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IMPACT OF HIGH NATURAL GAS PRICES ON SMALL FARMERS AND MANUFACTURERS

HEARING

BEFORE THE

SUBCOMMITTEE ON RURAL ENTERPRISES, AGRICULTURE, & TECHNOLOGY

OF THE

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HOUSE OF REPRESENTATIVES

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HEARING ON IMPACT OF HIGH NATURAL GAS PRICES ON SMALL FARMERS AND MANUFACTURERS

WEDNESDAY, SEPTEMBER 22, 2004

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON RURAL ENTERPRISES, AGRICULTURE & TECHNOLOGY
COMMITTEE ON SMALL BUSINESS
Washington, D.C.

The Subcommittee met, pursuant to call, at 10:06 a.m. in Room 311, Cannon Building, Hon. Sam Graves, [chairman of the Subcommittee] presiding.

Present: Representatives Graves, Butterfield, Shuster and Capito.

Chairman GRAVES. At this hearing we are going to explore the outrageously high natural gas prices and its impact and how that is having an effect on small businesses, specifically farmers and manufacturers. I do appreciate everyone being here today.

Currently over 60 million homes, farms, businesses and industries are dependent on natural gas. With the spike in the price of natural gas, one would think there is a shortage out there. Nothing could be farther from the truth. The United States has an abundance of natural gas, and yet prices are two or three times higher today than historic averages.

Beginning in the mid 1980s gas prices dropped, and for nearly a decade the price stabilized. It was an inexpensive energy source, and supply was extremely plentiful. For years natural gas was promoted, and public policy encouraged Americans to utilize the clean, cheap and efficient energy. The abundance of the gas supply would keep prices low, and that was the answer to all our energy needs. When additional clean air regulation was added to the books, converting to natural gas seemed to be the most efficient solution.

Prices have been skyrocketing in the past three years, and demand is expected to increase 30 to 40 percent by the year 2025, nearly 20 years from now, yet recent studies show that our recoverable natural gas reserves are sufficient to meet our demand for years to come, and it is believed that we have more natural gas resources than we thought nearly 20 years ago.

So what is the problem? Many say our supply chain is the problem, and I am sure many of our witnesses today are going to shed some light on that particular problem. In the meantime, we have

to deal with these high prices and what those prices are doing. They are driving manufacturing and driving our manufacturing base right out of this country and hurting our farmers.

Energy costs are frequently cited as one of the biggest costs to businesses, second only to labor. Many sectors rely significantly on natural gas. Natural gas accounts for more than 40 percent of commercial energy consumption.

Our manufacturing sector has been hard hit by the recession. While it is slowly turning around, soaring energy prices threaten this recovery. High natural gas prices have increased the cost of producing important fertilizers that farmers rely on for their crops.

Natural gas is a primary component in nitrogen fertilizers and accounts for 90 percent of the production cost. Fertilizer producers have had to turn to foreign imports, causing an upsurge in cost. As I think everyone knows, fertilizers plays an important role in the development of crops. As a farmer, I know how tough it is to meet the bottom line. When you have to take on additional costs profits become more difficult to realize.

We rely on our farmers three times a day. Farmers have been forced to decrease production by 25 percent in some cases, causing adverse financial damage to the agriculture industry, which has been hard hit over the years, and causing additional challenges to our slowly recovering economy, particularly in the rural areas.

There are answers to this problem. One, pass an energy bill that will allow us to explore for more natural gas, repeal the red tape surrounding further exploration and build a pipeline to increase gas supplies are all solutions that will help to stabilize the price volatility of natural gas.

Liquified natural gas is another solution to supply stability. We already know that there are abundant supplies under our lands and seas, and we need to tap these natural resources. However, many say the short-term recovery that we have is nearly three years away, and the pipeline that many talk about is at least a decade before it will impact supply and prices.

The fact is, high natural gas prices are driving jobs out of this country and hurting our farmers and manufacturing segment. I want to hear from our witnesses on how these prices affect them and any solutions they have to remedy the situation. In my eyes, we need to stabilize the price of natural gas and increase domestic exploration in an environmentally safe manner, and in turn help our economy.

[Chairman Graves' statement may be found in the appendix.]

Again, I want to thank all of our witnesses for being here today, and I look forward to hearing their testimony.

I want to welcome Judge Butterfield, Congressman Butterfield, to the Committee today. He is the new Ranking Member from North Carolina. I am very pleased to have you on board and look forward to hearing your opening statement.

Mr. BUTTERFIELD. Thank you so much, Mr. Chairman, for holding this hearing to review the impact of high natural gas prices on rural enterprises and manufacturers. I also want to thank you for your work on this Committee.

I am pleased that we will have the opportunity to examine the far reaching impacts of high energy prices. In particular, I am concerned about the impact that energy prices, specifically natural gas, are having on our farming operations.

I am deeply concerned about the consistent high cost of fuel. Experts do not see these costs coming down in the foreseeable future. It will cost Americans more to heat their homes and drive their cars, while costing businesses more to operate. Hardest hit will be the manufacturers that use energy intensive processes to produce.

I am most concerned about the state of the fertilizer industry. I am sure we will hear a lot about that today. Mr. Chairman, fertilizer is a necessary input in all crops. Eighty percent of the cost of fertilizer manufacturing comes from the cost of natural gas used to heat massive ovens that create the finished product. These ovens are not easily turned off and on again and are often kept heated throughout the night and weekends when the plant is closed. The result is that fertilizer manufacturers live and die by the prices of natural gas.

Natural gas is now three times as expensive today as it was two years ago, which means that the cost of fertilizer is also three time as expensive as it was two years ago. When the cost of fertilizer goes up, so does the cost of our food. Some farmers, as a result of these increasing costs, have been forced to the auction block.

Those of us from agricultural districts make the connection between the farm and the dinner table, although I realize that not everyone else does. American agriculture feeds 283 million Americans and consistently generates a surplus in foreign trade. A surplus. USDA instruments will reach $62 billion during 2004.

American agriculture also accounts for more than 60 percent of all food aid distributed throughout the world. Americans spend less than 13 percent of their total income on food, a lower percentage than any other nation in the world.

The rising cost of inputs into our food supply should be a reason for alarm. In addition, the fertilizer industry is feeling a severe pinch. Production plans are built to take advantage of economies of scale, so when capacity falls below 90 percent the facility ceases to be profitable.

Over the last three years, a number of plant closings throughout the south has put an increasing number of Americans out of work as farmers are forced to use cheaper foreign products. That, Mr. Chairman, is not good.

[Ranking Member Butterfield's statement may be found in the appendix.]

I may address some more of these points with the witnesses when they begin to testify in just a few minutes, but I thank you, Mr. Chairman, and I look forward to this process.

Chairman GRAVES. Mr. Shuster?

Mr. SHUSTER. Thank you, Mr. Chairman. I want to thank you and commend you for holding a hearing on this today. It is extremely important that we figure out a way here in Congress how to have a reliable, stable supply of natural gas.

As I travel around and talk to my manufacturers, where two and three and four years ago they were talking about the low cost of labor in the global market that they were competing in that has really taken a back seat now to the high cost of natural gas and energy in this country, so we need to move forward.

It is a shame—it is tragic—that we have not been able to pass an energy bill to be able to go out and explore new areas, find new sources of natural gas. I am hopeful that in the coming months we will finally be able to pass an energy bill here and do the things we need to do to, as I said, have a stable, reliable source of natural gas in this country.

Again, Mr. Chairman, thanks for holding this hearing today.

Chairman GRAVES. Thank you, Mr. Shuster.

Ms. Capito?

Ms. CAPITO. Yes. Thank you, Mr. Chairman. Again, thank you for holding this hearing and bringing attention to the problem of rising energy costs. It is an issue that Congress must address.

We are getting ready to head into the winter season, and our seniors are going to bear the cost of the high heating prices. Rising energy makes it harder for small businesses to make ends meet. I live in West Virginia where we have quite a large chemical industry, and they are feeling the effects daily of the rising energy costs of the price of natural gas.

I would like to use this hearing to call to attention something that has been brought to my attention, which is that the burden of the higher energy cost prices could be because of a manipulation of the trading markets. Unlike other commodity and trading markets, the market for natural gas does not have effective trading stops that limits sudden and massive price increases that can hurt folks in their pocketbooks.

In 2003, in spite of record natural gas inventories, and a record amount of gas production, the U.S. experienced more price volatility, including a price spike of more than $11. Unlike what exists with the trading of other commodities, there are no meaningful stops in place to prevent rumor or speculation from causing massive market disruptions.

Gas prices may rise $3 per million BTU before trading is stopped for five minutes. Then trading may resume. In theory, natural gas prices could climb $162 per MMBTU in one trading session. If you contrast that with beef prices, for instance, it may change 1.5 cents per pound before trading is suspended for 24 hours.

While consumers can choose to eat chicken if the price of beef jumps, seniors and small business people unfortunately cannot change on a dime how they want to heat their homes or heat their small businesses.

We cannot sweep this issue under the table. I look forward to hearing the testimony that is being brought forth today. Thank you for giving us this opportunity.

Chairman GRAVES. Thank you.

All statements of the Members and witnesses are going to be placed in the record in their entirety. We will get started right

away. I know that Representative King and Representative Peterson have other commitments, so we will jump right in.

We will start off with Representative Steve King from Iowa. Representative King is the co-founder of the House Agriculture Energy Users Caucus. Steve, I appreciate you being here today.

STATEMENT OF HON. STEVE KING, U.S. HOUSE OF REPRESENTATIVES (IA-5), HOUSE AGRICULTURE ENERGY USERS CAUCUS

Mr. KING. Thank you, Mr. Chairman. I appreciate you holding this hearing and having an opportunity to testify before this Committee. It is a perspective I do not often get to enjoy.

The Subcommittee knows that high energy costs are affecting farmers and small business owners in the Fifth District of Iowa and across this nation, and I do appreciate this hearing. In June I brought together a bipartisan coalition of Members to form a new caucus, the Ag Energy Users Caucus. I serve as the co-chair of this caucus, along with the Chairman of this Subcommittee, you, Mr. Chairman, and the Ranking Member of the House Ag Committee, Charlie Stenholm, Representative Earl Pomeroy, all as members of that caucus.

The mission of the caucus is to provide Members and staff with access to a forum where they can be educated and activated on issues affecting agricultural use of energy. Agriculture is an energy dependent industry that is affected by energy prices both directly and indirectly.

Let me give you some examples. Fertilizer, almost all of the nitrogen fertilizer, is made from natural gas. Of course, that is the foundation for most of our crops. Natural gas also runs irrigation pumps in many parts of the country. Propane gas is used to heat hog confinements, poultry houses and nearly all of our animal livestock enclosed facilities. Propane is used to dry our grain. Of course, we use gasoline and diesel for all of our crop production, from planting to harvest, and on the roads when we deliver our crops.

While all energy costs have become high input costs to farming and ranching, natural gas prices are of significant concern. I listened to the opening remarks by Mr. Butterfield, and 80 percent of the cost of the production of nitrogen fertilizer comes directly from the cost of natural gas.

That percentage has gone from around 60 percent in past years to 70 to 80. My producers in Iowa informed me a couple of months ago that now it is up to 90 percent of the cost of the nitrogen fertilizer. As a result, over the last four years nitrogen fertilizer costs to the farmer have skyrocketed by nearly 50 percent.

Another result is the decreased capacity of fertilizer production. Nearly 20 percent of our capacity that existed in this country prior to the year 2000 has been permanently closed with more at risk of closing. This has caused the agricultural industry to import over half of the total U.S. nitrogen supply compared to only 30 percent just four years ago.

If you remember, we had an oil crisis a couple of decades ago or 25 years ago when we were looking at about 30 percent imported

oil. Now we are up to 60 percent imported oil. Our fertilizer has gone from 30 percent to 50 percent. We are headed in a direction where we are so dependent on foreign suppliers that we may not be in control of our own food supply if this continues.

The outlook for the winter ahead does not look good either because natural gas prices have decreased over the summer due to the relatively mild temperatures. Storage levels are above average for this time of year, which could be seen as good news, but some of this gas was purchased into storage at fairly high prices, and really cold weather can lead to unexpected demand spikes. It is also important to note that 60 percent of our stored natural gas is for residential needs. That leaves only 40 percent then for industrial and agricultural needs.

U.S. fertilizer producers just cannot compete because natural gas supplies are simply too expensive. Supply is not keeping up with demand when it comes to natural gas, and it will not for many years unless we, the elected officials, act.

Switching gears, gasoline and diesel fuel used for planting, harvest and transportation have continued to experience prices that are higher than the average in the past several years. Diesel fuel has been especially high, and that is because of strong demand and, of course, low domestic production.

According to the American Petroleum Institute, U.S. imports 60 percent of the crude oil in petroleum products we consume. Our refineries are operating at record levels and are producing record amounts of gas and diesel. Moreover, as our economy grows, the demand for gas and diesel fuel strengthens.

In conclusion, Mr. Chairman, something must be done unless we want to see our domestic fertilizer industry go overseas and our agricultural producers go out of business due to expensive input costs.

In the area of natural gas, let us see the Senate pass the energy bill conference report that this House has passed twice. A pipeline from Alaska would do wonders for natural gas prices in this country. Let us allow the United States geological survey to explore other domestic sources of natural gas in the Rocky Mountains, off the coast of Florida and other areas around and especially on public lands in the United States.

Let us encourage the Administration to work through the WTO to persuade Russia to stop negative pricing effects of massive nitrogen exports produced with natural gas supplied at government set rates that do not even cover the full cost of gas.

In the area of petroleum, let us see the Senate pass the energy bill conference report. Our own homegrown sources of energy, such as ethanol and biodiesel, will help if we produce more of that. Let us also drill in ANWR, the Arctic National Wildlife Refuge. I have been up there. I have inspected the place. I do not know if there is a better place and a safer place environmentally in the world to drill for gas and oil than up in ANWR.

The facts are clear. Safe production on just 2,000 acres, which is actually really less than .01 percent of ANWR, will yield more than one million barrels of oil a day, and that will go on for at least 30 years. Whenever we have opened an oil field, we have always found more oil there than was predicted.

The current use is about nine million barrels a day. We could have one-ninth of that oil coming out of the Arctic National Wildlife Refuge at no environmental disadvantage. If the pattern at the North Slope is consistent from 30 years ago to today, 7,000 caribou in 1970, 28,000 caribou today, then the environment has actually been enhanced, if there is any argument it has been affected at all.

I would also emphasize that I represent western Iowa. We are in the heart of the corn belt. The corn belt runs across the country at least as far as Pennsylvania in an effective way, and corn is very sensitive to the nitrogen price. It takes a lot of nitrogen to raise corn. We get ethanol out of that. We get food products. We get 300 other products out of corn.

If we cannot purchase our nitrogen fertilizer at a competitive rate then the entire corn production is held, as I will say, hostage to those prices of imported fertilizer from foreign countries, that being Venezuela and Russia.

I think we need to be talking with the environmentalists. I do not think we have a very good dialogue there. When we cannot get down to sound science and have a dialogue, that barrier is keeping us from passing an energy bill.

Again, Mr. Chairman, I want to thank you for allowing me to testify today. Energy costs to ag producers are clearly a challenge of our time. I hope we can work together for some solutions.

Thank you very much.[Congressman King's statement may be found in the appendix.]

Chairman GRAVES. Thank you, Representative King.

We will now hear from Representative John Peterson, who is the co-chairman of the House Rural Caucus.

Thank you very much, John, for coming in. I appreciate it. I know you are busy, but it is a pleasure to have you.

STATEMENT OF HON. JOHN PETERSON, U.S. HOUSE OF REPRESENTATIVES (PA-5), HOUSE RURAL CAUCUS

Mr. PETERSON. Thank you very much, Chairman Graves, Ranking Member Butterfield and Members of the Subcommittee. Thank you for allowing me to testify today on an issue critical to the future of rural America.

I represent the second largest congressional district east of the Mississippi. Along with Congressman Alan Boyd of Florida, I am the co-chair of the congressional Rural Caucus. The Rural Caucus is a bipartisan group of 145 Members advocating for strong rural health care for rural veterans, all rural citizens, broadband access for all our rural communities, maintaining rural jobs, particularly our ailing manufacturing and natural resource base industries.

Taken together, all of these issues have one goal in mind: To preserve our rural way of life by having quality health care, education and jobs close to home. I have worked closely with the full Committee chairman, Mr. Manzullo, in support of our domestic manufacturers and am pleased to be here today to add my voice to those of my colleagues from Pennsylvania—Congressman Shuster, Toomey and Capito, my neighbor to the south in West Virginia—

on the impact of high natural gas prices on the small farmer and manufacturers in America.

I am going to turn the rest of my prepared statement in to the record—it gives a lot of details—and share with you how I think we got here, which I do not hear much discussion.

About 10 years ago, shortly before I came to Congress, there was a change in law that removed the prohibition of using natural gas to generate electricity in mass amounts. Prior to that, you only used natural gas to make electricity for peak power in the morning and the evening. That was the limit. That limitation was removed.

About five or six years ago I attended breakfasts put on by the Edison Energy Institute that talked about a 12 year bubble where we were going to generate a lot of our electricity in this country with natural gas. Now, I was not opposed to that, but I also attended a hearing in the Senate that talked about with some experts saying this was all being done without proven reserves available. In other words, the supply was not there.

Twenty-five percent of our natural gas today is used to generate electricity. It used to be a single digit. That amount of natural gas has not been replaced. Eighty-two to 83 percent of our gas is derived from our own country. Twelve to 13 percent we import from Canada. One to two percent is liquified natural gas. We actually export a little bit to Mexico because they do not have the system to get it to us. They have lots of gas, but they do not have the system to produce it.

So what do we do to fix this? I believe personally that the continuing skyrocketing prices of natural gas are going to impact home ownership in America and the ability of people to stay in their homes because the cost of heat is going up dramatically every year. It is going to put certain businesses offshore.

I think natural gas prices are offshoring more jobs than any other issue, maybe even more than China. The fertilizer business is leaving, as we heard, quickly, because you just cannot afford to make it here. The petrochemical businesses are moving. Dow Chemical recently moved 2,000 jobs not to a cheap labor market, but to Germany because our gas price has been averaging $6 per 1,000. Europe's has been under $4. North Africa is $1.20. Russia is 70 cents. We are not competitive for any industry that uses natural gas.

Now, we do not want to go back to $2 gas. There was no real way to drill. The gas price increases, in my view, are going to continue to escalate just as fast as they have in the past because we do not have the will to open up and drill.

A gas well is a six inch hole in the ground with a steel casing put in as it is drilled. It is not an environmental threat. It is not an oil well. It is not like an oil well, and it should be separated. We should not treat them the same. You drill a well. You put the casing in as you drill. You cement the bottom. You cement the top. You let gas out.

Most nations in the world drill offshore everywhere. Canada drills in our Great Lakes and sells us the gas. My staff have gone there and observed it. We have most of the Rocky Mountains locked up legislatively or by Presidential decree. We have 60 percent of the Gulf locked up legislatively. We have the Florida coast-

line locked up legislatively. We have the east and west coast locked up legislatively.

Folks, until we change, this country is going to have skyrocketing natural gas prices that make any industry that depends on them uncompetitive. I have businesses in my district that have gone out of business because of natural gas prices, others who are limping along and if they had not had a little cash reserve would not have made it.

Natural gas prices, in my view, are the greatest threat to the American economy if we do not stabilize them. All we have to do to stabilize them is to drill for natural gas. It is not an environmental hazard. We have lots of it. We do not have to import any.

Greenspan says LNG is the answer. It is a small piece. To bring liquified natural gas to this country we have to build the most expensive ships in the world. We have to build very controversial ports. Then we have to build pipelines hooking into our natural gas system. It will take a decade to have a dent in the natural gas supply.

In my view, this Congress is the problem because we have locked up all the natural gas reserves in this country that hold promise. We are drilling more natural gas wells today than we have ever drilled, but with less production because we are in the old fields. We need to be in some new fields, and Congress needs to bite the bullet.

Chairman GRAVES. Thank you very much, Representative Peterson. I appreciate it. Thanks, Jon.

Both of you, I know you have other commitments. I appreciate you being here. Thank you so much for your testimony.

[Pause.]

Chairman GRAVES. I appreciate all of you coming in today. You have come quite a distance, and we are just now in some parts of the country, at least my part of the country, starting into the harvest season, so I know it is a sacrifice to come in, but I do appreciate it. This is a very important issue and important to all of us, so we do appreciate your testimony.

We will start right out with Hal Swaney, who is a farmer from Platte City, Missouri, and representing the Missouri Farm Bureau. Hal, I appreciate you being here.

STATEMENT OF HAL SWANEY, MISSOURI FARM BUREAU

Mr. SWANEY. Thank you, Mr. Chairman, and good morning, everyone. My name is Hal Swaney, and I am a farmer.

I suppose it would have been nice if I had been turned in, would it not? Are we all right to continue, Mr. Chairman?

Chairman GRAVES. Absolutely. It happens to the best of us.

Mr. SWANEY. Okay. I am sorry. I will start with our industry is more efficient than ever before. I use 30 percent less gasoline and diesel than I did 15 years ago, but my total expenditures for energy keep going up. It remains essential that we have access to reliable,

affordable energy inputs, including gasoline, diesel, electricity and natural gas.

Natural gas is particularly important to agriculture because it is used to produce a host of farm inputs, one of which is nitrogen fertilizer. That is one of the more important ones. Natural gas by our standards accounts for about 90 percent of the cost of nitrogen fertilizer.

During the past four years, the cost of natural gas has risen dramatically. This has caused the price of nitrogen fertilizer between the year 2000 and 2003, the national average retail cost of nitrogen fertilizer has skyrocketed from $100 a ton to more than $350 a ton.

On my farm, in 2002 I paid $270 a ton for anhydrous ammonia. This spring, anhydrous ammonia was $400 a ton. That is a 48 percent increase. Due to these drastic price increases, I have reduced the amount of fertilizer I am applying to my corn and bean acreage. I am drawing down my soils' own reserves.

Another example. LP gas has gone from 86 cents a gallon to the price of $1.19 a gallon. That is a 34 percent increase. To offset this, I am allowing my corn to stand in the field and dry down on its own. Of course, what that does is increase my chances for losses in the field.

These two practices that I am doing right now are what I consider to be very short-term solutions to what appears to be a very long-term problem. Why do we feel this is a long-term problem? Eleven fertilizer plants closed due to high natural gas prices. That is 21 percent of our capacity in this nation.

As we have heard, another 15 to 20 percent are temporarily shut down due to high prices of natural gas. The loss of supplies has forced U.S. farmers to import nearly 60 percent of the area to grow this year's crop. Losing the domestic fertilizer industry negatively impacts America's food security. The issue of affordable natural gas is critical to the fertilizer industry.

Now, there are numerous research projects underway to help alleviate the problem. One of those is to produce from our abundant coal supply and use it to produce nitrogen fertilizer. This technology does show some early signs of being a good thing, but it is years away.

Farm Bureau has long been calling for a comprehensive energy bill that would increase domestic gas production. Missouri Farm Bureau policy specifically calls for an inventory of the natural gas potential in the United States and the development of the domestic natural gas reserves.

The Department of Interior announced plans that would provide for more natural gas drilling in the shallow waters off the Gulf of Mexico. That is a good start, but it is only a start. More action is needed. Energy rich deposits of natural gas that are now off limits must be considered for gas exploration and production immediately.

The demand for natural gas is increasing at an increasing rate. Congress should review the current policies that restrict the use of coal generation for electricity and provide incentives for clean coal technology as a way to alleviate some of the demand for natural gas.

Mr. Chairman, thank you for the opportunity to be here today.

[Mr. Swaney's statement may be found in the appendix.]

Chairman GRAVES. Thank you, Hal.

I think it is important to note, too, that we talk a lot about natural gas and the importance it has on the fertilizer industry. A lot of people think that is just because of using natural gas to generate that fertilizer, but it is actually an ingredient. That is what a lot of people do not realize. It is an ingredient in fertilizer. It is not just used to generate it. It is a beginning ingredient, so it is important to note that.

Next on our panel is Brent Rockhold from Missouri with the National Corn Growers Association. Brent, you might also point out, and I do not know if it is in your testimony or not, but we have had hearings in this Committee on ethanol as an alternative fuel, and you guys have your NASCAR that is powered by ethanol or race car that is powered by ethanol. I think it is on display out here right now, is it not?

Mr. ROCKHOLD. It will be at 1:00, from 1:00 until 4:00 today in the Garfield Circle.

Chairman GRAVES. Okay. I think it is important. That is obviously another area that when it comes to the energy bill and trying to reduce our reliance on foreign oil and increase our production, which has an impact on natural gas, we certainly want to highlight any ethanol use that we can.

I would appreciate you mentioning that, but go ahead with your testimony.

Mr. ROCKHOLD. We certainly appreciate you and your staff and the Members to come over and view the car while it is on display over there.

Chairman GRAVES. Absolutely.

STATEMENT OF BRENT ROCKHOLD, NATIONAL ASSOCIATION OF CORN GROWERS

Mr. ROCKHOLD. Good morning, Chairman Graves, Ranking Member Butterfield and the rest of the Committee Members. Thank you for the opportunity to testify on the impact of high natural gas prices on farmers.

My name is Brent Rockhold. I am the immediate past president of the Missouri Corn Growers, president of Missouri MOSA, a new generation cooperative trying to build a value added producer owned processing plan in northeast Missouri. I am also a producer member of the Nemo grain ethanol plant in Macon, Missouri, but first and foremost a farmer from Arbela.

I am also a member of the National Corn Growers Association Ethanol Committee. NCGA was founded in 1957 and represents more than 33,000 dues-paying members from 48 states. NCGA also represents the interests of more than 300,000 farmers who contribute to corn checkoff programs in 19 states. NCGA's mission is

to create and increase opportunities for corn growers and to enhance corn's profitability and use.

My purpose today is to provide insight to the Subcommittee on how high natural gas prices affect the cost of producing important fertilizers that farmers rely on for their crops. Increased natural gas prices have already had an adverse effect on farmers due to higher production costs and will continue to do so in the future.

Growers rely on affordable natural gas as feedstock for fertilizer, but also energy for irrigation, powering farm equipment, drying grain, cooking corn and producing ethanol. Whether used directly as a feedstock or for heat and power generation, reasonably priced natural gas is essential to grower profitability.

Fertilizers account for more than 40 percent of the total energy input per acre of corn harvested. Most of that energy is consumed in the production of nitrogen fertilizer. Retail prices for fertilizer—the prices paid by farmers —rise sharply when natural gas prices increase. According to the USDA, farm gate prices for fertilizer have jumped to near record highs. The largest cost component of making all basic fertilizer cost is natural gas, accounting for more than 90 percent of the cost of production.

Nitrogen fertilizer is a key input for the bountiful yields achieved by U.S. corn farmers. Nitrogen fertilizer in northeast Missouri has increased nearly $25 an acre since the year 2000. For my typical 600 acres of corn, that means an increase of $15,000 since 2000 to 2004. My total fertilizer costs have increased $24,000 in those four years.

Committee people, when it gets to my end there is nobody to pass that extra cost to. I just have to absorb it. I think it is the same for those senior citizens trying to buy natural gas for heating. There is no place else to pass that on.

Rising natural gas prices in the U.S. have caused domestic nitrogen fertilizer producers to greatly curtail production, but production curtailments and higher nitrogen prices are largely the cause of the current surge in nitrogen imports. Lower natural gas prices in Europe, Asia and South America make it difficult for U.S. nitrogen producers to compete with foreign nitrogen fertilizer producers who can buy natural gas at lower prices and export their products to the U.S.

Natural gas accounts for up to 90 percent of the cost of producing anhydrous ammonia, a key source of nitrogen fertilizer. In the midwest, in the beginning of 2000 anhydrous was selling for $160 per ton. By the end of that year, the price had climbed to $210 per ton. This spring, prices in northeast Missouri were close to $400 per ton.

Unfortunately, these high and volatile prices are expected to continue into the foreseeable future. Tight supplies and increasing demand will continue to pressure producers' margins and profitability.

Higher natural gas prices will also negatively impact this country's growing ethanol industry. According to USDA's latest crop production report, this year's corn crop will be the largest ever, and yields will be increased by nearly seven bushels per acre compared to last year. When harvested, more than 10 percent of that crop will be converted into ethanol.

Natural gas costs account for more than half of the energy costs for ethanol production. The corn industry becomes more energy efficient every year, but we still must have adequate, reliable and affordable natural gas to fuel the industry.

Government policy is creating a supply squeeze for natural gas. On one hand, electric utilities and other industries are moving from using our plentiful supplies of coal towards use of natural gas. Natural gas has been the choice for most of the new electric generation to come on line in the last decade. In addition, as that happens our access to natural gas is limited due to environmental policy. Clearly, we cannot have it both ways.

Our ability to be efficient and environmentally friendly corn producers will face huge obstacles if our nation cannot come to grips with its desire to have limitless resources like natural gas for production and not realize these resources have to come from somewhere.

I am sure the Members of the Subcommittee and individuals as well know this. However, Congress seems unaware of this fact. We can produce corn, but we need you to produce the kind of policy that enables us to use the needed resources to do so.

A renewable fuels standard as part of a comprehensive energy policy would result in the expansion of ethanol production, directly contributing to domestic fuel supply and reduction in our dependence on imported oil. Our ability to produce food and fuel our nation, and the world, depends on a sound energy policy.

We urge Congress to pass a comprehensive energy policy now that provides an enhanced role for renewable energy sources, further development of all energy resources for a more diverse portfolio and environmentally sensitive production of adequate domestic supplies of natural gas.

I encourage this Subcommittee to continue to address the energy and natural gas issues. Your decision directly impacts my farming operation. Simply, farmers need access to reliable sources of energy and raw materials so they can use the fertilizers necessary to produce an abundant, affordable and healthy food supply.

Thank you, Mr. Chairman.

[Mr. Rockhold's statement may be found in the appendix.]

Chairman GRAVES. Thank you, Mr. Rockhold.

Next we will hear from Mr. J. Fletcher Smoak, who is chairman and CEO of the Old Virginia Brick, Inc. He is also here representing the National Association of Manufacturers.

I appreciate you being here, Mr. Smoak, and I look forward to your testimony.

STATEMENT OF J. FLETCHER SMOAK, OLD VIRGINIA BRICK, INC.

Mr. SMOAK. Thank you, Chairman Graves. Good morning, Chairman Graves and Members of the Committee. I am Fletcher Smoak, chairman and CEO of Old Virginia Brick.

It is a great honor, as a member of the National Association of Manufacturers, to have the opportunity to address you regarding

our concerns about the huge impact of energy costs, especially natural gas costs, on our company and the manufacturing industry.

The National Association of Manufacturers is the largest industrial trade association, representing small and large manufacturers in every industrial sector in all 50 states.

Old Virginia Brick has been manufacturing brick for 125 years, and our products grace some of the most beautiful buildings on university and college campuses in the eastern United States. We operate three plants in Virginia, and our 185 employees take great pride in the brick we produce.

They are very patriotic. In fact, we erected a very moving 9-11 memorial by using two 36 foot beams weighing 14,000 pounds from the World Trade Center Tower One at our corporate headquarters in Salem, Virginia. It is open from dusk to dawn, lit all night for the public. We invite anyone who is down our way to get off on Exit 137 and come by and see this memorial. It will really touch you.

As is the case with all energy intensive manufacturers, Old Virginia Brick faces major cost increases that threaten the survival of our company. Fortunately, the construction economy has remained very strong in large part due to the strong productivity growth that has offset or moderated inflation.

High energy cost increases have historically driven the economy into a recession, and the construction industry is usually the first to feel the effects. I must give the Federal Reserve Board and the President's three tax relief bills over the past three years credit for keeping the economy afloat in the face of unprecedented natural gas and oil costs.

In addition, credit must be given to the continuous improvements in energy efficiency in the manufacturing sector, particularly which has led the company to be 46 percent more energy efficient per unit of gross domestic product versus 30 years ago.

Despite these general improvements, high energy prices are still devastating to energy intensive industries like mine. We have struggled, as has everyone, with increases in group insurance and workmen's comp insurance, but these increases pale by comparison to our cost increases from 2002 to 2004 of 60 percent or $1,160,000 from natural gas. We experienced a similar natural gas run up from 1999 to 2000, but not of this magnitude. Prices did moderate in 2002, but they were still 19 percent above 1999.

We are currently producing and shipping at record levels. However, our pretax profit will be only very modest, at approximately three percent of sales, compared with the 11 percent we should achieve at these shipment levels. If it was not for the high volume of shipments, we could not operate our plants with these natural gas costs. We have increased our selling price, but it is difficult to increase prices to cover such high cost run ups in a year to 18 months. We have contracts with our customers, and they must have some price protection.

Just one quick aside. I think this past weekend in the Washington Post there was an article about the high cost of building materials in the Washington area/Northern Virginia area. If you look at that, next to the bottom thing was 22 percent, and I think it was plywood or something. Unfortunately, brick is down there at a 3.2 percent increase. Our industry is very conservative, and we keep

getting squeezed and squeezed. The natural gas cost is just killing us.

During the winter months, November to March, the price of natural gas delivered to our distribution company increased from $5.22 per decatherm in 2002 to $6.58 in 2004, or 26 percent. The greatest impact was the summer cost, which increased from $3.09 in 2002 to $6.21 per decatherm in 2004, an increase of over 100 percent. For the first time in our history, we are paying more for summer gas at the Henry hub than the preceding winter's prices. It is absolutely upside down.

The persistent high prices in the summertime underscore a number of changes that have occurred in the natural gas supply/demand balance. First, during the 1990s natural gas became the overwhelming choice for new electric generation. Second, the natural gas domestic supply bubble shrank and disappeared during the 1990s, and Canadian imports grew every year to pick up the gap between domestic demand and supply.

Starting in 2003, Canadian gas imports began to drop. Meanwhile, despite active drilling in some areas of the U.S., domestic production dropped while the industrial economy began to revive. In other words, there is not enough gas to meet demand. Thus, the summer, despite a relatively cool summer, less natural gas was used in the utility section, but demand pressures on tight supplies have kept the market clearing price far above affordable levels.

In my view, these summer prices may have been driven by large investors such as hedge funds and commodity trading advisors, as referenced in an article on oil trading in the Wall Street Journal on September 2.

I suggest for the immediate term a study, perhaps by this Committee, be undertaken to determine if pure speculation and market manipulation created the summer price run up. However, the core issue remains the same. The nation needs adequate supplies to reduce both price spikes and volatility.

Old Virginia Brick has started an investigation into using landfill gas for part of our natural gas needs. Unfortunately, the landfill is over 20 miles from our plants, and the only economical means of transportation is through the local distribution company's pipeline.

This is possible except the BTU content has to be increased from 490 to 950 BTUs per MCF. This can be accomplished but at substantial cost. The ultimate risk to us are whether the fowler gas quality is satisfactory and what will be the useful life of the landfill output. Funding to help develop this type of resource could greatly reduce the natural gas demand by allowing brick companies in many locations to convert. This would also reduce pollution since the landfills would no longer need to flare the gas that is being generated.

For the short term, two to four years, we must increase drilling in new fields and offshore, and we must expedite the permitting of LNG facilities. Long term, we need to start pipeline development from Alaska and, as needed, pipelines for LNG terminals. This should have been accomplished several years ago.

It is the responsibility of Congress to protect our jobs, our economy and our nation by ensuring that these efforts be put on a fast

track without fear of litigation. We applaud the House for passing a comprehensive energy legislative package the last two congressional sessions, including provisions to facilitate the Alaskan gas pipeline project.

The House had it right. We need improvements in every energy area. Congress needs to facilitate improvements for natural gas and the electricity infrastructure and put in place incentives for additional energy efficient investments. Most of all, Congress must recognize we need more of every type of energy supply; not just oil and natural gas, but also coal, nuclear and affordable renewables.

Congress must put statesmanship ahead of politics and develop a workable short term, mid term and long term energy plan because energy is the life blood of our economy.

Thank you.

[Mr. Smoak's statement may be found in the appendix.]

Chairman GRAVES. Thank you, Mr. Smoak.

We are now going to hear from Billy Willard, who is president of Willard Agri-Service of Frederick, Inc., and he is also representing The Fertilizer Institute.

I thank you, Mr. Willard, for being here. I look forward to your testimony.

STATEMENT OF WILLIAM F. WILLARD, WILLARD AGRI-SERVICE OF FREDERICK, INC.

Mr. WILLARD. Thanks for having me. Good morning, Mr. Chairman and Members of the Subcommittee. My name is Billy Willard. I am president of Willard Agri-Service of Frederick, Maryland.

Our company is a family owned business operating out of five locations—Marion, Pennsylvania; Frederick, Maryland; Mt. Airy, Maryland; Lynch, Maryland; and Greenwood, Delaware. Our primary customer is the farmer, accounting for approximately 95 percent of our total gross sales. The remaining sales are attributed to our specialty division, which serves turf grass, golf course and the nursery industry.

Our products and services include crop protectants, application, agronomic consulting and fluid fertilizers. We employ about 60 full-time employees and hire about another 50 part-timers during the busy season.

My family has a longstanding history with involvement in agriculture, being in the farm supply business since 1970 and also operating a 2,200 acre grain farm in Poolesville, Maryland, just about 25 miles up the river from here, which was started by my great-great-grandfather in 1871.

T.F.I. is the leading voice of the nation's fertilizer industry, representing public policy, communication and statistical needs of manufacturers, producers, retailers and transporters of fertilizer. Other issues of interest to TFI members include the environment, international trade, security, transportation and worker health and safety issues. Willard Agri-Service has been a member of the TFI for the past 25 years.

On behalf of these two groups, I appreciate the opportunity to testify before this Subcommittee regarding the impact of high nat-

ural gas prices on farmers and manufacturers. Furthermore, I would like to thank you, Mr. Chairman, for scheduling this very important hearing and for your leadership in this critical issue impacting my family farm, my family business and the farmers that are our customers who depend on us for their fertilizer needs.

I am present here today to speak to you concerning our inability to purchase for our farm and our farmer customers nitrogen products that are essential to produce corn, small grains and the very important grass hay crops, which, by the way, are critical components of dairy production in Representative Shuster's region of Pennsylvania. Ninety percent of our customers we serve up in that Pennsylvania area are dairy farmers, and they use a lot of hay.

The aforementioned crops simply will not grow and achieve economical yields without the addition of nitrogen fertilizers. The nitrogen product that is most commonly used by our companies is called liquid urea ammonium nitrate. It is the most accepted product for a nitrogen source in our region and a good part of the country at that. I will refer to that as UAN or UAN solution.

It is important to note that there really is not any substitute product for UAN solution fertilizer because of how we use it in production agriculture in our region. It is the most cost effective product to use, and our 1,800 farmer customers depend on us to supply them with that product to feed their crops.

As a side note, UAN is a relatively inert product. It is non-flammable, and its chemical characteristics are not in any way usable in the manufacturing of explosives or illegal substances. Natural gas was alluded to this morning as a fundamental feedstock ingredient for the production of nitrogen fertilizers and represents 70 to 90 percent of the production cost of one ton of anhydrous ammonia. UAN solutions, which we use, and other forms of nitrogen such as urea are all derived from anhydrous.

To get right to the important part of this matter, the issue of why farmers are paying very high prices for their nitrogen products and the reason we as manufacturers are having a difficult time procuring product comes down to the basic principle of supply and demand. There just is not enough nitrogen product being produced in the U.S. to meet our needs for agriculture.

Since mid 2000, as was mentioned here earlier, when the natural gas price crises began, 15 nitrogen production facilities in the U.S. representing more than 22 percent of U.S. capacity have permanently closed. They will not be back. During this period, many other production facilities have been idled due to the volatility of U.S. natural gas prices, all of this jeopardizing the farm profitability.

The shortage/high price issue is more severe on the east coast, we feel, because of our inability to access the river system as the midwest can. We in the east are very dependent on imports and are getting most of our product now from the Ukraine, Russia and Bulgaria.

A quick overview of where our business has been over the past few years concerning UAN solutions is as follows: For the crop year 2003, UAN solution, which is 32 percent of solution, cost us on the average $110 a ton delivered by rail, and this was all U.S. product, most of it coming out of Augusta, Georgia.

We prefer and aggressively try to purchase U.S. product, and in the past this product was very cost competitive. One reason for this was that it could be railed directly to our facilities from the factory where it is produced. Imported product that arrives at Baltimore or Norfolk or Philadelphia has to be offloaded from the ship, put into a tank, for which there is a charge, and then reloaded and trucked to our locations.

For the crop year 2004, we were unable to purchase any domestically produced UAN. We paid the average cost for 32 percent nitrogen of $135 per ton.

For the upcoming season, 2005, we are now trying to make purchases and have only been able to secure about 50 percent of our needs for our customers. Usually by this time of year we have about 75 percent of our needs covered. The product that we have committed to is all imported material, averaging a cost of about $180 a ton for 32 percent again.

At present, there is no producer in the market, import or domestic, in our area with product to sell us except for one recent quote we just got last week from Terra out of Canada for $204 a ton for 32 percent nitrogen. They could ship it in February of 2005.

As was mentioned also earlier, these increases of $70 a ton is really going to hit farmers hard. Farmers cannot pass that on when they are selling corn, wheat, milk, et cetera. That just cannot be passed on to the consumer. The farmer has to eat that.

Again, I thank you for allowing me to testify today on this very important subject. The TFI will issue you an in-depth analysis of possible solutions to our problem, two of which include supporting comprehensive federal energy policies that allow for increased exploration, drilling and supplies of natural gas and supporting research into clean coal and coal gasification technologies.

I would like to invite any of the Members of this Committee to visit any of our outlets, which are pretty close to D.C., or our farming operation if they wish to learn more about our industry.

Thanks for much for having me.

[Mr. Willard's statement may be found in the appendix.]

Chairman GRAVES. Thank you, Mr. Willard.

We will now hear from Mr. Peter Huntsman with Huntsman, LLC, in Houston, Texas. Did I get that right?

Mr. HUNTSMAN. That is right.

Chairman GRAVES. I appreciate you being here and look forward to your testimony.

STATEMENT OF PETER HUNTSMAN, HUNTSMAN LLC

Mr. HUNTSMAN. Mr. Chairman, thank you very much. I would like to express my appreciation to this Committee as well for taking a keen interest in this.

I am president and chief executive officer of the Huntsman group of companies. We are the largest privately held chemical company in the world. We employ roughly 15,000 people around the world. We have annual sales of just over $10 billion.

I will not reiterate much of what has been said. We fully agree that a long-term solution is more exploration and more production, better conservation of natural gas prices. I want to address something that literally hits these companies and our company and the American economy on a day-to-day basis.

Our company was struck very hard in 2000-2001 with price volatility of natural gas. Over a six month period, we absorbed over $250 million and pushed our group of companies to the brink of bankruptcy. Over that six month period, we laid off over 1,000 positions in North America alone and 600 contractors during that same time period. Like the nitrogen and like the fertilizer industry, these are jobs that are going, and they are gone for good.

Our largest concern rotates around the issue of price volatility. I understand the laws of supply and demand. We trade products all over the world on a global basis and manufacture products. The United States has not only the highest natural gas prices, but also the most volatile natural gas prices.

As we have had an opportunity to go back and examine what happened between 2000 and 2001, it is now very apparent that the market was under huge manipulation of companies like Enron, El Paso and other companies that had been fined billions of dollars and caused billions of dollars of damage to the western United States, to the American Gulf coast and the agricultural industry.

We saw the same sort of pricing manipulation take place in 2002-2003 as Reuter's reported an epidemic of false prices, sham trades, round trip trades and so forth that continue.

As we look at where natural gas prices are set in the United States economy, you must focus on the New York Mercantile Exchange or the NYMEX. This is a group that is largely self-regulated. This is a group that from a manufacturer's perspective I have great concern that three weeks ago they reported that the CFTC who oversees the NYMEX had studied the gas trading markets and could find no signs of price manipulation, though they themselves have fined companies, many of which are members of the NYMEX, $230 million over the course of the last 24 months.

At the very time that the CFTC was reporting these findings, the chairman of the CFTC took a job as chairman of the NYMEX. The chief of staff for the CFTC, while this investigation was taking place, took a job with one of the largest hedge fund traders that trades on the NYMEX and moves the price of natural gas.

I want to just give you one example as to how the volatility is devastating the industry. Look at the events of the trading prices over the course of the last three trade sessions. The price of natural gas has moved nearly 25 percent up over the course of the last three trading sessions—Friday, Monday and Tuesday of this past week.

This morning, the headline article in Platt's Daily, which reports the movement of price and movement of traders, attributed this to aggressive short covering and fresh buying. They quoted one trader as saying that the frenzy on the floor was to buy first and ask questions later.

I am not proposing government control of natural gas prices. Government control is precisely what I just mentioned here. It is when a group of traders can put billions of dollars behind certain

investments and push the price up and down. We read these quotes almost on a daily basis as to what is happening.

Simply put, let me offer two solutions that would cost taxpayers no money, that do not require any further jobs in the federal government or anything else. Let us look at two simple solutions here.

First, the price of natural gas on the NYMEX, again which largely influences and sets the price of natural gas on a nationwide basis, is largely unregulated. Look at what is going on with beef. Look at what is going on with agricultural products and so forth. One and a half cent movement per trade session.

The stops that are put in for natural gas is $162 per day per MMBTU. Now, what does that mean? That is the equivalency of a movement in crude oil of $1,000 per barrel per day. The NYMEX says that these stops have worked well and have served them well in the past. There is no point in having stops when you have an equivalency of $1,000 per barrel movement per day.

We would propose that this Committee would seriously propose legislation that would put similar sorts of stops in with natural gas that are in agricultural products. We are doing a better job in this economy of protecting the price of a Big Mac and the price of a hot dog than we are the price of natural gas.

Secondly, as we get into looking at who is trading and any sort of market manipulation, there is no public accountability here. As you see in the New York Stock Exchange, as you see in most other exchanges, we have no idea which companies are moving what sort of volumes, what sort of terms and so forth.

One single gas company in the United States is capable of trading up to 42 percent. That is more than the entire OPEC, any legal cartel, is capable of controlling on crude oil, one company controlling 42 percent of the trading volume that is consumed on a daily basis in the United States.

We would propose just two simple solutions. Let us look at putting in some sort of daily meaningful stops in the price of natural gas. I have said nothing about high natural gas prices. Meaningful stops.

Secondly, we believe that transparency and openness with some sort of an idea of who is trading and what volumes are trading would be of great help to industry today, not three to five years out when ANWR can be developed and pipelines put in. This can be enacted today, and it could help industry today.

Thank you very much.

[Mr. Huntsman's statement may be found in the appendix.]

Chairman GRAVES. Thank you, Mr. Huntsman.

We will now hear from Bill Prindle, who is the Deputy Director of the American Council for an Energy Efficient Economy. I appreciate you being here today.

STATEMENT OF WILLIAM R. PRINDLE, AMERICAN COUNCIL FOR AN ENERGY EFFICIENT ECONOMY

Mr. PRINDLE. Thank you, Mr. Chairman and Members of the Committee. My name is Bill Prindle. I am with the American Council for an Energy Efficient Economy. We are a national non-

profit organization that specializes in technology research and policy analysis.

Today I want to talk to you about how energy efficiency can help on the demand side to bring balance into the natural gas markets. There is a supply and a demand challenge that we face in these markets. We have done some research that shows that energy efficiency can not only help individual farmers and businessmen and homeowners save energy. If done in a concerted way, we can actually help bring prices down on the margin as much as 20 percent.

While I think we all understand intuitively that if we invest in efficiency we can make our businesses and our homes less costly to run, in a tight market like we have today we can actually affect prices. That is really the bottom line of my message. I want to say a little more about how we got to that.

Just to say a little bit about how we got into this situation with these tight gas markets, we have an increasingly challenging supply picture in the lower 48 of the United States for both oil and gas. Oil production peaked in this country in 1970. Gas production peaked in 1973.

We have average depletion rates in U.S. gas fields of 29 percent a year. That means that regardless of how much we open up lands and new areas to production, the drillers have to work that much harder every year just to account for depletion. The supply side is continually challenging. That is why we are looking at LNG and the Alaska pipeline and the other sources.

The other problem that we face with the supply options is that they are typically six, eight, 10 or even 12 years out. We can get relief from those sources. We need new sources clearly, but what do we do for the next five years? That was the focus of our research last year. What can we do in the next five years to bring some relief to gas markets to help all consumers, farmers and small businesses and homeowners?

Energy efficiency has proven itself as a resource in this country. As my colleague down the panel here said, we have become 46 percent more energy efficient as a nation. What that means is that we are using about 25 quads of energy, if you will. We use about 100 quads overall today.

What that means is if we had not saved that much energy we would have to be using more than double the amount of coal we now produce, more than double the amount of petroleum or more than double the amount of gas. That would be a huge penalty to our economy. We would be spending an additional $400 plus billion in the economy today if we had not made those improvements.

Some may get the impression that because we have saved a lot of energy there is no more to be saved. Well, that is actually not correct. We and others, the national laboratories, do a lot of research on this. The good news is that technology continues to improve, so even as we have made investments in efficiency in the past, there is a large resource potential that remains. We are estimating 20 to 25 percent of our gas consumption can be saved looking forward through energy efficiency.

I want to say a little bit about the study we did last year. Last year, some of you may be aware, the National Petroleum Council issued a major study called for by the Department of Energy on the

natural gas industry future for the United States. They did some very detailed modeling of natural gas markets using a very sophisticated computer model run by a consulting firm named EEA.

Well, we decided to work in parallel with the NPC study, and we used the EEA model to look at what would happen if we were able to ramp up the efficiency resource a little bit on the demand side. The bottom line is that by achieving relatively modest gains in efficiency—we are talking about maybe a four percent gain in energy efficiency across the board—we could bring gas prices down about 20 percent over the next five years. That is about $1 an MCF.

It is not where we want to be totally, but it is a contribution that would bring significant relief to everyone who is represented on this panel—the fertilizer industry, small manufacturers and farmers—so we think it is important that Congress and the Administration really focus on this over the next five years and try to do what we can from the demand side to bring energy markets, especially the gas markets, back into balance before these new supply options can be brought on line.

There is one interesting fact. You know, when you think about saving gas you think about well, maybe I will put in a new furnace, or maybe I will make my industrial boiler a little more efficient, or I will do this or that. There are direct savings in natural gas end uses, but what we found in our study is that the majority of the natural gas savings actually come from saving electricity.

How is that? The fastest growing end use for natural gas in the last 15 years has been electric generation, so in many markets today the marginal unit that is on line at a given hour is a gas fired unit. That means if you achieve an energy efficiency gain, you back out a little bit of natural gas as the power plant.

Of course, not all of the gas that goes into the power plant turns into electricity. There is some thermal waste. You actually save two to five times the amount of gas for every unit of electricity you save, so there is a very broad spectrum of efficiency opportunity out there that we can use to affect the natural gas markets.

You might ask well, will the market not just correct itself? Will people not just invest in efficiency because prices are high? The answer is yes, markets do work. However, what we are finding is they are not working fast enough. What we need is a little bit of a policy boost to get the kind of efficiency resources that we need to bring markets back into balance, especially in the small business world.

A lot of small businesses do not have engineers who understand energy or whose job it is to walk around and worry about energy all day. They have too many other things to do. A lot of small businesses do not have the capital to go out and invest in new technology.

We need to get technology to market. You know, it is a big country out there. There are millions of farmers, millions of homeowners, thousands of businesses. Just getting that technology out to market is a challenge. It needs help from the government side.

What can Congress and the Administration do in the next five years to use the resources we have on the demand side to help balance the gas market situation? Well, the good news is that there are some programs already in place.

For the farm sector, the good news is that in the 2002 farm bill there was a new provision created for energy efficiency/renewable energy grants, Section 9006. It is funded currently at about $20 million. We would like to see that go up, given the need that is out there. The Ag Department just announced their new round of grants last week. They gave about 175 grants. Clearly not enough. We would like to see that program do better.

At the Department of Energy there is an industrial assessment center where schools of engineering around the country take skilled graduate students, and they go out to small manufacturers and they show them practical, low-cost, fast payback ways to save energy. It is a very successful program. It has been recommended for a small cut in the 2005 appropriations. I would like to see that come back.

There is a whole range of other energy efficiency programs in the appropriations process that I will not go into, but we would like to see Congress boost those energy efficiency R&D programs. There is an energy bill, as many of my colleagues on the panel have referred to. There are many worthwhile energy efficiency provisions in that bill and so we support those.

However, there is also the tax incentive portion of the energy bill, which includes a range of homeowner and business tax credits for energy efficiency and renewable energy and also from the farm point of view includes the production tax credit for wind energy. A lot of farmers, as many of you know, are beginning to see the profit potential and becoming hosts for wind machines.

The FSC/ETI bill, which is trying to work its way through conference, has some of those tax credits embodied in it. We would like to see the full set of efficiency and renewable credits included in the FSC/ETI bill. That is something that Congress could pass this month, could start getting tax incentives out to businesses, farmers and homeowners starting next year and really start to make a dent in this problem.

There are several other policy options out there. Appliance efficiency standards have been a very successful program. It works across the board. We have refrigerators that are three times more efficient than they were 20 years ago, even though they are bigger and have more ice coming through the door. There are technology success stories out there that need to be continued.

Many states run public benefits energy efficiency programs, about 20 states currently. We would like to see more states get into that role because that provides a small funding source to help farmers, small businesses and homeowners invest in energy efficiency.

Combined heat and power. We currently waste about two-thirds of the energy that goes into a power plant out the stack. Through combined heat and power technologies, we can cut those losses in half. That is a huge opportunity. Those opportunities are available even down at the small manufacturer and the commercial building level with today's technology.

Last, but not least, we need to keep the technology pipeline flowing. We need strong R&D programs because ultimately this is a technology challenge. We need the new technologies for new drilling and exploration. We also need the new technologies for more

and more efficient end use. Again, that is an appropriations question. We would like to see the Administration up its request and like to see the Congress support that.

I will stop now, and thank you again for the invitation to speak.

[Mr. Prindle's statement may be found in the appendix.]

Chairman GRAVES. Thank you, Mr. Prindle.

We will now open it up for questions. I do have one for you real quick, too.

You did not mention increasing production in your options. Do you think that is just as much a part of this process as getting better as far as efficiency goes?

Mr. PRINDLE. Yes, certainly. We are going to need more supplies. We do not believe that we can totally save our way to economic prosperity. However, we do believe that in the near term, before some of the bigger supply projects come on line, we have a lot of opportunity on the margin to use the demand side resources that we know about to bring some balance to the markets. Then, you know, as new pipelines, LNG or whatever come on line the markets will begin to correct themselves.

Chairman GRAVES. Thank you.

I do have a question for Mr. Rockhold and Mr. Swaney because both of you have farming operations, and it has often been said that agriculture farmers are the only industry out there that buy everything—all their inputs —at retail and sell all their outputs at wholesale, which is completely backwards to the way it is when fertilizer prices continue to go up the way they have, but yet your output price continues to stay relatively the same. In fact, it has been approximately the same for the last several decades.

What does that do to your bottom line? How do you recover from that? How do you react to that when you are continuing to get squeezed, and there is not a thing you can do? You cannot pass that on to the consumer.

Mr. SWANEY. I think if you look at our industry, Mr. Chairman, as being a farmer you well know there are certain things we can do. As I said, we have cut the amount of diesel and gas we are using. We have become more efficient to try and offset those higher costs of inputs.

The other thing that we can do, that we are doing, is we expand our operations. We try to absorb those that are less efficient. That is why the number of farmers are dropping rapidly in this country.

I will give you an example of one of the things, a group that really cannot pass their costs on. I was in southwest Missouri just a few days ago and had dinner with some chicken producers. Their natural gas price was 35 cents a gallon, now $1.

That is a pretty good increase, and you know chicken prices have not changed at all. These gentlemen use 50,000 to 60,000 gallons or units of that every year, so that is a huge addition to their bottom line.

You know, two years ago we had so much chicken in this country that if you bought one at the store they almost gave you another

one just to get them out of there, so there is no way that these prices can be passed on to the consumer.

Mr. ROCKHOLD. Mr. Chairman, I would pretty much echo what he just said. I think it is in the numbers. You have seen the amount of producers dwindle significantly in the last decade, and that is going to continue to happen. These margins have been tight even without the higher natural gas price.

I know in my area, as well as in your area, there has been a severe crop production loss in the last couple years as well, and we have just seen several people just have to sell and move on to other things.

I think if it gets into more bigger corporate farms it is going to be a higher cost to everybody in the food chain, so we have to look for ways to continue to help the small farmer stay on the farms.

Another number that I think reflects very highly is the average age of farmers is nearly 60 years old, so I think it shows that it is very hard for a new guy to break in or a young person to stay on the farm.

Our value added opportunities like the ethanol plants are one way of giving those people a chance to come back to the farm, but with natural gas highs like we mentioned in our testimony even it affects those ventures too.

I just think we have to figure out some way to keep our young people coming back. The numbers are going the other way against us right now.

Mr. SWANEY. One additional point, Mr. Chairman, would be that the GMOs—everybody talks about the GMO crops that we now produce, but if it was not for the technology and the advancements in quality of seed and what they can produce with the limits that we can place on ourselves with how much fertilizer we can put on and chemicals. If it probably was not for those we would be a lot worse off than we are now, sir.

Chairman GRAVES. We are going to have some votes here coming up at any time. I have a lot more questions, but I want to move right on down so we can allow Mr. Shuster and Ms. Capito to ask some too.

Mr. Shuster?

Mr. SHUSTER. Thank you, Mr. Chairman.

I first want to welcome Mr. Willard. Thanks for coming here today. I would extend an invitation to all Members of Congress if they want to see not only a fertilizer facility or the business that you are in. It is only about an hour and 20 minutes up the road. It is an award winning facility. It won the EPA award for being environmentally friendly. Thank you for all the good work you do up there.

My question is to Mr. Huntsman, and then I would like maybe all the panel members to comment on it. The two ideas that you put forward, the transparency I think makes perfectly good sense and finding out who is out there so it is easier for us to determine

if there is manipulation going on in the markets. I do not doubt that there was some of that going on.

The first one, though, the stops. I have some concern, and maybe you can talk about it a little more in depth. It is not price controls, but price influencing that always concerns me when we put stops on. The difference, too. We talk about beef and other commodities.

I think Ms. Capito pointed out, you know, that you do not have to buy beef. You can buy chicken if something is going on in the market. With natural gas, if you are using natural gas and producing fertilizer in your business then you pretty much have to use natural gas.

Do you believe that those stops are going to be effective, or is it just going to be a one day deal where we stop trading natural gas, and then the next day the prices spike up anyway?

Mr. HUNTSMAN. I think again if you look at the realities of the marketplace I would just ask my colleagues here to the right, who are all considered manufacturers, can you absorb a 25 percent increase in your raw materials in three days, and can you pass that along? I do not have to wait for their response. It is impossible.

You know, the reason, if you go back three days ago and you read why the price of gas went up, it was because Hurricane Jeanne was heading into the U.S. Gulf coast. That was the reason that was given three days ago. Jeanne is now heading to the Azores Islands the last I looked this morning, yet the prices never went back down.

All I am saying is people can have some sort of rational sentiment. I think that we all would be very familiar in this room with what happened with the cattle prices and cattle futures during the mad cow scare. There was a legitimate concern that could have driven the price of cattle to near zero.

If my memory serves me, over a four day period the cattle futures stopped out four days in a row. Finally after a week, the news reports came out that there had been a single cow that had been affected, that the herd had been isolated, and cattle future prices were able to recover quite rapidly after that.

I am for free trade. We have as much manufacturing outside the U.S. as inside the U.S., but if you want to talk about price controls the price is being controlled today. It is not being controlled by people who manufacture, people who transport or people who consume natural gas. It is being controlled by people who trade paper and profit on the volatility of it.

Now, if a product can move in price one, two percent a day, think of what would happen to your stock portfolio. One or two percent a day? That is a 700 percent increase a year. Nobody sees a return like that.

You know, I am not proposing that we should not be trading gas. I am not proposing it should not be a commodity that is traded. I am merely saying that we ought to treat it like we do other commodities that are, in my opinion at least, less important to the welfare and the future viability of our overall manufacturing economy.

Efficiency is fine. Our industry became 15 percent more efficient in four months. In four months in the winter of 2000-2001, we went

from battling the agricultural industry as being the nation's largest exporter of goods. In six months we were importing.

The chemical industry, for the first time in its history, became a net importer. We lost the ability to compete overseas. It was not just our company that lost 1,000 jobs, you know. We became very efficient overnight. I do not think that that is a very decent model to follow here.

Mr. SHUSTER. Again, we talked about beef. They put a stop because the beef prices were falling. Natural gas has not fallen for many, many months, as far as I can see, or just a little bit of a dip up and down.

What you are talking about is stopping the increase, for instance, on the storm when it went up, and it has not come down. Does that not indicate that that is what the market will bear? Whether it is good or bad for the market, the market says prices go up and stay up.

Mr. HUNTSMAN. My question I guess to that would be who is the market? I am a consumer. For every dollar that gas moves, it costs my company between $80 and $85 million per year.

I do not ever have anybody come and sit down with me and negotiate gas prices. It is set because of what is done on the NYMEX. When we talk about what the market can bear, the people trading paper can bear all sorts of outrageous price because they do not have to live with the consequences of it.

Mr. SHUSTER. Right.

Mr. HUNTSMAN. We do in manufacturing. We do in the agricultural industry. That is of grave concern to us.

I would propose that prices ought to be capped going both up and down. I believe when I talk to my friends who are in the gas exploration business, when they see the price of gas fall by 50 cents or $1 per MMBTU they say, because of this extreme volatility, we do not want to go out and risk money and be punching new holes in the ground because we are afraid that it could fall as fast as it has gone up.

Mr. SHUSTER. All right.

Mr. HUNTSMAN. On the manufacturing side, we do not want to invest in any more capital projects in the United States because we do not know where our raw materials are going to be priced.

Mr. SHUSTER. Sure. Would anybody else like to comment on that about the stops?

Mr. SMOAK. Yes. How about instead of stops if they put trading caps at so much percent and let the trading—and they can still trade. Not stop trading, but say all right, you have reached the cap. This is all you can do for a certain period of time. Either daily caps or monthly caps.

There is one more thing, and I had not looked at this, but electric generation is a very, very inefficient use of any fuel and especially premium fuel like natural gas. Now, a lot of my associates say well, it does not matter. The electric companies can just pass it on. They can only pass on so much.

If my memory serves me correctly, many years ago at EE they told us that only about 25 percent of the energy out for the energy in. You put 100 percent energy in. You get 25 percent out with electric generation. Line losses, power losses also. It is a very, very inefficient way. We have to have it, but it is a very inefficient way to use fuel.

Therefore, the need for nuclear, the need for coal firing, and short-term maybe if some of the power companies can be given some waivers so they could go back to firing coal with existing technology, with existing scrubbers, that would take a tremendous amount of load off of the natural gas markets because these utilities really suck up the gas, even just the peak units.

In my view, if we could do something with that short term and then go back when we get the pipelines in and, you know, we all keep talking seven to 10 years out, but we need to do something for the next two or three years to keep our economy healthy.

Mr. SHUSTER. I think what you say there is true, and I have seen that the utility companies now are moving towards building coal fired plants, which is good for West Virginia and Pennsylvania. We are happy to see that and try to encourage that.

You mentioned caps. Now, are you talking about caps, or are you talking about what Mr. Huntsman mentioned about stops?

Mr. SMOAK. Well, stops and caps are a little different I think. Caps, you can continue to trade, but you have just reached the maximum you can trade for that day. Maybe it is a one or two percent margin, not ten and twenty percent per day. Maybe monthly caps of ten percent. That equates to 120 percent a year so there is still a lot of upside, and it can be on the downside to keep the same thing so that companies can at least—

For instance, two years ago as we tried to budget for the coming year we have to start the process in June and July for the following year. We start either locking in gas or attempting to lock in gas unless it is so obscenely high that we cannot lock it in, as has been the case for the last 22 months.

You know, I put down 20 to 25 percent increases. I had $4 well head gas for the summer. I said gosh, it has never been that bad. Well, it is $6. I mean, you cannot budget. You cannot project what you need to do when it is that volatile. As the gentleman over there says, you cannot pass that much on.

Mr. SHUSTER. Right.

Mr. SMOAK. We have tried to, and you would have thought we were asking some of our distributors to give us the second and third generation of their children when we try to go up four or five percent in price, you know.

Mr. SHUSTER. I see that my time has expired. I want to make certain that Ms. Capito—

Mr. HUNTSMAN. Mr. Shuster?

Mr. SHUSTER. Yes?

Mr. HUNTSMAN. I think we are both in violent agreement, whether it is caps or stops.

Mr. SHUSTER. Right. It sounds that way.

Mr. HUNTSMAN. I would just note, too, we are sitting today on the highest inventories, near record high inventories and production today.

I mean, if you want to say why do you not just hedge for the winter, all supply and demand market indicators would tell me the prices ought to be going down under that sort of scenario.

Mr. SHUSTER. Right. Again, it is your belief that the manipulation is what is causing much of this?

Mr. HUNTSMAN. I frankly do not know what it is, but when the price goes up 25 percent in three trade sessions it is not because we have all of a sudden increased capacity by that amount.

Mr. SHUSTER. Okay. Again, my time has expired. Just a final comment. I think that in the long term, the answer has to be more supply. We have to find it out there. We have to be able to go into these various other places of the country and bring the gas out so that we do not have to depend on other nations and we do not have to limit the supply that we have now.

Thank you all very much for being here today. I appreciate it.

Thank you, Mr. Chairman.

Chairman GRAVES. Ms. Capito?

Ms. CAPITO. Thank you. Yes. I have a couple comments to make and then a couple questions.

I am pleased, coming from one of the largest coal producing with one of the largest coal reserves, the State of West Virginia, pleased to see that there is an overwhelming belief across your businesses and across your experiences that coal has a place in the future of the energy production here in America, and there are ways to clean it up and burn it safely, more efficiently. Efficient is really going to be the key as we move towards the future.

I would like to go back to this question of stops and caps, Mr. Huntsman, and I am going to pull a little naivete here. In terms of stocks and other commodity trading, I mentioned beef prices do have this. Are there other stocks and commodity trading markets that do have the cap and stop or range of trading?

Mr. HUNTSMAN. Every commodity that is traded on the Chicago or the New York Mercantile Exchange has caps. They are all much

less, everything from diesel fuel to crude oil. They are all much less than natural gas.

There is a direct corresponding effect to caps and price volatility. That is just not my opinion. Natural gas, of all the commodities, is the most volatile of all of these, and it is also the most widely consumed. As was said earlier, if you are living on a fixed income in January, you cannot go out and boycott your utility.

Utilities, by the way, they do not have to put up with the pricing pressure that we do. They just put it on through to the consumer, so naturally they do not take an interest in this.

Ms. CAPITO. Yes. Let me ask a follow-up question to that. When you see the volatility, for instance, in the last three days the rise in price of 25 percent, let us take it down to the general consumer, the elderly couple heating their home through this winter.

I know you all see it probably much more immediately than an individual consumer might because in my state, for instance, they have to go to the Public Service Commission to raise the rates and all this. Where does that individual consumer see it? Do they see it this winter? Do they see it in three days? Do they see it two years down the road?

Mr. HUNTSMAN. We obviously are not a utility, but my understanding is that most utilities buy their natural gas in strips. They will go out for multiple months.

A three day increase like this, if it stays at the present price, will obviously affect the value of those long-term strips, and they will most likely see it during the winter months. Those strips are usually three to six months out, and the highest consumption will take place either in the heat of the summer or in the cold of the winter.

They will also see it—the minority of the amount of gas consumed in this country is for utility purposes. The rest of it is used in manufacturing, agriculture and so forth. They will see it in inflationary indexes with higher prices and so forth as we attempt to try to put our prices up to try to reconcile this.

Ms. CAPITO. Let me ask another question in final. Anybody can answer this if they have an opinion. I have heard you all talk, several folks talk, about LNG, you know, bringing it in from Africa and all these other places where you can liquify the natural gas and then bring it in across the ocean.

You know, in this day and world that we are living in right now, that raises a bit of a red flag for me, even though I am sure we can assure some of the safety issues. But it has to be an enormous safety consideration that is going to be built into the price of LNG as it is imported into this country.

Does anybody have an opinion on that?

Mr. HUNTSMAN. Ms. Capito, I do not think that the price of oil today is $47 a barrel. I think it is about $80 a barrel when you take into account the costs that we spend in our foreign policy.

I am not trying to point fingers at what is going on in Iraq or anything, but just our macro foreign policy to try to preserve the

sea lanes and try to preserve the ability to import in the energy and these hydrocarbons.

If the average American understood the price of crude oil is more like $80 to $100 a barrel and the price of gasoline ought to be about $4 to $5 a gallon when you take into account those subsidies, I think your point is exactly well taken.

We are now consuming 60 percent of our crude oil in this country. That is increasing. That does not worry me nearly as much as when our agricultural industry or the chemical industry, when we have to start importing in all of our basic raw materials for food production.

Again, we are going to be dependent on—no offense to our allies overseas and neighbors in the U.N. and so forth, but we are going to be dependent on countries that I do not know if they have our best interests at heart when it comes to pricing, when it comes to price stability. That I think is a very real issue.

Ms. CAPITO. Anybody else?

[No response.]

Ms. CAPITO. I thank the Chairman. This has been an interesting discussion. Obviously if we would all burn more coal we would be in great shape. That is my parting comment. Thank you.

Chairman GRAVES. Mr. Willard, I wanted to ask you and also Mr. Swaney mentioned too that a number of fertilizer plants have closed. Can you expand on that just a little bit the reasons for that and what is happening there, who is picking up that production? Is that just lost production?

Mr. WILLARD. It is indeed just lost production. The importers have tried to scramble, and I will speak about our little area of the world in the mid-Atlantic. In the last couple years they have been scrambling and buying materials for us.

This year almost mirrors maybe what had happened in 1973. If you recall, we did have a shortage in the U.S. of product. It is my understanding that some of the suppliers have sold off or the manufacturers will sell off their natural gas contracts if in fact the natural gas becomes so high. They figure they can make more money selling off those contracts rather than converting it into agricultural nitrogen.

I understand also that there is probably some industrial capacity at these plants, that they will turn their production towards industrial capacities and generate greater profits than agricultural.

Mr. SWANEY. Actually, those that did not sell off their natural gas and made fertilizer were probably foolish because farmers can only pay so much for nitrogen fertilizer.

They probably would have done better to have sold their natural gas and had their money as compared to taking the risk of producing something like anhydrous ammonia, the exposure you have in transporting that, collecting from farmers as you sell it to them at an extremely high price.

That production is gone, and in my opinion and American Farm Bureau and Missouri Farm Bureau is that it will probably not come back for several reasons. What has happened, and I served on the board of a local cooperative for nine years. We kept inventory, you know, just so that when a farmer called in and said I need some nitrogen fertilizer, you know, whether it was early in the season or late in the season we had some.

Today that is not the case. Anhydrous delivery is coming in almost as fast as it is going out. I say almost as fast because there is always people waiting for that next transport to show up, waiting for that next load of dry fertilizer to come in to the elevator to be redistributed out to the farms.

There is just very little inventory. They cannot afford to keep inventory. When prices go up this high and you try to keep margin, when you are selling anhydrous at $100 a ton or even $200 a ton and then it goes to $400 a ton and you try to make margin on that, it becomes very difficult.

I have a concern because that supplier— you have to be there for me to do business. If the supplier goes broke, where am I going to get my anhydrous? Who is going to handle that dry fertilizer? You know, for us on our individual farm we cannot bring in and stockpile those commodities or inputs.

Mr. WILLARD. May I make one other comment, please?

Chairman GRAVES. Yes.

Mr. WILLARD. You know what else is happening also that I think further complicates the issues is the development of other agricultural regions in the world. There has actually been a tremendous additional demand for some of these products, nitrogen products especially, that we are trying to get shipped into the mid-Atlantic are coming. They are going somewhere else.

Not only nitrogen products. If you have not shopped potash for your fall needs yet, the potash market is just absolutely crazy right now. World demand is also impacting what is happening.

Chairman GRAVES. Any more questions?

Mr. SHUSTER. No, sir.

Ms. CAPITO. No.

Chairman GRAVES. I appreciate all the witnesses coming down. Again, all the statements of the witnesses and Members will be placed in the record in their entirety.

Obviously we have a huge problem out there. There are no good short-term solutions obviously, but certainly we need to start down this road in figuring out what we are going to do in the future.

I think efficiency is obviously important, but as much as anything else we have got to increase supply in this country. Getting an energy bill passed through the Senate would be a huge step in that direction.

I appreciate everybody coming out today, and I appreciate your testimony. Again, I know it is a very busy time right now, but thank you all so much.

The hearing is adjourned.

[Whereupon, at 11:43 a.m. the Subcommittee was adjourned.]

SG Testimony for Natural Gas Hearing

Good morning and welcome to the Subcommittee on Rural Enterprise, Agriculture and Technology. Today's hearing is going to explore the outrageously high natural gas prices and its impact on America's small businesses, specifically farmers and manufacturers. I appreciate everyone making the trip out to Washington this morning.

Currently, over 60 million homes, farms, businesses and industries are dependent on natural gas. With the spike in the price of natural gas, one would think that there is a shortage of gas. Nothing could be further from the truth. The United States has an abundance of natural gas and yet, prices are two to three higher today than historic averages.

Beginning in the mid-80s gas prices dropped. For nearly a decade the price stabilized and it was an inexpensive energy source and supply was plentiful. For years natural gas was promoted and public policy encouraged to Americans to utilize this clean, cheap, efficient energy. The abundance of gas supply would keep prices low and that this was the answer to all our energy needs. When additional clean air regulation were added to the books, converting to natural gas seemed to be the most cost efficient solution.

Prices have been sky-rocketing the past three years. Demand is expected to increase 30 – 40 percent by 2025, nearly 20 years from now. Yet, recent studies show that our recoverable natural gas reserves are sufficient to meet our demand for years to come. It is believed that we have more natural gas resources than we thought twenty years ago. So what is the problem? Many say our supply chain is the problem. I'm sure many of our witnesses will shed more light on this problem.

In the mean time, we have to deal with these high prices. And what are those prices doing? They are driving our manufacturing base right out of this country and hurting our farmers. Energy costs are frequently cited as one of the biggest cost to business, second only to labor.

Many sectors rely significantly on natural gas. Natural gas accounts for more than 40 percent of commercial energy consumption. Our manufacturing sector has been hard hit by the recession and while it is slowly turning around, soaring energy prices threaten its recovery.

High natural gas prices have increased the cost of producing important fertilizers that farmers rely on for their crops. Natural gas is the primary component in nitrogen fertilizer and accounts for 90 percent of the production costs. Fertilizer producers have had to turn to foreign imports causing an upsurge in cost.

As I think everyone knows, fertilizer plays an important role in the development of crops. As a farmer I know how tough it is to meet the bottom line and when you have to take on additional costs, profits becomes more difficult to realize. We rely on our farmers three times a day. Farmers have been forced to decrease production by 25 percent causing adverse financial damage to the agricultural industry, which has been hard hit over the years, and causing additional challenges to our slowly recovering economy.

There are answers to this problem. Pass an energy bill that will allow us to explore for more natural gas, repeal the red-tape surrounding further exploration and build a pipeline to increase gas supplies are all solutions that will help to stabilize the price volatility of natural gas. Liquefied natural gas (LNG) is another solution to supply and stability. We already know that there are abundant supplies under our lands and seas. We need to do is tap these natural resources.

However, many say the shortest-term recovery we have is nearly three years away. And the pipeline is at least a decade away before it will impact supply and prices.

The fact is high natural gas prices are driving jobs out of this country and hurting our farmers and manufacturing segment. I want to hear from our witnesses how these prices affect them and any solutions they may have to remedy the situation. In my eyes we need to stabilize the price of natural gas and increase domestic exploration in an environmentally safe manner, and in turn help our economy.

Again, I thank all our witness today for participating in this hearing and I look forward to your statements.

STATEMENT
of the
Honorable G.K. Butterfield, Ranking Member
Subcommittee on Rural Enterprise, Agriculture and Technology
Hearing on "The Impact of High Natural Gas Prices on
Small Farmers and Manufacturers"
September 22, 2004

Thank you Mr. Chairman for holding this hearing to review the impact of high natural gas prices on rural enterprises and manufacturers. I am pleased that we will have the opportunity to examine the far-reaching impacts of high energy prices. In particular, I am concerned about the impact that energy prices, specifically natural gas, and having on farming.

I am deeply concerned about the consistent high cost of fuel. Experts do not see these costs coming down in the foreseeable future. It will costs Americans more to heat their homes and drive their cars, while costing businesses more to operate. Hardest hit will be the manufacturers that use energy-intensive processes to produce.

I am most concerned about the state of the fertilizer industry. Mr. Chairman, fertilizer is a necessary input in all crops. 80 percent of the cost of fertilizer manufacturing comes from the cost of natural gas used to heat massive ovens that create the finished product. These ovens are not easily turned off and on again, and are often kept heated throughout the night and weekends when the plant is closed. The result is that fertilizer manufacturers live and die by the prices of natural gas. Natural gas is now <u>three</u> times as expensive today as it was two years ago, which means that the cost of fertilizer is also

three times as expensive as it was two years ago. When the cost of fertilizer goes up, so does the cost of our food. Some farmers, as a result of these increasing costs have been forced to the auction block.

Those of us from agricultural districts make the connection between farm and dinner table, although I realize that not everyone else does. American agriculture feeds 283 million Americans, consistently generates a surplus in foreign trade – a surplus USDA estimates will reach $62 billion during 2004. American agriculture also accounts for more than 60 percent of all food aid distributed around the world. Americans spend less than 13 percent of their total income on food, a lower percentage than any other nation in the world. The rising cost of inputs into our food supply should be a reason for alarm.

In addition, the fertilizer industry is feeling a severe pinch. Production plants are built to take advantage of economies of scale, so when capacity falls below 90 percent, the facility ceases to be profitable. Over the last three years, a number of plant closings throughout the south has put an increasing number of Americans out of work, as farmers are forced to use cheaper foreign products. And that, Mr. Chairman, is not good.

I may address some of these points with the witnesses. Thank you, Mr. Chairman and I look forward to hearing from our witnesses.

Congressman Steve King (IA-05)

Testimony before the House Small Business Subcommittee on Rural Enterprises, Agriculture and Technology September 22, 2004

Thank you, Mr. Chairman, for allowing me to testify to this Subcommittee on the high energy costs that are affecting the farmers and small business owners in the Fifth District of Iowa and across this great nation. I appreciate you holding this hearing.

In June, I brought together a bi-partisan coalition of Members to form a new caucus, the Ag Energy Users Caucus. I serve as a co-chair of this caucus with the Chairman of this Subcommittee Sam Graves (MO-6), the Ranking Member of the House Agriculture Committee Charlie Stenholm (TX-17) and Representative Earl Pomeroy (ND-AL). The mission of the caucus is to provide Members and staff with access to a forum where they can be educated and activated on issues affecting agricultural use of energy.

Agriculture is an energy-dependent industry that is affected by energy prices both directly and indirectly. Let me give you some examples:

- Fertilizer, made from natural gas, is utilized to produce crops.
- Natural gas also runs irrigation pumps in parts of the country where they are needed to water crops.
- Propane gas is used to heat hog and poultry houses.
- Propane is also used to dry grain once it's harvested.
- Gasoline and diesel fuel are necessary to run tractors and trucks for planting, harvest and transportation.

While all energy costs have become high input costs to farming and ranching, natural gas prices are of significant concern. Approximately 70-90 percent of the total cash cost of producing nitrogen fertilizer is the cost of the natural gas. As a result, over the last four years, nitrogen fertilizer costs to the farmer have skyrocketed by nearly 50 percent.

Another result is the decreased capacity of fertilizer production. Nearly 20 percent of our capacity that existed in this country prior to 2000 has been permanently closed with more at the risk of closing. This has caused the agricultural industry to import over half of the total U.S. nitrogen supply, compared to only 30 percent just four years ago.

The outlook for the winter ahead does not look good, either. Because natural gas prices have decreased over the summer due to the relatively mild temperatures, storage levels are above average for this time of year, which could be seen by some as good news. However, most of this gas was purchased into storage at fairly high prices and extremely cold weather can lead to unexpected demand spikes. It is also important to note that 60 percent of our stored natural gas is accounted for by residential needs, leaving 40 percent for other industrial needs, including agriculture.

U.S. fertilizer producers just can't compete because natural gas supplies are simply too expensive. Supply is not keeping up with demand when it comes to natural gas, and it won't for many years unless we, the elected officials, act.

Switching gears, gasoline and diesel fuel, used for planting harvesting and transportation, have continued to experience prices that are higher than the averages of the past several years. Diesel fuel has been especially high due to strong demand.

According to the American Petroleum Institute, the U.S. imports 60 percent of the crude oil and petroleum products we consume. Our refineries are operating at record levels and are producing record amounts of gasoline and diesel fuel. Moreover, as our economy grows, the demand for gasoline and diesel fuel strengthens.

In conclusion, Mr. Chairman, something must be done, unless we want to see our domestic fertilizer industry go overseas and our agricultural producers go out of business due to expensive input costs.

In the area of natural gas, let's see the Senate pass the Energy Bill Conference Report that this House has passed twice. A pipeline from Alaska would do wonders for the natural gas prices in this country. Let's allow the United States Geological Survey to explore for other domestic sources of natural gas in the Rocky Mountains and off the coast of Florida. Let's encourage the Administration to work through the World Trade Organization to persuade Russia to stop the negative pricing effects of massive nitrogen exports produced with natural gas supplied at government-set rates that do not even cover the full cost of the gas.

In the area of petroleum, once again, let's see the Senate pass the Energy Bill Conference Report. Using our own home-grown sources of energy such as ethanol and biodiesel will help. But, let's also drill in the Arctic National Wildlife Refuge. The facts are clear -- safe production on just 2000 acres (or 0.01%) of ANWR will yield more than 1 million barrels of oil a day for more than 30 years. Currently, we use about 9.09 million barrels of oil a day in the U.S.

Again, Mr. Chairman, I want to thank you for allowing me to testify today. Energy costs to agricultural producers are clearly a challenge at this time. I hope we can work together toward some solutions.

Written Testimony of Congressman John E. Peterson

Before the Small Business Subcommittee on Rural Enterprises, Agriculture and Technology

The Impact of High Natural Gas Prices on Small Farmers and Manufacturers

Wednesday, September 22, 2004

Chairman Graves, Ranking Member Christensen, and Members of the Subcommittee; thank you for allowing me to testify today on an issue so critical to the future of rural America.

I represent the second largest Congressional district east of the Mississippi, and along with Congressman Allen Boyd of Florida, I am the Co-Chairman of the Congressional Rural Caucus. The Rural Caucus is a bipartisan group of 145 Members advocating for strong rural health care for rural veterans and all rural citizens, broadband access for all of our rural communities, and maintaining rural jobs – particularly in our ailing manufacturing and natural resource-based industries. Taken together, all of these issues have one goal in mind: to preserve our rural way of life by having quality health care, education, and jobs close to home.

I have worked closely with the full Committee Chairman, Mr. Manzullo, in support of our domestic manufacturers, and am pleased to be here today to add my voice

to those of my colleagues from Pennsylvania, Congressmen Shuster and Toomey, on the impact of high natural gas prices on small farmers and manufactures in Pennsylvania.

As a member of the Resources Committee and the Speaker's Task Force For Affordable Natural Gas, I was pleased to host the Task Force's initial public hearing in my district in August of last year. At that hearing, we heard from citizens worried about their next gas bill, chemical manufacturers grappling with an extra $25 million in gas costs, and school districts struggling to keep up with rising energy costs. We discussed two fundamental questions: Why do we have a natural gas shortage in America? And, what is the impact on our rural economy?

To answer the first question, one must look no further than misguided policies of the federal government. The Federal government has encouraged the use of natural gas by all sectors of the economy, from industries to families, all the while locking up more and more of the areas where natural gas exists. Federal Reserve Board Chairman Alan Greenspan described it as conflicting federal policies.

The U. S. has enough supply of natural gas in its non-park, non-wilderness lands and offshore to supply energy to 100 million homes for 157 years. It is time to release that natural gas and deliver it to the people to heat their homes and businesses, fuel industries and transportation systems, and reduce our dependence on foreign energy supplies.

In terms of the impact of natural gas shortage on our rural economy, I have heard from numerous manufacturers and farmers. Mill Hall Clay Products, a small

manufacturer that has operated in my district for over 50 years, has been hit especially hard by high natural gas prices. The company currently has thirteen natural gas-fired kilns that operate 24-hours a day, 7-days a week to fire clay chimney liners for use across the country. For the past few years the company has been facing monthly natural gas bills 3-4 times higher than past years. These dramatic cost increases have been passed onto consumers, with the resulting price increases hitting the company again through reduced sales.

The challenge of high natural gas prices has also hit the health care industry across my district through higher prices to heat and cool facilities which represent the economic center of many small towns. Lewistown Hospital serves 85,000 people in central Pennsylvania and is the only hospital in a 30 mile radius. During the 2003 Fiscal Year, the hospital had to spend an extra $50,000 just to cover their natural gas usage. This was money that could have been more appropriately spent on medicine, equipment, or increased pay for their hard working staff.

And Mr. Chairman, you can't mention higher natural gas prices without thinking of its impact on the steel industry. The dumping of foreign steel into our markets has put American steel makers in a very precarious situation – and high natural gas prices only make things more difficult. For example, despite the Jersey Shore Steel Company's efforts to modernize their manufacturing process, natural gas prices that have increased as much as 168% over the previous years have resulted in price increases that resulted in major losses in business for this small company. Within the last year, Jersey Shore Steel

has had to lay off 70 employees due to business conditions – employees who were once making $18 per hour.

Keystone Powdered Metal Company, which has been a leader in providing powdered metal parts to the automotive industry, including the military's HUMVEE, estimates that energy represents 10% of its product costs. Despite reducing natural gas usage by 22% over the past two years, the expiration of the company's long term natural gas contracts in 2005 mean that the company will experience a 50% increase in natural gas prices next year. While the company is successful now with over 800 employees and 4 locations, increasing energy prices plus a softness in the automobile market could lead to a major loss of customers for the company.

Even when using the most up-to-date, cleanest, and efficient technology, natural gas users in rural America are hit by high prices. The Centre Area Transportation Authority (CATA), which provides public transportation for the Pennsylvania State University and the State College community, was the first bus system east of the Mississippi to convert to a clean, all-natural gas burning fleet. Despite widespread community support and an in-depth cost-benefit analysis, CATA is faced with the fact that each time the price of gas rises 10%, the agency must remove one of its buses from the service.

Turning now to our farming communities, while I am told that Pennsylvania farmers do not use much pure natural gas, the price of natural gas nonetheless affects the

price of propane, which is used by farmers like Jim Hoover of Perry County, Pennsylvania – in Mr. Shuster's district - to heat barns and to dry grains. Mr. Hoover estimates that this year he will use 50,000 to 70,000 gallons of commercial propane, also known as liquid petroleum (LP) gas, for these purposes. Whereas last year he paid approximately eighty-seven cents per gallon for LP gas, he reports that this year many farmers are paying $1.20 and more per gallon, an increase of nearly 40%. This represents a real dollar difference of at least $20,000 to $24,000 for the LP gas user consuming this volume of propane. The price of natural gas is also affecting the price of fertilizer, and all of these input costs, combined with a bountiful harvest in many parts of the country that is lowering the price farmers receive for their crops, are dealing a devastating blow to the rural economy.

Mr. Chairman, rural American can no longer afford to sit back and allow soaring natural gas prices to wreak havoc on our rural economy and way of life. We must eliminate counter-productive federal polices that forbid us from focusing on our vast domestic gas reserves to help alleviate this problem. I commend this Committee for investigating these issues, and offer my continuing participation in any future actions you may take to help our small, growing rural businesses.

STATEMENT OF
THE AMERICAN FARM BUREAU FEDERATION AND
THE MISSOURI FARM BUREAU FEDERATION
TO THE
HOUSE SMALL BUSINESS SUBCOMMITTEE ON
RURAL ENTERPRISES, AGRICULTURE AND TECHNOLOGY
REGARDING NATURAL GAS PRICES

Presented by,
Hal Swaney
Board of Directors,
Missouri Farm Bureau Federation

September 22, 2004

Good morning. My name is Hal Swaney. I am a farmer from Platte City, Missouri. My family and I own and operate a diversified farm that includes beef cattle, row crops, and tobacco. I also serve on the Missouri Farm Bureau State Board of Directors. On behalf of the American Farm Bureau Federation and the Missouri Farm Bureau, thank you for the opportunity to testify today in regard to natural gas prices. We appreciate your attention to this issue, as it is of major concern to agricultural producers.

U.S. farmers and ranchers work hard to produce the safest, most abundant food supply in the world, yet our national energy policy, or lack thereof, threatens our livelihood. Using USDA statistics as a basis, the American Farm Bureau estimates that increased energy input prices over the 2003 and 2004 growing seasons has cost U.S. agriculture over $6 billion in added expenses to produce the food and fiber for this nation and abroad.

Our industry is more energy efficient than ever before; however, it remains essential that we have access to reliable and affordable energy inputs including gasoline, diesel, electricity and natural gas. Natural gas is particularly important to agriculture because it is used to produce a host of farm inputs including nitrogen fertilizers, farm chemicals and electricity for lighting, heating, irrigation, and grain drying. Natural gas accounts for nearly 90 percent of the cost of nitrogen fertilizer.

During the past four years the cost of natural gas has been extremely volatile, causing retail nitrogen fertilizer prices to dramatically increase. For example, between 2000 and 2003 the national average retail cost of nitrogen fertilizer skyrocketed from $100 per ton to $350 or more per ton. At my farming operation in 2002, I paid $270 per ton for anhydrous ammonia. In the spring of this year, nitrogen fertilizer cost me $400 per ton, a 48 percent increase. Due to this drastic price increase, I have reduced the amount of fertilizer I apply to my corn acreage and time will tell whether this had a negative impact on yields. It also costs more today to dry grain than in previous years. I paid $1.19 for LP gas this year versus $0.86 in 2002, a 34 percent increase. As a former board member of a local cooperative, I know retail suppliers are struggling through the natural gas crisis as well.

Farm Bureau is also concerned about the impact the extended higher natural gas prices are having on the U.S. fertilizer industry and our long-term ability to obtain nitrogen fertilizer. According to The Fertilizer Institute, 11 ammonia nitrogen fertilizer plants have permanently stopped production since 2000, representing 21 percent of our domestic capacity and other facilities are at risk. An addition 15 to 20 percent of the fertilizer industry is temporarily shut down due to the high natural gas prices. This loss in domestic suppliers of commercial fertilizer forced the U.S. to import nearly 60 percent of the Urea that was used on this year's crop. Our concern is for the negative impact of losing our domestic fertilizer industry will have on America's food security as U.S. agriculture becomes more reliant on foreign imports to meet farmers' demands. The issue of access to affordable natural gas has become so critical to the fertilizer industry that numerous research projects have been fast-tracked to look at obtaining the nutrients needed to produce nitrogen-based fertilizer from coal supplies through a gasification process. While this technology shows early promise, it is years away and does not offer any short to mid-term relief.

For as long as most of us can remember, Farm Bureau has been calling for a comprehensive energy bill that would, among many other benefits, increase domestic natural gas production. Missouri Farm Bureau policy specifically states: *"We favor an inventory study be initiated to determine natural gas potential in the continental United States, including Alaska, to determine untapped reserves. Natural gas reserves in the continental United States and Alaska should be developed to provide the feedstock needed to produce agricultural products for the United States' agricultural needs."*

As you know, the Department of Interior announced earlier this spring that royalty relief would be provided for deep natural gas drilling in the shallow waters of the western Gulf of Mexico. While this is a step in the right direction, more action is needed. Energy rich deposits of natural gas that are now off-limits must be reconsidered for gas exploration and production immediately.

The Energy Information Administration estimates demand for natural gas will increase 54 percent by 2025, with electric power generation accounting for 33 percent of consumption. Congress should review current polices that restrict the use of coal for the generation of electricity and provide incentives for the use of clean coal technology as a way to alleviate some of the demand for natural gas.

Thank you again for the opportunity to testify on this issue.

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Testimony of Brent Rockhold
National Corn Growers Association
Before the
House Subcommittee on Rural Enterprises, Agriculture and Technology
Washington, D.C.
September 22, 2004

Good morning, Chairman Graves and Ranking Member Ballance. Thank you for the opportunity to testify on the impact of high natural gas prices on farmers.

My name is Brent Rockhold. I am the immediate past president of the Missouri Corn Growers Association, and a member of the National Corn Growers Association's (NCGA) Ethanol Committee. I am from Arbela, Missouri where I grow corn.

NCGA was founded in 1957 and represents more than 33,000 dues-paying members from 48 states. NCGA also represents the interests of the more than 300,000 farmers who contribute to corn checkoff programs in 19 states. NCGA's mission is to create and increase opportunities for corn growers and to enhance corn's profitability and use.

My purpose today is to provide insight to the subcommittee on how high natural gas prices affect the cost of producing important fertilizers that farmers rely on for their crops. Increased natural gas prices have already had an adverse effect on farmers due to higher production costs, and will continue to do so in the future. Growers rely on affordable natural gas as feedstock for fertilizer, but also energy for irrigation, powering farm equipment, drying grain and producing ethanol. Whether used directly as a feedstock or for heat and power generation, reasonably priced natural gas is essential to grower profitability.

Role of Fertilizer
Fertilizers account for more than 40 percent of the total energy input per acre of corn harvested. Most of that energy is consumed in the production of nitrogen fertilizer. Retail prices for fertilizer – the prices paid by farmers – rise sharply when natural gas prices increase. According to the U.S. Department of Agriculture (USDA), farm gate prices for fertilizer have jumped to near record-high levels. The largest cost component of making all basic fertilizer products is natural gas, accounting for more than 90 percent of the cash cost of production.

Nitrogen Fertilizer
Nitrogen fertilizer is a key input for the bountiful yields achieved by U.S. corn farmers. Rising natural gas prices in the U.S. have caused domestic nitrogen fertilizer producers to severely curtail production. Of the 16.5 million tons of nitrogen capacity that existed in the U.S. prior to 2000, almost 20 percent has been closed permanently. Another 25 percent is at risk of closing within the next two years. Farmers face higher nitrogen fertilizer prices and the prospect that there might not be an adequate supply of nitrogen fertilizer to satisfy farmers' demands at any price.

The production curtailments and higher nitrogen prices are largely the cause of the current surge in nitrogen imports. Imports currently account for approximately 40 percent of the total U.S. nitrogen fertilizer supply. Lower natural gas prices in Europe, Asia and South America make it difficult for U.S. nitrogen fertilizer producers to compete with foreign nitrogen fertilizer producers who could buy natural gas at lower prices and export their products to the U.S. Supplies of nitrogen fertilizer have been adequate during periods of high natural gas prices in the past primarily because of increased imports.

Anhydrous Ammonia
Natural gas accounts for 70 to 90 percent of the cost of producing anhydrous ammonia, a key source of nitrogen fertilizer. In the Midwest at the beginning of 2000, anhydrous ammonia was selling for $160 to $170 per ton. By the end of that year, the price had climbed to $210 per ton. Today, prices are close to $350 per ton. Unfortunately, these high and volatile prices are expected to continue into the foreseeable future. Of the 20 million tons of ammonia capacity that existed in the U.S. prior to 2000, almost 20 percent have closed permanently. An additional 4 million tons is at risk of closing within the next few years. Tight supplies and increasing demand will continue to pressure producers' margins and profitability.

Ethanol Production
Higher natural gas prices will also negatively impact this country's growing ethanol industry. According to USDA's latest crop production report, this year's corn crop will be the largest ever and yields will increase by nearly seven bushels per acre compared to last year. When harvested, more than ten per cent of that crop will be converted into ethanol. Natural gas costs account for nearly 65 percent of the energy costs for ethanol production. The corn industry becomes more energy efficient every year, but we still must have adequate, reliable and affordable natural gas to fuel the industry.

Market Watch and Impact
Government policy is creating a supply squeeze for natural gas. On one hand, electric utilities and other industries are moving away from using our plentiful supplies of coal and towards use of natural gas. Natural gas has been the fuel of choice for more than 90 percent of the new electric generation to come online in the last decade. In addition, as that happens, our access to natural gas is limited due to environmental policy. Clearly, we can't have it both ways.

Our ability to be efficient and environmentally friendly corn producers will face huge obstacles if our nation cannot come to grips with its desire to have limitless resources, like natural gas, for production and not realize that these resources have to come from somewhere. I am sure the members of the subcommittee as individuals know this well. However, Congress seems unaware of this fact. We can produce corn, but we need you to produce the kind of policy that enables us to use the needed resources to do so.

There are many indications that our nation's economy and energy security will be seriously impacted should we not take action to expand all sources of domestic, energy to feed our country's growing demand. A renewable fuels standard (RFS) as part of a comprehensive energy policy would result in the expansion of ethanol production -- directly contributing to domestic fuel supply and reduction in our dependence on imported oil. Our ability to produce food and fuel for our nation and the world depends on a sound energy policy.

We urge Congress to act expeditiously to promote the development of domestic energy resources to help secure future economic growth for our nation. Congress needs to enact a comprehensive energy policy ***now*** that provides an enhanced role for renewable energy sources, further development of all energy resources for a more diverse portfolio, and environmentally sensitive production of adequate domestic supplies of natural gas.

Conclusion

I encourage this subcommittee to continue to address energy and natural gas issues. Your decisions impact my farming operation. Simply, farmers need access to reliable sources of energy and raw materials so they can use the fertilizers necessary to produce an abundant, affordable and healthy food supply.

Fletcher Smoak
Remarks Before the House Small Business Committee
Subcommittee on Rural Enterprise, Agriculture and Technology
September 22, 2004

Chairman Graves and members of the Committee, I am Fletcher Smoak, Chairman & CEO of Old Virginia Brick Co. It is a great honor, as a member of the National Association of Manufacturers, to have the opportunity to address you about our concerns about the huge impact of energy costs, especially natural gas costs on our company and the manufacturing industry.

The National Association of Manufacturers is the nation's largest industrial trade association, representing small and large manufacturers in every industrial sector and in all 50 states.

As is the case with all energy intensive manufacturers, Old Virginia Brick has been faced with major cost increases that threaten our survival as a company. Fortunately, the construction economy has remained very strong, and in large part due to strong productivity growth inflation has remained moderate. High energy cost increases have historically driven the economy into recession, and the construction industry is usually the first to feel the effects. I must give the Federal Reserve Board and the president's three tax relief bills over the past three years credit for keeping the economy afloat in the face of unprecedented natural gas and oil costs.

In addition, credit must be given to the continuous improvements in energy efficiency in the manufacturing sector in particular, which has led the country to be 46 percent more efficient in energy use per unit of GDP than 30 years ago. Despite these general improvements, high energy prices are still devastating to energy intensive industries like mine.

We have struggled with increases in group insurance and workers comp insurance, but these increases pale by comparison to our cost increase from 2002 to 2004 of 60 percent or $1,146,000 for natural gas. We experienced a similar natural gas run up from 1999 to 2000, but not of this magnitude. Prices did moderate in 2002, but they were still 19 percent above 1999. We are currently producing and shipping at record levels. However, our pre-tax profit will only be very modest at approximately three percent of sales, compared with the 11 percent we should have at these sales levels. If it was not for the high volume of shipments, we could not operate our plants with these natural gas costs. We have increased our selling prices, but it is difficult to increase prices to cover such a high cost run up in one year. We have contracts with our customers and they must have some price protection.

During the winter months, November to March, the price of natural gas delivered to our distribution company increased from $5.22 per decatherm in 2002 to $6.58 per decatherm in 2004 or 26 percent. However, the greatest impact was the summer cost, which increased from $3.09 per decatherm in 2002 to $6.21 per decatherm in 2004, an increase of over 100 percent. For the first time in our history, we are paying more for summer gas at the Henry Hub than the preceding winter's prices.

The persistent high prices in the summertime underscore a number of changes that have occurred in the natural gas supply/demand balance. First, during the 1990s natural gas became the overwhelming choice for new electric generation. Second, the natural gas domestic supply "bubble" shrank and disappeared during the 1990s and Canadian imports grew every year to pick up the gap between domestic demand and domestic supply. However, starting in 2003, Canadian gas imports began to drop. Meanwhile, despite active drilling in some areas of the United States, domestic production dropped while the industrial economy was beginning to revive. In other words, there is not enough gas to meet demand. Thus, this summer, despite a relatively cool summer and less use of natural gas in the utility sector, demand pressures on tight supplies have kept the market clearing price far above historic – and affordable – levels.

Moreover, I personally think these high summer prices need to be examined with regard of the impact that investors and commodity traders may have had. I suggest that for the immediate term a study, perhaps by this committee, be undertaken to determine if pure speculation and market manipulation created the summer price run-up. In any case, tight gas markets invite investor influence. Accordingly, the core issue remains the same. The nation needs adequate supplies to reduce both price spikes and volatility.

Old Virginia Brick has started an investigation into using landfill gas for part of our natural gas needs. Unfortunately, the landfill is over 20 miles from our plants, and the only economical means of transportation is through the local distribution company's pipeline. This is possible, except that the BTU content will have to be increased from 490 btu/mcf to 950. This can be accomplished, but at substantial cost. The ultimate risks to us are whether the final quality of the gas is satisfactory and what will be the useful life of the landfill gas. Funding to help develop this type of resource could greatly reduce the natural gas demand by allowing brick companies in many locations to convert, and this would also reduce pollution, since the landfills would no longer need to flare the gas that is being generated.

For the short term, 2-4 years, we must increase drilling in new fields and offshore, and we must expedite the permitting of the LNG facilities. Long term, we must start the pipeline development from Alaska and as needed from new LNG terminals. This should have been accomplished seven years ago, and it is now the job of Congress to see that all these efforts must be put on a fast track, without fear of lengthy litigation, if we want to protect our jobs, our economy and our nation.

We applaud the House for passing a comprehensive energy legislative package the last two Congressional sessions, including provisions to facilitate the Alaskan Gas Pipeline project. The House had it right – we need improvements in every energy area. Congress needs to facilitate improvements to the natural gas and electricity infrastructure, and to incentivize additional energy efficiency investments. But most of all, Congress must recognize that we need more of every type of energy supply – not just oil and natural gas, but also coal, nuclear, and affordable renewables.

Congress must put statesmanship ahead of politics, and develop a workable short term, mid term, and long term energy plan, because energy is the life blood of our economy.

The Fertilizer Institute

Nourish, Replenish, Grow

Testimony of

William F. Willard

of

Willard Agri-Service of Frederick, Inc.

on behalf of

The Fertilizer Institute

Before the

House Small Business Subcommittee on Rural Enterprise, Agriculture and Technology

Regarding

The Impact of High Natural Gas Prices on Small Farmers and Manufacturers

DESCRIPTION OF TESTIMONY

A description of Willard Agri-Service of Frederick, Inc., and an outline of the impact of high natural gas prices on this company and its farmer customers.

September 22, 2004

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Mr. Chairman and members of the subcommittee, my name is Billy Willard and I am President of Willard Agri-Service of Frederick, Md. Our company is a family-owned business operating out of five locations: Marion, Pa.; Frederick, Md.; Mt. Airy, Md.; Lynch, Md.; and Greenwood, Del.

Our primary customer is the farmer, accounting for approximately 95 percent of our total gross sales. The remaining sales are attributed to our specialty division which serves the turf grass, golf course and nursery customer. Our products and services include crop protectants, application, agronomic consulting and fluid fertilizers. We employ about 60 full-time employees and hire another 50 part-timers during our busy season. My family has a long-standing history with involvement in agriculture, being in the farm supply business since 1970 and also operating a 2,200 grain farm in Poolesville, Md., which was started by my great, great grandfather in 1871.

The Fertilizer Institute (TFI) is the leading voice of the nation's fertilizer industry, representing the public policy, communication and statistical needs of manufacturers, producers, retailers and transporters of fertilizer. Other issues of interest to TFI members include the environment, international trade, security, transportation and worker health and safety. Willard Agri-Service has been a member of the TFI for the past 25 years.

On behalf of Willard Agri-Service and The Fertilizer Institute, I appreciate the opportunity to testify before this subcommittee regarding the impact of high natural gas prices on farmers and manufacturers. Furthermore, I would like to thank you, Mr. Chairman, for scheduling this very important hearing and for your leadership in this critical issue impacting my family farm, my family business and the farmers that are our customers, who depend on us for their fertilizer

needs.

I am present today to speak to you concerning our inability to purchase for our farm and my farmer customers nitrogen products that are essential to produce corn, small grains and of course the very important grass hay crops (which by the way are critical components of dairy production in Representative Shuster's region of Pennsylvania). 90 percent of our customers we serve in Marion, Pa., are dairy farmers. The aforementioned crops simply will not grow and achieve economical yield without the addition of nitrogen. The nitrogen product that is most commonly used by our companies is called liquid urea ammonium nitrate. It is the most accepted product for a nitrogen source in our region (and most of the country). I will refer to this product as UAN.

It is important to note that there is no substitute product for UAN solution because of how we use it in production agriculture. It is the most cost effective product to use and our 1,800 farmer customers depend on us to feed their crops with this product.

Natural gas is the fundamental feedstock ingredient for the production of nitrogen fertilizer and represents 70 to 90 percent of the production cost of one ton of anhydrous ammonia (UAN solutions and other forms of nitrogen products such as urea are derived from anhydrous ammonia).

To get right to the heart of the matter, the issue of why farmers are paying very high prices for their nitrogen products and the reason we, as manufacturers, are having a difficult time procuring product comes down to the basic principal of supply and demand. There is not enough nitrogen product being produced in the United States to meet our needs for agriculture. Since mid-2000, when the natural gas crisis began to manifest itself, 15 nitrogen production facilities representing more than 22 percent of U.S. capacity have permanently closed. During this period, many other production facilities have been idled due to the volatility of U.S. natural gas prices, jeopardizing farm profitability.

This shortage/high price issue is more severe on the east coast because of our inability to access the river system in the Midwest. We (in the east) are very dependant on imports of UAN solution from the Ukraine, Russia and Bulgaria.

A quick overview of where our business has been over the past few years concerning UAN solutions is as follows:

- For the crop year 2003, UAN cost us on the average $110.40 per ton delivered by rail. This was U.S. produced product.

- We prefer (and aggressively try) to purchase U.S. produced UAN. In the past, this product was very cost-competitive. One reason for this was that it could be railed directly to our manufacturing facilities. Imported product that arrives at Baltimore, Md., Norfolk, Va., or Philadelphia, Pa. has to be off-loaded from the ship, put into a tank (for which there is a charge) and then reloaded and trucked to our locations.

- For the crop year 2004, we were unable to purchase any U.S. produced UAN. The average cost was $135.00 per ton.

- For the upcoming season of 2005, we are now trying to purchase product and have only been able to secure about 50 percent of our needs. Usually by this time of the year we have purchased 75 percent of our needs. The product that we have committed to is all imported material, costing on the average $180.00 per ton. At present there is no producer in the market (import or domestic) in our area with product to sell us, except for one quote received last week from Terra out of Canada for $204 per ton – delivered in February 2005.

- Please note that this price increase of $70.00 per ton is really going to hit farmers hard. As you know, the farmer cannot dictate the selling price of his commodity (corn, wheat, milk, etc.). These are additional costs the farmer cannot pass through because the selling price is dictated to him.

I thank you again for allowing me to testify today on this very important subject. TFI will issue to you an in-depth analysis of possible solutions to our problem, two of which include supporting a comprehensive federal energy policy that allows for increased exploration, drilling and supplies of natural gas and supporting research into "clean coal" and coal gasification technologies. I would like to invite any member that is interested in learning more about our industry to visit one of our locations or our farm in Poolesville.

Thank you for your attention.

Respectfully submitted,

William F. Willard

Thank you, Mr. Chairman.

My name is Peter Huntsman. I am President and Chief Executive Officer of the Huntsman companies, which constitute the world's largest privately held chemical company, with approximately 15,000 employees and more than $9.5 billion in annual revenues. We are an energy-intensive company so we appreciate the efforts of you and your colleagues to pass meaningful energy legislation. We share the view that increased production, conservation and the responsible development and use of alternatives to oil and natural gas are all fundamentals of comprehensive energy legislation.

However, Mr. Chairman, there is an aspect of the energy crisis that is being largely ignored. I refer to the extreme volatility in natural gas prices, caused not by the market forces of supply and demand but by speculation in the commodities markets. Traders who neither produce nor consume this valuable commodity are responsible for setting the price and, to the detriment of everyone but themselves, causing the volatility; they are profiting at the expense of consumers. To see how it works one need only read daily analysts' reports that describe "the longs being forced out," or "the longs have the shorts on the run," or "large speculative funds bought contracts to close previous bets that prices would decline."

This wild swing in prices, which began in the winter of 2000 – 2001, has been responsible for the loss of thousands of jobs and untold other damage to the manufacturing sector of the U.S. economy. I use my own company as an example. We use natural gas as both a fuel and a feedstock. For the decades preceding 2000, the average price of natural gas was $2.30 - $2.50 per million BTU. In three weeks during the winter of 2000-2001 the price surged more than 300%. That winter's spike cost our company in excess of $250 million. As a result we were forced to eliminate 964 permanent jobs and another 600 contractor positions in North America alone. Within months the U.S. chemical industry lost its global competitiveness. The nation's largest net exporting industry became a net importer as we suffered price volatility the rest of the world did not face. In 2003 there was another major price spike that, again, hit is in the economic solar plexus. Ours is but one story. Natural gas price volatility negatively impacts not only chemical production but the entire manufacturing segment of the U.S. economy.

We know now that much of the volatility was caused by energy companies and traders making bogus trades, making phony reports and otherwise illegally attempting to manipulate the price. The Commodities Futures Trading Commission (CFTC) has to date collected more than $230 million in fines and penalties. We also know that many of the same companies that were involved in these illegal acts were the same that caused billions of dollars in damage to the Western United States, especially California, during the same time period.

Now, one would think that in the face of so much illegal activity, steps would be taken to change the process. Not so. The pricing mechanisms that allowed and/or promoted the abuses remain unchanged and in place today. It perhaps is no coincidence that wild price run-ups have occurred even though the U.S. has near-record gas inventories and is

experiencing near-record production. Market fundamentals are being ignored and gas traders, hedge funds and other speculators are causing the harmful price swings.

Mr. Chairman, I am not saying that illegal activity continues. But neither can I say with certainty that it does not, because we are dealing with a closed system. For example, the New York Mercantile Exchange (NYMEX) where natural gas and other commodities are traded, and which greatly influences U.S. prices, sets its own rules and is left largely to police itself. The CFTC says it knows what is happening, and that should be sufficient. They point to the fines they have levied as evidence that the system is working. But as a consumer I must ask, "If the system is working, why does the greatest degree of price volatility in the world continue, even in the face of record high inventories and production?" There is another very troubling trend that deserves close scrutiny. The NYMEX recently hired CFTC chairman as its president. And the CFTC chief of staff recently joined one of the leading hedge funds that trades on the NYMEX. A cynical observer would say the foxes are guarding the hen house.

Mr. Chairman, we see two solutions that will help to bring pricing stability to the critical natural gas market. Virtually every commodity traded on the mercantile exchanges is subject to trading "stops" designed to prevent rumor and speculation from causing the markets to run amok. The beef market, for example, may move just 1.5 cents before trading is stopped for 24 hours. We saw in graphic form the value of these restrictions during the mad cow scare of approximately three months ago. When it was reported that the U.S. beef industry may be subject to mad cow infestation the futures markets immediately fell 1.5 cents. Then trading was stopped. This happened for four successive trading sessions. Then the news media reported that the problem was with one cow, the herd it came from had been isolated, the scare was over and the beef markets immediately recovered from their modest losses. Other commodities are subject to similar trading restrictions, or "stops."

The natural gas market has no such protection. Prices may move as much as $3.00 per million BTU…that's more than 50% with today's prices…before trading is stopped for ***five minutes.*** Then trading may resume. Natural gas, the most widely used commodity, is also subject to the greatest price volatility. Allow me to use another example. One day in February of this year someone (we still don't know for certain whom it was) allegedly told the market he thought it was going to be colder than normal in the Northeast. The price of gas on the NYMEX immediately shot up more than 30%! If reasonable trading stops had been in place it would have allowed cooler heads to prevail at least until the markets found out who had made the claim and if it had even an ounce of credibility!

Historically, stops have been implemented in the market only when strong political pressure had been applied. The result of trading stops has in no way contributed to market manipulation in any form. Rather, it has offered the market the opportunity to operate in a more efficient fashion that giving investors confidence in the market.

In theory natural gas prices may move as much as $162 per MMBTU in any given trading session. That is equivalent to the price of crude oil moving to just over $1,000 per barrel in a single day. We find it ironic that our government regulators are more interested in protecting the price of Big Mac or a hot dog than they are the manufacturing

sector of the U.S. economy. We believe treating natural gas the same as other important commodities, and putting meaningful trading stops in place would be a tremendous boon to all consumers.

Proposed Solution 1: Put in place reasonable and meaningful "stops" for natural gas trading.

Further, there currently is insufficient transparency in natural gas trading to allow the public to see who is trading and how many contracts they are holding. The Commodities Futures Trading Commission says *it* knows who the players are and that should suffice. As consumers, we disagree. In fact, many of the companies who paid huge fines for fraudulently illegally attempting to manipulate the price of gas are still allowed to sit and trade on the NYMEX. A reasonable person need only look at the upheaval that current rules allow to see that the system is badly broken. Existing NYMEX rules permit entities to trade not only under their own name but to use surrogates as well. According to Platts Daily, one company produces and markets 43% of the natural gas consumed in the United States, and also trades on the NYMEX. I am not saying that is necessarily wrong, only that there should be some transparency. Because it is a fact that deep pockets and hedge funds trading on the NYMEX greatly influence the price of gas consumers' pay. As it stands now we do not know that even the CFTC can track how much of the market any one trader may control. We believe that moving trading more into the sunlight will curb if not eliminate the temptation to control the market and set the price.

Proposed Solution 2: Put in place a system of transparency to allow the consuming public to see the players and how much they are trading.

Mr. Chairman, we are not opposed to higher prices if they are set by recognized market fundamentals and the rules of supply and demand. Our concern lies in the volatility that benefits only paper traders and makes business planning extremely difficult at best.

Establishing meaningful trading stops and trading transparency will, in our opinion, be two huge steps toward stabilizing natural gas pricing and helping to solve a major part of the energy crisis.

It is our hope that the industry can continue to work with this committee and other Members of Congress to effect needed reforms in this area. As the winter months approach, it is vital trading stops be implemented to ensure that the millions of Americans that own and work with small business are not subjected to the same job losses that larger business has witnessed over the last 2 years. Trading stops will enable all Americans to know that they will literally and figuratively be left out in the cold.

Thank you.

TESTIMONY OF WILLIAM R. PRINDLE
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American Council for an Energy-Efficient Economy (ACEEE)
before the
HOUSE SMALL BUSINESS COMMITTEE
SUBCOMMITTEE ON RURAL ENTERPRISES, AGRICULTURE, AND TECHNOLOGY
SEPTEMBER 22, 2004

Summary

ACEEE research shows that energy efficiency is the best available near-term strategy for moderating natural gas prices, and is also key to stable long-term gas markets. To realize this potential, we propose both near-term and longer-term policy responses to the looming crisis in natural price and supply. Our testimony first discusses the roots of the current situation, assesses the potential impact of energy efficiency on wholesale natural gas prices, and points out the limits of supply-side solutions. In the near term—within the next two to three years—moderating energy demand is the most realistic and effective approach to balancing natural gas markets.

We document the energy resource contribution energy efficiency has made to the U.S. economy, and define its overall potential for future contributions, including its potential for saving natural gas. We estimate that, over time, 10-20% or more of U.S. gas demand can be avoided via efficiency, and a significant portion of those savings can be realized in the short term. In addition, saving electricity can expand those savings because so much electricity is generated by natural gas, especially in peak demand periods. A substantial portion of these savings—enough to have an effect on gas prices—can be realized in the next two to three years through an aggressive program of energy efficiency and conservation.

ACEEE's recommendations for near term action include:

1. **Supplement current efficiency deployment programs.** We recommend Congress pass a supplemental appropriation for federal programs that deliver energy savings to the farm sector, especially the Farm Bill Section 9006 grants program.
2. **Conduct a national efficiency and conservation campaign.** DOE should lead a partnership effort among efficiency manufacturers, farm organizations, utilities, states, and others to accelerate efficiency investments and encourage short-term behavior modifications.

Recommendations for longer-term action include:

1. **Accelerate federal efficiency standards.** DOE should accelerate its standards rulemakings for residential heating equipment and commercial air conditioning equipment, and should take current gas price trends and supply issues into account in setting these standards.

2. **Expand incentives for high-efficiency technologies.** Congress should increase incentives for gas-saving technologies in the current energy bills.
3. **Expand research and development.** DOE budgets for advanced technologies that save gas in the residential, commercial, industrial, agricultural and power sectors should be increased.
4. **Create public benefits funds for efficiency.** States should create and expand public benefits programs dedicated to energy efficiency and renewable energy technologies
5. **Create efficiency performance standards for utilities.** Congress should follow Texas' example and require utilities to offset a portion of demand growth through energy efficiency.
6. **Expand support for Combined Heat and Power (CHP).** Congress should expand support for CHP by improving proposed CHP tax credits, and by encouraging states and utilities to provide fair and reasonable interconnection and tariff treatment for new CHP systems.

Introduction

ACEEE appreciates the opportunity to provide our comments to the Subcommittee on the important subject of energy efficiency as a response to the severe problems in U.S. natural gas markets. Our analysis shows that energy efficiency and conservation efforts are the most effective response to these challenges over the next one to five years, and also offer longer-term insurance against future gas price spikes and shortages.

ACEEE is a non-profit organization dedicated to increasing energy efficiency as a means for both promoting economic prosperity and environmental protection. We were founded in 1980 and have developed a national reputation for leadership in energy efficiency policy analysis, research and education. We have contributed in many ways to congressional energy legislation adopted during the past 20 years, including the current energy bills, the Energy Policy Act of 1992 and the National Appliance Energy Conservation Act of 1987. We are also an important source of information for the press and the public on energy efficient technology, policies, and programs.

The Current Natural Gas Problem

Senior officials, including Chairman Greenspan and Secretary Abraham, have repeatedly stated that natural gas price and supply problems are significant enough to warrant serious federal response in the near term. As Chairman Greenspan said in Energy and Commerce Committee testimony last year, gas prices have shut down some industrial production, costing U.S. jobs and threatening the sluggish economic recovery. The fertilizer industry has been hit particularly hard, and farmers have felt the effects.

Gas prices are not only historically high, they are quite volatile, meaning that the rapid swings in prices we have seen since 2000 are likely to continue. Volatility is almost as much a threat to economic growth as high prices, because it makes it difficult for investors to plan rationally, either for exploration and development of new supplies, or for energy efficiency investments. It was expected that the sophisticated risk-

management and trading techniques pioneered by companies like Enron would provide a price-stabilizing effect in energy markets. However, the demise of Enron and other traders has left gas markets without the hedging options than can moderate price swings.

Natural gas is proving to be a prisoner of its own success: increasing demands for this relatively low-emission, low-cost fuel over the past 15 years have outrun the North American supply system. As a result, we are experiencing prices that are both high and volatile. Indications are that new supply initiatives in North America will have a limited impact on this situation, especially in the near term, and that policy actions on the demand side are the most effective near-term measures to bring gas markets back into balance.

Natural gas markets have been largely deregulated since the 1970s, when federal price regulation limited supply investments, shortages appeared in many markets, and new gas connections were embargoed by many gas utilities. Since the late 1980s, natural gas has become more widely available, and more popular as an environmentally-preferred, relatively inexpensive fuel.

Electric power generation continues to be the fastest-growing demand sector for gas. (See Figure 1.) While industrial demand remains the largest consuming sector, its gas use has declined somewhat from peak levels in the late 1990s. Commercial and residential natural gas demand continues to be strong. However, the power sector has been the dominant factor in driving gas demand recently, as gas is increasingly preferred for environmental and other reasons. (See Figure 2.) Gas is increasingly the dominant fuel used in peak-period generation: gas combustion turbines are relatively inexpensive to install and can be brought on line quickly.

However, these "peaker" turbines are also among the least efficient generation technologies, with thermal efficiencies between 12% and 20%. Today's combined-cycle gas power plants can perform at close to 50% efficiency, and combined heat and power (CHP) technology provides efficiencies in the 75% range. The overall U.S. system average thermal efficiency is about 33%; so gas peaking generation is about half as efficient as average generators, and wastes more than three times the energy as today's best generation technologies.

The disproportionate use of natural gas for peaking generation, combined with the low efficiency of peaking units, shows that saving electricity, especially at peak times, is a key to freeing up natural gas for other uses. In this way, pursuing electric energy efficiency in peak demand periods is a powerful tool for saving natural gas.

The long-term prospects for significant increases in U.S. gas production are limited. The exploration and production of natural gas and petroleum are historically linked. U.S. oil production peaked in 1970, and has declined since. Oil imports have steadily grown to make up the difference. U.S. natural gas dry production peaked in 1973, and in 2002 was 13% below that peak. Most low-cost fields have been drilled; recovery of additional gas from existing and new fields will come at a premium price. The average depletion rate

for newly-opened natural gas fields in the continental U.S. is approaching 30%. This means that the gas industry must work harder each year just to offset depletion, let alone increase net production.

Imports, mostly from Canada, have helped fill the supply gap in the past years, but Canada's growing domestic consumption and declines in production have resulted in a significant reduction exports. Liquefied natural gas (LNG) imports have dramatically in the last few years as the gas industry reactivated the full capacity of our four existing LNG terminals. LNG bears a premium price, and our ability to increase imports will be dependent upon building new terminals or expanding capacity at existing facilities – a costly and time consuming endeavor. If we rely on LNG as the marginal source for gas, it will tie U.S. gas markets to a permanent higher cost baseline.

U.S. gas production and delivery can be increased on the margin in the medium term through industry investments and policy measures. However, these efforts will not ultimately reverse the long-term decline in U.S. gas production. Imports may provide limited additional supply, but as LNG they will come at a price premium and also bear safety and homeland security risks. Most of these new supply initiatives are likely to come at a price premium, so the forecasts are for higher prices into the foreseeable future.

Given the limitations and cost premiums associated with natural gas supply options, Congress must consider options to manage demand as part of a balanced energy policy. Energy efficiency and conservation are proven resources for moderating energy demand, and are also the most effective tools to apply in the near term to bring balance to gas markets. By combining aggressive demand management with supply development, we can stabilize natural gas markets and husband this strategic fuel to support America's economic growth and environmental protection.

Energy Efficiency as a Vital National Resource

Energy efficiency is a quiet but effective energy resource, contributing substantially to our nation's economic growth and increased standard of living over the past 30 years. Energy efficiency improvements since 1973 accounted for approximately 25 quadrillion Btu's in 2002, which is about 26% of U.S. energy use and more energy than we now get annually from coal, natural gas, or domestic oil sources. Consider these facts which are based primarily on data published by the federal Energy Information Administration (EIA):

- Total primary energy use per capita in the United States in 2002 was almost identical to that in 1973. Over the same 29-year period, economic output (GDP) per capita increased 74 percent.

- National energy intensity (energy use per unit of GDP) fell 43 percent between 1973 and 2001. About 60% of this decline is attributable to real energy efficiency

improvements and about 40% is due to structural changes in the economy and fuel switching.[1]

- If the United States had not dramatically reduced its energy intensity over the past 29 years, consumers and businesses would have spent at least $430 billion more on energy purchases in 2002.

  - Between 1996 and 2002, GDP increased 21 percent while primary energy use increased just 2 percent. Imagine how much worse our energy problems would be today if energy use had increased 10 or 20 percent during 1996-2002.

Energy Efficiency's Resource Potential

Even though the United States is much more energy-efficient today than it was 25 years ago, there is still enormous potential for additional cost-effective energy savings. Some newer energy efficiency measures have barely begun to be adopted. Other efficiency measures could be developed and commercialized in coming years, with proper support:

$ The Department of Energy's national laboratories estimate that increasing energy efficiency throughout the economy could cut national energy use by 10 percent or more in 2010 and about 20 percent in 2020, with net economic benefits for consumers and businesses.[2]

$ ACEEE, in our *Smart Energy Policies* report, estimates that adopting a comprehensive set of policies for advancing energy efficiency could lower national energy use from EIA projections by as much as 11 percent in 2010 and 26 percent in 2020.[3]

$ The opportunity for saving energy is also illustrated by experience in California in 2001. Prior to 2001 California was already one of the most-efficient states in terms of energy use per unit gross state product (ranking 5th in 1997 out of 50 states[4]). But in response to pressing electricity problems, California homeowners and businesses reduced energy use by 6.7% in summer 2001 relative to the year before (after

[1] Murtishaw and Schipper, 2001, *Untangling Recent Trends in U.S. Energy Use*. Washington, D.C.: U.S. Environmental Protection Agency.

[2] Interlaboratory Working Group, 2000, *Scenarios for a Clean Energy Future*. Washington, D.C.: Interlaboratory Working Group on Energy-Efficient and Clean-Energy Technologies, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy.

[3] Nadel and Geller, 2001, *Smart Energy Policies: Saving Money and Reducing Pollutant Emissions through Greater Energy Efficiency*, www.aceee.org/energy/reports.htm. Washington, DC: American Council for an Energy-Efficient Economy.

[4] Geller and Kubo, 2000, *National and State Energy Use and Carbon Emissions Trends*. Washington, DC: American Council for an Energy-Efficient Economy.

adjusting for economic growth and weather)[5], with savings costing an average of 3 cents per kWh,[6] far less than the typical retail or even wholesale price of electricity.

- A recent ACEEE analysis of efficiency potential studies shows that cost-effective technologies could save a median 24% of electricity use and 9% of gas use nationwide.[7] While the efficiency potential number for gas seems low, there has been relatively little analysis of gas efficiency potential. Moreover, other ACEEE analysis shows that the greatest source of natural gas savings is indirect; it comes through reducing electricity use, which then displaces gas consumed in power generation.

Energy Efficiency Potential for Natural Gas

ACEEE has conducted years of research on the energy efficiency potential in a wide range of technologies and end-use sectors. We have a research effort underway to refine energy efficiency potential estimates specifically for natural gas. On a preliminary basis, we identified a number of cost-effective efficiency measures that would collectively save more than 10% of U.S. gas usage by 2020. A sample of these measures is shown in Table 1. It is important to note that these savings are only direct gas end-use savings; indirect savings, which reduce gas used in power generation by saving end-use electricity, greatly expand the potential for gas energy efficiency.

Table 1
A Sample of Natural Gas Energy Efficiency Measures

Measure	Current Efficiency	Efficiency Target	Units for Efficiency Target	Potential Gas Savings In 2020 (TBtu)	Average Cost of Saved Energy ($/therm)*
1 Ind'l management practices	Typ. plant	8%	savings	402	0.351
2 Comm'l building retrocommissioning	149	134	kBtu/sf	362	0.229
3 Res duct sealing & infiltration reduction	Avg. home	20%	H&C svgs	310	0.450
4 Residential windows	.64/.65	.33/.44	U-Factor/ SHGC	233	0.154
5 Commercial furnaces and boilers	standard units	Power burner	savings	181	0.082
6 New homes	Avg. home	30%	H&C svgs	178	0.401
7 Res. furnaces/boilers (equip. & install.)	82%	90%+	AFUE+	162	0.479
8 Sector-based comm retrofit (e.g. offices)	0.5	0.4	therms/sf	162	0.361
9 Advanced commercial glazing	1.3/.69	.45/.45	U/SHGC	145	0.301

[5] California Energy Commission, 2001, *Emergency Conservation and Supply Response 2001*. Report P700-01-005F. Sacramento, CA.

[6] Global Energy Partners, 2003, *California Summary Study of 2001 Energy Efficiency Programs, Final Report*. Lafayette, CA.

[7] Nadel, et al. 2004. "The Technical, Economic, and Achievable Potential for Energy Efficiency in the United States: A Meta-Analysis of Recent Studies". In *Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings*. American Council for an Energy-Efficient Economy, Washington, DC.

10 Comm'l new construction	90.1-1999	30%	savings	140	0.322
11 Res. combo gas space & water htg unit	82/59	90/90	AFUE/EF	85	0.543
12 Comm'l cooking and ventilation	typ equip	improved		76	0.300
13 Major residential appliances	Federal Standards	21%	savings	53	-0.859
14 Res. gas water htg (stand-alone units)	0.59	0.62	Energy Factor	52	0.370
15 Bldg. operator training & certification	Typ O&M	Better		51	0.063
			TOTAL	2,590	

* Note: Cost of Saved Energy is the cost of a measure per unit of unit of fuel saved. Measures costing less than retail gas prices (currently averaging $0.83/therm for residential customers) are cost-effective. A negative cost of saved energy means that savings in non-energy costs can fully pay for the measure.

Source: Nadel, Steven, 2002, *Screening Market Transformation Opportunities: Lessons from the Last Decade, Promising Targets for the Next Decade*, Washington, DC: American Council for an Energy-Efficient Economy available online at http://aceee.org/pubs/u022full.pdf.

In 2003, we conducted an analysis of the effect energy efficiency could have on natural gas wholesale prices. In the tight markets we are experiencing, small changes in demand or supply have large impacts on price. To test this economic principle, we used the best available computer model of U.S. gas markets, designed and operated by Energy and Environmental Analysis, the consulting firm who used the same model to support the National Petroleum Council (NPC)'s 2003 natural gas study. We tested the wholesale prices impact of small (2-4%) changes in natural gas demand over the next 1-5 years. The next five years contain large risks for the American economy if gas prices do not stabilize (see Figure 3), and energy efficiency is the most widely available resource in that timeframe, as most new gas supply options will take six or more years to bring on line.

What we found was that moderate gains in end-use efficiency over the next five years can reduce wholesale gas prices by about 20%, or about $1 per thousand cubic feet (see Figure 4). This would bring substantial price relief to all gas consumers, including farmers and manufacturers. Achieving these results would cost about $30 billion in new investment, including about $7 billion in public expenditures, but would generate over $100 billion in economic benefits, including direct energy savings to customers who invest in efficiency and lower gas prices to all energy users. The ratio of benefits to costs would be more than three to one.[8]

A major finding of this study was that the majority of the natural gas savings came indirectly, through investments in electricity efficiency. This effect stems from the fact that natural gas has become the marginal generating fuel in many power markets, so that electricity savings tend to displace gas used for generation more than any other fuel. Also, because the average efficiency of natural gas generation remains low, especially at peak times, saving one unit of electricity backs out several units of gas at the generator. Thus saving electricity is the key to saving natural gas, and adding electricity-saving measures to the list in Table 1 would greatly expand the potential for gas demand reduction.

[8] Elliott et al. 2003. *Natural Gas Price Effects of Energy Efficiency and Renewable Energy Practices and Policies.* American Council for an Energy-Efficient Economy, Washington, DC.

Barriers to Free-Market Solutions to the Natural Gas Problem

A free-market advocate might argue that high natural gas prices contain their own remedy, since by economic theory price elasticity would cause demand to fall when prices rise. This argument contains a fundamental element of truth, and ACEEE believes in markets as a key focus for energy efficiency solutions. However, several factors in today's U.S. markets keep the laws of economics from being applied in their purest form:

- **Regulatory Lag.** In many states, public utility commissions set retail prices, at least for residential and smaller business customers. In these cases, gas utilities that experience gas commodity price increases must go through rate case proceedings to pass through these costs in rates. This can take a year or more, and masks the effect of market prices on customers.
- **Contract Structures.** Most gas in the U.S. is sold under long-term contracts, which serves to delay the impact on most customers. Some utilities in deregulated states pass gas costs through to customers on a monthly basis, and some industrials buy some of their gas on the spot market. But for those with most of their supply in multi-year contracts, it can take years to fully feel the effect of market prices.

These factors are currently insulating many consumers from the pending gas crisis. But they must not mislead Congress into waiting to take action on this problem. If we wait until most customers feel the full effect of today's gas prices, the ensuing crisis could be much worse than if we act now to take prudent steps that will help keep markets in balance.

In addition to these price-masking effects, a variety of market barriers to energy efficiency keep worthwhile investments and behavior changes from being made, even when prices rise. These barriers are many-fold and include: "split incentives" (landlords and builders often don't make efficiency investments because the benefits of lower energy bills are received by tenants and homebuyers); panic purchases (when a product such as a water heater needs replacement, there often isn't time to research energy-saving options); and bundling of energy-saving features with high-cost extra "bells and whistles."

Energy efficiency is also hobbled by being a "distributed resource". It is found in more than 100 million homes, over 5 million commercial buildings, and hundreds of thousands of factories. For many homes and businesses, energy costs are a small enough percentage of total budgets that price changes may not motivate efficiency investments, especially when compounded by the other barriers listed above. By the same token, the information and technical skills needed to understand and pursue energy efficiency projects are not available to most, smaller customers.

For these reasons, policy and program initiatives are needed to realize the benefits of energy efficiency for the economy and the environment as a whole.

Energy Efficiency Policy Solutions for Natural Gas Markets

Energy efficiency and conservation can help bring balance and price stability to gas markets in the near term and the longer-term. ACEEE's analysis indicates that several policy and program initiatives can be effective in curbing demand on the margin. Given the sensitivity of volatile gas markets to small changes in supply or demand, efficiency initiatives can make enough difference on the margin to affect prices.

First, it is important to define key terms used in describing these initiatives:

- **Efficiency:** permanent reductions in energy use based on changes in technology and management practice. Examples: replacement of older gas furnaces with new high-efficiency models; installing efficient showerheads; computerized rescheduling of building operations to keep equipment off during unoccupied hours.
- **Conservation:** temporary reductions in demand from voluntary curtailments in customer end-uses. Examples: changing thermostat settings beyond normal ranges; taking shorter showers; reducing lighting levels.

In our experience, affecting energy demand in the near term requires a mix of efficiency and conservation. As mentioned earlier, the state of California used such a strategy in 2001 to bring down state electricity use by almost 7%. This had the effect of bringing electricity prices down substantially. And because of the link between electricity and natural gas, this effort also helped reduce natural gas prices.

Recommended Near-Term Steps

ACEEE recommends the following near-term actions for Congress and the Administration to respond to the looming threat of natural gas prices.

1. **Supplement current efficiency deployment programs.** We recommend Congress pass a supplemental appropriation for federal programs that deliver energy savings, including the Agriculture Department's Section 9006 grants program, EPA and DOE Energy Star programs, weatherization and other state grants, LIHEAP energy assistance funds (with a rider to expand the allowable percentage usable for weatherization from 15% to 30%), and DOE's industrial assistance programs. This bill could also create matching grants for states that operate energy efficiency programs with their own funds; approximately 20 states, representing a majority of the population, fall in this category.
2. **Conduct a national efficiency and conservation campaign.** DOE should lead a partnership effort among efficiency manufacturers, farm organizations, utilities, states, and others to accelerate markets for efficient technologies, and to motivate consumers and businesses to moderate their gas usage. This campaign would include public service announcements, educational materials, voluntary commitments from industry, and accelerated market transformation efforts. The California Legislature worked closely with the utility commission, utilities, and state and local agencies to

mount a campaign in 2001 that succeeded in reducing electricity usage by almost 7%. This helped bring down both electricity and gas prices within that same year.

These initiatives can make a difference in the next 24-30 months, which will be critical in avoiding crippling gas price and supply problems

Recommended Longer-Term Steps

Looking three years and beyond, ACEEE recommends the following actions:

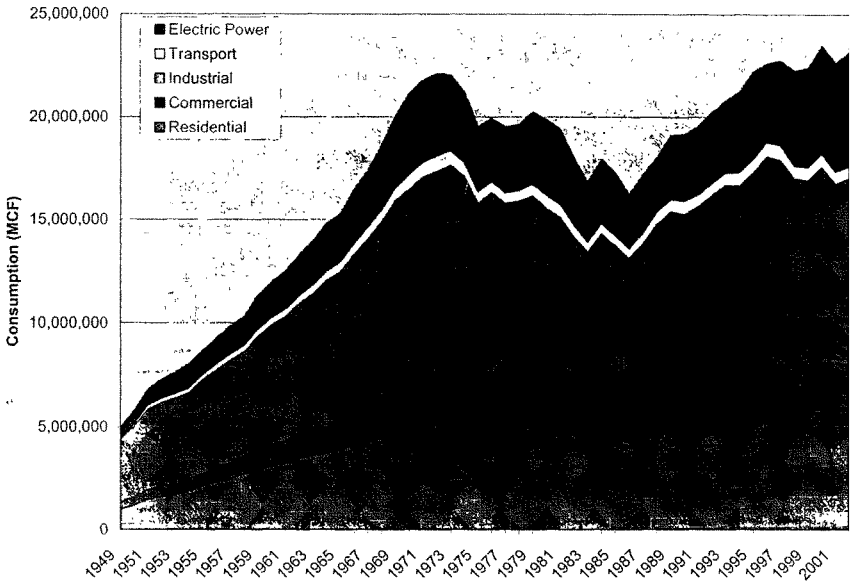
1. **Accelerate federal efficiency standards.** The Department of Energy's appliance efficiency standards program currently has a rulemaking underway for residential heating equipment. DOE should accelerate this rule, allowing cold-weather states to elect a higher standard level, and including furnace fan efficiency in the standard. DOE should take higher gas prices into account in setting the final rule. DOE should also accelerate its commercial air conditioning standard rulemaking, as commercial cooling is served mainly by inefficient gas-fired peaking turbines.
2. **Expand incentives for high-efficiency technologies.** The current energy bills offer tax credits for efficient technologies such as combined heat and power systems, new and existing homes, and commercial buildings. However, major gas-saving technologies for residential furnaces, air conditioners, and hot water heaters were dropped from the bill and should be restored. Congress should also consider increasing incentive levels, years of eligibility, and other features of these incentives to increase their natural gas savings. For example, the existing home credits do not cover duct sealing, which is one of the largest opportunities for reducing gas usage.
3. **Expand research and development.** Congress should increase funding for advanced technologies that save natural gas in: buildings through advanced heating, cooling, and hot water systems, advanced envelope designs, and control systems; in industry through CHP, advanced manufacturing processes, motors and other components; and in power generation through CHP and other advanced generation technologies, plus efficient transmission and distribution technologies.
4. **Create public benefits funds for efficiency.** One provision Congress has not included in the current energy bills is a Public Benefits Fund for energy efficiency. However, 18 states have pursued this kind of policy, and more states should adopt this method of funding efficiency programs.
5. **Create efficiency performance standards for utilities.** Texas' electricity restructuring law created a requirement for electric utilities to offset 10% of their demand growth through energy efficiency, and enabled them to use public benefits funds for this purpose. Bills along these same lines have been introduced in Colorado and Washington, and have been discussed in Congress. This kind of performance standard also can be applied to natural gas utilities.
6. **Expand support for Combined Heat and Power (CHP).** CHP generates electricity far more efficiently than the majority of the conventional natural gas generation. Congress should expand its support for CHP by passing the proposed CHP tax credit now under consideration as part of the package of energy efficiency and renewable tax credits. The Congress should also include language in the energy bill that

encourages states and utilities to provide fair and reasonable interconnection and tariff treatment for new CHP systems.

ACEEE's experience with these programs and policies gives us confidence that they can make a critical difference in bringing balance to natural price prices and supplies in the coming years. We look forward to working with the Subcommittee on these important issues.

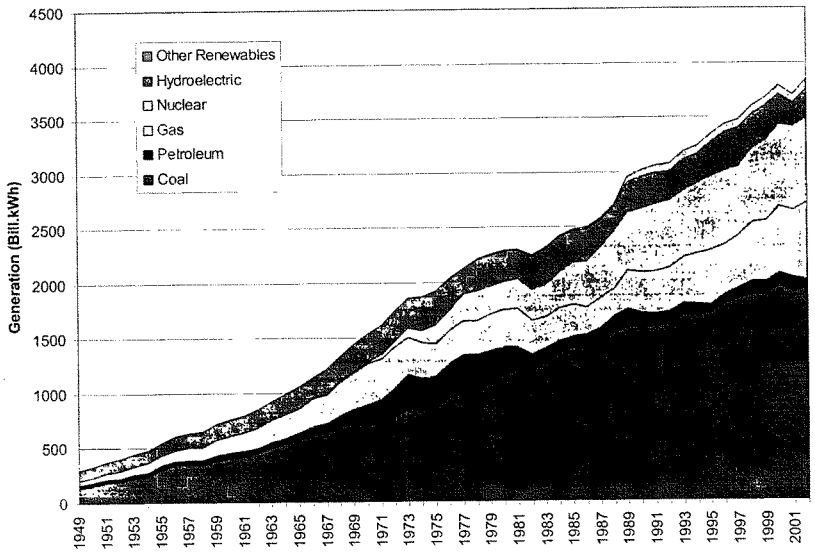
Thank you for the opportunity to share our views with the Subcommittee.

Figure 1
Natural Gas Demand By End-Use Sector



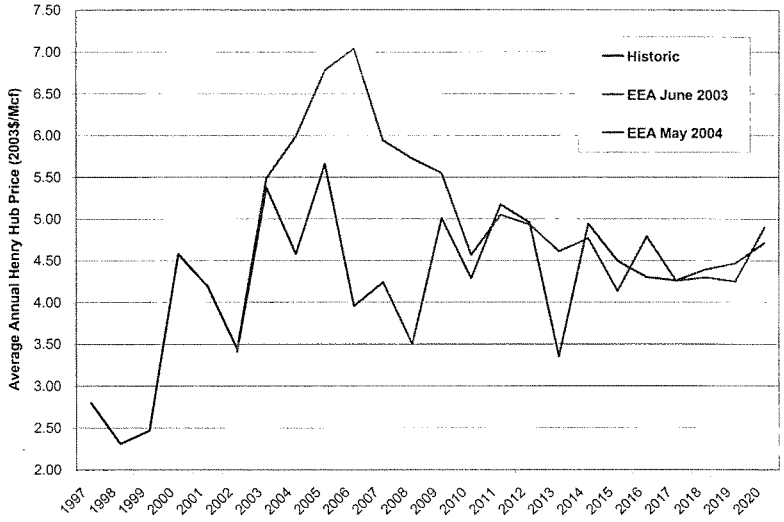
Source: ACEEE staff analysis based on Energy Information Administration data

Figure 2
Fuel Sources for Electricity Generation



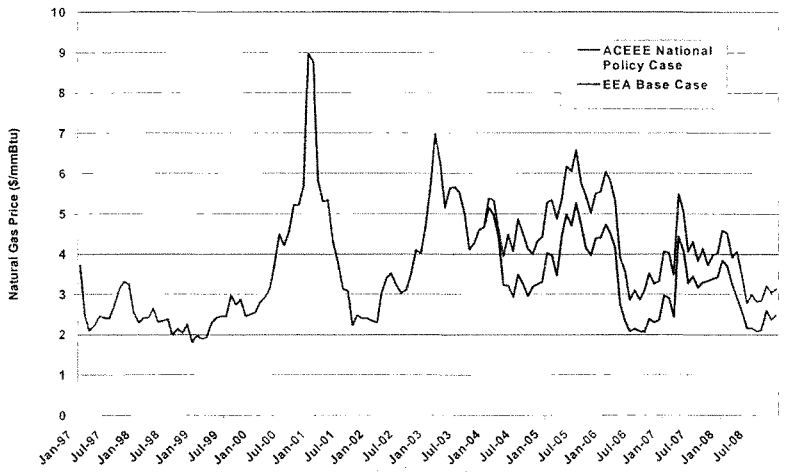
Source: ACEEE staff analysis based on Energy Information Administration data

Figure 3. Natural Gas Price Forecast (Henry Hub)



Source: ACEEE Staff analysis based on EEA gas price forecasts

Figure 4. Wholesale Natural Gas Price Impacts of Efficiency Investments (Henry Hub)



Source: Elliot, et al. 2003. *Natural Gas Price Effects of Energy Efficiency and Renewable Energy Practices and Policies.* American Council for an Energy-Efficient Economy, Washington, DC.

Thank you, Mr. Chairman.

My name is Peter Huntsman. I am President and Chief Executive Officer of the Huntsman companies, which constitute the world's largest privately held chemical company, with approximately 15,000 employees and more than $9.5 billion in annual revenues. We are an energy-intensive company so we appreciate the efforts of you and your colleagues to pass meaningful energy legislation. We share the view that increased production, conservation and the responsible development and use of alternatives to oil and natural gas are all fundamentals of comprehensive energy legislation.

However, Mr. Chairman, there is an aspect of the energy crisis that is being largely ignored. I refer to the extreme volatility in natural gas prices, caused not by the market forces of supply and demand but by speculation in the commodities markets. Traders who neither produce nor consume this valuable commodity are responsible for setting the price and, to the detriment of everyone but themselves, causing the volatility; they are profiting at the expense of consumers. To see how it works one need only read daily analysts' reports that describe "the longs being forced out," or "the longs have the shorts on the run," or "large speculative funds bought contracts to close previous bets that prices would decline."

This wild swing in prices, which began in the winter of 2000 – 2001, has been responsible for the loss of thousands of jobs and untold other damage to the manufacturing sector of the U.S. economy. I use my own company as an example. We use natural gas as both a fuel and a feedstock. For the decades preceding 2000, the average price of natural gas was $2.30 - $2.50 per million BTU. In three weeks during the winter of 2000-2001 the price surged more than 300%. That winter's spike cost our company in excess of $250 million. As a result we were forced to eliminate 964 permanent jobs and another 600 contractor positions in North America alone. Within months the U.S. chemical industry lost its global competitiveness. The nation's largest net exporting industry became a net importer as we suffered price volatility the rest of the world did not face. In 2003 there was another major price spike that, again, hit is in the economic solar plexus. Ours is but one story. Natural gas price volatility negatively impacts not only chemical production but the entire manufacturing segment of the U.S. economy.

We know now that much of the volatility was caused by energy companies and traders making bogus trades, making phony reports and otherwise illegally attempting to manipulate the price. The Commodities Futures Trading Commission (CFTC) has to date collected more than $230 million in fines and penalties. We also know that many of the same companies that were involved in these illegal acts were the same that caused billions of dollars in damage to the Western United States, especially California, during the same time period.

Now, one would think that in the face of so much illegal activity, steps would be taken to change the process. Not so. The pricing mechanisms that allowed and/or promoted the abuses remain unchanged and in place today. It perhaps is no coincidence that wild price run-ups have occurred even though the U.S. has near-record gas inventories and is

experiencing near-record production. Market fundamentals are being ignored and gas traders, hedge funds and other speculators are causing the harmful price swings.

Mr. Chairman, I am not saying that illegal activity continues. But neither can I say with certainty that it does not, because we are dealing with a closed system. For example, the New York Mercantile Exchange (NYMEX) where natural gas and other commodities are traded, and which greatly influences U.S. prices, sets its own rules and is left largely to police itself. The CFTC says it knows what is happening, and that should be sufficient. They point to the fines they have levied as evidence that the system is working. But as a consumer I must ask, "If the system is working, why does the greatest degree of price volatility in the world continue, even in the face of record high inventories and production?" There is another very troubling trend that deserves close scrutiny. The NYMEX recently hired CFTC chairman as its president. And the CFTC chief of staff recently joined one of the leading hedge funds that trades on the NYMEX. A cynical observer would say the foxes are guarding the hen house.

Mr. Chairman, we see two solutions that will help to bring pricing stability to the critical natural gas market. Virtually every commodity traded on the mercantile exchanges is subject to trading "stops" designed to prevent rumor and speculation from causing the markets to run amok. The beef market, for example, may move just 1.5 cents before trading is stopped for 24 hours. We saw in graphic form the value of these restrictions during the mad cow scare of approximately three months ago. When it was reported that the U.S. beef industry may be subject to mad cow infestation the futures markets immediately fell 1.5 cents. Then trading was stopped. This happened for four successive trading sessions. Then the news media reported that the problem was with one cow, the herd it came from had been isolated, the scare was over and the beef markets immediately recovered from their modest losses. Other commodities are subject to similar trading restrictions, or "stops."

The natural gas market has no such protection. Prices may move as much as $3.00 per million BTU…that's more than 50% with today's prices…before trading is stopped for ***five minutes.*** Then trading may resume. Natural gas, the most widely used commodity, is also subject to the greatest price volatility. Allow me to use another example. One day in February of this year someone (we still don't know for certain whom it was) allegedly told the market he thought it was going to be colder than normal in the Northeast. The price of gas on the NYMEX immediately shot up more than 30%! If reasonable trading stops had been in place it would have allowed cooler heads to prevail at least until the markets found out who had made the claim and if it had even an ounce of credibility!

Historically, stops have been implemented in the market only when strong political pressure had been applied. The result of trading stops has in no way contributed to market manipulation in any form. Rather, it has offered the market the opportunity to operate in a more efficient fashion that giving investors confidence in the market.

In theory natural gas prices may move as much as $162 per MMBTU in any given trading session. That is equivalent to the price of crude oil moving to just over $1,000 per barrel in a single day. We find it ironic that our government regulators are more interested in protecting the price of Big Mac or a hot dog than they are the manufacturing

sector of the U.S. economy. We believe treating natural gas the same as other important commodities, and putting meaningful trading stops in place would be a tremendous boon to all consumers.

Proposed Solution 1: Put in place reasonable and meaningful "stops" for natural gas trading.

Further, there currently is insufficient transparency in natural gas trading to allow the public to see who is trading and how many contracts they are holding. The Commodities Futures Trading Commission says *it* knows who the players are and that should suffice. As consumers, we disagree. In fact, many of the companies who paid huge fines for fraudulently illegally attempting to manipulate the price of gas are still allowed to sit and trade on the NYMEX. A reasonable person need only look at the upheaval that current rules allow to see that the system is badly broken. Existing NYMEX rules permit entities to trade not only under their own name but to use surrogates as well. According to Platts Daily, one company produces and markets 43% of the natural gas consumed in the United States, and also trades on the NYMEX. I am not saying that is necessarily wrong, only that there should be some transparency. Because it is a fact that deep pockets and hedge funds trading on the NYMEX greatly influence the price of gas consumers' pay. As it stands now we do not know that even the CFTC can track how much of the market any one trader may control. We believe that moving trading more into the sunlight will curb if not eliminate the temptation to control the market and set the price.

Proposed Solution 2: Put in place a system of transparency to allow the consuming public to see the players and how much they are trading.

Mr. Chairman, we are not opposed to higher prices if they are set by recognized market fundamentals and the rules of supply and demand. Our concern lies in the volatility that benefits only paper traders and makes business planning extremely difficult at best.

Establishing meaningful trading stops and trading transparency will, in our opinion, be two huge steps toward stabilizing natural gas pricing and helping to solve a major part of the energy crisis.

It is our hope that the industry can continue to work with this committee and other Members of Congress to effect needed reforms in this area. As the winter months approach, it is vital trading stops be implemented to ensure that the millions of Americans that own and work with small business are not subjected to the same job losses that larger business has witnessed over the last 2 years. Trading stops will enable all Americans to know that they will literally and figuratively be left out in the cold.

Thank you.

WRITTEN STATEMENT OF THE AMERICAN CHEMISTRY COUNCIL

BEFORE THE
HOUSE COMMITTEE ON SMALL BUSINESS,
SUBCOMMITTEE ON RURAL ENTERPRISE, AGRICULTURE AND TECHNOLOGY

ON THE IMPACT OF NATURAL GAS COSTS ON MANUFACTURING.

September 22, 2004

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The American Chemistry Council appreciates the opportunity to comment on the terrible impact high and volatile natural gas prices are having on consumers. The chemical industry is the nation's largest industrial consumer of natural gas. We use gas, like other consumers, for heat and power. But natural gas is also a raw material, a key ingredient, used to make thousands of products that everyone of use, every day.

For reasons described below, the chemical industry's center of gravity is at risk of moving overseas. High and volatile natural gas prices are a major reason why. Quarterly earnings reports from our members show that operating incomes from their US-based operations are severely lagging their overseas operations and those reports are driving investment decisions away from the US market.

To preserve a healthy future for chemical manufacturing in the United States, we would like to develop a plan of action with the federal government that will result in concrete measures to bring natural gas supply and demand into better balance and return prices to globally-competitive levels.

Natural gas prices have nearly tripled in recent years, sending our industry's gas bill up by $10 billion in two short years. Chemical manufacturing operations in other regions of the world have not had to absorb these kinds of cost increases. We have lost $50 billion in business to overseas manufacturers over the past five years. More than 90,000 good-paying American jobs have disappeared in that time.

The US chemical industry has historically been the most globally competitive manufacturing industry in America. In the late 1990s our companies achieved the largest trade surpluses of any industry in the nation's history. Today, America imports $9 billion more in chemicals than it exports. Most of that turnaround can be traced to high natural gas prices.

Many experts have commented on the terrible toll high and volatile natural gas prices are taking on the nation's economy and its industries. At Fed chairman Allen Greenspan's April appearance before the Joint Economic Committee, he said that, "We are losing a lot of business especially in chemical-related areas, because we can't compete at these (natural gas) prices." The following week, at a conference, he noted that "elevated long-term prices" for energy, ...ha(ve) been substantial enough and persistent enough to influence business investment decisions, especially for facilities that require large quantities of natural gas."

Stephen Brown of the Federal Reserve Bank in Dallas recently told the Louisiana Public Service Commission, "You're looking at the gradual destruction of employment in certain petrochemical firms. Given the prices of natural gas and oil, the petrochemical industry here could be gone in 10 to 20 years."

Unfortunately, there is ample evidence to support Mr. Greenspan's and Mr. Brown's observations:

- In March, *The Washington Post* ran an article on the front page of its business section. The headline said, "Chemical Industry in Crisis: Natural Gas Prices are Up, Factories are Closing, And Jobs are Vanishing." The US has "the highest natural gas prices in the industrialized world," R. William Jewell, vice president for energy at Dow Chemical, told *the Post*. In the past two years, Dow has closed four major chemical factories in North America and replaced them with production from Germany, the Netherlands, Kuwait, Malaysia and Argentina. "These jobs didn't leave the US because of labor costs," Jewell told *the Post*. "They left the US because of uncompetitive energy costs." Dow's energy bill increase by $2.5 billion last year, most of it natural gas. The company has eliminated 4,500 jobs – 10 percent of its workforce -- to make keep its costs under control.

- On April 12, the Wall Street Journal ran the following story, "DuPont to Eliminate 3,500 Jobs As High Gas Prices Take a Toll." The lead sentence said, "Buffeted by high natural-gas prices in the U.S., DuPont Co. said it plans to cut 3,500 jobs, or about 6% of its work force, by the end of the year."

- Vertex Chemical of St. Louis, saw its raw material costs jump by $2.5 million last year. Vertex is tiny. It has only 48 employees. Those kinds of cost increases can sink a company of that size.

- Another company, Cytec Industries Inc., has been forced to shut down its ammonia and methanol plants in Louisiana due to high and volatile natural gas prices.

- Nexen Chemical shut down two sodium chlorate plants in Taft, La because of high gas-based electricity costs. The company moved its production capacity to Canada and eliminated 100 highly paid jobs.

- Vulcan Chemicals says "it has experienced a negative impact on the bottom line of more than $50 million" since 2002 due to increases in the price of natural gas.

- Celanese says, "the change in US natural gas pricing over the past few years has driven Celanese to reduce its exposure to US natural gas by sourcing methanol production in Trinidad." The company is shutting down its Bishop, TX methanol plant in 2005.

- An article published in a recent edition of the *New Orleans Times-Picayune* contained some sobering numbers. Of nine companies that owned Louisiana ammonia plants in 1998, six have shut down all ammonia-producing operations: Borden Chemicals & Plastics, Cytec Industries, Farmland Industries, IMC-Agrico, Koch Nitrogen and Monsanto. The article says that more than 4,000 chemical industry jobs – jobs that pay more than $50,000 a year on average – have disappeared during the recent run up in natural gas prices. The paper also reported that another 1,800 jobs will probably be lost in the next year.

- The DSM Elastomers plant in Addis, La will shut down at the end of the year. The plant's site manager says natural gas contributed to its closure.
- Mississippi Chemical closed two Donaldsonville plants in March, laying off 72 workers. The plants made building-block chemicals derived from natural gas.
- BASF announced in May that it would be cutting as many as 500 jobs at its Geismar, La. Facility

Charles Ludulph, a senior vice president with Stonebridge International, a respected consulting firm, recently said: "While media attention has focused primarily on US crude oil and retail gasoline prices, the more important change in energy prices relates to long-term natural gas." Mr. Ludolph also said, "...rising natural gas prices have implications for the de-industrialization of the country..."

Mr. Ludolph is right. We are facing the gradual 'de-industrialization' of America if urgent action is not taken to return natural gas prices to globally competitive levels. We believe there is a solution to this terrible problem. It is contained in last year's report by the National Petroleum Council.

The National Petroleum Council is a federal advisory committee chartered to advise the Secretary of Energy on energy policy matters. The NPC is comprised of senior executives and energy experts from industry, academia, and the non-profit community.

Last fall, the NPC issued what many regard as the most definitive study on natural gas markets ever written. We support the study's key findings and recommendations, including the following statement:

> *"The solution is a balanced portfolio that includes increased energy efficiency and conservation; alternate energy sources for industrial consumers and power generators, including renewables; gas resources from previously inaccessible areas of the United States; liquefied natural gas (LNG) imports; and gas from the Arctic."*

It may be tempting to think that current prices are an accurate reflection of the "free market at work." For North American consumers competing in global markets, natural gas does not trade in a "free market." Public policies, implemented by Congress, have forced a dramatic growth in natural gas consumption. Other government policies restrict access to proven reserves. Those policies were passed to help achieve well-intentioned environmental protection goals, but those policies paid no attention to the economic impact high natural gas prices are having on consumers.

Congress helped to create current conditions in natural gas markets. Congress must now act to correct those conditions. We urge Congress to consider and act on the following recommendations.

- Use Natural Gas More Efficiently. Demand-side management of natural gas can have tremendous benefits. We believe that a 5 percent reduction in natural gas consumption to produce electric power, for instance, can free up 1.5 trillion cubic feet of natural gas a year – enough natural gas to heat 18-million homes. In November 2003, the American Council for an Energy-Efficient Economy issued a report. Its chief finding: "Nationwide efficiency and renewable energy efforts would result in energy bill savings to residential, commercial, and industrial consumers exceeding $104 billion."

- Encourage Greater Fuel Diversity. The nation has put too many of its energy eggs in the natural gas basket. Demand far outstrips supply. The nation must expand and diversify its fuel portfolio. Incentives for deploying proven new clean coal technologies, like coal gasification, must be quickly developed. Additional incentives for cost-competitive renewable energy are needed as well.

  The 2003 study by the National Petroleum Council estimates that implementing new efficiency and fuel diversity measures could reduce natural gas purchases by more than $640 billion over the next 20 years.

- Increase availability of Domestic Reserves. Lehman Brothers recently reported that domestic natural gas production fell by more than 5 percent in the first quarter of the year, despite record high prices spurring new investments in supply. The nation's current resource base is in decline, we need a new political consensus on environmentally responsible natural gas exploration and production. To finally bring supply back into balance with demand, we need to increase imports of LNG as well.

  The National Petroleum Council report says that American consumers would save $300 billion over the next two decades if the nation expanded its resource base.

Congress must enact a balanced portfolio of natural gas policies – including curbing demand through energy efficiency, diversifying fuel use, increasing supply, and building infrastructure – that enable consumers to buy adequate supplies at globally competitive prices.

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