 16, 2004.

[8] The Enforcement Hotline is an informal means available to market participants to resolve disputes and to ask questions of Commission staff.

[9] Attached, as Appendix A to this report, is a more detailed chart summarizing OMOI's accomplishments.

In addition to its enforcement and investigative activities, the Commission, through OMOI, has worked to enhance market integrity in other ways. First, OMOI provides regular reports to the Commission to ensure that the Commission has a comprehensive understanding of the current state of the energy markets. Last year, OMOI provided 15 market surveillance reports to the Commission and published assessments identifying areas of concern for each upcoming season. OMOI also frequently interacts with industry and the public to explain market monitoring at FERC, including making over 150 presentations last year.

OMOI provides to the Commission special purpose reports in response to events such as the January 14-16, 2004, New England cold snap that resulted in record spot market gas prices and strained electric generation resources and power and gas delivery systems. In that instance, OMOI conducted an investigation to determine whether markets reacted rationally to the weather event or whether any price manipulation occurred, including whether any electric generators improperly sold natural gas supplies rather than generating electricity. OMOI's investigation determined that the energy markets functioned appropriately to avoid curtailments of natural gas deliveries while still avoiding power blackouts. OMOI's findings were reported to the New England Council of Public Utility Commissioners and released publicly.

The Commission, through OMOI, has also focused on building the capability to respond quickly to potentially troublesome market events and to safeguard the energy markets. For example, OMOI was able to expeditiously investigate and report on the unexpected high level of storage withdrawals reported by the Energy Information Administration (EIA) on November 24, 2004, which prompted a sharp run-up in NYMEX prices upon the EIA's release of the information. Within a week of the precipitating event's occurrence, OMOI determined that misreporting by Dominion Transmission, Inc. (Dominion) to EIA caused by a Dominion contract employee's

clerical error, resulted in the company's provision of incorrect data indicating a substantially larger natural gas storage withdrawal for the week ending November 19, 2004 than had in fact occurred. The Commission apprised the market of OMOI's findings and EIA is currently soliciting comments on proposed changes in the way it reports errors.

B. Civil Penalty Authority

As the foregoing illustrations demonstrate, the Commission has accomplished much of what the Commission sought to achieve when OMOI was established. These achievements notwithstanding, the Commission, with its limited civil penalty authority, lacks a critical tool.

At present, in most circumstances the Commission can only order a company that breaks the rules either to disgorge any profits that resulted from that violation or to return monies paid as the result of the imposition of an unjust and unreasonable rate. Such remedies are important because they return money to people and entities adversely affected by the conduct. However, these remedies serve only to return the company that perpetrated the wrongdoing to the status quo that existed before the wrongdoing occurred, and as such are not the most effective means of deterring misconduct.

Congress has long recognized civil penalty authority for federal regulatory agencies as the most effective means of deterring conduct detrimental to free and open markets. The Commission's enforcement efforts would be further enhanced if its statutory authority allowed it to impose appropriate civil penalties for violations of the FPA and the NGA. For most violations of these statutes, the Commission currently does not have sufficient - - or in many instances, any - - civil penalty authority that would assist it in regulating its jurisdictional markets and entities. Remedies currently available to the Commission in the form of refunds and disgorgement of profits do not deter

anticompetitive or manipulative market behavior to the same degree as civil penalties.

As stated in a report to the Administrative Conference of the United States:

> [T]he civil fine has assumed a place of paramount importance in the compliance arsenal of most federal regulatory agencies. It is today almost inconceivable that Congress would authorize a major administrative regulatory program without empowering the enforcing agency to impose civil monetary penalties as a sanction. It has become commonplace for observers of the administrative process, disillusioned with traditional criminal, injunctive and license-removal sanctions, to urge greater reliance on civil fines as an enforcement device.[10]

Appropriate civil penalties would allow the Commission to be even more effective in enforcing the statutes, rules and regulations governing its jurisdictional markets. The discrepancy in the settlements obtained by the Commission as compared to the CFTC in connection with the investigation of market manipulation during the California energy crisis of 2000–2001 demonstrates the need for the Commission to have effective civil penalty authority.[11] The Commission and CFTC each based their settlements on conduct that was brought to light in the Western Markets Report, which was prepared by Commission staff. In other words, both agencies' settlements were based on actions engaged in to attempt to manipulate the energy markets. Although the Commission was able to obtain the full amount of revenues associated with the alleged misconduct from the majority of the twenty-four wrongdoers, estimated at just over $28 million, the

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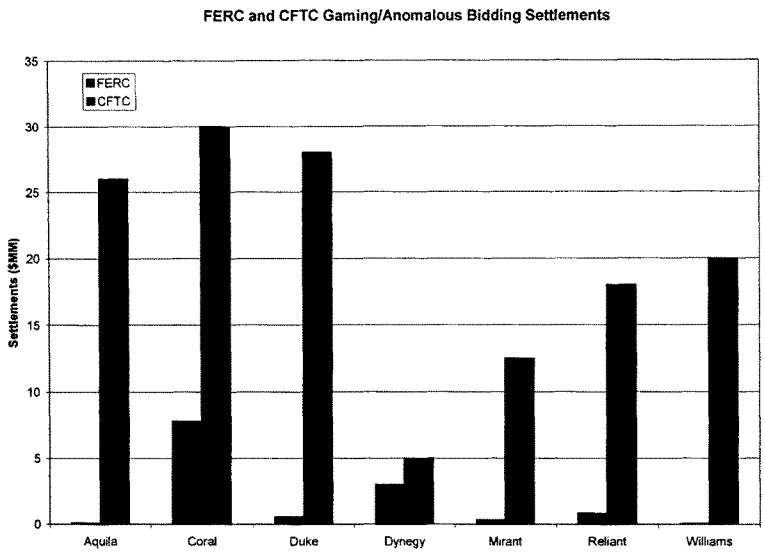
[10] Colin S. Diver, Report to the Administrative Conference of the United States Concerning the Assessment and Mitigation of Civil Money Penalties by Federal Administrative Agencies 1 (May 1979) (as cited in H. Rpt. 101-616 (July 1990)).

[11] In its June 25, 2003 *Order to Show Cause Concerning Gaming and/or Anomalous Market Behavior*, 013 FERC ¶ 61,346, the Commission declared various types of gaming activities that had been conducted by Enron and others to be violations of applicable tariffs, entitling the Commission to obtain all unjust profits received as the result of those gaming activities.

Commission lacked the authority to obtain civil penalties. In contrast, the CFTC was able to obtain approximately $268 million in civil penalties from 23 parties.[12] In short, because it had civil penalty authority, the CFTC was able to obtain settlement amounts that were approximately ten times greater than those obtained by the Commission. The chart below further illustrates the wide gap between the Commission's and the CFTC's available remedies.



The Commission's limited civil penalty authority under the FPA regarding electric markets was conferred in the Energy Policy Act of 1992, but it does not address the needs of the greatly changed electric energy markets since that time. Expansion of civil penalty authority would modernize the Commission's powers and allow it to address problems in

[12] From the seven parties that were investigated by and settled with both the Commission and CFTC, the Commission was able to obtain $12.6 million while the CFTC was able to obtain $139.5 million.

today's energy markets. In addition, Congress should increase the Commission's criminal penalty authority to levels that will serve as effective deterrence and punishment in today's economy. It is worth noting that at least some of the Commission's success to date is attributable to the fact that the Enron debacle and the California energy crisis, which were the impetus for the formation of OMOI by Chairman Wood, are still prominent in the minds of investors and the public. Thus, the possibility of negative publicity and reputation risk for companies found to have engaged in misconduct has undoubtedly helped motivate companies to negotiate settlements with Commission staff, even given the limitations on the Commission's ability to penalize certain conduct. During the last several years, a public pronouncement that a company may have engaged in market manipulation and, thus, may lose its ability to charge market-based rates, has posed a serious threat to both the company's reputation and its stock price. Nonetheless, the most effective long-term deterrent to abusive misconduct by companies is expanded civil penalty authority.

Specifically, Commission Staff recommends that the Commission seek the following statutory changes to enhance its civil and criminal penalty authority:

- An amendment of the FPA to expand civil penalty authority to cover violations of any provision (and Commission regulations and orders under any provision) in Parts II and III of the FPA and to increase the maximum civil penalty for any such violation from not more than $11,000 per day for each violation[13] to not more than $1,000,000 per day per violation;

- An amendment of the NGA to create civil penalty authority to cover violations of

[13] FPA section 316A provides for penalty authority up to $10,000 per day per violation. However, this amount is subject to inflation adjustment and is now $11,000 per day per violation. 18 C.F.R. § 385.1602(d) (2004).

any provision (and Commission regulations and orders under any provision) of the NGA up to a maximum civil penalty of not more than $1,000,000 per day per violation;

- An amendment to the NGPA to increase available civil penalty amounts up to a maximum civil penalty of not more than $1,000,000 per day per violation;

- Amendments to the FPA, the NGA and the NGPA increasing criminal penalties from a fine of up to $5,000 per day for each violation and two years imprisonment to a fine of up to $1,000,000 per day per violation and up to five years imprisonment under both statutes, and

- Amendments to the FPA, the NGA and the NGPA adding a separate civil penalty for intentional, material false statements made in any matter or filing before the Commission, including false statements made to Commission staff during the course of an investigation or audit.

Specific language for this proposed legislation is set out in Appendix B to this report.

III. Remedies Currently Available to the Commission

A. Electric Power

Electric energy markets in the United States have changed dramatically since 1935, the year in which Part II of the FPA was enacted into law. Before then, the "regulatory compact" between the government and utilities, which were viewed as natural monopolies, was the basis for all regulation. Under that system, almost all sales of electricity were made by traditional utilities to their retail customers at rates set by state regulatory commissions. The rates charged were based upon cost of service and relatively few sales of electricity were made in interstate commerce.

Part II of the FPA is the Commission's principal grant of authority for regulating the transmission and sale of wholesale electric power in interstate commerce. However, under the FPA, civil penalty authority is available only for violations of sections 211 through 214 of Part II.[14] The limited sections of the FPA to which civil penalties apply are generally insufficient for enforcement in a market environment. The Commission is rarely able to invoke the civil penalties for sections 211 through 214 of Part II and most violations of Part II involve violations of other provisions.[15] Moreover, even in these limited circumstances where civil penalties are available, the amounts of civil penalties assessable pursuant to the FPA are inadequate because they are limited to not more than $11,000 per day per violation, a nominal amount when compared to the size of most energy companies.

The Commission's May 2003 Order approving a settlement agreement involving Idaho Power Co., IDACORP Energy, L.P., and IDACORP, Inc., provides a useful illustration of the limitations on the Commission's civil penalty authority. The Commission's investigation revealed evidence that Idaho Power violated the Commission's Standards of Conduct and a code of conduct, including giving preferential access to non-public transmission information to its own wholesale marketing employees.[16] The company also violated sections 203[17] and 205[18] of the FPA by failing

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[14] Those sections apply only in very limited circumstances involving either the transmission or "wheeling" of power through utilities' transmission systems or inappropriate preferences granted by public utilities to a certain type of generation plant as defined under the Public Utility Holding Company Act of 1935 (PUHCA).

[15] However, the Commission has been able to use section 214 in one case. *See CLECO*, 104 FERC ¶61,125 (2003), as set forth in attached Appendix A.

[16] *See* 18 C.F.R. § 37.4 (2002) (setting forth standards of conduct for public utilities). A power marketer (such as IDACORP Energy) that is affiliated with a public utility (such as Idaho Power) must provide a code of conduct for the Commission's approval in order

to file a large number of contracts to provide jurisdictional transmission service. The evidence against Idaho Power was strong, and the company admitted to many violations and subsequently refunded $6.1 million to customers, but because the Commission cannot impose civil penalties for that conduct, violations which the Commission views as serious and to which the violating entity had admitted, were left essentially unpunished.[19]

As a result of these limitations on civil penalties under the FPA, the principal remedy available to FERC under the FPA is the ordering of a refund for unjust or unreasonable rates or disgorgement of profits. The Commission may also order penalties identified in Commission-approved tariffs (*e.g.*, imbalance penalties). However, these remedies are limited. Section 206 of the FPA provides for refunds where a rate charged is deemed to be unjust and unreasonable, but the refund effective date may be no earlier than 60 days following the filing of a complaint or the initiation of a proceeding by the Commission. In addition, although the Commission may order disgorgement of profits when a Commission-approved tariff is violated (in addition to any specific penalties identified within the tariff), this remedy may also have limitations. Some courts have held that in applying the disgorgement of profits remedy, the Commission must calculate

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to obtain market-based rate authority from the Commission. The code of conduct is meant to deter affiliate abuse by, among other things, addressing the concern that profits earned from intra-affiliate transactions not accrue at the expense of the captive customers of investor-owned utilities.

[17] Section 203 of the FPA requires that public utilities obtain authorization from the Commission before disposing of facilities, including agreements, with a value of greater than $50,000. 16 U.S.C. § 824b (1994).

[18] Section 205 of the FPA provides in pertinent part: "every public utility shall file with the Commission, within such time and in such form as the Commission may designate . . . schedules showing all rates and charges for any transmission or sale subject to the jurisdiction of the Commission . . . ." 16 U.S.C. § 824d(c) (1994).

[19] *See Idaho Power, et al.* 103 FERC ¶ 61,182 (2003).

profits exclusive of the entity's costs for the violative conduct.[20]

In November 2003, to prevent manipulation of the electricity markets in the future, the Commission enacted the Market Behavior Rules. The Market Behavior Rules are six specific behavioral rules designed to prohibit forms of market manipulation and other market misconduct. Among them, for example, is Market Behavior Rule 2 which prohibits "[a]ctions or transactions that are without a legitimate business purpose and that are intended to or foreseeably could manipulate market prices, market conditions, or market rules for electric energy or electricity products."[21] The Market Behavior Rules Order amended all then-existing market-based rate tariffs, and applied to all new market-based rate tariffs. In the Market Behavior Rules Order, the Commission provided that in connection with any such violation, the seller would be subject to disgorgement of unjust profits associated with the tariff violation, and the Commission held that the seller may also be subject to the suspension or revocation of its authority to sell at its market-based rates or to other appropriate non-monetary remedies.

The Market Behavior Rules monetary remedy of disgorgement of profits is limited by the fact that if no actual profits are realized from the market manipulation, the company is required to pay nothing, even though its market manipulative behavior has undermined the operation of the markets. For example, a manipulative scheme may fail to affect price. The Commission may still want to sanction the behavior because even unsuccessful attempts to manipulate markets undermine the integrity and/or operation of

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[20] *Coastal Oil & Gas Corp. v. FERC*, 782 F.2d 1249 (5th Cir. 1986).

[21] *See* Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations, 105 FERC ¶ 61,218 (2003). There are similar Market Behavior Rules prohibiting market manipulation in the natural gas markets. *See* Amendments to Blanket Sales Certificates, 105 FERC ¶ 61,217 (2003).

markets.[22] Similarly, when a company engages in misconduct in order to "cut its losses," no actual profit is nominally earned. In such situations, where the gain to the company is in the form of a mitigated loss, rather than a realized monetary profit, there is no profit to disgorge.[23] In sum, providing the Commission with the ability to impose civil penalties in a broader array of situations would serve as a better deterrent to market abuse and give the Commission the ability to appropriately sanction egregious behavior.

B. Gas

The NGA is the Commission's principal grant of authority for regulating the transportation and resale of natural gas in interstate commerce. The NGA regulates the interstate transportation of gas, imposing various rules, including requirements for entry into and exit from natural gas transportation. However, the Commission lacks statutory authority under the NGA to impose civil penalties of any kind. The NGA contains minimal criminal penalty authority: up to $5,000 per day per violation and two years imprisonment.

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[22] However, as previously stated, the Commission also has the option of suspending or revoking a company's authority to make sales at market-based rates, although that remedy may not be appropriate in certain situations.

[23] In *American Electric Power Co., et al.*, 103 FERC ¶ 61,345 (2003) (the "Gaming Order"), the Commission described the practice of underscheduling load as conduct violating the California Power Exchange's ("Cal PX") and the California Independent System Operator's ("Cal ISO"). By engaging in underscheduling load, the utilities may have submitted inaccurate information and taken advantage of tariff rules in violation of the Commission-approved Cal PX and Cal ISO tariffs and caused a demonstrable detriment to the efficiency of California's power markets. Although the Commission noted its disapproval of the practice in the Gaming Order, 103 FERC at 62,338, because underscheduling load was a price-reducing purchasing strategy for which there were no profits, the Commission could not order disgorgement of unjust profits.

Although the Commission has no civil penalty authority under the NGA, the Commission may impose civil penalties for conduct that violates section 311 of the NGPA. The NGPA covers transportation of gas on behalf of local distribution gas companies or gas pipelines and relieves intrastate pipeline companies that provide this transportation from the regulatory requirements of the NGA.[24] As noted above (at pages 3-6 and in the attached Appendix A), although the Commission has been successful to date in obtaining section 311 penalties, its continuing ability to do so is diminishing because section 311 transportation contracts with interstate pipelines have become relatively uncommon. Since the early 1990s, blanket transportation certificates have allowed interstate pipelines to provide transportation under the NGA with features similar to section 311 transportation. Thus, civil penalties are available in increasingly fewer instances as section 311 transactions become a smaller part of the interstate natural gas market.

Due to the lack of civil penalty authority in the NGA, some of the Commission's investigations have been curtailed because, even if wrongdoing were uncovered, it could not be punished because no section 311 transaction was involved. In other cases, companies that are the subjects of the investigations receive disparate treatment, based upon whether or not they perform services under section 311 of the NGPA. The Commission's settlement of *Enogex, et al.,* 105 FERC ¶ 61,308 (Enogex), exemplifies such differing treatment for the same conduct. Enogex and Ozark failed to comply with regulations requiring them to obtain advance approval for certain pipeline construction projects. Because Enogex operated an intrastate natural gas pipeline pursuant to section 311 of the NGPA, the Commission was able to obtain a civil penalty against Enogex. However, because Ozark operated under a blanket construction certificate pursuant

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[24] Section 311 was enacted in 1978 as part of an effort to increase the sales of natural gas in the interstate market by reducing the amount of red tape needed for pipelines to transport natural gas on behalf of others. Commission regulations allow local distribution companies to provide this type of transportation as well.

section 7 of the NGA, the Commission could not assess a civil penalty against Ozark for the same misconduct. The two companies committed the same violations on different parts of the same pipeline, but because Enogex was operating intrastate under NGPA section 311 and Ozark was operating under the NGA, they were not subject to the same penalty. *See* Appendix A.

IV. Amending Civil and Criminal Penalty Authority under the Federal Power Act

The Commission's narrow civil penalty authority under the FPA leaves it with an insufficient foundation for strong enforcement of the electric power market regulations. As discussed above, and as illustrated in the chart comparing FERC and CFTC settlements for similar conduct (see page 11, above), the Commission's limited remedial authority in the electric power markets is readily apparent. To remedy this situation, the Commission proposes expanding its civil penalty authority to: (1) include all of Parts II and III of the FPA, and (2) increase the maximum civil penalties applicable to each violation of the FPA from no more than $11,000 per day for each violation, to no more than $1,000,000 per day for each violation. Part II contains the statutory provisions that are the most relevant to the Commission's regulation of its jurisdictional electric markets. For example, section 205 provides, in part, that rates and charges "shall be just and reasonable" and prohibits "any undue preference or advantage to any person"; and section 206 gives the Commission authority to "determine a just and reasonable rate, charge, classification, rule, regulation, practice, or contract," if it determines, after a hearing, that any of the foregoing were unjust and unreasonable. Because Part II is also the basis for the Market Behavior Rules, the proposed amendment would mean that civil penalties in addition to disgorgement of profits would be available for market manipulation.

Part III of the FPA covers numerous administrative and substantive requirements, including provisions mandating compliance with the Commission's operational and

financial audit functions[25] and prohibiting certain interlocking directorates without Commission approval.[26] Provisions included in Part III give the Commission the authority to request that entities provide information, documents and other materials during investigations and audits.[27] Under the existing statutory scheme, without applicable civil penalties, entities that are undergoing an audit face no direct penalties for failure to comply with requests by the Commission's auditors for information, documents and other materials.

Similarly, although the FPA clearly prohibits serving in interlocking directorates without seeking prior authorization, the Commission can impose no civil penalties on anyone who violates this prohibition. In the situation of interlocking directorates, which occurs when a person simultaneously serves as a director or officer of more than one public utility, or serves as an officer of a public utility and a securities underwriter or an equipment supplier for a public utility, the Commission's inability to impose civil penalties for violations of FPA section 305 can have troubling implications. The legislative history of this provision indicates that "Congress exhibited a relentless interest in . . . the evils of concentration of economic power in the hands of a few individuals" and it "recognized that the conflicts of interest stemming from the presence of the same few persons on boards of companies with intersecting interests generated subtle and

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[25] FPA section 301, 16 U.S.C. §§ 825(a) and (b).

[26] FPA section 305, 16 U.S.C. § 825d.

[27] Section 307 provides that the Commission may investigate any facts, conditions, practices, or matters which it may find necessary or proper in order to determine whether any person has violated or is about to violate any provision of the FPA or any rule, regulation or order thereunder, or to aid in the enforcement of the provisions of the FPA or in prescribing rules or regulations thereunder, or in obtaining information to serve as a basis for recommending further legislation concerning the matters to which the FPA relates. 16 U.S.C. 825f(a). The comparable provision in the NGA is section 14. 15 U.S.C. 717m.

difficult-to-prove failures in the arm's length bargaining process."[28] However, the Commission is without authority to punish or deter violations of the prohibition on interlocking directorates through civil penalties.

To address the effects of the lack of civil penalty authority in Parts II and III of the FPA, we propose that section 316A be amended to include civil penalties for violations of these provisions within the Act. Specific language for the proposed amendment is set forth in Appendix B.

The Commission also proposes an increase in criminal penalties that would be available under any referral for criminal prosecution by the Commission to the Department of Justice under section 316 of the FPA for violation of the Act from a fine of up to $5,000 for each violation to a fine of up to $1,000,000 for each violation and a term of imprisonment of up to five years, increased from the current term of two years imprisonment. An increase in the current $5,000 maximum fine per violation to a $1,000,000 per violation fine was proposed in H.R. 6 during the 108th Congress.

Finally, in addition to the expansion of the Commission's civil penalty authority for violations of the FPA, the Commission also proposes including a separate penalty for making intentional, material false statements in any matter or filing before the Commission pursuant to the FPA, including false statements made to Commission staff during the course of an investigation or audit. In contrast with other regulatory schemes, the statutes under which the Commission acts do not provide it with the ability to impose civil penalties for making false statements or otherwise providing false information in filings with, or other matters before, the Commission, such as ongoing investigations,

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[28] *See Hatch v. FERC*, 654 F.2d 825, 831 (D.C. Cir. 1981), *citing, e.g.,* 79 Cong. Rec. 10379 (1935) (remarks of Representative Lea), 79 Cong. Rec. 8524 (1935) (remarks of Sen. Norris), and *15 U.S.C. § 79a(b)(2)* (2000); *see also Paul H. Henson*, 51 FERC ¶ 61,104 at 61,230 n.5 (1990).

inquiries, or audits.

The provision proposed is comparable to the authority of other regulatory agencies including the Atomic Energy Act of 1954 § 234(a). See 42 U.S.C. § 2282(a) (2000) (authorizing civil penalties for any violation for which a license issued under that Act may be revoked, including material false statements). Currently, the Commission generally can address this type of conduct only with the revocation or suspension of market-based rate authorizations or blanket certificates. In cases where such revocations or suspension may be an overly severe remedy, the Commission's only clear options are to let the false statement go unpunished, or to refer the matter to the Department of Justice for a possible criminal prosecution for the obstruction of justice under 18 U.S.C. § 1001. Specific language for the proposed false statements provision is set forth in Appendix B.

V. Creation of Civil Penalty Authority and Expansion of Criminal Penalty Authority under the Natural Gas Act

Because the Commission's role in regulating gas transportation and markets has transformed from traditional cost-based rate regulation to oversight of market-based rates, the Commission's civil penalty authority should be updated to reflect the present reality. Moreover, Congress should grant civil penalty authority under the NGA to enhance the Commission's ability to regulate the companies under its jurisdiction. Accordingly, the Commission proposes amendments adding civil penalty authority to the NGA.[29] Specific language for this proposed amendment is set forth in Appendix B.

The Commission also supports an increase in the amount of criminal penalties available under the NGA. Proposed amendments to the NGA that were before the 108th

[29] The House Conference Report on the energy bill that had been pending before the 108th Congress, H.R. 6, H. Rept. No. 108-375, did not include an amendment adding civil penalties to the NGA.

Congress would have expanded the Commission's criminal penalty authority. H.R. 6 included a proposal to amend section 21 of the NGA to increase the amount of criminal penalties available for violations of the NGA from not more than $5,000 to not more than $1,000,000; the term of imprisonment would have been increased from two years to five years. H.R. 6 also proposed an increase in the penalty for any willful and knowing violation of "any rule, regulation, restriction, condition, or order made or imposed by the Commission under this act" from not more than $500 to not more than $50,000 for each day of the offense. The Commission believes that, if enacted, these amendments would put the Commission's criminal penalties in balance with the severity of willful and knowing violations of the NGA and promote prosecution of appropriate cases by the Justice Department.

In addition, although the NGPA provides for civil penalties as discussed herein, increasing the dollar amount of civil penalties available under the NGPA to comport with the civil penalties proposed for the NGA would further the goal of eliminating disparate treatment of conduct governed by those acts. Specific language for the proposed amendment is set forth in Appendix B.

VI. Conclusion

Today, OMOI serves as the Commission's "cop on the beat" for energy markets that encompass numerous power sellers, interstate transmission lines, Regional Transmission Organizations, interstate gas pipelines, gas storage facilities and highly-sophisticated financial institutions. In its first two years of existence, OMOI has proven successful in increasing the number of investigations the Commission has conducted and in resolving those investigations to the maximum extent of its ability under the Commission's existing statutory authority. However, the Commission is missing a key tool - - effective civil penalty authority under the FPA, the NGA and the NGPA. Such authority would allow the Commission to more effectively deter market misconduct.

The Commission has taken great strides to put in place appropriate rules, and an office dedicated to enforcing those rules, so that the energy markets can function competitively and effectively. However, it must also have the necessary authority to punish those who fail to follow the rules and to deter any participant that may contemplate deviating from the rules. For energy markets to function properly, the Commission needs sufficient tools to penalize participants who violate the market rules.

SETTLEMENT (BY NAME OF LEAD ENTITY OR PATTERN OF BEHAVIOR)	BASIS FOR INVESTIGATION AND FOR SETTLEMENT	COMPLIANCE TERMS OR OTHER CONDITIONS IMPOSED	SETTLEMENT AMOUNT OBTAINED THROUGH DISGORGEMENT OF PROFITS, REFUNDS OR PAYMENT OF COSTS	CIVIL PENALTIES UNDER THE NGPA OR FPA §§ 211, 212, 213 OR 214
RELIANT ENERGY SERVICES 105 FERC ¶ 61,008 (2003)	Violations of the entity's California Independent System Operator (Cal ISO) and California Power Exchange (Cal PX) tariffs as a result of submission of bids above $250 per megawatt hour (MWh) in the California markets between May 1, 2000 and October 2, 2000. Conduct qualified as "economic withholding" defined as "bidding available supply at a sufficiently high price in excess of the supplier's marginal costs so that it is not called on to run and where, as a result, the market clearing price is raised"	Oversight by OMOI for one year, including random reviews of emails and taped telephone conversations.	Total of $50 million in disgorgement of profits including: $25 million in cash and $25 million from an auction of capacity from certain of entity's gas-fired electric generation units, all to be paid into an account established by the U.S. Treasury for distribution for the benefit of California and Western electricity customers	No civil penalties available
AMERICAN ELECTRIC POWER CORPORATION, ET AL. (2005)	AEP's intrastate pipeline, Jefferson Island Storage & Hub, failed to disclose that it entered into a non-public agreement putting an affiliated marketer, AEP Energy Services, in control of injections and withdrawals. This allowed the marketer unduly preferential use of the pipeline's NGPA section 311 storage service and	AEP, Energy Services, American Electric Power Service Corp. and Houston Pipe Line Co., AEP's remaining intrastate pipeline company, are required to follow a four-year compliance plan to prevent future	None	$21 million civil penalty under the NGPA, the largest civil penalty ever assessed by the Commission

	continuous access to confidential storage information about other pipeline customers. Another AEP pipeline, Louisiana Intrastate Gas, also provided undue preferences in section 311 transportation services to the affiliated marketer.	violations, including enhanced employee training and continued monitoring by Commission staff for compliance with Standards of Conduct and Market Behavior rules. (Neither Jefferson Island nor Louisiana Intrastate Gas are currently owned by AEP.)		
DOMINION, ET AL. 108 FERC ¶ 61,110 (2004)	Alleged violation of the Commission's Standards of Conduct by providing non-public gas storage information to affiliates, select entities and individuals that was not provided to the public at large	Extensive employee training to deter future similar violations for employees of two involved entities; recording and maintaining the recordings of conversations between customer service representatives and customers of another entity for one year	Total refunds of $4.5 million paid by Dominion and its affiliates	Total of $3.6 million under §311 of the NGPA paid by Dominion and its affiliates and by 2 non-affiliated entities

RECORD STATEMENT OF
LORI COOPER
before the
U. S. Senate Permanent Subcommittee on Investigations
St. Paul, Minnesota Field Hearing
Hearing On
Volatility in the Natural Gas Market:
The Impact of High Natural Gas Prices On American Consumers
February 13, 2006

My name is Lori Cooper. I am a mother, wife and working professional. My husband, Lee, worked as a mobile hydraulic repair specialist for Pirtek and my daughter is 21 months of age. I work as the lead habilitation instructor for Capstone Services at a group home for developmentally disabled adults. We have owned our home since 1991. We were like many families with a dual income. We had no trouble paying our bills.

When my mother passed away she left me a small inheritance and we used the money to begin a remodeling project on our home. We performed the work ourselves. We put new roofing on our home, replaced the windows, added attic insulation, replaced our furnace, hot water heater, central air conditioner, washer and dryer. We remodeled our kitchen and replaced the refrigerator and dishwasher. With the exception of the roofing, all of these changes served to increase the energy efficiency of our home. We expected that these remodeling expenses, which we paid for ourselves, would reduce our heating costs and allow us to eventually recover the money we spent on our home by reducing our heating bills. In addition, we had insulation added to the outside walls of our home by the state Weatherization Assistance Program.

However, our life changed when it was discovered that my husband had cancer in his bladder. We were unable to finish our remodeling project and Lee lost his job. In addition to my husband's cancer, Lee had other medical problems that required two liver biopsies. Further, there were complications from internal bleeding. I am very happy that his operation was successful in removing the cancer, but he is still dealing with other medical difficulties. He is now receiving medical assistance but he has been out of work for over a year.

Once Lee lost his job, we had to get by on my income alone. With only my income, we started getting behind on our bills. When we couldn't pay our heating and electric bill, we received shut-off notices from Xcel. We contacted them and arranged a payment plan. Our heating bill for last Winter was $2,008 and it took us all summer to pay it off. That was about $400 less than we would have paid if we had not received an energy assistance grant through the Low Income Home Energy Assistance Program. We are reapplying for a grant again this year. After finally getting caught up on last year's heating bill, we received our December 2005 heating bill for $511. Last year our December heating bill was $374. That is a 37 percent increase in just one year.

With these price increases, my husband and I have no hope of recovering any of the money we put into our home to increase its energy efficiency Instead, because of increased prices, we are sending the money to the gas company It would really be helpful to us if we could somehow recover some of our expenses.

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RECORD STATEMENT OF

Nora Brownell

Commissioner, Federal Energy Regulatory Commission
Before the
Permanent Subcommittee on Investigations
Committee on Homeland Security and Governmental Affairs
United States Senate
February 13, 2006

Mr. Chairman and Members of the Subcommittee:

On behalf of Chairman Kelliher, thank you for allowing me to submit a statement for the hearing record discussing the critical issues in the natural gas market and recent trends of increasingly high and volatile prices.

Let me begin by laying out the current state of the energy industry in this country. Demand for natural gas is projected to increase at an average rate of 1.5 percent from 2003 to 2025, primarily as a result of increasing use for electricity generation and industrial applications. In 2004, domestic gas production declined 1.4 percent as output from some key traditional supply basins declined. New production sources are desperately needed as supply basins mature. Growth in natural gas supplies will depend on unconventional domestic production (tight gas sands, shale, and coalbed methane), natural gas from Alaska and imports of LNG. There is an estimated $61 billion needed for natural gas transmission infrastructure investment to serve demand in Canada and the US.

As you are keenly aware, healthy, vibrant energy markets are vital to our economy and to our environment. Clean, reliable energy markets supported by robust infrastructure will give us the competitive edge that we need and that customers demand. Minnesota is home to 19 Fortune 500 companies, including 3M and many prominent private companies.[1] With a historical 3.3% gross state product annual growth rate, Minnesota's gross state product grew 3.9% in 2004 over 2003.[2] Minnesota's international exports have strong growth rates - in 2004, Minnesota exports nearly exceeded $12 billion, which was 12.5% higher than

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[1] Minnesota Department of Employment and Economic Development.
[2] US Department of Commerce, Bureau of Economic Analysis News Release, "Widespread Gross State Product (GSP) in 2004 Led by Services-Providing Industries: Accelerated Estimates of GSP by Industry for 2004", BEA 05-06, October 26, 2005.

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2003.[3] According to the Energy Information Administration, Minnesota had 1,308,143 residential and 123,123 industrial customers of natural gas in 2003. They consumed 138 and 101 billion cubic feet (Bcf) of natural gas, respectively. Consequently, our national economy as well as Minnesota's economic well-being have been and will continue to be affected by the rapid increase and volatility in natural gas prices.[4]

Over the last few years, natural gas prices have escalated, in part, due to depletions and disruptions in the supply of natural gas – and electric prices are inextricably linked to the natural gas market. Last fall, all indications and projections forecasted energy prices to rise even higher this winter because of the loss of domestic oil and natural gas supplies due to Hurricanes Katrina and Rita. The hurricanes shut in about 500 Bcf, almost three percent of the Nation's annual production. I would point out that natural gas prices had been at sustained high levels even prior to the hurricanes. As of January 21, eighty percent of the hurricane-related shut-ins have come back on line. To date this winter, we have experienced 12 percent warmer than normal weather. This recovery of Gulf production and mild weather, have had a moderating influence on prices, but wholesale spot prices remain in the $8.00 to $9.00 range. The electricity sector is no better, maybe even worse. Customers have felt the impacts and they are angry and frustrated.

However, Hurricanes Katrina and Rita are not the root cause of our high energy prices. That loss exacerbated the already existing and growing problem of inadequate infrastructure and lack of supply. I think it is important to clearly define and focus the debate about high energy prices. Unfortunately, we all too often find it more comforting to blame the high energy prices on unprecedented natural catastrophes, market manipulation, or revelations of corporate malfeasance instead of addressing the underlying economic issues. I do not mean to suggest that we ignore these factors as possibly contributing to high and volatile energy prices. In fact, the Commission has aggressively taken the steps necessary to eliminate or at least minimize the influence of these factors on energy prices. Using the new anti-manipulation authorities provided by the Energy Policy Act of 2005 (EPAct 2005), the Commission now has in place rules to prohibit market manipulation by <u>any</u> entity, not just companies traditionally subject to our jurisdiction, and the ability to impose civil penalties for any violation.

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[3] Annual Export Statistics: *Minnesota's Exporting Trends in Manufacturing in 2004*, Department of Employment and Economic Development prepared for the Minnesota Trade Office, Publ. April 2005, Rev. May 2005.

[4] Minnesota Quarterly Export Statistics: Data on Manufacturing for Third Quarter 2005, Department of Employment and Economic Development prepared for the Minnesota Trade Office, Publ. Dec. 2005.

The key to affordable energy on a long-term basis is infrastructure, infrastructure, and more infrastructure in order to promote production, efficiency, reliability, and innovation – but most importantly, infrastructure is critical to access supplies, both domestic and foreign. With the passage of the Natural Gas Policy Act of 1978 and the Natural Gas Wellhead Decontrol Act of 1989, Congress removed federal price controls on most wholesale sales of natural gas. Further, the Commission does not regulate retail sales or natural gas wellhead prices. Accordingly, our primary role is to certificate and regulate natural gas pipelines.

The Commission has sufficient authority under the NGA, ANGTA and the Alaska Natural Gas Pipeline Act to get the necessary facilities built and we are using it. In 2005, we approved 870.6 miles of pipeline and 145,336 HP of compression; storage projects that totaled 3.3 Bcf of deliverability and 109.6 Bcf of capacity; and LNG projects that totaled 6.5 Bcf of deliverability and 34.4 Bcf of capacity.

Congress has also done its part by passing the EPA 2005, which gave the Commission additional tools to address the high and volatile natural gas prices on a long-term basis. LNG will be a critical niche player, but requires a national LNG supply program. EPAct 2005 clarified that the Commission has exclusive LNG siting authority. Furthermore, consistent with the requirements of EPAct 2005, the Commission has issued rules establishing mandatory pre-filing procedures for all applicants seeking to site, construct and operate new LNG terminals and related facilities. I am hopeful the mandatory pre-filing procedures will promote early identification and resolution of the issues surrounding authorization of LNG facilities. Also, using the new authority granted to us by Congress under EPAct 2005, the Commission has issued a Notice of Proposed Rulemaking to reform our pricing policies for natural gas storage facilities in order to encourage greater investment in storage facilities. I believe that expansion of storage capacity may help reduce the volatility in natural gas prices.

I also want to make the point that the lack of adequate infrastructure is not solely a natural gas problem. We have an energy transmission problem. Electric transmission constraints cost between $1 and $2 billion during the summers of 2000-2001. Electric infrastructure investment deficit is estimated at $20 billion per year. Electric transmission investment accounts for less than 2% of utility capital expenditures. Power quality disturbances, particularly critical in a digital economy, are estimated at between $50 and $100 billion a year. The convergence of the natural gas and electricity markets requires a comprehensive energy plan of attack. The natural gas and electricity markets are inextricably linked. The solutions are interdependent and infrastructure, specifically transmission, is the great enabler of cost-effective, reliable solutions. The emergence of renewable

wind energy as an important electricity supply alternative, for example, will have a mitigating impact on natural gas prices. Minnesota has a very significant wind resource, particularly in the Buffalo Ridge area in the very southwestern part of the state. Transmission has been one factor limiting further development of this renewable resource.

New technology is also part of the solution to high energy prices for both industries. High temperature superconductors are a good example of advanced materials that have the potential to transform electric power delivery. The prospect of transmitting large amounts of power through compact underground corridors, with minimal electrical losses over long distance, could significantly enhance the overall efficiency and reliability of our electrical system. The accelerated development of advanced composite conductors can increase transmission line capacity. New technologies in exploration and development have unlocked coalbed natural gas as a significant resource, accounting for nearly 10 percent of domestic gas production. Developing new technologies to assess the condition of existing lines, repair pipelines remotely or with less cost, improve the efficiency and reduce the emissions of compressors and monitoring the integrity of gas pipeline systems on a real-time basis will lead to increased efficiency, reliability and safety of pipeline operations.

In closing, I assure the Subcommittee that the Commission is working diligently to promote adequate and reliable infrastructure and to prevent market manipulation. Thank you for this opportunity to share my thoughts, and I look forward to continuing to work with you on these matters.

RECORD STATEMENT
OF

JOSEPH A. CARRABBA

President and Chief Operating Officer
Cleveland-Cliffs Inc
before the
Unites States Senate
Permanent Subcommittee on Investigations of the
Committee on Homeland Security and Governmental Affairs

February 13, 2006

Mr. Chairman and Members of the Committee, I am Joe Carrabba, president and chief operating officer of Cleveland-Cliffs Inc, America's largest producer of iron ore pellets.

Iron ore pellets, or taconite pellets as they are known on Minnesota's Mesabi Iron Range, are a key ingredient in the making of steel and a strategic mineral necessary to preserve our national and economic security.

Cliffs manages six mines in North America—three in Minnesota, two in Michigan and one in Canada. These mines have the capacity to produce 37.5 million tons of iron ore pellets annually, which represents approximately 46 percent of the total North American pellet capacity. Our total U.S. employment is currently about 3200.

We appreciate the opportunity to participate in today's hearing and have this discussion on how recent, dramatic increases in the price of energy—particularly natural gas—has affected Cliffs' mines and our position in today's ever-more-global marketplace

Iron ore is a commodity—a commodity sold in a global market where the world's largest producers are located in Brazil and Australia, and have significantly lower operating costs. Iron ore producers in these countries process natural ores that contain approximately 60% iron and require little or no expensive and energy-intensive upgrading.

The world price for iron ore—which sets the stage for what Cliffs can charge for our products—is set annually in negotiations between these large foreign producers and their customers in Asia and Europe.

Cliffs sells virtually all of its iron ore pellets to North American steel producers under long term contracts that have price adjustment factors, including world price.

Domestically, all the natural ore reserves have been exhausted and today we process ores that contain roughly 25% iron. Ores of this grade require extensive upgrading before they can be used in steel making. This is a very capital and energy intensive

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process. Historically, energy costs have represented 25% of our total production costs, but recently, energy has grown to 30% of our production costs.

To remain competitive Cliffs must be ever-mindful of keeping our costs low. Consequently, we have had a long-standing tradition of maximizing energy efficiency—pursuing alternative energy, employing energy recovery systems, making thoughtful and strategic purchasing choices and squeezing every pellet we can from every Btu we purchase.

Cliffs makes it a practice to use the lowest cost fuel. Natural gas is preferred, because it burns cleaner and maximizes our production capabilities. In the face of recent skyrocketing natural gas prices, however, Cliffs has expanded its use of other fuels, which often are blended with natural gas.

Burning only natural gas, Cliffs' U.S. mines annually would consume about 20 million Btu's. Because of the recent dramatic price increases we have reduced our natural gas consumption by about 30 percent by supplementing natural gas with other fuels, principally coal and pet coke. Due to higher demand for fuels, these prices have also increased significantly.

Our ability to use alternative energy sources is limited, however. Some mines—like Hibbing Taconite and Northshore Mining in Minnesota—cannot use solid fuels because of their furnace design.

The use of alternative energy also creates some challenges.

- Permitting for the use of alternative energy is difficult.
- Emissions are higher than when burning natural gas.
- Oxides and ash build up in furnaces, causing high maintenance and repair.
- And productivity is reduced.

Cliffs is focused on its energy purchasing strategies to keep costs as low as possible. We have a Natural Gas Procurement and Risk Management Strategy and we implement a variety of procurement options that minimize natural gas costs and maximize our control over future gas costs.

While I won't detail these options, which include purchasing methods and a handful of financial instruments, I will note that the volatility of natural gas prices has greatly reduced the affordability of some of these options.

Cliffs' commitment to energy and operational efficiency is a hallmark of our success. We have always pursued energy initiatives focused on reducing energy consumption. However, because energy efficiency is not new for Cliffs' mines, we already have picked

most of the low-hanging fruit and have realized significant cost savings by implementing these measures.

Today, we are building upon that record. New teams are studying how we can gain even more efficiency, tapping new technology or new practices. Teams have recommended new capital and equipment, improved maintenance procedures and enhanced operating practices.

For example, we recently modified the air duct for one furnace at Hibbing Taconite, improving the air flow, achieving the same output and reducing natural gas use by 10%. We plan to install similar modifications to the remaining two furnaces at Hibbing this year.

We are also very close to reaching an agreement to install new coal gasification technology at one of our U.S. mines to demonstrate its application to our process. If this demonstration is successful, it could have extensive application not only to iron ore processing, but also to other natural gas dependent industries.

While these are all new and exciting projects, they are consuming an enormous amount of time and money. If this county is to retain its competitive position in today's global markets, companies like Cliffs should be directing these scarce resources into mining and mineral processing research, not alternative energy technology.

Even with a successful track record of managing energy use and expense, we cannot keep pace with natural gas prices that have increased 400% in less than six years. To put this in perspective, Cliffs spent $39.6 million dollars on natural gas in 2001; we anticipate spending $162 million dollars this year. Our natural gas costs have more than quadrupled in six years.

Had it not been for the recent increase in global demand for iron ore and dramatic turn around in the domestic steel industry, the current uncontrolled spike in natural gas prices could have put Cliffs' and its mines at risk of bankruptcy. Should the price of natural gas remain at current levels, and iron demand and pricing fall, our entire industry would be immediately threatened.

In addition to the impact rising natural gas prices have had on our operations as a process fuel, it has had a negative impact on our bottom line in several other ways.

Natural gas increasingly is used for electric power generation. As natural gas prices rise, so does the cost of electric power, which is the largest energy cost component for Cliffs' mines.

Natural gas also impacts the price of supplies we use. Our costs for explosives, chemicals and castings have risen dramatically. Across all of our operations, we use over 140 million pounds of explosives annually. In just the past years our average cost for explosives has increased 42 percent.

Cliffs understands market influences. We recognize that **we** must do all we can to be efficient, to explore ways to use alternative fuels and to maximize our use of purchasing practices to keep our costs low.

We are dedicated to exploring new technologies and alternative fuel products that can replace natural gas. As I mentioned earlier, coal gasification—transforming coal into synthetic gas—holds particular promise.

Cleveland-Cliffs has been and remains committed to energy efficiency, to the use of alternative energy and to new technologies that will help our mines manage their energy costs.

Despite our commitment, despite our successes, our current, competitive position in the markets we serve is adversely impacted by the ever-escalating natural gas prices that hit our bottom line from so many different directions.

I can assure you, Cleveland-Cliffs is doing its part. It is investing the time and financial resources to enhance its energy position and maintain its competitive posture in the global iron ore market.

I am encouraged that the Senate is considering how the federal government can do its part to help American families, consumers and employers in the face of these escalating costs.

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February 17, 2006

Senator Norm Coleman
Chairman
Permanent Subcommittee on Investigations
Committee on Governmental Affairs
United States Senate
Russell Senate Office Building, Room 199
Washington, DC 20510-6250

Dear Senator Coleman:

During the hearing of the Permanent Subcommittee on Investigations of the Committee on Homeland Security and Governmental Affairs on February 13, 2006, the question arose as to how much of Minnesota's natural gas is purchased on the spot market. The Minnesota Department of Commerce (Department) reviewed utility purchasing information to assist the Subcommittee in answering this question.

The Department monitors the purchasing practices of all regulated natural gas utilities in Minnesota on both a monthly and annual basis. According to the required annual information provided to the Department on September 1, 2005, the combined amount of spot market purchases for the 2005 fiscal year is 5,803,136 Dkts annually, which is approximately 2.21 percent of total gas purchases. During the five-month (November through March) heating season, four of the seven regulated Minnesota natural gas utilities reported the purchase of gas on the spot market. These purchases made up the majority (4,005,770 Dkts) of the annual spot purchases executed.

The Department analyzes, summarizes and reports the annual purchasing practice information to the Minnesota Public Utilities Commission for review and necessary action when warranted. Upon request, the Department is willing to share the appropriate purchasing data with the Governmental Accountability Office in an effort to align definitions and reporting data related to purchased natural gas in Minnesota.

Please feel free to contact me if you have any questions.

Sincerely,

EDWARD A. GARVEY
Deputy Commissioner
Minnesota Department of Commerce

EAG/CB/jl

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