S. HRG. 109–235

GASOLINE PRICES

HEARING

BEFORE THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

TO

RECEIVE TESTIMONY ON GASOLINE PRICES AND FACTORS CONTRIBUTING TO CURRENT HIGH PRICES

SEPTEMBER 6, 2005

Printed for the use of the
Committee on Energy and Natural Resources

U.S. GOVERNMENT PRINTING OFFICE

25–575 PDF WASHINGTON : 2006

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2250 Mail: Stop SSOP, Washington, DC 20402–0001

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GASOLINE PRICES

TUESDAY, SEPTEMBER 6, 2005

U.S. SENATE,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The committee met, pursuant to notice, at 2:35 p.m. in room SD–106, Dirksen Senate Office Building, Hon. Pete V. Domenici, chairman, presiding.

OPENING STATEMENT OF HON. PETE V. DOMENICI, U.S. SENATOR FROM NEW MEXICO

The CHAIRMAN. The hearing will please come to order. First I want to thank all the Senators for coming this afternoon. Obviously, this is a rather difficult time for all of you because of our schedule. I do want to remind everyone, including the Senators, but in particular the witnesses and those here from the press and other interested people, that this hearing was set by myself with Senator Bingaman's concurrence, substantially before Katrina. In other words, we were already interested in the high prices and the spikes in pricing and the apparent shortage of gasoline and gasoline products in the United States before Katrina.

Now, Katrina has happened, so it is a reality about which we cannot decide. That is, it is not relevant to these hearings, because it is. It has pointed out some things we ought to know.

But I am hopeful, Senators. While I cannot control what anybody says—we are Senators; this is a public forum—but I am hopeful that we will not spend a great deal of time talking about who is to blame for what in Katrina. It is up to you all. If you would like to, that is fine. But I think we have our plate full with areas that we have something to say about, and that have to do with supply and demand, and this region of the country might come into the picture from the standpoint of have we learned something about it versus our national supplies that could be relevant and important.

Having said that, Senator Bingaman, first I thank you for your cooperation and I hope the meeting is helpful, not only to this Senator and our side, but to you and your side of the aisle.

We all know that the devastation created by Hurricane Katrina is absolutely heartbreaking. Everyone here would concur that our thoughts and prayers are with the people of Louisiana, Alabama, Mississippi and Florida. Working to relieve their pain and suffering will be everyone around here, will be their highest priority.

At this point in time it is not possible to know what has really happened there, how many people have died, and what the extent

of the suffering will be. As I said, there are questions and there are criticisms. I hope they are left for another day.

We announced about 2 weeks ago about the rising gasoline prices this year, how they have been hurting consumers across the country. Hurricane Katrina exposed the harsh reality that we have been skirting and skating on thin ice when it comes to this country's energy concentration in the gulf coast. The purpose of this hearing is to learn more about the hurricane's impact on our energy infrastructure and high energy prices in general. Why are the gasoline prices so high? Why are the oil companies making record profits and what are they doing with them?

Our job is to make sure that, one, price-gouging, two, unfair speculation and unconscionable profiteering, does not take place and is not taking place, and especially that they do not take place as a result of the hurricane.

As to price-gouging, there has been a great deal of concern about this issue, the price-gouging in the wake of Katrina. The President said that there should be zero tolerance for price-gouging. Congress should ensure that the Federal Trade Commission, which monitors wholesale and retail prices of gasoline, has the tools it needs to investigate allegations and support State attorney generals, who have primary authority over this issue. Price-gouging laws should be vigorously enforced at the State level. Incidentally, there are some 23 States that have such laws. I am sure others are looking at them now.

If the U.S. Government should help in that regard, we ought to look at it. Everyone here should know, and our fellow Senators should know, we do not have jurisdiction in this area. We could not be the ones that amend the Federal Trade Commission. We could in a big bill, but we could not free-standing. It would go to another committee.

But I will add, even though they are not subject to our jurisdiction, that any oil company that is price-gouging at whatever level will find themselves in those witness chairs, where they will be held accountable, if we can ascertain that such has happened. I am not now saying it has, but I am saying if it has and if it is, even though we have no jurisdiction over the law, we do have jurisdiction to bring them here and sit them in those witness chairs and find out what is happening.

On the issue of speculation, we will have some serious discussion, Senator Bingaman, from an expert on that today. Many think that the energy prices are pushed and sustained to high levels because of speculation. We do have Dr. Overdahl, chief economist from the Community Futures Exchange Commission, Commodity Futures, with us today to talk about the role of the futures market and the effect of speculation on energy prices.

Are the oil companies accumulating excess profits and large cash reserves? Are oil companies investing profits in production and improvement of infrastructure? Are oil companies using profits to help keep prices affordable? Are oil companies acting like responsible citizens?

Now, I understand there will be much quibbling as to whether that is anybody's business. But I do submit there is some concern and there are some questions that have to be answered.

In addition to the high prices of oil and gasoline, I am also worried about the price of natural gas, propane, and butane. Any time we mention gasoline, we ought not forget that there are thousands upon thousands dependent upon the others that I have mentioned, and they too are having huge, huge increases.

The forgotten commodity that will affect our economy worse than any others is the skyrocketing cost of natural gas. I wish we had some solutions there also. But it is a rather big, big problem. Many on this committee have been seriously worried about that. Obviously, Senator Alexander took a lead, along with Senator Johnson, on that whole issue of natural gas. We did some important things, Senators. There may be some more to do.

On July 29, 74 Senators came together to endorse the Energy Act of 2005 because they know we needed a road map. I am very proud of that bill. A number of very important goals and objectives were set. Some people wanted to go further on issues. Some did not want to deal with certain controversial issues. I submit that we did leave some issues out because we wanted a bill and we could not risk a bill with regard to some of them.

The things that were not politically possible 2 months ago are still before us and still require answers. We can either ignore them or we can act. We worked successfully in the energy bill on a bipartisan basis. We need to do something like that now with reference to the current problem regarding gasoline.

Some goals that I think we should address are to ensure consumer protection against price-gouging, unfair speculation, and unconscionable profiteering; to encourage citizens to conserve. We understand the President has done that, but obviously that should occur and we should be part of that. I believe we must take another look at CAFE standards. We looked at them and they were an impossibility when we looked at them because of the politics of it. I am not sure that that should be the case, will be the case after Katrina. I do not know how we would address it, Senator Bingaman, if at all.

I also want to mention that increased refinery capacity is quite obvious when you look at what has happened to our country. It was probably there when we passed our bill, and we did do some things to encourage additional refining capacity. But we did duck some very serious proposals that the House made and we might have to take another look at them.

On the proliferation of boutique fuels, it is obvious that there are too many and they must be reduced in number because it adds significantly to the availability of gasoline. Some of the provisions that should go in this proposal are not in our jurisdiction and deserve debate. But I will mention, we debated the Outer Continental Shelf as a way to achieve more energy security for us, the United States, and opponents threatened to filibuster the bill and probably maintain the same as of today. But maybe we have to address that issue again and see where it really lies when we find out how dependent we have become on offshore drilling from just these three States. They produce 20 percent of the gas, natural gas, for our country. That is from no other State but those. Protecting the environment does not mean failing to protect ourselves. So I believe we must look at this again.

I submit that there are not bills before us on this issue, but Senators here want to suggest things they have in mind, and we look forward to that.

I am going to propose the following. Senator Bingaman will make an opening statement. We will then proceed to these three witnesses and limit their time. We have seen their testimony. Then we will proceed in an orderly manner with each Senator based on time of arrival. They will have 7 minutes each to make opening remarks and make inquiry, if that is fair.

Senator Bingaman, would you proceed.

[The proposed statements of Senators Akaka, Johnson, Landrieu and Martinez follow:]

PREPARED STATEMENT OF HON. DANIEL K. AKAKA, U.S. SENATOR FROM HAWAII

Thank you, Mr. Chairman, for scheduling this hearing on gasoline prices, supplies, and constraints. It is very timely because of the tragic events in Louisiana, Mississippi and Alabama, and the effects of Hurricane Katrina on production and refining capacity in the Gulf of Mexico. My heart goes out to all who are suffering through this terrible tragedy and my prayers are with the victims of the flooding and the storm. I look forward to hearing the views and updates from our witnesses today.

When we talk about gasoline prices, it is often overlooked that the State of Hawaii has consistently had the highest gasoline prices in the nation. From 1995 through the first half of 1998, gasoline prices in Hawaii averaged more than 30 cents per gallon higher than U.S. mainland prices. As I have said in the past, we don't have gasoline price spikes in Hawaii—we have one, long continuous spike!

In the past, I joined some of my colleagues from the West coast, New Mexico, and New York, in calling for gasoline price relief through release of oil reserves from the Strategic Petroleum Reserve, and for OPEC to increase production. Hawaii gets most of its crude oil from Indonesia, not from the U.S. In 2002, more than 50 percent of Hawaii's crude oil imports were from Indonesia. Current estimates by oil industry experts are not optimistic that OPEC can increase production enough to make a difference in Hawaii, since the biggest remaining oil reserves are in Saudi Arabia, not Indonesia.

Gas prices have been so high above the national average for so long that the Hawaii State Legislature passed a gas price cap in 2002, which took effect last week—September 1, 2005. The price caps would prevent Hawaii wholesalers from charging more than 22 cents above the five-day average spot price for regular gasoline in Los Angeles, San Francisco, and Portland, Oregon.

Today in Honolulu, the price of regular gas is $2.94 per gallon, which is in line with, or even *lower* than, the national average this week, which was $3.04. However, *outside* of Honolulu, the prices are higher. In Hilo, for example, premium gasoline is $3.35 and regular gasoline is $3.11.

The Hawaii State Public Utility Commission (PUC) sets the caps based on wholesale prices on the mainland, not including any markups that dealers may add. Dealers usually add about 12 cents to the gallon. Caps are higher for higher grades of gasoline and on neighbor islands to account for added operating costs such as shipping and storage. The PUC also has the ability to adjust the caps if industry officials show that the caps will negatively affect their operations. In addition, Governor Lingle can suspend the cap if there is a major adverse impact on the economy, public welfare or the health and safety of people.

I am interested in hearing the testimony of the witnesses today. I would like to know the effects of Hurricane Katrina on oil and gas production and how that will affect the economy not just on the mainland, but in Hawaii as well. I am also interested in refinery capacity and how we can safely increase refinery capacity.

Mr. Chairman, I look forward to hearing the testimony of the distinguished witnesses today, and I have some questions for them.

PREPARED STATEMENT OF HON. TIM JOHNSON, U.S. SENATOR FROM SOUTH DAKOTA

Thank you, Chairman Domenici and Ranking Member Bingaman, for working together to schedule this very timely hearing. The catastrophic hurricane and the floods and destruction wrought throughout hundreds of square miles along the gulf coast are more devastating than any other domestic natural disaster witnessed in

our lifetimes. These are the moments when we realize we are our brother's keeper. It is clear that this is a national emergency, and we must all come together to help our fellow Americans. In South Dakota, we know that Mother Nature can be cruel. We have seen crops wiped out due to hail; our landscape changed by floods; family farms devastated by drought; and lives lost as tornadoes swept through our prairie. This disaster is on a scale greater than any natural disaster in my lifetime and we must call the country toward the collective action required to lend comfort to the victims and ensure that their lives are put back into order.

The destruction caused from Hurricane Katrina has placed acute pressure on the country's energy delivery network. The destructive force of the hurricane only accelerated what had been a measured increase throughout 2003 and 2004 in gasoline prices. South Dakota is a good barometer for appreciating the drastic increase in gasoline prices. My state usually falls somewhere in the middle pack of the average cost of unleaded gasoline. In the last twelve months the average price for a gallon of regular gasoline has increased over $1.25, from $1.83 per gallon in September 2004 to $3.09 per gallon average yesterday.

Although today's hearing is limited to examining oil demand and gasoline prices, I want Chairman Domenici to understand that high oil prices will also push natural gas prices higher at a time when farmers are using vast quantities of natural gas for drying crops, and also securing orders and contracts for delivery of fertilizers used in the next seasons crop. Therefore, I hope that the Chairman will move forward with additional hearings on high gasoline prices and take in a broader swath of witnesses and panelists testifying to the problems and searching for solutions.

While I was traveling in South Dakota, my constituent's pressed their concerns regarding record-high gasoline prices, returning to a familiar theme. Their concerns followed a similar tone: *Oil companies are reaping record profits, but whenever gasoline prices increase, these companies continue to point toward a lack of infrastructure to extract, refine, and transport gasoline to the marketplace as the culprit*. My constituent's want to know what oil companies are doing with billions and billions of dollars in quarterly profits. *Where is the investment in the infrastructure these companies keep pointing toward as the culprit for high gasoline prices?*

First Quarter profits at ExxonMobil Corporation, ConocoPhillips Inc., Royal Dutch Shell, and BP Amoco were all up more than 25 percent compared to the same point last year. ExxonMobil boosted its profits by 44 percent to $7.86 billion compared to 2004.

These companies must invest in the refining capacity and the infrastructure both upstream and downstream in order to take the pressure off of the system's maxed-out refining capacity. *Absent these investments and combined with the truly eye-opening record profits, many of my constituents are left to conclude that these oil companies are manipulating the market, intentionally leaving infrastructure taxed in order to wring every last dollar from American consumers.*

Therefore, it is time to consider and act on the absence of a federal statute that protects consumers from price gouging. Although price gouging statues exist at the state level, investigations of price gouging and enforcement is often time sporadic. In the past, Congress has even gone so far as providing the President of the United States with the authority to set a cap on petroleum products. While this type of authority may not appeal to a majority of my colleagues, I would submit that we have an obligation to ensure that prices are not artificially set or manipulated by a tight collection of market participants.

The United States consumes 20 million barrels of oil per day, yet our proven oil reserves have decreased by 20 percent in the last fifteen years. As demand continues to outstrip domestic production we need solutions that go past the slogans purporting to convince Americans we can drill our way toward self-sufficiency. Increased production is indeed a piece of the upstream production answer to more supply. However, oil companies can not sit on record profits and game the market by failing to make corresponding investments in the downstream refinery and pipeline network that delivers gasoline to consumers.

PREPARED STATEMENT OF HON. MARY L. LANDRIEU, U.S. SENATOR FROM LOUISIANA

Over the past week, the entire country has witnessed an unprecedented catastrophe. People worldwide have seen the devastation that continues to affect the gulf region. Images of New Orleans completely underwater have haunted our television screens. The realization that many, probably thousands, have lost their lives in this terrible tragedy has broken the hearts of all Americans.

In order to overcome the effects of Hurricane Katrina, the gulf coast will need the full support and cooperation of the federal government. I appreciate the hard work

of my colleagues on the Energy Committee and their past efforts to support Louisiana's coast. In particular, I was grateful for Senators Domenici and Bingaman for their leadership in including coastal impact assistance in the recent Energy Bill. Now, after this terrible disaster, we clearly have much more hard work ahead.

Stabilizing, repairing and rebuilding Louisiana and the gulf coast is not only a paramount concern for the thousands left heartbroken and homeless, it is one of the largest economic challenges our country has ever faced. The damage caused to our energy infrastructure will affect every American and will require a concerted effort by the entire nation.

Regretfully, I am unable to be in attendance at today's hearing as I must remain in Louisiana to assist in the efforts to rebuild our state. However, given the timely nature of this hearing, I did want to offer my thoughts to the Committee regarding gasoline prices and the factors that are contributing to the current situation around the country in light of Hurricane Katrina.

As a result of Hurricane Katrina blowing through the coastlines of Louisiana and Mississippi eight days ago, almost seventy percent of daily oil production in the Gulf of Mexico—which represents thirty percent of the nation's oil production—and fifty-four percent of daily gas production in the Gulf of Mexico—which is represents over twenty percent of the natural gas produced domestically—were offline as of Monday. Ten percent of the nation's refining capacity was knocked out initially by the storm and at least three refineries remain completely shutdown while several others in Louisiana are operating at reduced rates. The Louisiana Offshore Oil Port (LOOP), which handles about 1 million barrels a day or 13% of this country's foreign oil and is connected to more than 30% of the total refining capacity in the U.S. was initially shut down and still is not operating at full capacity. Port Fourchon, which is the geographic and economic center of deepwater production and is responsible for servicing more than sixteen percent of the nation's oil and gas production is at about twenty-five percent capacity and expects to be near fifty percent by the end of the week.

As both the Chairman and Ranking Member and other Members of this Committee are well aware, and what should now be clear to the rest of the country in the aftermath of Hurricane Katrina, Louisiana is the heart of oil and gas supply for the country. Consumption of oil and gas in the United States is inextricably tied to the production and transportation of oil and gas offshore Louisiana.

The Outer Continental Shelf (OCS) represents more than twenty-five percent of our nation's natural gas production and thirty percent of our domestic oil production. It is estimated that sixty percent of the oil and natural gas still to be discovered in U.S. will come from the OCS. In fact, the OCS supplies more to oil to the United States than any other country, including Saudi Arabia. Approximately 97% of all OCS production is in the Gulf of Mexico. In addition, an average of more than $5 billion in bonus bids, rents and royalties are from oil and gas production are deposited into the federal treasury each year from the OCS—$155 billion since production began. That's the second biggest contributor of revenue to the federal treasury after income taxes. 80% of this production and these revenues are generated off Louisiana's coastline.

While there are a number of factors to consider and many steps to take in the aftermath of Hurricane Katrina, what must be of particular interest to the work of this Committee is the role Louisiana's coast plays in supplying the country with its energy. This means recognizing not only the contributions of the past fifty years but also addressing any impacts to Louisiana's coastline as it continues to host much of the country's oil and gas supply well into the foreseeable future. I mention the future because for many of us what happened to oil and gas supply as a result of Katrina was not a surprise. Last year when Hurricane Ivan struck, it should have been a wake up call to us all. Although not a direct hit on the heart of supply in the Gulf of Mexico, its impact on the price and supply of oil and gas in this country could still be felt four months later. That situation raised the question: How many more hurricane seasons are we going to spend playing Russian roulette with our oil and gas supply? Unfortunately, we now know the answer.

Unlike previous storms, Katrina damaged much of the onshore infrastructure that provides the crucial support for the offshore oil and natural gas industry in the Gulf of Mexico. As a result of this damage, we have had to take emergency measures to try and alleviate the supply of oil and gas for our country in the short run by loaning crude oil to refiners from the Strategic Petroleum Reserve. Also, the International Energy Agency has agreed to provide the equivalent of 2 million barrels per day of oil for an initial period of 30 days. Both of these actions were appropriate given the circumstances but might not have been completely necessary had we made the appropriate investments.

As the Members of this Committee have heard me say time and time again, Louisiana's coast is vanishing. Prior to Hurricane Katrina, Louisiana was losing more than 24 square miles of our coastal land each year. We've lost more than 1,900 square miles in the past 70 years, an area the size of Rhode Island. One can only imagine how much Hurricane Katrina has accelerated that erosion.

The erosion of Louisiana's coast is of fundamental interest to all of us because these coastal wetlands and barrier islands are the first line of defense for protecting the offshore and onshore energy infrastructure in the Gulf of Mexico against the combined wind and water forces of a hurricane. Preserving these vital wetlands and the billions in energy investments they protect are vital for the continuation and expansion of the energy production in the Gulf of Mexico the country so desperately relies on every day. As Louisiana's coastal wetlands continue to wash away, this infrastructure is more exposed to the forces of nature and storms less destructive than Katrina. Without energy assets like Port Fourchon, LA-1 and the 20,000 miles of pipeline that crisscross our state, it would literally be impossible to access the mineral resources of the OCS.

The need to reinvest in our energy infrastructure and coastal wetlands along the gulf coast was already long past due. The high prices and disrupted supply we confront today as a result of Katrina's impact have only made the situation more urgent. Louisiana's coast is truly America's Wetland and its continued erosion presents a clear and present danger to our national security.

Thanks to the leadership of the Chairman and Ranking Member of this Committee and the good work of the Senate and House of Representatives, Louisiana, as well as other coastal producing states, will receive a significant amount of coastal impact assistance through the Energy Policy Act of 2005. The wisdom of that policy should be clear to everyone. The need to do more apparent. I call on my colleagues on the Committee

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PREPARED STATEMENT OF HON. MEL MARTINEZ, U.S. SENATOR FROM FLORIDA

Mr. Chairman, I want to thank you for holding this important hearing today to examine the cost of energy prices in the wake of the devastating destruction wrought by Hurricane Katrina. We in Florida felt only a small part of Katrina's power before she made her way across the gulf. But as a neighbor from another hurricane-prone state, I want to share my support and my prayers for the people of Louisiana, Mississippi, and Alabama. I also want to recognize my colleague from Louisiana, Mary Landrieu for all the hard work and leadership she has shown in these troubling times. We share our sympathies with our friends and neighbors of the gulf. Our neighbors in the gulf have been so good to us in our times of need in dealing with devastation that has occurred during past disasters in Florida, and we are committed to returning that same kindness and assistance to you. The road to recovery will not be an easy one. But the people of America—and the people of Florida—are behind you and we are committed to helping you rebuild your communities and your lives.

I have urged my fellow Floridians and I want to urge our nation to remain calm and avoid the hoarding of gasoline. We need to think of what our neighbors are going through and do our part to employ some simple conservation methods, like reducing unnecessary trips, encouraging carpooling, and turning down your home thermostats. In my state of Florida, local businesses like Publix Super Markets have adopted energy-saving conservation practices to reduce the amount of lighting that their retail stores use. Publix is the largest private employer in the state with hundreds of outlets across the southeast; this will provide significant power savings that will help keep our energy prices lower in Florida. I have also been heartened by the response our President and federal agencies have shown, including opening oil reserves from the Strategic Petroleum Reserve and granting fuel waivers to ease the stress on refineries.

There is no doubt—our economy runs on energy and it may be some time before we return to normal. The Gulf Coast region provides more than one-fifth of our nation's daily energy consumption. In 2004, this region supplied over 4.5 million barrels of oil per day to the American consumer.

The disruption of oil and gas refining operations could have a serious impact on meeting the energy demands of our nation. It will not only affect our personal vehicles, but also jet fuel levels in several airports around the southern and southeastern United States. These shortages will be severe in one our nation's busiest airports, Atlanta-Hartsfield International, as well as many major airports in Florida—most notably Orlando, Ft. Myers, and Tampa. According to an article published

in *USA Today* on September 1st, Hurricane Katrina knocked out roughly 13 percent of our nation's jet fuel distribution system.

Without power, crude oil and petroleum products cannot be moved through pipelines. Millions were without power throughout Louisiana, Mississippi, and Alabama and this has had a significant affect on our refining capacity. We need to remember that in light of the record high gas prices, resources are on the way; but it will take time. According to Colonial Pipeline, it takes on average 20 days to move product from Louisiana to Washington D.C.; and that is without a disruption from a major disaster.

However, I also think Senator Domenici raised a good question when he announced that we were going to have this hearing. We need to address whether it a wise decision to have such a large concentration of our oil refining capacity located in such a high-prone area for hurricanes?

I have recently returned from a trip through South America, where I visited Brazil, Chile, Columbia, and Uruguay. Over 22 percent of Brazil's energy production comes from ethanol; I think we should examine making stronger investments in other alternative resources. I realize we recently doubled the renewable fuel standard for ethanol production, but I am interested to hear from our panel of experts today on things we can do in the short term to invest in other alternative sources of energy.

My last concern that I hope we can address in this hearing is the protection of consumers as we deal with market disruptions. In Florida, for example, our price gouging law is enacted once the Governor declares a state of emergency and remains in effect for 60 days. Retailers cannot sell gasoline at unscrupulous prices and must justify price increases based market trends of the previous 30 days. If such a disaster befalls our country, it might be wise to adopt some type of federal price gouging statute to bring some stability to the marketplace.

I am open to your ideas—you are the experts. I am encouraged by the quick response this Committee has shown to such a critical problem facing our nation.

America has been through a lot in the last five years. We have endured a terrorist attack on our soil, led a war against terrorism and tyranny in Afghanistan and Iraq, and now have witnessed the horrific power of disasters like Hurricane Katrina. Despite these challenges, the American people have moved forward and have come together in one spirit of cooperation and purpose. We must swiftly distribute aid and assistance to our friends that have been ravaged by Katrina. Our hearts go out to them and so does our determination to help them rebuild. We also owe it to them and the rest of the country, to think critically about how we manage our national energy infrastructure. At this critical juncture in our nation, I urge people to put aside their partisan agendas and let us rededicate ourselves to helping our friends in the gulf and meeting the needs of those impacted by this terrible tragedy.

STATEMENT OF HON. JEFF BINGAMAN, U.S. SENATOR FROM NEW MEXICO

Senator BINGAMAN. Thank you very much, Mr. Chairman, for having this hearing. You indicated to me your plan to have a hearing on high gas prices long before Katrina, and the occurrence of the hurricane makes the issue even more timely and one that we need to be addressing.

I begin where you did, and that is by acknowledging the tremendous suffering and loss of life that our fellow citizens in the gulf coast area have experienced. I'm sure everyone in the room joins us in expressing our sympathy. Particularly I would mention that Senator Landrieu is not with us today because she is in her home State, as she has been now since the hurricane occurred, trying to work with her constituents to get through this terrible tragedy, and our sympathy goes out to her as a member of this committee.

This human tragedy is beyond anything that we might have imagined and it deserves our full focus in the days and weeks ahead. I know there will be and should be extensive hearings about the failures to protect against a hurricane of this magnitude, also the failures to plan for the aftermath. But this hearing is focused

on the high and the rising prices of gas and other petroleum products.

The high prices we faced before Hurricane Katrina are what prompted the holding of the hearing and, as I indicated, the hurricane makes the issue even more timely. Hurricane Katrina significantly damaged the petroleum production and refining facilities in the gulf coast, Louisiana, Mississippi and Alabama. While we are now recovering from that damage, there are some 900,000 barrels per day of refining capacity that has been damaged severely enough that it will likely be off-line for more than a month. That damage has exacerbated the high prices that we are already seeing for gasoline, and has given impetus to this hearing.

To understand the reasons behind the high gas prices that we face today, I think we need to look at several issues. The hurricane underscored the fact that our national energy system is particularly vulnerable to losses of refining capacity in the gulf coast area. We need to look at the policy issues that relate to that.

There are some short-term issues. I think we can hear from our witnesses about any additional steps that Congress or the administration could be taking to address supply and demand of refined product in the near term. The situation also presents us with an opportunity to reconsider the current state of our refining industry and the challenges that we face in going forward.

The energy bill that you mentioned, that we have just recently passed, contains two measures that I think have a bearing on the current situation that we have before us, and I would appreciate hearing from the witnesses in that regard. First, the act creates a new tax deduction for investments to increase refining capacity. That is section 1323 of the energy bill. In addition, it creates a new program of technical assistance at the EPA to help State and local government address applications for new or expanded refineries, and I would be interested in hearing from witnesses as to how the industry views those provisions, whether they are useful, whether they need to be added to, or what actions we ought to take.

In addition, I believe we owe it to ourselves and our constituents to see if we can get the affected parties, the stakeholders involved with refining, around the table to put in motion an initiative to increase and diversify U.S. refining capacity. I think all of us are willing to work with the President and with his administration on trying to deal with this very important infrastructure issue.

Let me just speak very briefly about demand, because we all know that price is a result both of supply and of demand. We cannot ignore demand. There are three issues that I would suggest as possible issues deserving our attention. The first relates to vehicle fuel economy. You mentioned the importance of that in your comments and I am very encouraged that this possibly is an issue that we could revisit. I felt very strongly that it was one of the shortcomings of the energy bill that we were not able to get the votes and the support necessary to address it there.

A second step would be another issue you mentioned, which is encouraging the American public to take common sense measures to improve the efficiency with which they use energy.

The third I believe would be encouraging the President to use his authority to immediately issue instructions to Federal agencies to

implement fuel economy measures with regard to their own fleets and their own use of energy. To my mind, this would be a good example. If we in fact are calling upon the American people to conserve their use of petroleum products for the next month or 2 or whatever period, it would be appropriate for those of us in government to be willing to make that same kind of commitment ourselves.

Mr. Chairman, again I thank you for the attention you have given to this issue in calling the witnesses and I look forward to hearing the testimony of the witnesses. Thank you.

The CHAIRMAN. Thank you, Senator Bingaman.

Senator Bingaman, on the issue of asking the President regarding the government fleet, I wonder if we might jointly ask our staff to prepare such a letter and we will circulate it to the members of the committee here and see how many want to sign it, and direct it to him.

Senator BINGAMAN. Good.

The CHAIRMAN. I forgot, Senators, in my opening remarks to say to each of you, thank you so much for all the attention, time, and hard work that you put into the energy bill. It will bear fruit. There are already some very positive things happening, and I hope we can pull together on a few more issues and then maybe we can say there is one good that came out of this storm. I am not sure we need a storm, but I am sure we need to do some things we have not done. Maybe this will be the impetus.

With that, rather than starting with questions, if you do not mind, Senator Bingaman, I am going to go to Senators on my side. I will leave it up to your judgment on yours. Senator Burns—oh, we are going to have the witnesses. I am sorry. You are first, Senator Burns, after the witnesses.

Let us proceed with the witnesses. The first witness will be Ms. Rebecca Watson, Assistant Secretary of Lands and Mineral Management of the Mineral Management Service. The second will be Guy Caruso, administrator of the Energy Information Administration. Thank you again. You have done an excellent job in the past and we appreciate your performance and your testimony. And Dr. James Overdahl, chief economist for the Commodity Futures Commission.

Let us start with you.

STATEMENT OF REBECCA WATSON, ASSISTANT SECRETARY OF LAND AND MINERALS MANAGEMENT, DEPARTMENT OF THE INTERIOR

Ms. WATSON. Mr. Chairman and members of the committee, I appreciate the opportunity to appear here today to testify on the role of the Minerals Management Service and gasoline prices. I will update you on the status of offshore oil and gas production that has been shut in due to Hurricane Katrina. I will also provide you with an overview of what the Minerals Management Service is doing to support the safe resumption of production in the Gulf of Mexico.

I would first like to say that it is difficult to comprehend or express the horrific impacts of Hurricane Katrina on the people in the Gulf of Mexico region. MMS considers itself part of the family of New Orleans. We have many people that live in New Orleans

and all of us at the Department of the Interior extend our condolences to all of the people impacted in the States that have been hurt by Hurricane Katrina.

Our focus at MMS is to ensure that offshore oil and gas operations are now brought on line safely and as soon as possible. That is because our role at MMS in gasoline prices is to competitively make available Federal offshore resources in an environmentally responsible manner. But oil and gas produced from the Gulf of Mexico Outer Continental Shelf plays a major role in supplying our daily energy needs, accounting for 29 percent of domestic oil production and 21 percent of domestic natural gas production.

The map on the easel here shows that Hurricane Katrina moved through a core area of offshore operations. That kind of yellow swath there shows the whole area of the hurricane, including the hurricane force winds and the tropical storm winds. The red streak through there is the eye of the storm. At its peak on August 30, 95 percent of daily oil production and 88 percent of daily gas production was shut in.

Today those numbers have been reduced. Right now 58 percent of oil production is now shut in and 42 percent of gas production is shut in. This graph illustrates how every day we have brought the amount of oil and gas that is shut in down. By "we" I mean our partners in industry, obviously, working together to get these numbers back up to capacity. The numbers improve every day, but we are obviously not close to full capacity. But I would note that just between yesterday and today there was a 10 percent improvement in both oil and natural gas.

As was to be expected, many production and exploration facilities sustained damage. But early reports indicate that the vast majority of facilities could be ready to come back on line in days and weeks, rather than months. However, a full assessment of the damage from Hurricane Katrina will require several more days as many facilities still have not yet been inspected by their operators.

I would add there have been no reports of significant spills related to production. All safety systems worked to successfully shut in production on the OCS platforms.

At the latest count, the hurricane destroyed 37 of the roughly 4,000 OCS production platforms. However, all of those 37 platforms were in shallow water and they were producing relatively small volumes of oil and gas, cumulatively, about 1 percent of the total gulf production. Most of the deep water, high output facilities appear to have survived with minimal damage.

Fifteen platforms suffered extensive damage. Here again, these were in shallow water and they were low production facilities. Four of these, however, were large, deep water platforms which account for about 10 percent of the pre-storm Federal offshore gulf oil production. These four platforms could take up to 3 to 6 months to complete repairs to be brought back on line.

But looking at it from another perspective, that means about 90 percent of the Gulf of Mexico production did not suffer significant damage offshore. But it is important to note that, unlike Hurricane Ivan, we did see a lot of damage onshore to very critical support facilities and infrastructure. Many of these facilities do not have electricity or communications, and they are flooded and suffering

from sustained wind damage. These are important jumping-off points for industry workers, inspectors, and the materials and supplies that will be needed to repair offshore pipelines and platforms. Others are needed to move the oil and gas from the offshore to the ultimate consumer. The availability of these vital facilities will be a critical factor in the recovery of OCS production.

MMS is working every day with industry to assess the damage of offshore pipelines and junction facilities that are critical for transporting the oil from the platform to the shore. As was the case for offshore platforms, it appears that some pipelines suffered significant damage, which could take several months to repair. Others have already been inspected and tested and appear ready to resume. Right now we are still doing underwater inspections. It is a little bit too early to give an estimate on the impacts to pipelines. But again, we are not seeing the type of damage we saw in Hurricane Ivan, where we had that mud slide that caused a lot of damage to pipelines.

Our goal in dealing with hurricanes and tropical storms is a four-part one: protection of workers through evacuation, protection of the Nation's supply of oil and gas from long-term disruption of production, protection of the environment, and rapid initiation of our contingency of operations plan referred to as the COOP, so that we may continue our business from another location.

Unfortunately, we had to put into place our COOP. We moved about 100 people already to Houston and set up a satellite office. We are moving more people there. We are monitoring and reporting on shut-in production and doing our damage assessments from Houston. We are processing permits and are prepared to expedite approvals for repairs to facilities in an efficient and effective manner.

In the coming days, we will move more people there to continue to assist industry to bring the facilities back on line to resume normal operations. Four out of our five district offices in the gulf are open to conduct inspections and process permit requests. More details are in my written statement.

Mr. Chairman, Hurricane Katrina has certainly dealt the central Gulf of Mexico region and its people in the oil and gas industry a heavy blow, but we will recover. MMS has responded by working with industry to assess damages, facilitate repairs, expedite critical business processes, and resume full production of oil and gas on the Outer Continental Shelf as rapidly as possible to meet the Nation's energy needs.

[The prepared statement of Ms. Watson follows:]

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

Mr. Chairman and Members of the Committee, I appreciate the opportunity to appear here today to provide you with an update on the status of offshore oil and gas production that has been shut in due to hurricane Katrina. I would also like to take this opportunity to provide you with a look at what we are doing to support the safe resumption of production in the Gulf of Mexico.

It is difficult to comprehend or express the horrific impacts on the people in the Gulf of Mexico region. The loss of lives, livelihoods and property is mind boggling to say the least. Katrina, a category 4 hurricane with winds over 145 mph, will likely be recorded as the worst natural disaster in the history of the United States.

Every day we are learning more about the extent of the casualties and destruction left in the wake of Katrina.

As Katrina approached, those who serve at the Department of the Interior prepared for the worst. Department bureaus efficiently activated their emergency plans, security facilities and evacuated employees. The Minerals Management Service (MMS) implemented its Gulf of Mexico Continuity of Operations Plan (COOP) and moved key personnel to Houston. In the coming days, we will move more people and resources there to help in efforts to bring facilities back on line and resume normal operations. The Department continues to account for employees who evacuated the area with their families. The Department and MMS employees will continue to do whatever we can to help our gulf colleagues and neighbors.

Our focus now is to ensure that the offshore oil and gas operations are brought on-line safely and as soon as possible. Progress is being made. On Monday, when the storm hit, 615 platforms and 90 drilling rigs had been evacuated. By Thursday, September 1, the numbers had dropped to 423 and 64, respectively. As the platforms are coming back online, so is oil production. The oil and gas produced from the Outer Continental Shelf (OCS) in the Gulf of Mexico plays a major role supplying our daily domestic energy needs, accounting for about 29% of domestic oil production and 21% of domestic gas production. While it will be several days before we have a more complete assessment, it appears many of the high-production facilities weathered the storm without major damage.

LATEST PRODUCTION SHUT-IN STATISTICS

As of Thursday, September 1, MMS reported the following evacuation and production shut-in statistics based on reports from 68 companies:

	Total
Platforms Still Unmanned	423
Rigs Still Unmanned	64
Oil, Barrels Per Day (BOPD) Shut-in	1,356,498
Gas, Billion Cubic Feet (BCF) Per Day Shut-In	7.8

As discussed above, on Monday, when the storm hit, 615 platforms had been evacuated and so had 90 drilling rigs. By Thursday, September 1, these numbers were 423 and 64, respectively. The difference in a week's time is due to the platforms that were evacuated as a precaution but were not in the path of the storm and suffered no damage, and those platforms that were unscathed by the storm, although in the path, and were remanned immediately after the assessment was done.

These evacuations are equivalent to 52% of 819 manned platforms and 48% of 137 rigs currently operating in the Gulf of Mexico (GOM).

As of Thursday, September 1, shut-in oil production was 1,356,498 barrels per day. This shut-in oil production is equivalent to 90% of the daily oil production in the gulf, which is currently approximately 1.5 million barrels per day.

As of Thursday, September 1, shut-in gas production is 7.8 billion cubic feet per day. This shut-in gas production is equivalent to 79% of the daily gas production in the gulf, which is currently approximately 10 billion cubic feet per day.

The cumulative shut-in oil production for the period 8/26/05-9/1/05 is 7,441,566 barrels, which is equivalent to 1% of the yearly production of oil in the gulf, which is approximately 547 million barrels.

The cumulative shut-in gas production 8/26/05-9/1/05 is 42 billion cubic feet, which is equivalent to 1% of the yearly production of gas in the gulf, which is approximately 3.65 trillion cubic feet.

These cumulative numbers reflect updated production numbers through Thursday from all previous reports.

MMS OPERATIONS

We have three overriding principles in dealing with tropical storms or hurricanes:

- evacuate the workers so there is no loss of life or injury
- protect the Nation's supply of oil and gas from long-term disruption of production
- protect the environment from oil spills

We work on each of these goals in close cooperation with our partners in the U.S. Coast Guard and with the regulated oil and gas industry.

Many platforms under MMS jurisdiction are designed to be manned but also designed to be evacuated for short periods of time. The oil and gas industry starts the evacuation of personnel far in advance of a tropical storm or hurricane. Non-essential personnel are removed from the oil platforms many days in advance starting with areas nearest the storm track. The rest evacuate after securing the facility.

The industry relies on weather predictions from the National Oceanic and Atmospheric Administration and others. It is an immense undertaking to evacuate the 25,000 to 30,000 people that are working offshore at any given time. Industry uses the huge fleet of crew boats, supply boats, and helicopters to service the evacuation efforts. MMS releases its 14 leased helicopters either all or in part to assist in this evacuation effort.

As a standard practice, industry shuts in all oil production when they evacuate the platform. In some cases, natural gas production is monitored from onshore through what is called a Supervisory Control and Data Acquisition or SCADA system. This allows the production to be stopped remotely if necessary.

Regarding the prevention of oil spills, the MMS has mandatory requirements for the use of downhole safety valves to shut off the flow of oil and gas in the event of a well failure. We are pleased that in the aftermath of Katrina, there have been no reported significant oil spills from production. If you recall, in Hurricane Ivan last year there were 7 platforms that were completely destroyed. These 7 platforms had a total of 75 oil wells. All 75 of the downhole safety valves held and no significant pollution occurred from them. Two of the wells had very minor gas leaks but nothing of any significance.

The MMS requires the operators to report their production shut-in statistics and number of evacuated platforms and drilling rigs. This allows MMS to issue frequent reports on how much production is shut-in. During Hurricane Ivan last summer, the very significant amount of production shut-in (83 percent of oil production and 53 percent of natural gas production at the peak) was quickly and dramatically reduced to only that production that involved damaged facilities—either platforms or pipelines.

The third area with which we are concerned is protecting the Nation's supply of oil and gas from long-term disruption. MMS deals with this issue principally in two ways. We incorporate into our regulations tough design standards for fixed and floating production facilities. These standards outline the acceptable wind strength, wave height, and other environmental conditions. Current design standards require industry to design facilities to Category 5 storm criteria. MMS also requires annual above-water structural inspections of all OCS platforms and periodic underwater structural surveys. We established these requirements to minimize the potential for platform damage from serious storm events.

Another area we focus on is facilitating the repairs to facilities in an efficient and expedited manner. Hurricane operations plans provide guidance to operators on how to ensure the integrity of all systems, from visible production equipment on the platform to the thousands of miles of pipeline that rest on the seafloor. Any damage to facilities is identified and necessary repairs completed before systems resume production. As I will note later in this testimony, we are taking steps to ensure that MMS resources are available to review company plans to bring production back on line.

Following major hurricanes, we make a systematic effort to identify lessons learned and take steps to prepare for future hurricane seasons. Following Hurricane Ivan, we focused on five principal areas:

First, MMS concluded that the basic design standards for deep water floating production systems seem adequate. We had no floating production facility failures.

Second, MMS saw that some drilling units installed on the floating production platforms moved on their supports and caused damage. In consultation with MMS, industry has tightened the bolting mechanism and strengthened the clamps that secure these drilling packages on the floating platforms.

Third, MMS issued a new reporting requirement for the 2005 hurricane season—NTL 2005 G-6. This requires industry to submit statistics to the MMS Gulf of Mexico Region (GOMR) regarding evacuation of personnel and curtailment of production because of hurricanes, tropical storms, or other natural disasters. Operators must include both those platforms and drilling rigs that are evacuated and those that they anticipate will be evacuated. Evacuation is defined as the removal of any personnel (both essential and non-essential) from a platform or drilling rig. In addition, operators submit a report regarding facilities remaining shut-in. This report includes basic platform information, prior production information, estimated time to resumption of operations and the reason for shut-in (facility damage or transportation system damage). Operators must notify the MMS GOMR when production is resumed.

Fourth, MMS issued contracts for six new engineering and technical studies to look closely at the damage caused by Hurricane Ivan and what design or operational changes may need to be made.

Fifth, MMS consulted heavily with industry experts and in July jointly sponsored with the American Petroleum Institute a conference in Houston, Texas, on offshore hurricane readiness and recovery to more fully discuss these issues.

We will conduct similar reviews and assessments of facility performance and impacts from Hurricane Katrina to identify any additional steps that need to be taken.

A full assessment following hurricane Katrina will require several more days and will require an integrated view of production and drilling facilities, ports, electricity, availability of repair equipment, availability of workers, and potentially other factors. Crew began to re-board platforms by Wednesday last week.

As to be expected, many production and exploration facilities sustained significant damage, but early reports indicate that many facilities could come back on line in days and weeks rather than months. Many of the deep water high output facilities appear to have survived with minimal damage.

A different scenario is playing out in the aftermath of Katrina that was not part of previous storm recovery events. The infrastructure of many onshore support facilities sustained damage from hurricane Katrina. These facilities provide vital support for the offshore oil and natural gas industry. However, many do not have electricity, are inundated with water, and sustained damage from hurricane winds. These support facilities are important jumping off points for industry workers and MMS inspectors to conduct pipeline and structure repairs and their availability will be a key factor in getting production online and onshore.

MMS STAFF AND COOP OPERATIONS

- MMS implemented its Gulf of Mexico Region COOP (Continuity of Operations Plan). Key personnel and operations are up and running in Houston.
- As part of the COOP, MMS established communication channels providing staff critical information through call-in lines and internet.
- MMS provided two weeks administrative leave for all non-essential personnel who have been affected by Katrina and were not called to Houston or any other MMS office.
- MMS coordinated with the energy operators to address mutual needs for helicopters to perform fly over inspections.
- The MMS district offices have performed fly-overs of key facilities in the hurricanes path to perform independent assessments as to potential damage.
- Four of Five districts in GOM region are up and running. The GOM regional operations, relocated in Houston, are providing advice to companies on their plans to bring production back on line.

MMS is coordinating with the Coast Guard as a contingency for oil spill response.

CONCLUSION

Mr. Chairman, Hurricane Katrina has certainly dealt the Central Gulf of Mexico region, its people and the industry a very heavy blow. The Department has begun to put its people and resources in place to assist in responding to this tragic event. Progress is being made. The MMS Continuity of Operations Plan is in place and is working. Under this plan, we will work with industry to assess damages, facilitate repairs and resume full production of oil and gas on the Federal OCS—all in a manner to ensure the safety of personnel, integrity of the offshore infrastructure, and protection of the marine environment.

Based on our experience with Hurricane Ivan, production from undamaged facilities will be back on line in a matter of days, but it will take some time, weeks or even months before we are back up to 100%. We stand ready to meet the challenge before us. We will continue to keep Congress, the public and the media informed of the progress of these operations.

The CHAIRMAN. Thank you very much. Your full statement will be made a part of the record. We greatly appreciate not only your testimony but your professional way in which you represent this Department.

Ms. WATSON. Thank you, sir.

The CHAIRMAN. Mr. Caruso, you are next. Your full statement will be made a part of the record.

STATEMENT OF GUY F. CARUSO, ADMINISTRATOR, ENERGY INFORMATION ADMINISTRATION, DEPARTMENT OF ENERGY

Mr. CARUSO. Thank you very much, Mr. Chairman and members of the committee, for once again asking the Energy Information Administration to present our view of oil and natural gas markets, in particular with the impact of Hurricane Katrina. As both you and Senator Bingaman mentioned, even before this tragedy the crude oil and natural gas markets were extremely tight. On August 29, gasoline prices on the national average were $2.61 a gallon.

The CHAIRMAN. Mr. Caruso, would you tell the public who you are, what you do, and where you get your money and authority, your resources and authority?

Mr. CARUSO. Sure. My name is Guy Caruso. I am the administrator of the Energy Information Administration and all of our budget comes as part of the Federal budget.

The CHAIRMAN. What are you charged with? What is your responsibility?

Mr. CARUSO. Our responsibility is to find, collect, disseminate, and analyze all the energy information for the United States.

The CHAIRMAN. Thank you very much.

Mr. CARUSO. Even before this tragedy, markets were tight. Gasoline prices were high, diesel prices were high, natural gas prices have been high. That was largely because over this same period world demand had been growing rapidly, refineries were being stretched very thin, not only in the United States but worldwide. We had already been beginning to see tightness in both gasoline and diesel markets.

Katrina's destruction has put further upward pressure on oil and natural gas prices. As Secretary Watson has just detailed, a significant amount of gulf production—both oil and natural gas are shut down—is now well on its way to being brought back on line, which is I think extremely good news.

In addition, about 1.8 million barrels a day of refinery capacity in the Gulf of Mexico region was taken off line by the hurricane. Over half of this is already back on line now or will be in the next week or so, which again is good news.

Pipeline damage was initially thought to be severe, with estimates of long repair times. In fact now all three major pipelines—Colonial, Plantation, and Capline, the former two product and the last being crude—have been restored and are returned to full or very near full capacity as we speak today.

Gasoline supply, however, particularly in the Southeast, remains constrained. We expect that it will remain that way for the next several weeks before being fully restored.

The entire system, as Secretary Watson has indicated, is interconnected and highly dependent on the electricity supply for its recovery. Fortunately, electricity is steadily being restored.

On the price side, crude prices rose early last week, but already by the end of the week they were coming down, and as of noon today on the NYMEX crude oil was $66 a barrel, which is what it was the Friday before the hurricane. Later today, EIA will be releasing our estimate of gasoline and diesel prices for the week ending September 2, and we expect this national average to be much

higher than the $2.61 that I mentioned, most likely above $3 per gallon as of today.

The near-term outlook for oil and natural gas markets will depend on a number of factors, including the pace of recovery in the gulf and other actions, such as the loan of crude oil from the Strategic Petroleum Reserve, the offer of SPR oil for sale, and releases of government-controlled product stocks from other industrialized countries that are members of the International Energy Agency.

Other actions include the temporary waiver of the Jones Act to facilitate shipments between U.S. ports. All of these should assist in alleviating the market pressure. There has also been a nationwide waiver on requirements of summer gasoline and for low sulfur diesel, which should also increase the flexibility of the distribution system.

There are a significant number of tankers which we believe will deliver refined product, particularly gasoline, from Europe over the next 2 or 3 weeks, and that again should add supply and liquidity to market and we believe put downward pressure on gasoline prices.

Fortunately for natural gas markets, we are in the shoulder season between high demand for air conditioning and before the heating season. So that gives time for restoration of the offshore production, as we are seeing in the gulf, as well as other facilities that are onshore, such as natural gas processing centers and pipelines.

Tomorrow EIA will release its short-term energy outlook and, although our analysis is still preliminary, we assume that these actions that I have mentioned will help offset some of the price impact of Katrina. The WTI crude oil price averaged $65 per barrel in August. We anticipate that during the third quarter—going through December—an average of about—I am sorry, the third quarter, September, August, and July—will average about $65, and we expect that will actually come down a bit in the fourth quarter.

Under the medium recovery case, we expect gasoline prices to begin to ease off in the coming weeks and to average about $2.60 per gallon for the third quarter of 2005 and $2.40 for 2006. With normal weather, heating oil prices will still be much higher this year, averaging about 30 percent higher than last winter.

The natural gas market is likely to stay tight over the next couple of months as the heating season causes increased demand. In our medium recovery case, the Henry Hub natural gas spot price is expected to average about $11.50 per thousand cubic feet in the fourth quarter, but decline in 2006. Natural gas storage remains above the 5-year average, but higher prices are supported by high world oil prices, continued economic growth, and the effects of Hurricane Katrina.

Obviously, economic growth changes and weather deviations from normal could make this picture either better or worse, but the full report will be issued, as I mentioned, tomorrow, Mr. Chairman.

That concludes my statement and I would be happy to answer questions as you so deem necessary.

[The prepared statement of Mr. Caruso follows:]

PREPARED STATEMENT OF GUY F. CARUSO, ADMINISTRATOR, ENERGY INFORMATION ADMINISTRATION

Mr. Chairman and Members of the Committee: I appreciate the opportunity to appear before you today to discuss gasoline prices in the United States and recent developments in world oil markets.

The Energy Information Administration (EIA) is the independent statistical and analytical agency within the Department of Energy. We are charged with providing objective, timely, and relevant data, analysis, and projections for the Department of Energy, other government agencies, the U.S. Congress, and the public. We do not take positions on policy issues, but we do produce data and analysis reports that are meant to assist policymakers determine energy policy. Because the Department of Energy Organization Act gives EIA an element of independence with respect to the analyses that we conduct and publish, our views should not be construed as representing those of the Department of Energy or the Administration.

The devastation of Hurricane Katrina included offshore production, refineries, and loss of power to run pipelines and otherwise-working refineries. Damage assessments are ongoing but still incomplete. With the current tight global petroleum market, gasoline and distillate prices have risen sharply. How far and how long they remain elevated will depend on the severity of damage to petroleum facilities. Our understanding of the situation is rapidly evolving, and I will discuss this in my oral remarks. This written testimony focuses on events prior to the hurricane and challenges to gasoline markets following the recovery.

Even prior to Hurricane Katrina, petroleum prices, including gasoline, were setting new records as crude oil prices climbed. Gasoline prices as of August 29 were $2.61, which was 73 cents per gallon higher than a year ago, and, on average for the month, were 58 cents per gallon higher. Yesterday's prices, which will be released late this afternoon, will undoubtedly be much higher given the significant disruptions experienced due to Hurricane Katrina. A consumer who drives about 1,000 miles per month in a car that gets about 20 miles per gallon paid almost $30 more for that car's fuel during August this year than last August. Businesses and government budgets are also affected, as it costs more to fill their vehicle fleets.

The remainder of this testimony describes the fundamentals affecting petroleum prices, focusing on crude oil and gasoline. The underlying market situation today, even before Katrina, is one in which the spare crude oil production, refinery, and tanker capacities that existed for more than a decade prior to 2003 were reduced more quickly than EIA or other analysts anticipated. Little spare capacity, both upstream and downstream, not only supports higher prices, but they also add to price volatility, since any upset to supply/demand balances regionally cannot be resolved quickly. Restoring spare capacity will not be easy or rapid, because an increase in capacity takes time and investment, and growing demand will require capacity increases just to maintain current cushions, which suggests that high prices and potential volatility will be with us for some time.

Changes in the gasoline price at the pump are driven mainly by changes in crude oil prices and changes in wholesale gasoline prices. Crude oil cost represented nearly 60 percent of the gasoline price this summer and explains much of the variation in gasoline price. Crude oil prices are driven and set by international markets. The wholesale price of gasoline or its spot price is influenced first by crude oil but also by seasonal demand variations and by regional refinery and distribution supply and demand balances. Retail price changes generally lag behind wholesale price changes.

INTERNATIONAL CRUDE OIL MARKETS

Turning to crude oil prices first, Figure 1* shows that the current crude price increase began in 2004, when crude oil prices almost doubled from 2003 levels, rising from about $30 per barrel at the end of 2003 to peak at $56.37 on October 26, 2004. After falling back briefly, prices then continued to rise in 2005.

This is a significant change from what we experienced during much of the 1980s and 1990s. For most of the time since the early 1980s, we have lived in a market in which spare crude oil production, refining, and delivery system capacity existed. Crude oil suppliers outside of the Organization of Petroleum Exporting Countries (OPEC) produce at maximum rates (i.e., no surplus production capacity) for economic reasons, thus, the world's surplus crude oil production capacity resides in OPEC (mainly Saudi Arabia). The large growth in non-OPEC capacity and production in areas like the North Sea and Alaskan North Slope, along with softening de-

*Figures 1-4 have been retained in committee files.

mand from high prices, led to major cuts in OPEC production in the 1980s, creating large capacity surpluses. As demand grew through the 1990s, OPEC production increased, but new productive capacity was not added. Short-term imbalances between supply and demand occurred and we experienced some price swings, but those imbalances did not last long, as capacity generally existed to remedy the situation within a year.

During most of the 1990s, the West Texas Intermediate (WTI) crude oil price averaged close to $20 per barrel, but plunged to almost $10 per barrel in late 1998 as a result of the Asian financial crisis slowing demand growth, at the same time as extra supply from Iraq was entering the market for the first time since the gulf War. OPEC producers reacted by reducing production, and crude oil prices not only recovered, but increased to about $30 per barrel as demand grew in the face of OPEC production discipline.

Beginning in 2004, world oil demand growth accelerated significantly. For the 10 years prior to 2004, world oil demand growth had averaged 1.2 million barrels per day. But in 2004, world demand jumped by 2.6 million barrels per day, led by an unprecedented increase in demand from China of about 1 million barrels per day, compared to that country's increase of 0.4 million barrels from 2002 to 2003. This unusually rapid demand growth along with growth in the United States and the rest of the world, quickly used up much of OPEC's available surplus crude oil production capacity (Figure 2). As the world balance between supply and demand tightened considerably, ongoing supply uncertainties associated with Russia, Iraq, and Nigeria added to market concerns over the availability of crude oil, and prices rose. In 2005, Iran, Ecuador, and Venezuela added new uncertainties.

Global oil demand is expected to grow more slowly during 2005 and 2006, increasing by about 1.7 to 1.8 million barrels per day. China's demand is projected to increase by 0.5 million barrels per day and U.S. demand by 0.4 million barrels per day in 2006. Together, these two areas are projected to account for about 50 percent of the world's petroleum demand growth next year.

Crude oil production capacity increases are expected to keep up with these demand increases. Production increases from OPEC members are projected to represent almost one-third of the world production growth next year, and the former Soviet Union is expected to provide an additional 40 percent of the increase. Other areas such as the United States and other non-OPEC countries will provide additional production volumes. However, EIA is not projecting much increase in the surplus capacity cushion any time soon. Spare capacity is projected to remain at or below 1.2 million barrels per day in 2005.

We are facing tight crude oil markets for a number of years. EIA's *Short-Term Energy Outlook* is projecting WTI crude oil prices to remain above $55 through 2006. Even if demand softens or capacity is developed faster than anticipated, statements from OPEC members indicate an intention to keep prices from falling below $50 per barrel. While high relative to recent years, the price of crude oil, adjusted for inflation, is still below the levels seen in the early 1980s.

This tight balance results in different behavior and price implications than exhibited by the short-term market imbalances seen for the past 20 years. Instead of high prices being accompanied by low inventories and expectations for prices to be falling quickly in the future, today, in both crude oil and product markets, we see high prices with high inventories. Consumers exhibit similar behavior when they expect to experience higher prices in the near future. For example, consumers top off their gasoline tanks before a bad storm that could limit supplies and drive prices up in their region.

Prior to Hurricane Katrina, crude oil prices increased about 39 cents per gallon in summer 2005 over summer 2004, while gasoline prices only increased 34 cents per gallon (Figure 3). Although refinery and distribution and marketing contributions to gasoline prices were on average lower this summer on average than last summer, seasonal and local supply conditions affected these refinery contributions to price gasoline more strongly at the end of the summer, as described next.

U.S. PRODUCT MARKETS

Tightening in other parts of the supply chain beyond crude oil exacerbated product price increases in the United States and in the rest of the world. World refining capacity utilization increased from 85 percent to 87 percent from 2003 to 2004, driven in large part by increases in demand and utilization in areas like China and India. While adequate refining capacity is available to meet demand today, the refining system cannot shift quickly to meet unexpected needs. With refinery capacity running at high utilization levels in many parts of the world, including the United States, product balancing is frequently done through international trade, which

means products must travel long distances, stretching out the time it takes to resolve imbalances. This sluggish response puts additional pressure on product prices beyond the effect of high crude oil prices and can result in price spikes if a regional shortage evolves.

Product markets in the United States provide an example of various supply and demand balancing effects on price. In the United States, the spread between wholesale product prices and crude oil prices is often higher in spring and summer than during the rest of the year. Gasoline is the highest volume product refineries produce, and spring and summer are when gasoline demand is typically the highest. Gasoline spreads typically increase at this time of year, lifting overall refinery margins to their highest seasonal level. Distillate product (diesel and heating oil) spreads are usually lower in spring and summer, but they represent only about half as much volume as gasoline production.

U.S. petroleum product price spreads were very unusual in spring and summer 2005. Wholesale gasoline price spreads through July were slightly above the average for the past 5 years, but lower than spreads seen in 2004. Heating oil and diesel spreads were unprecedented, exceeding gasoline spreads from April through July. This unusual distillate market was seen throughout the world as distillate demand grew rapidly and ultra-low sulfur diesel demand in Europe pulled on tight supplies. Distillate prices remained above gasoline prices in Europe as well as Asia. This unusual distillate market ultimately affected gasoline.

Gasoline and distillate products are produced together at the same refineries. In the spring, the U.S. inventories for gasoline were high and prices were lower than for distillates. Distillate inventories were low, and the price incentives caused refiners to respond by producing unusually high yields of distillate, which resulted in reduced gasoline yields. The consequence was that U.S. distillate inventories rose from below normal to above normal, and gasoline inventories fell from above normal to normal into July.

In addition to the switch in yield patterns, unplanned refinery outages in July and August added to the tightening gasoline market. The high demand summer season is when U.S. refiners run close to or at full utilization rates, but outages always occur. The degree of outages varies, and preliminary data indicate a higher level than average occurred in July and August of this year. Had refineries been able to run at the same utilizations as last year, they would have run about 200 thousand barrels per day more crude oil, and the gasoline inventories in the July/August period would now be in the middle of their seasonal range, even with the higher-than-usual distillate yields.

The loss of supply and rapid decline in gasoline inventories starting in July resulted in an increase in gasoline price spreads (Figure 4). Higher gasoline spreads encourage more gasoline imports, and some refiners may have shifted yields to produce more gasoline, but with the peak summer driving season at an end, and winter heating needs ahead, we would expect a continued focus on maximizing production of distillates.

The high level of refinery outages in July and August increased pressure on gasoline prices, adding possibly 8 to 15 cents per gallon. Wholesale prices were poised to decline as some of the refinery problems were being resolved, but then the gulf coast was hit by Hurricane Katrina. Both spot market prices and near-month futures prices for gasoline and distillate products have risen dramatically in the days following the hurricane. Retail prices, which follow wholesale prices with a lag, are also rising. We expect that prices will begin to fall back as production and refining capacity are restored, although the pace of restoration is at present highly uncertain. While the gasoline price and supply situation will also be helped by the seasonal decline in U.S. gasoline demand after Labor Day, seasonal trends in crude oil markets will work in the opposite direction as world crude oil demand begins to increase in the fall with the onset of the Northern Hemisphere heating season.

Looking ahead to next summer, high crude oil prices are expected to continue to support high prices for all petroleum products, including gasoline. In addition, gasoline prices may see some additional pressure since the industry is moving quickly to eliminate methyl tertiary butyl ether (MTBE). While the removal of the oxygen content requirement in the recently-enacted Energy Policy Act of 2005, without some accompanying liability protection, may have hastened companies' decisions to remove MTBE, companies were moving in that direction anyway. Removing the oxygen content requirement will help consumers in the long run by providing more supply options for refiners and blenders. In the short run, however, the loss of gasoline production capability and some potential sources of gasoline imports that will occur when phasing out MTBE cannot be made up easily. The distribution system will also have to adjust, depending on how the industry shifts. The result is that we may

see increased volatility during the transition, as we have seen with other fuel specification transitions.

In addition to potential supply problems due to removal of MTBE, the United States will begin the ultra-low sulfur diesel program. In June 2006, suppliers will begin providing diesel fuel to the on-road market that contains less than 15 parts per million sulfur. Following a full recovery from Katrina, production capability to produce ultra-low sulfur diesel is felt to be adequate, but the industry is still struggling to determine how to deliver the product through its pipeline and storage tank system without contamination. Many issues remain to be resolved, implying this transition may also add pressure to the system, and can be expected to affect gasoline as well as distillate prices.

Next year is also the first year of the renewable fuel standard established under the new energy bill, and while meeting the total volumes of ethanol required under this standard should not be difficult, a credit trading program must be in place and operating smoothly to enable each gasoline supplier to meet its obligation. It is our understanding that Environmental Protection Agency (EPA) and the industry are working towards this goal, but little time exists for EPA and the industry to get everything prepared.

One more specification change slated for 2006 is the final phase of the Tier 2 low-sulfur gasoline program for refiners and importers, who will be providing gasoline with an average sulfur content of 30 parts per million or less, which is less than one-tenth the average sulfur content before the program began. With many refiners already producing gasoline at 30 parts per million, this last phase may be less challenging than the removal of MTBE and the start of ultra-low sulfur diesel. It is one more additional strain on the supply system, however. For example, if a refinery loses a desulfurization unit, the stricter specifications may result in no production of gasoline, whereas, in the past, the refinery might have been able to produce more volumes at higher sulfur levels for a longer time.

CONCLUSION

In conclusion, the world is experiencing an underlying change in petroleum markets with the development of tight supplies that will not likely change quickly. Hurricane Katrina has significantly exacerbated the near-term supply tightness, especially in the U.S. market for gasoline and diesel fuel. Even after production and refinery operations fully recover from the effects of Katrina, capacity increases will be needed throughout the supply chain to keep up with demand. Until the world returns to more spare capacity, particularly in crude oil supply, crude oil and petroleum product prices will remain high. Even if the balance should relax unexpectedly, OPEC members have expressed an interest to maintain prices well above their prior target range. While the system currently can meet demand, it cannot respond quickly to unexpected changes. We will see shifts in imbalances from one region of the world to another and from one product to another, as we saw with gasoline and distillate in the United States. The gasoline market in the United States is subject not only to the higher crude oil prices and generally tight market conditions, but also to volatility from continuing specification changes down the road, with next summer presenting a number of such specification challenges.

This completes my testimony, Mr. Chairman. I would be glad to respond to any questions you and the other Committee members may have.

The CHAIRMAN. Thank you very much, Mr. Caruso. We do not have the benefit of your full report, but you have given us a glimpse. What we have heard is good news and we appreciate that.

Mr. Overdahl.

STATEMENT OF JAMES A. OVERDAHL, CHIEF ECONOMIST, U.S. COMMODITY FUTURES TRADING COMMISSION

Mr. OVERDAHL. Mr. Chairman, Senator Bingaman, and members of the committee, I appear before you today in my capacity as chief economist of the Commodity Futures Trading Commission, or CFTC, the Federal Government regulator of futures markets in the United States. My purpose here this afternoon is to do two things. First, I will briefly describe the methods the CFTC uses to ensure market integrity. Second, I will address the role played by non-

commercial traders, commonly referred to as speculators, in energy markets under the CFTC's jurisdiction.

The CFTC's mission is to administer the Commodity Exchange Act, or CEA, the statute governing futures trading in the United States. At its core, the CEA is an anti-manipulation statute, meaning that the CFTC's primary mission is to detect and deter market manipulation. The CFTC relies on a program of market surveillance to ensure that markets under CFTC jurisdiction are operating in an open and competitive manner.

The heart of the CFTC's market surveillance program is its Large Trader Reporting System. This system captures position-level data for market participants meeting certain criteria. The Large Trader Reporting System is a powerful tool for detecting the types of concentrated and coordinated positions required by a trader or a group of traders attempting to manipulate the market.

In addition to regular market surveillance, the CFTC conducts an aggressive enforcement program that prosecutes and punishes those who break the rules. The punishment meted out as a result of enforcement proceedings deters would-be violators by sending a clear message that improper conduct will not be tolerated.

Data from the CFTC's Large Trader Reporting System can help answer questions about the role of noncommercial traders in U.S. energy futures markets. A current snapshot, current as of last Friday, of these positions shows that noncommercial traders, those who are commonly labeled as speculators, hold about 25 percent of the so-called long positions, that is the positions that will appreciate if gasoline futures prices rise. The remainder of open positions are held by commercial traders, that is producers, refiners, retailers, and those who are commonly referred to as hedgers, in other words those who are using futures markets to reduce their commercial risks.

The role of noncommercial traders in futures markets has been studied extensively, both by CFTC economists and others. One lesson from these studies is that noncommercial traders are necessary in order for futures markets to facilitate the needs of hedgers. In order for hedgers to reduce the risks they face in their day to day commercial activities, they need to trade with someone willing to accept the risk the hedger is trying to shed.

Therefore, both hedgers and speculators are necessary for a futures market to perform its socially beneficial role of transferring risk from those who do not want it to those who are willing to accept it for a price.

Noncommercial traders are a diverse group with diverse trading objectives. Managed money traders, including those called hedge funds, fall into the category of noncommercial traders because they do not have a commercial interest in the product upon which the futures contract is written. As a group, managed money traders represent a large portion of the noncommercial positions in unleaded gasoline futures markets.

The chart* that I have attached to my written testimony that you have before you provides a snapshot of participation by managed money traders in the October 2005 unleaded gasoline contract

*The chart has been retained in committee files.

traded at the New York Mercantile Exchange. I call your attention to the three vertical lines at the end of that chart. These are the positions immediately following Hurricane Katrina. It shows that as a group managed money traders reduced their positions, that is they were selling, as market prices, represented by the continuous line, were soaring. A conclusion that can be drawn from this chart is that managed money traders and speculators in general do not have perfect foresight.

A common speculative trading strategy is to simultaneously establish offsetting positions between crude oil and the products that are refined from crude oil, that is gasoline and heating oil. The trading strategy is referred to by traders as the crack spread, the name reflecting the cracking process of turning crude oil into refined products.

In the past week, prices for refined products have moved much higher on a percentage basis than prices for crude oil. A conclusion that can be drawn from this behavior is that the increases in gasoline prices following Hurricane Katrina were driven primarily by disruptions to the refining process and not as much from increases in the levels of crude oil prices.

An important benefit to society provided by futures markets is price discovery. Looking at the New York Mercantile Exchange futures prices over the next year, one can see that the market expects prices to fall back to levels close to where they were before Hurricane Katrina.

I look forward to your questions.

[The prepared statement of Mr. Overdahl follows:]

PREPARED STATEMENT OF JAMES A. OVERDAHL, CHIEF ECONOMIST, U.S. COMMODITY FUTURES TRADING COMMISSION

Mr. Chairman, Senator Bingaman, and Members of the Committee, I appear before you today in my capacity as Chief Economist of the Commodity Futures Trading Commission, the federal government regulator of futures and futures options markets in the United States. Energy contracts falling under the CFTC's jurisdiction include futures and related contracts on crude oil, natural gas, heating oil, propane, electricity, and unleaded gasoline. Trading in these contracts takes place predominately at the New York Mercantile Exchange (NYMEX).

In U.S. energy markets, recent experience has shown that even small disruptions in production, refining capacity, or transportation networks can significantly affect prices in the face of high demand for energy products. Therefore, given the scale of disruptions caused by Hurricane Katrina, it is not surprising that current prices for energy products have risen significantly. Consumers of energy products, who are paying these higher prices, deserve to know that energy prices are being set fairly in an open and competitive environment.

Futures markets serve energy producers and consumers in two important ways. First, these markets provide a means for market participants to manage risks arising from their normal day-to-day commercial activity. This risk-management activity is commonly referred to as "hedging." A significant majority of futures positions held over time are established by commercial users of energy products who hedge their exposure to price risks occurring in the underlying "cash" energy markets. Second, futures markets are a venue for price discovery. The prices discovered through the interaction of thousands of traders provide valuable information even to those who are.not direct participants in futures markets. These prices are widely distributed through newspapers and over the internet and television so that anyone, not just professional traders, can observe futures market prices and can use these prices as a reliable benchmark upon which to guide forward-looking decisions. The prices discovered in futures markets are also used as a benchmark in many types of privately-negotiated, over-the-counter contracts.

My purpose here today is to do two things. First, I will briefly describe the methods the CFTC uses to ensure market integrity. Second, I will address the role played

by non-commercial traders, commonly referred to as "speculators," in energy markets under the CFTC's jurisdiction.

Methods used by the CFTC to ensure that energy futures prices are determined in an open and competitive environment. The CFTC's mission is to administer the Commodity Exchange Act (CEA), the statute governing futures trading in the United States. Under the CEA, the CFTC is the exclusive regulator of futures and futures options markets in the United States. At its core, the CEA is an anti-manipulation statute, meaning that the CFTC's primary mission is to detect and deter market manipulation and other trading abuses. The CFTC relies on a program of market surveillance to ensure that markets under CFTC jurisdiction are operating in an open and competitive manner, free of manipulative influences or other sources of price distortions.

The heart of the CFTC's market surveillance program is its Large Trader Reporting System. This system captures end-of-day position-level data for market participants meeting certain criteria. Positions captured in the Large Trader Reporting System make up 70 to 90 percent of all positions in a particular market. The Large Trader Reporting System is a powerful tool for detecting the types of concentrated and coordinated positions required by a trader or group of traders attempting to manipulate the market.

In addition to regular market surveillance, the CFTC conducts an aggressive enforcement program that prosecutes and punishes those who break the rules. Nearly one-third of the CFTC's resources are devoted to its enforcement program. The punishment meted out as the result of enforcement proceedings deters would-be violators by sending a certain and clear message that improper conduct will be detected and will not be tolerated.

In addition to the efforts of the CFTC, futures exchanges, such as the NYMEX, also conduct regular surveillance of their markets under their self-regulatory obligations as defined in the Commodity Exchange Act. Under the CEA, futures exchanges are guided by a set of eighteen core principles to ensure that futures trading takes place in an open and competitive environment. Core principles 3, 4, and 5 speak directly to the duty of futures exchanges to adopt internal rules and policies and to design futures contracts that reduce the threat of market manipulation and other sources of price distortions. In addition, Core principle 9 addresses the duty of futures exchanges to provide a competitive, open, and efficient market for executing futures transactions. The CFTC oversees compliance with the core principles by conducting periodic rule enforcement reviews to ensure that the exchanges are enforcing the rules on their books. Aside from their assigned self-regulatory obligations to the public, futures exchanges also have private business reasons to make sure that the markets they host operate in an environment free of manipulation. Even the perception of manipulation is one of the worst fates that can befall a futures market.

The role of non-commercial traders in energy markets under the CFTC's jurisdiction. Data from the CFTC's Large Trader Reporting System can help answer questions about the role of non-commercial traders in U.S. energy futures markets. For the unleaded gasoline futures markets, approximately 80 percent of all open futures positions meet the size threshold for inclusion in the CFTC's Large Trader Reporting System. A current snapshot of these reportable positions shows that non-commercial traders, those who are commonly labeled as speculators because they do not have an underlying commercial purpose for holding a futures position, hold about 25 percent of the "long" positions, that is, positions that will appreciate if gasoline futures prices rise. This current percentage is slightly lower than the average percentage for similar positions over the past two years. The remainder of open positions, which represent a significant majority of positions, are held by commercial traders, that is, producers, refiners, and retailers, who are commonly viewed as hedgers. The CFTC provides on its web site (*www.cftc.gov*) a weekly report, called the Commitments of Traders Report, showing the aggregate positions of commercial and non-commercial traders based on the CFTC's Large Trader Reporting System.

The role of non-commercial traders in futures markets has been studied extensively, both by CFTC economists and others. One can find a long list of academic studies on the role played by non-commercial traders in affecting a variety of market characteristics across many different markets. One lesson from these studies is that non-commercial traders are necessary in order for futures markets to facilitate the needs of hedgers. In order for hedgers to reduce the risk they face in their day-to-day commercial activities, they need to trade with someone willing to accept the risk the hedger is trying to shed. Non-commercial traders take on this risk for a price. Non-commercial traders also add to overall trading volume which contributes to the formation of liquid and well-functioning markets. Futures exchanges know from experience that the markets they host cannot exist with hedgers alone. Both

hedgers and speculators are necessary for a futures market to perform its socially beneficial role of transferring risk from those who do not want it to those who are willing to accept it for a price.

Non-commercial traders are a diverse group with diverse trading objectives. Managed money traders, including those called hedge funds, fall into the category of non-commercial traders because they do not have a commercial interest in the product upon which the futures contract is written. In the futures market for unleaded gasoline, managed money traders represent a sizable portion of the category of large non-commercial traders captured in the CFTC's Large Trader Reporting System. Like other non-commercials, the trading strategies of managed money traders can vary greatly from one trader to another. On average, managed money traders make up approximately 75 percent of the non-commercial positions on the "long" side of the market, that is, the side of the market that would benefit from increases in unleaded gasoline futures prices.

The attached chart provides a snapshot of participation by managed money traders in the October 2005 unleaded gasoline contract traded at the NYMEX. I call your attention to the last three vertical columns representing the positions of managed money traders in the days immediately following Hurricane Katrina. As a group, managed money traders reduced their positions, that is, they were selling, as market prices, represented by the continuous line, were soaring. A conclusion that can be drawn from this chart is that managed money traders, and speculators in general, do not have perfect foresight.

Managed money traders also represent a significant share of traders speculating on prices across related markets. A common trading strategy is to simultaneously establish offsetting positions between crude oil and the products that are refined from crude oil, that is, gasoline and heating oil. This trading strategy is referred to by traders as the "crack spread." In the past week, prices for refined products have moved much higher, on a percentage basis, than prices for crude oil. A conclusion that can be drawn from the behavior of the crack spread is that the increase in gasoline prices following Hurricane Katrina are being driven primarily by disruptions to the refining process, and not as much from increases in the level of crude oil prices.

As I mentioned earlier, an important benefit to society provided by futures markets is price discovery. Looking at NYMEX futures prices for wholesale unleaded gasoline over the next year, one can see that the market expects prices in the future to fall back to levels close to where they were before Hurricane Katrina. Overall however, the futures market reflects expectations that gasoline prices a year from now will be significantly higher than prices a year ago. Of course, such expectations depend on many variables, including how quickly refinery facilities and transportation networks return to normal operations. I look forward to your questions.

The CHAIRMAN. Thank you very much.

Now, did you have a more detailed statement? Did you have a more detailed statement?

Mr. OVERDAHL. Yes.

The CHAIRMAN. It will be made a part of the record, as you know.

Now, we will follow the procedure that I announced, and I think under that, Senator Burns, you are first. We will keep a clock on all of us, but I want to be as generous as I can, but you know there are plenty Senators, so let us stick to our time.

Senator Burns.

STATEMENT OF HON. CONRAD BURNS, U.S. SENATOR FROM MONTANA

Senator BURNS. Thank you, Mr. Chairman. Thank you for this hearing. I think we have all got concerns. We had concerns about this even before the tragedy in the gulf, because if you come out of agriculture not only do high oil prices and high gas prices drive the prices of fertilizer and everything that we use on the farm, our petrochemicals, our transportation to put a crop in—and of course, when you live in Montana you are at the end of the line. In agriculture, you sell wholesale and buy retail and pay the freight both ways. So it really hits us.

Mr. Overdahl, of course I have been around traders just about all my life as far as futures are concerned, and of course you buy on facts and sell on rumor if you are a speculator. Give me some idea on the percentage, the difference between—how many speculators do you have in the market as a rule and how many people really use the market as a hedge in either selling their product or hedging the cost of the product?

Mr. OVERDAHL. One way to answer that question is to look at the commitments of traders report that the CFTC publishes on a weekly basis. This is an aggregate summary of all traders across—it comes from our Large Trader Reporting System, but it provides the aggregate numbers based from those reports.

From that you will see a summary figure of commercial traders, in other words those who are actually in the market as refiners or producers or users of commercial—have commercial interests in the product—versus the noncommercials, that includes perhaps hedge funds and others who do not have a direct link to the underlying cash market. From that, it varies across markets and it varies in multiple dimensions.

For unleaded gasoline, we break it out between long positions and short positions. About 25 percent of the long positions held in the unleaded gasoline futures markets are held by noncommercial traders. However, they are also, some of them, on the short side. So in net they have been long most recently, but that is a rough idea.

In other markets, crude oil and natural gas, you see a different pattern. You see the noncommercial traders, so-called speculators, on both sides of the market, on the long side and the short market. But importantly, you see them also playing a big role in spreading, spread trades across related markets and across related contracts within the same complex. That is a bigger role in those markets and differs from what we see in the unleaded gasoline futures market.

Senator BURNS. I assume then those in a long position, if I was a speculator in a long position, there is a time when you have got to—you do not want to take delivery on the product, but sometimes they do take delivery?

Mr. OVERDAHL. In the futures markets very few actually take delivery. It is much less, on average much less than 1 percent of all open positions are settled by physical delivery. Most contracts are settled by offset, and that is because these are primarily risk management contracts used by hedgers. They have their own commercial day to day risks, but they can manage those risks by opening and offsetting positions in the futures markets.

Senator BURNS. Do you get the feeling that it could be the tail wagging the dog every now and again?

Mr. OVERDAHL. Well, that is always the question. I think that what we see—it is a balancing act for the exchanges. They need the speculators in there to absorb the risks that hedgers are trying to unload. One way they handle that is through position limits to make sure that not any one trader or any single position can dominate, and so that you cannot have that type of influence.

Senator BURNS. Ms. Watson, with the storm down there I have just got a couple questions for you. You are one of the parts of gov-

ernment that really makes money for us, the Minerals Management Service. Tell me about the people that you have in the gulf? Are all of them safe, and how will you operate now that you have been moved out of most of your facilities down there?

Ms. WATSON. Well, thank you for asking. Right now, unfortunately, we are still trying to locate 67 of our people. We had about 100 people we were not able to locate immediately after the hurricane, but they have been reporting in. We have some confidence and hope that they have not been injured or killed in the hurricane, they have just not called in. We are getting calls from them, but right now we have not been able to account for 67 folks that work for us at MMS.

As I said, we set up a COOP office in Houston. We have 100 people there right now working and doing their duties. We have put other folks on administrative leave. About 25 percent of our employees have lost their homes in the hurricane. Many of them lived in the New Orleans area. We are assessing how many more people we need to move to Houston and for how long as we work with the local authorities in Metairie, Louisiana, where our office was located, to determine when it will be safe for them to return. It is day by day on that score.

Senator BURNS. Well, good luck to you, and I know you have got a challenge down there. If we can be of any assistance, let us know.

Ms. WATSON. Thank you.

Senator BURNS. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Does that mean they could be dead?

Ms. WATSON. Well, we hope that is not the case. What I hear from the people at MMS is they feel optimistic that that is not the case. The office is located outside of the immediate impact of the storm. It was in an area that had to be evacuated and it is an area that is kind of dicey right now. It is a bit of a lawless area. They do not allow anybody in there.

But we are getting calls from people coming in and probably they are tending to their families first and calling their employer somewhere down the road. So that is what we are hoping, and we are trying to find out where they are.

The CHAIRMAN. Senator Bingaman.

Senator BINGAMAN. Thank you very much.

Mr. Caruso, let me just ask a couple of questions about your information-gathering. The main focus of this hearing is the adequacy and reliability of our refining capacity. What information does your agency require refiners to provide to you with regard to their current activities?

Mr. CARUSO. Thank you, Senator. Each week we receive from all refiners, a sample—we sample about 92 percent of the refining capacity—on what their production, byproduct, and their output is. Then we also collect more detailed information on a monthly basis. But we do have weekly reports from most refiners.

Senator BINGAMAN. Do they give you weekly reports on the extent of their output? One of the statements in your testimony concerned me, where you talked about how the outages of refining capacity in July and August had caused something in the range of 15 or 16 percent increase in the price of gas. But you knew about

that outage before it happened or at the time it happened, or at what point?

Mr. CARUSO. In terms of outages, we get that information from commercial services. We do not get outage reports per se. We get weekly reports on output, and of course if a refinery is down for maintenance or what have you that would be reflected in the weekly reporting.

One clarification on the increase in prices. It was outages of refiners were one of a number of factors, including of course strong demand and other factors on the world market as well.

Senator BINGAMAN. It strikes me the analogy that comes to mind is when we were talking about electricity in the hearings we had on the energy bill, one of the concerns was that there did not seem to be real good visibility into outages and decisions by power plant operators to shut the operation down for maintenance or whatever.

I am sort of gathering that we have a similar problem in this area. We do not have good visibility into the decisions to shut down refineries. Am I wrong about that? Do you feel that you are on top of that situation?

Mr. CARUSO. Well, as I mentioned, we do not get specific reporting on that factor. We only get that through the commercial trade publications, which on a monthly basis do report on which refineries have scheduled maintenance and scheduled outages.

Senator BINGAMAN. But there is nobody trying to coordinate the scheduled maintenance among refineries?

Mr. CARUSO. That is correct, sir.

Senator BINGAMAN. Do you think that might be a useful thing to have somewhere in the Federal Government, someone who is trying to encourage that a whole group of refineries do not decide to do their maintenance at the same time?

Mr. CARUSO. It is certainly worth considering, Senator.

Senator BINGAMAN. You have another part in your testimony that concerned me a little bit, where you talk about this new requirement that we have put into the energy bill on renewable fuel standard. You say next year is the first year of the renewable fuel standard established in the energy bill. "While meeting the total volumes of ethanol required under this standard should not be difficult, a credit trading system must be in place and operating smoothly to enable each gasoline supplier to meet its obligation. It is our understanding that EPA and the industry are working toward this goal, but little time exists for them to get it all prepared."

Could you elaborate on that problem? It seems to me that you are subtly trying to flag a problem for us that we need to know about.

Mr. CARUSO. I believe that refers to the phasing out of the MTBE.

Senator BINGAMAN. No, I do not believe so. I think that that is separate, you deal with that separately in the previous paragraph. This is on paragraph 9 of your testimony. I think that the need to establish this credit trading program with relation to renewable fuels is a separate requirement which EPA needs to get up and running. I am just wondering if we have got the various parts of the Government talking to each other to see if this is getting done

and can get done on time or if this is a problem that we are going to hear about later.

Mr. CARUSO. Well, I would be very happy to provide that information for you for the record, Senator.

[The information referred to follows:]

The concern we were addressing was the overall assessment of the future petroleum product supply situation in the aftermath of Hurricanes Katrina and Rita, and moving forward into next year. In 2006, the refining industry will be faced with implementation of two clean fuels programs and the requirements of EPACT 2005. These requirements include the final phase of the Tier 2 gasoline sulfur program, the introduction of ultra-low sulfur diesel. the possible loss of MTBE as a gasoline blending component, and implementation of a more aggressive mandate for renewable fuels. We believe the industry was on track to fulfill their commitments with these programs.

However, the tight supply situation for petroleum products, the significant loss of supplies and loss of time to perform maintenance and system upgrades as a result of the two hurricanes leaves the industry little room for error or unexpected glitches in fulfilling these commitments. It is our understanding that EPA is working diligently with other government agencies and industry to ensure that the current implementation schedule for clean fuels is maintained and that EPACT 2005 requirements are implemented in such fashion that consumer demand will he fully met.

Senator BINGAMAN. Okay.

I think Mr. Slaughter in his testimony has an attachment number 4 which gives a fuels time line listing all of the requirements EPA and others and ourselves through the energy bill are imposing on those involved with refining. I would appreciate if you would look at that and see if we have got—if everyone is talking to everybody about the doability of these various efforts.

Mr. CARUSO. I will, Senator.

[The information referred to follows:]

We believe industry is working with both Federal and State governments to ensure that all are on track to fulfill commitments with the programs listed in Fuels Timeline presented by Mr. Slaughter during his testimony. It is our understanding that EPA is working diligently with other government agencies and industry to ensure that the current implementation schedule for clean fuels is maintained and that EPACT 2005 requirements are implemented so that consumer demand is met. Note, however, EPACT 2005 imposes several new fuels-related requirements on DOE, and in some cases authorizes funding, but Congress has not appropriated the funding that would be required to implement those requirements.

Senator BINGAMAN. Thank you.

I will stop with that, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Bingaman.

Now we are going to on our side go to Senator Craig.

STATEMENT OF HON. LARRY E. CRAIG, U.S. SENATOR FROM IDAHO

Senator CRAIG. Mr. Chairman, thank you very much. To our witnesses, thank you.

Let me say at the outset that I think this committee over the course of the last year can be very proud of its work product. You have mentioned it in your opening statement, Mr. Chairman, but in a very bipartisan way we have produced a very positive energy product on July 29, 2005. The great problem is that we did not produce it on July 29, 2000. But this committee at that time could not come together. The marketplace brought us together finally. We became less selective on what we were attempting to do for our individual political interests and I think we finally produced a comprehensive and now very timely energy policy for our country.

Having said that, we will work our way through the current situation. But I have a couple of observations. I find out there are no hearings scheduled on the 25 to 150 percent increase in the cost of housing over the last 2 years across the American real estate market. For some reason, Congress simply is not interested in the cost of housing. That is the marketplace at work and we can choose it if we wish to or we, hopefully, can sell our home at the right time and gouge like everybody else might be gouging. But then again, that is the market and we are going to leave it alone.

But today, we are extremely concerned about the run-up in the cost of energy. I do not disassociate myself with the comments of our chairman and the ranking member. What we are doing here today is legitimate and responsible, and if gouging is occurring then we ought to be at it and understand why it is, and I would hope the responsible corporate citizens of this country would not play that game and take advantage of difficult situations.

But the facts are out there as it relates to the supply of gas, the demand of gas, imported gas. All of those figures this committee, like no other in this Congress, is aware of, and we know of the tight supplies you are all talking about.

Mr. Overdahl, you did mention I believe one thing, either you or Mr. Caruso, the price of refined moved faster than the price of crude. Which one made that statement as it relates to the last week?

Mr. OVERDAHL. I did, yes.

Senator CRAIG. How much faster in that relationship has it moved, let us say in that week's period of time, than over the last year as crude moved up in the market?

Mr. OVERDAHL. Well, to give you a specific answer, I can provide that after the hearing when I can go back to my office and check that. But in general, just making an observation on the spreads themselves, I would say this is a very unusual situation following Katrina. You have not seen a spike in that spread between refined and crude oil products like that any time over the last couple of years.

Senator CRAIG. And you cannot say how much greater it was than the normal patterning of price at the pump versus crude in the world market?

Mr. OVERDAHL. Specifically, no.

Senator CRAIG. Is that gouging or is that speculation?

Mr. OVERDAHL. Well, it is a reflection, I suppose, of—because the difference has to do with refined product versus the input into making the refined product. It has something to do with disruptions in the refining process.

Senator CRAIG. So the spike, you are not willing to label it? You are willing to define it, but you are not willing to label it?

Mr. OVERDAHL. It is what we observe in the market, yes.

Senator CRAIG. Okay.

Rebecca, could we go back to your first chart. I would like to have you turn it. We have seen it, but the audience has not seen it. On the eastern side of the path of Katrina, why is there—why are there no wells in there? Is there no oil there?

Ms. WATSON. There are resources there, oil and gas, but——

Senator CRAIG. But?

Ms. WATSON. That is an area that is subject to a congressional and presidential moratoria.

Senator CRAIG. In other words, Congress did it to the American consumer by denying the right to explore, develop, and produce for the market oil that could have come out of that area?

Ms. WATSON. That is a correct statement, yes.

Senator CRAIG. How many other coastlines of America look like that, where there are known oil reserves?

Ms. WATSON. You are looking at the only part of the American coastline where we can produce, and that is the central and western part of the Outer Continental Shelf. The entire rest of the lower 48 is under a congressional and presidential moratoria, and then around Alaska there are portions that are also under some moratoria. But as a rule, the entire coastline of the United States of America is under a moratoria but for the central and western part of the gulf, which is depicted on this map.

Senator CRAIG. Is it possible the anger of the American consumer is misdirected at those who produce it instead of those who deny production? I do not want you to answer that.

One last question. What is the general answer, Mr. Caruso, you can give as to why our country once had 300-plus refineries and today only has 100-plus refineries in the market?

Mr. CARUSO. The main reason is that the refining sector of the oil business was a very poor investment during the 1980's and most of the 1990's.

Senator CRAIG. Why was it a poor investment?

Mr. CARUSO. Because prices were relatively low and profitability was very low in that particular sector of the industry for a period of——

Senator CRAIG. Because the cost of sustaining or building a refinery was higher in relation to yield?

Mr. CARUSO. Yes.

Senator CRAIG. Or return?

Mr. CARUSO. Yes, sir. Return on investment was much lower than the average manufacturing part of industry.

Senator CRAIG. Do you know if it is true that EPA requires tank farms to keep levels of gas at a certain level in the tank for purposes of fumes that might be emitted? There is a report today out of Oklahoma that some companies were willing to put more into the pipe but were denied that by EPA. Do you know if there are restrictions as to volumes and capacities that are needed to be sustained in tank farms?

Mr. CARUSO. I am not familiar with that restriction, Senator, but would be happy to check on that when I——

Senator CRAIG. Would you do that for this committee? I think that is important to understand, that if we had reserve capacity out there in different storage facilities around the country but we were denied the right to enter it into the pipeline because of environmental concerns or certain Federal standards?

Mr. CARUSO. I will.

[The information referred to follows:]

EIA understands that the issue referred to by the Senator concerns large aboveground storage tanks with internal floating roofs. The floating roof is designed to keep vapors from accumulating in air space above the liquid in the tank as the tank is drained, then being emitted into the atmosphere when the tank is refilled. In nor-

mal practice, and as required by law, the tank is not emptied below the minimum level at which the roof floats on the surface of the liquid, rather than resting on its leg supports. During the period of supply tightness following Hurricane Katrina, we understand that the American Petroleum Institute asked the Environmental Protection Agency (EPA) for an interpretation of the applicable regulations, specifically as to whether terminal tanks could be drained further during this unusual period, so as to provide additional supply. We do not know what action was taken on this request by EPA, and respectfully suggest that further inquiries on this subject, if any, be directed to that agency.

Senator CRAIG. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

On the Democratic side, I understand that Senator Wyden was next.

STATEMENT OF HON. RON WYDEN, U.S. SENATOR FROM OREGON

Senator WYDEN. Thank you, Mr. Chairman. Mr. Chairman and colleagues, I may be in the minority again, but I think a major factor in these skyrocketing prices is that the Government is not in the consumer protection business any more. The Federal Trade Commission, we have not heard word one from them. The Justice Department, the same thing. The Energy Department, the same thing.

I want to read you, Dr. Overdahl, a quote that appeared in the Dow Jones Newswire a couple of days ago, talking about oil commodity traders, the people that you have jurisdiction over at your agency. I want your reaction to one comment several days after Katrina—this comes from a Mr. Addison Armstrong, manager of exchange-traded markets, TPS Energy Futures, LLC, in Stamford, Connecticut, and he said, and I quote: "There are traders who made so much money this week they won't have to punch a ticket for the rest of the year."

Now, this is the New York Mercantile Exchange. This is talking about people trading in the days after Katrina. What happens in an instance like that? I assume you get the same kind of clippings that I do. This was sent to me from folks in Oregon. What happens in an instance like that? How do you protect consumers when you have an allegation like that?

Mr. OVERDAHL. I have read that quote as well. I have also read last Friday's *Wall Street Journal*, which had an article about the number of people who missed participating in that.

Senator WYDEN. So there should have been more people doing that kind of thing?

Mr. OVERDAHL. No, what I am saying is—no, no. What I am saying is that there are speculators on both sides of the market. One of the things that we observed from our Large Trader Reporting System in the days immediately following Katrina is that a lot of these people were actually selling their positions. Now, granted a number of them made money, and that is how they do their job, that they earn a return from providing this service.

Senator WYDEN. So it sounds okay to you from what you are saying to me? Just part of the market, I take it?

Mr. OVERDAHL. It is part of—it is a balancing act always with these markets. You need the participation of these traders to ab-

sorb risk. And the exchanges do limit their participation, but they also need those traders to make these markets work.

Senator WYDEN. Do you contact this person to try to investigate if maybe this was not just garden variety markets 101?

Mr. OVERDAHL. I am not familiar—I am not sure what we have done with respect to that particular instance.

Senator WYDEN. Because it seems to me this cries out exactly for the kind of thing you ought to follow up on. This guy is saying people are making out so well they are not going to have to do anything else for the rest of the year. I am going to move on, but at a minimum it seems to me you ought to be following this kind of thing up.

The second area I want to ask you about is, I guess we read the *Wall Street Journal* a different way. I heard you say in response, I believe it was to a question asked by Senator Bingaman on the differential with respect to unleaded gasoline and crude oil, that you did not see any big dramatic change. That is not what is being reported.

The *Wall Street Journal* published a chart showing how the price of unleaded gas in the United States had gone up 132 percent in the past year, while the price of crude oil had gone up 64 percent. So that makes it clear that the oil companies are not simply passing on higher crude oil costs, but they are also adding substantial increases to the cost of gas above and beyond the higher crude costs.

Now, that looks to me like price-gouging. I think again it is the kind of thing that an agency with a consumer protection portfolio, especially given the comments you made earlier, which seemed to me to be quite different than what I just read you, it seems to me you ought to be following up on.

Mr. OVERDAHL. Well, with respect to the spread between the refined products and the crude, that is in the futures market itself, not in the cash market. My comments were comparing the immediate aftermath of Katrina to what we have observed more generally. Certainly the prices of refined product have gone up, judging from that spread.

But one of the things I can assure people is that in the futures market that there are thousands of traders in these markets, that there is no single trader that can have undue influence on those prices, and that it is among the most competitive markets that you can observe, where every trader—they are sophisticated traders, trying to obtain the best price for themselves or for their customers. So it is a competitive market.

Senator WYDEN. Mr. Caruso, I do not know how many times I have heard folks from your agency say that the west coast is an isolated gasoline market. That has been the agency's position again and again. But even though the west coast gets no gas from the gulf and west coast refineries were not affected, oil companies raised prices on the west coast of the United States immediately after Hurricane Katrina.

So if the west coast is geographically isolated from the gulf, as your agency has been maintaining, how can the oil industry legitimately justify these overnight price increases for west coast dealers and consumers that followed Katrina?

Mr. CARUSO. Well, the market is fungible.

Senator WYDEN. That is not what you all said. You said we were isolated.

Mr. CARUSO. That is correct.

Senator WYDEN. Do you want me to give you the quotes from your people over the years?

Mr. CARUSO. No.

Senator WYDEN. You did not say the markets were fungible. You said we were isolated.

Mr. CARUSO. I think both are true. The west coast is isolated in the sense that there is not enough refinery capacity making the particular California-grade gasoline to serve that market, so your State and Washington as well traditionally have higher prices than the national average for that reason and, in the case of California, due to higher environmental standards, and, in some cases, taxes.

Now, once the price of crude oil and other products goes up on the NYMEX, it feeds through the whole system without—there are no price controls, as you know. So that is largely the reason.

Just as a small matter, factual matter, for this week's AAA retail prices, for the first time in a long time, the price of gasoline in California is about the same as the national average. Normally it is between 15 and 25 cents higher. So there is usually some differential.

The CHAIRMAN. Your time has expired. The Senator's time has expired. Thank you very much, Senator.

Now we are going to come back to our side.

Senator Alexander.

STATEMENT OF HON. LAMAR ALEXANDER, U.S. SENATOR FROM TENNESSEE

Senator ALEXANDER. Thank you, Mr. Chairman. Thank you for the hearing.

All of us, like most Americans, wish we could do more to help those in the gulf coast. I for one am particularly grateful to the hard work of utility crews who worked last weekend to keep Tennessee and other parts of the Southeast from being without gasoline because of the failure of electricity.

I want to spend my time asking a few questions, particularly, Mr. Caruso and Ms. Watson, about what Chairman Domenici called, I believe he said, the forgotten commodity, natural gas. We talk a lot about gasoline and it is a big problem, but I would suggest—and Senator Johnson and I have done some work on this—that it is not a bigger problem than the price of natural gas.

You said, Mr. Caruso, the spot market today is $11.50 per unit. What was it 5 years ago, 4 or 5 years ago, in the United States?

Mr. CARUSO. Just a little over $2.

Senator ALEXANDER. Just a little over $2.

Mr. CARUSO. Yes, sir.

Senator ALEXANDER. And at that time were we the lowest priced natural gas in the industrial world?

Mr. CARUSO. In the commercial world.

Senator ALEXANDER. And today are we the highest priced natural gas in the commercial world?

Mr. CARUSO. I think so, yes, sir.

Senator ALEXANDER. Just 2 weeks ago I was at a roundtable at Tennessee Eastman Chemical Company with 10,000 employees. 40 percent of their cost is natural gas for raw material, and the price was $9.50 2½ weeks ago. In our bill, unlike gasoline, which we know is going to stay high, not as high as it is today, we hope, we know what to do about natural gas.

I would like to ask you and maybe you could give me just a few broad estimates of which of these steps that we have taken, made an effort to change, would actually make a difference in bringing down the price, first stabilizing and then bringing down the price, of natural gas. For example, what percent of new power plants in America have been built with natural gas during the 1990's roughly?

Mr. CARUSO. I know from the latter part of the 1990's until right now it has been in the upper 90's, 98 percent or so.

Senator ALEXANDER. Almost all. What effect has that had on the price of natural gas?

Mr. CARUSO. It has certainly been a major contributor to the upward pressure on price.

Senator ALEXANDER. How many nuclear power plants have been built in the United States since the 1970's?

Mr. CARUSO. The last one I believe was actually ordered in 1978.

Senator ALEXANDER. So the answer would be none since the 1970's?

Mr. CARUSO. Not since the last part——

Senator ALEXANDER. And if instead of natural gas power plants we had had nuclear power plants, what would the effect be on the price of natural gas?

Mr. CARUSO. It certainly would—we would have substantially less demand for natural gas today than in the case you mentioned.

Senator ALEXANDER. Well, the energy bill, which we worked together in a bipartisan way to enact just a few weeks ago, encourages the use of nuclear power and coal gasification, so we could have less natural gas.

Ms. Watson, there is something called Lease 181 down in the Gulf of Mexico, is that correct?

Ms. WATSON. Yes.

Senator ALEXANDER. Does the President have the authority today to draw a line between Florida and Alabama defining what is Florida and what is Alabama on Lease 181?

Ms. WATSON. Yes, the President has had that authority for quite some time, I think about 50 years.

Senator ALEXANDER. And if the President were to draw that line, about how much natural gas reserves are estimated to be available on the Alabama side of Lease 181?

Ms. WATSON. I would have to get back to you with that answer.

Senator ALEXANDER. Is it a substantial amount of natural gas?

Ms. WATSON. It is a substantial amount of natural gas in Lease 181.

Senator ALEXANDER. So all the President would have to do is draw the line and we could start leasing. Is there anything to stop us if he draws the line from leasing the area that is in offshore Alabama to produce more natural gas?

Ms. WATSON. I really do not think drawing the line is the predicate, but I think there is a lot of natural gas in the Lease Sale 181 area. President Clinton thought this was an area that should be developed for the benefit of the United States and I think we think that the Lease Sale 181 area has a lot of resources that would benefit the American public.

Senator ALEXANDER. Well, if you have the authority to draw the line, then why do you not draw the line so we can drill the gas and bring down the price?

Ms. WATSON. I think we have a 5-year plan that we have right now out for public comment. We have asked for comment on all the areas that are under moratorium, and we are working with States to take a look at that issue that you have raised, as well as others, on how we can bring more resources to the marketplace.

Senator ALEXANDER. Right, but this is unlike drilling off the coast of Virginia, where the legislature has said it would like to consider drilling. There we do have a moratorium. If you draw the line there is no moratorium in Alabama; am I not correct?

Ms. WATSON. I do not think that is quite accurate. I do not think the line is the predicate to that. But I take your point.

Senator ALEXANDER. Would the opportunity to give States, such as Virginia indicated it might want to do, the option to drill for gas and oil, but let us say gas, offshore, have the potential to substantially reduce the price of natural gas in the United States? Are there much reserves out there, based on what we know?

Ms. WATSON. We really do not know how much reserves are off the coast of Virginia. That has been one of the impacts of the moratoria, is we have not been able to go out there. One of the provisions in the energy bill that was just passed was a direction to go out and perform an inventory in the moratoria areas to find out what is out there.

Senator ALEXANDER. I am about out of time. But we do know there are substantial gas reserves offshore that we are not allowed——

Ms. WATSON. Based on the information we have now, we do know there are substantial resources off our coasts.

Senator ALEXANDER. And it would be possible to drill 20 miles out, so no one could see the rigs, is that not possible to do?

Ms. WATSON. Yes, you cannot see a rig 12 miles offshore.

Senator ALEXANDER. Okay.

One last question. The energy bill provided new authority to speed up bringing imported liquified natural gas from overseas. Could you comment on whether that will significantly begin to stabilize and reduce the price of natural gas and when that might happen?

Ms. WATSON. Yes, I think Chairman Greenspan and many others have testified that import of liquified natural gas will have a beneficial effect on the price of natural gas. MMS has a small role but an important role to play in the construction of liquified natural gas terminals, and I know there are many requests pending right now for the construction of these terminals, and we are working with the Coast Guard to get those constructed as soon as we can. So we are hard at work at bringing more terminals on and that is something we need to do.

Senator ALEXANDER. Thank you very much.
Thank you, Mr. Chairman.
Senator CRAIG [presiding]. Thank you, Senator.
Senator Feinstein.

STATEMENT OF HON. DIANNE FEINSTEIN, U.S. SENATOR FROM CALIFORNIA

Senator FEINSTEIN. Thank you very much, Mr. Chairman.

In mid-August I wrote a letter to the seven oil companies that serve California urging voluntary price restraint. I wrote it to the CEOs of those seven companies. I have not had a response. I looked at the second quarter earnings of those companies and I was very much struck by the enormity of them. I now see the profits of the major companies in the first half of 2005 are on track to being the highest in 5 years.

I find this hard to reconcile when everyone knows that the consumer is pushed to the brink. I come from a State with long commutes with no alternatives, and I look at some of these profits for the first half of 2005—ExxonMobil, $31 billion, up from $15 billion in 2001; ConocoPhillips, $12.1 billion; BP, $20.9 billion; Shell, $20.3 billion.

According to Mr. Caruso's agency, refiners' margins have grown to 40.8 cents per gallon of regular unleaded in 2004, the highest level over the past 17 years. Then if you read Credit Suisse First Boston, they have just raised the profit margin estimates for U.S. gulf refineries by 67 percent to $15 per barrel from $9 per barrel.

We see the price of oil is going to bankrupt airlines, destroy major legacy carriers, and it is just a question of time before it begins to destroy the economy. One of the things I learned in the energy crisis in California is that there is very little consumer loyalty, there is very little response to consumers' needs. I find it inordinately puzzling why there is no voluntary price restraint.

President Bush before the Gulf War—this is Bush I—urged voluntary restraint. I would hope that President Bush would urge voluntary price restraint, and I would hope if that is not forthcoming that this body would move to take action.

Mr. Caruso, let me ask you the hard question. In your view, is there price-gouging now occurring in the oil and gas markets?

Mr. CARUSO. Well, of course that is not—that is the purview of the Federal Trade Commission.

Senator FEINSTEIN. I ask your view.

Mr. CARUSO. My view is that in isolated instances at specific retail outlets, based on what I have heard, most likely there have been some abuses. On the broad issue of whether there is abuse, of course it would require specific investigations.

Senator FEINSTEIN. What would be the body that would—who would——

Mr. CARUSO. The Federal Trade Commission on that issue, and then, if it is anti-competitive behavior, the Department of Justice. There are substantial numbers of opportunities for consumers to report examples of abuse, either through the Department of Energy website, through the State attorneys general offices, and a number of governors, especially in those States where price-gouging laws

exist. So I think that is the track that this has to take from this point.

Senator FEINSTEIN. Can you answer this question. How many States have price-gouging laws?

Mr. CARUSO. I believe the chairman mentioned 23.

Senator FEINSTEIN. 23.

The CHAIRMAN [presiding]. Senator Feinstein, I might mention, I think that is the correct number. But I think you should also know that they are all over the waterfront in terms of what they say. Your State says 10 percent variable, other States just use general words, and none of them have found it very easy to process currently, but they are looking at it. But 23 with varying degrees of gouging definitions.

Senator FEINSTEIN. I do not know how one justifies the projections of the annual profits of the first half that I have just mentioned at this time. Gas prices have never been higher in the history of the United States. There clearly is a catastrophe that has just taken place. Yet the profit estimates for gulf refineries are all going up.

Can any of you shed any light on what should be done, what options you see out there?

Mr. CARUSO. As I mentioned, I think if there are abuses taking place then the proper authorities within the Government should be allowed to—and will—investigate them.

Senator FEINSTEIN. To the best of your knowledge, have there been any investigations begun? Senator Wyden touched on that.

Mr. CARUSO. Any new ones? I am not aware of any. But there have been a number of investigations over the years. Most recently, I think the Federal Trade Commission issued a report earlier this year.

Senator FEINSTEIN. Well, my time is just about up, but clearly it gives some of us a place to go to begin to demand that these prices be looked at, because I think they have reached the point where the American worker cannot tolerate the price.

I come from a two and three-tank a week State, where people have to use gas to get to work because there is not another option. If you have as much as a $40 increase in a tank it is tremendous. It is a tremendous hardship if you use two or three tanks a week.

So I think we need to get to the bottom of it. I am certainly open. I think—somebody mentioned a little earlier that listening to this hearing is like the way it was in 2001 with energy prices in the Pacific Northwest and in California. Everybody said it is somebody else's fault, and it turned out to be major fraud and major manipulation, and case after case today that is being settled shows that, I think as well as anything else.

So for me, I just want to say the distrust is enormous. I hope somebody out there is listening that controls these prices.

Thanks, Mr. Chairman. I appreciate it.

The CHAIRMAN. Thank you, Senator.

Now I am going to come back to my side and I think Senator Allen is next.

STATEMENT OF HON. GEORGE ALLEN, U.S. SENATOR FROM VIRGINIA

Senator ALLEN. Thank you, Mr. Chairman. I appreciate you holding this hearing. I know it was scheduled before because even before Katrina there was a great deal of concern about the rising cost of energy, natural gas and gasoline.

First, I know that all our thoughts and prayers are with those who are suffering and trying to get back on their feet in the gulf area and those who are working long hours to get people in Alabama and Mississippi and New Orleans and southeast Louisiana back on their feet.

We do have some considerations here on a variety of fronts and concerns that we all hear from our constituents. The issue on price-gouging, let me just give you the Virginia perspective. Our attorney general in Virginia, Judy Williams Gogman—under Virginia's laws, you have to have a state of emergency for the gouging prosecutions to go forward and so a state of emergency was declared, and she actually is investigating questions of gouging where prices at a gas station went up 50 cents or more in the same day and the questions on that. So that is being prosecuted.

The other, larger issue here for policy is what many of you have heard me say for months and years now, and that is why this energy bill was so important, that an energy policy for this country, and it is now exacerbated by the remnants or the aftermath of this tragedy, this catastrophic hurricane. That is how important energy is for jobs and our economy. It is important for the competitiveness of our country and manufacturing in particular, and also for our national security.

Now, the President in reacting to this situation has suspended many laws and regulations, and it is to make more—whether it is natural gas and in more cases gasoline more available. He suspended a slew of these regulations that do affect gasoline and refining and distribution to make gasoline more available to mitigate these skyrocketing prices.

Clearly, some of these regulations were having an impact. My question really, when you look at this situation, is how many of these regulations actually ought to be permanently suspended? How many of these laws and rules and regulations ought to be modified, and which ones ought to go back into effect once the emergency has ameliorated months from now?

Mr. Caruso or Ms. Watson, do you see any of these regulations that you think ought to be permanently suspended? It is amazing how many regulations there are. In particular let me bring up one where the President suspended the regulation on reformulated fuels. The Energy Committee memo points out how there are 100 different fuel formulations in this country, these special gasolines or boutique fuels specifications, and all the fuel-switching rules. I know Senator Byrd shares my concern on this.

These special gasolines cost more to produce and are difficult to trade among markets—lack of fungibility. In addition, these fuels make the use of existing transportation fuel infrastructure for fuels less efficient and correspondingly more expensive to run. These costs are passed on to consumers. A large number of fuel types also

limits flexibility in production, distribution, particularly if a disruption occurs.

Would you think that a modification or permanent suspension of that rule or some sort of modification would be appropriate? I note in the second panel the AAA has this as one of their recommendations. What would either of you care to say on suspending or modifying that regulation and coming up with maybe eight, ten different fuels, because we have such tapped-out, fully utilized refinery capacity here in this country, that if you had fewer types of formulations there would be less costs to the consumers? Would either of you care to share any of your perspective on that?

Mr. CARUSO. Thank you, Senator——

Senator ALLEN. Or any other regulation you think ought to be modified or eliminated?

Mr. CARUSO. Thank you. I think it is an accurate statement to say that this phenomenon of boutique gasolines does reduce flexibility. There is no question about that. The point that you made about transportation and the inability to use one fuel in a different market makes it particularly difficult in a time like this and in a time of tight markets. So there are clearly some benefits to reducing the number of types of gasoline.

However, there are, as with anything in the case of these types of environmental requirements, tradeoffs between the environment and in this case supply flexibility.

The other issue with respect to a single or a smaller number of types of gasoline, if you were to impose one standard or several standards it could of course raise the costs in those regions where perhaps they are using those fuels which require a lower cost of refining. An example would be RFG, reformulated gasoline, which probably costs 7 or 8 cents a gallon more.

Senator ALLEN. Let us assume you picked one or two or at most three reformulated fuels for nonattainment areas and then another fuel for those that are in attainment as far as air quality is concerned, thereby coming up with in that case about four, and then you have the three different grades—premium, midgrade, and lower octane. Would that not reduce the cost of gasoline and also to some extent alleviate the pressure we have on our limited refining capacity here in the United States?

Mr. CARUSO. It certainly would be worth looking into, and I believe that the EPA, after the passage of EPACT 2005, is doing just that, Senator.

Senator ALLEN. We may want to do it more quickly.

Mr. CARUSO. Yes, sir.

Senator ALLEN. I have 13 seconds left. I want to associate myself with Senator Alexander's remarks. Let me ask you right quick, Ms. Watson, in all those damages out there on the gulf coast on the oil rigs, were any of them damaged by Katrina that resulted in oil spills?

Ms. WATSON. No, so far our investigation has shown no oil spills from any damage to the platforms. All the safety systems that we have which shut off oil both at the surface and at the seafloor worked to prevent that. Of course we are still going out to investigate, but so far we have seen no oil spills in the Outer Continental Shelf.

Senator ALLEN. Thank you.

Thank you.

The CHAIRMAN. Thank you very much, Senator.

Now, we are going to go to Senator Dorgan. Then, on our side, Senator Murkowski, you are next.

STATEMENT OF HON. BYRON DORGAN, U.S. SENATOR FROM NORTH DAKOTA

Senator DORGAN. Mr. Chairman, thank you. Let me make just a couple of comments with my time.

My neighbor filled up his car and his son's car yesterday, 15 gallons in each car, and it was $103. The American people understand that kind of sticker shock with what has happened with the price of gasoline. I acknowledge that the hurricane has caused enormous difficulties. But this hearing was called before that hurricane. The price ramp-up occurred before that.

One of my colleagues gave a rather spirited defense of the oil industry. Let me give a spirited defense of the consumer just for a moment. Let me also say that the energy bill that was signed into law does require the Federal Trade Commission within 90 days to begin an investigation of gasoline and oil prices. I wrote that provision. It stayed in in conference. But having the FTC do this hardly gives me a great deal of hope. I wrote the piece, but their past experience does not give me a great deal of hope.

But let me say this. Markets. This is not a free market, just not a free market. First of all, we have got revenue-sharing from the American taxpayer to the Saudis and Kuwaitis and Venezuelans and Iraqis and others. Second, it is not a free market domestically. It is a market with clogged arteries. It is a market with OPEC pricing. It is a market with a much more concentrated domestic oil industry through mergers and acquisitions. It is a market with rampant speculation, much more than is necessary for just liquidity, Dr. Overdahl. It is a market in my judgment with massive windfall profits as well with the major integrated oil companies.

Now, the question is: where is the pain and where is the gain in all of this? Let me show you where the gain is, if I can have a chart held up. My colleague from California, Senator Feinstein, referred to this. But this shows you in 2002 a $20 billion net income for the industry and it shows you where it is going. This year it is going to be well over $100 billion at current rates.

So who is paying for all of this? Of course the consumer is paying at the gas pump. Now, with the major integrated companies moving all the way from digging in the ground to selling at the pump, they have enormous capability and capacity to price. 40 percent of that which we use, 21 million barrels a day, 40 percent is domestic. In the last 18 months the price of oil has increased by over $30 a barrel. If 40 percent of our domestic production, 40 percent of the usage, rather, is domestic, at $30 a barrel, that means the domestic industry, oil industry, is profiting, profiting above that which it previously profited, which was record profits, is profiting at $7 billion a month, $7 billion a month, $80 billion a year. Those in my judgment are windfall profits.

I suppose we can look at this in different ways. Let me say that, yes, there have been errant public policies. That does not justify the current price and the current run-up in the price of gasoline.

Now, I propose and will propose tomorrow and introduce in the Congress a Windfall Profits Rebate Act which will set a $40 target and impose an excise tax above that for the purpose of rebating to consumers. We can sit around and talk about this. There are a hundred reasons, I suppose, that people will have that this will not work, it should not be done. The question is are you going to do nothing while we have an industry that is going to reap about $80 billion in windfall profits on a yearly basis? Are you going to say that is fine, just ignore it, it does not matter, and then have the American people pay it at the pump?

There is a big difference in where the gain is and where the pain is, and I think this Congress needs to stand up, not only for good public policy—yes, for good public policy—but also for the interests of the American consumer. That has not been the case for a long, long time when it comes to energy.

Again, we hear all this nonsense about markets. This is as far from a free market as about anything I know. There is just nothing free about this market. You have OPEC countries. You have a substantial amount of the oil on this little planet that is under the sands in a small area. You get a bunch of people around a table and they decide how they are going to deal with price and also with production. Then about 40 percent of that which is produced in this country and sold in this country is sold by increasingly concentrated markets from mergers and acquisitions and fewer and fewer and fewer big companies that also set price.

I understand, Mr. Overdahl, what you are talking about with respect to the markets and the need for liquidity. I also understand and have studied tulipmania and all the other speculative bubbles that have occurred. I think what we have here is excess speculation and I think the consumer is injured as a result of it.

So the question is not whether we do something, the question is what do we do. Most likely the Congress will do little or nothing and talk a great deal and hold hearings. But I think, I submit that we should at this point embrace a Windfall Profits Rebate Act and give the consumer some relief.

I would exempt from a windfall profits rebate, from the taking as a result of windfall profits, I would exempt that that is going to be invested in additional production or that that is going to be invested in additional refineries. But take a look at what is happening in the industry today and you will see oil companies buying back their stock, among other things. Do you think that advances the interests of additional supplies, energy supplies for the consumer? It does not.

Again, we can sit around and gnash our teeth and wring our hands and mop our brow about this, but I do think while we do it there are people driving up to the gas pumps, paying extraordinary prices that are not justified by this so-called perverted market. I intend to introduce a bill tomorrow dealing with the Windfall Profits Rebate Act.

Now, several of my colleagues have made important and interesting points and let me say that we are a country that is hope-

lessly addicted to oil. We need to find ways, and the chairman and I and others, and Senator Akaka and even President Bush, who talked about moving toward a construct in which we do not have to keep running gasoline through our carburetors or fuel injectors.

We have a $3.7 billion title in the energy bill we just passed dealing with hydrogen fuel cells and that is a significant step forward. We have to remove this addiction we have. But in the short term, at the moment, we also have to stand up for the interests of the American consumer. Frankly, I think there is price-gouging in some areas. I do not allege that is the case in every circumstance, but I do believe this: This market is perverted, its arteries are clogged, this is not a free market, and the result is an extraction to the tune of $80 billion a year that is excess or windfall profits above record profit levels that already existed for this industry. I believe the Congress has a responsibility on behalf of consumers to do something about it.

Mr. Chairman, thank you for allowing me to make my say here. It is therapeutic for me at least.

The CHAIRMAN. Thank you very much, Senator.

Now we are going to come back to our side and see if Senator Murkowski has questions and/or a statement.

STATEMENT OF HON. LISA MURKOWSKI, U.S. SENATOR FROM ALASKA

Senator MURKOWSKI. Thank you, Mr. Chairman. I too appreciate you bringing this hearing as quickly as you have today, recognizing that this was on the table even before Katrina. I do hope that my colleague who has just spoken is wrong, that we do more than just have the hearings and do the talk, because that is not what our constituents want. That is not what the American consumers want.

There comes a point when they say: Enough, we have had enough already. Whether it is paying $100 for the 2 cars at the gas pump—or is that the point where we say we are expecting, we are demanding, our Congress, our administration, the industry, to get together and do something about it? I think we are at that point.

When world oil prices are $67 a barrel, Americans are paying $288 million a day more for fuel than we did this time last year. Those numbers kind of get your attention. We are paying a billion dollars a day more for fuel than we did 3 years ago, and this is according to the Oil Information Reporting Services. At some point in time, this starts affecting more than when you just go to the gas pump and see it ticking up and up and up. It is affecting us in our businesses. It is affecting the price of transporting our kids to school. It is affecting everything we do and how this country operates. So we get to the point where we say enough is enough.

Now, we recognize that there are things that we can do. We look at the energy bill and we can cite to some of the things that we are doing to encourage more refineries, because we know that if you have the product, if you have the oil, but you do not have the capacity to do anything with it, we are in a world of hurt.

But one of the things that I think Katrina has pointed out to us as a Nation is our vulnerability of having our energy resources to a good extent sitting in one part of the country. We have got 29 percent of our oil coming out of the region, 21 percent of our gas

coming out of the region. In terms of our refining capacity, we had 10 percent of our Nation's refining capacity shut down because of one incident that Mother Nature has wrecked upon us.

We are just in the beginning of the hurricane season. What happens if we have another hurricane? What happens if there is labor unrest in Nigeria? We cannot be so bold as to say this is the end of the big crisis. I guess it was *The New York Times* this weekend running an article about the possibility of $100 a barrel oil, and we have to recognize that that is not so far out of the realm of possibility.

But is that something that this country can sustain? I cannot sit before you today and not suggest that we need to do more to diversify our domestic resources. You all know that, coming from Alaska, that means ANWR, and what would another million barrels a day mean to this country if we had ANWR? We have got to be thinking about just those opportunities, and they are opportunities.

Mr. Caruso, I want to ask you a question just in terms of what we can tell our constituents. They want to know, what are you doing about the price of oil, when is the price of gasoline going to be going down? In your comments you have indicated that in the third quarter coming up we are going to see a drop, I think you said around $2.60, and then in 2006 you said it was about $2.40.

Now, you have cited in your written testimony some concerns that Senator Bingaman started to point out that we need to be looking at. You have mentioned the issue of the refinery outage problems, what we do, how we reckon with that, and is this something where we can actually time the outages so we do not see such a hit. But what about the volatility due to the MTBE issue that you have raised?

You also bring up the potential supply problems due to the ultra-low sulfur diesel program kicking in. There are some things out on the horizon that would seem to make the picture that much more bleak in terms of price to the consumer. So instead of seeing a drop in the price, quite potentially we are not going to see a drop and in fact it just continues to go up for the consumer.

Am I missing something, or what do we need to be doing different to make a difference to the consumer?

Mr. CARUSO. Well, you are correct, the risks are there for even higher prices. The prices you quoted are from our medium recovery case, which assumes things go reasonably well. With respect to the point you mentioned, there are some concerns about the phasing out of MTBE and how that might affect the volumetric output of our refineries, given the behavior we have seen so far; and the point that Senator Bingaman mentioned about the ethanol requirements; and then ultra-low sulfur diesel. All three of those potentially will put further strain on our refinery system.

Senator MURKOWSKI. Do you factor these into your mix when you have come up with your $2.40 barrel for 2006?

Mr. CARUSO. Yes.

Senator MURKOWSKI. A gallon, excuse me.

Mr. CARUSO. These estimates are based on, as I say, things going reasonably well. The point you have made is that there are certainly potentials for things going wrong. But this is the medium case, and we have a higher price case and a lower price case. So

the risks certainly, as we have seen, are there when you are operating a system as close to full capacity, as we are.

Senator MURKOWSKI. What does Katrina, or not even Katrina—given what we are faced with today and the prices that we are looking at, what can we anticipate then as consumers for home heating oil for this winter?

Mr. CARUSO. I mentioned in the statement that we are looking right now at about a 30-percent increase this winter for heating oil.

Senator MURKOWSKI. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Murkowski.

Senator Johnson, it is your turn. Senator Johnson is not here.

Senator Cantwell.

STATEMENT OF HON. MARIA CANTWELL, U.S. SENATOR FROM WASHINGTON

Senator CANTWELL. Thank you, Mr. Chairman, and thank you for holding this hearing and for your opening comments about the bipartisan nature of the energy bill. I certainly went home and trekked across the State talking about tax credits for wind energy and biodiesel and a variety of other things, and found many people in my State very excited about those tools and the implementation of them.

But I also found many Washingtonians very concerned about the high price of gasoline. As my colleague from Oregon has already stated, Washington, Oregon, and California pay some of the highest gas prices in the country. In fact, over the last 36 months we have gone from $1.30 a gallon to almost $3 a gallon in the Seattle-Puget Sound area. Just this weekend as I was traveling back across the State, in one of our rural communities, I paid $3.29 a gallon to fill up my car.

So I can guarantee you that we are seeing an impact. This chart basically shows you what that impact has been on the Washington economy, and the red line just keeps going up and up and up and up.

So consumers want to know what we are going to do about this. They want to know what we are going to put in place. For an economy that has already been wrecked by electricity markets, that at the beginning of the energy crisis we were all told that, well, it is just about not enough supply and it is just about these regulations and it is all about things not being put in place, only to find out, basically after my own constituents did the investigation, that market manipulation happened.

So my constituents are very well aware of the payments being felt and they are very confused by going through the same dilemma this time about gasoline prices. They are very frustrated by the fact that someone would suggest that the FTC, as an oversight entity, would help solve this problem.

In fact, in 2004 an argument broke out between the FTC and the GAO. Basically, they issued dueling reports about whether mergers and consolidations of the oil industry raised prices, and the FTC concluded that it had little impact, while the GAO said that increased market concentration generally led to higher gas prices in the United States.

So they want to know, who is in charge of doing something about the high price of gas. Dr. Overdahl, I will have some questions for you about the CFTC and their role and responsibility, because as far as I am concerned there is a lack of transparency in the energy markets as it relates to what happens on the NYMEX and how we are looking, or I should say not looking, at physical deliveries.

Everything we found out about the Enron market in electricity only was found out by digging deeper and deeper into the records, into phone conversations, and proving the case. I think everybody knows that any type of DOJ or FTC investigation takes, not months, but years. So are we going to allow the consumers to continue to be gouged while we are doing this? I suggest not.

Now, another element of this dilemma, if I can indulge my colleagues, is the fact that we also have zone issues. Here is a gas station in Seattle selling unleaded at $2.77 a gallon. That was on September 1. Just less than a mile away or a couple miles away in Seattle, the same brand of gasoline selling at $2.97. So we are talking about a 20 cent difference in the same brand of gasoline in two different locations.

So consumers definitely want to know what is going on. So I suggest, Mr. Chairman, working with my colleagues in the same bipartisan fashion that we worked on the energy bill, that we ought to consider this. In fact, I plan to introduce legislation regarding such, that: one, we reinstate the state of energy emergency powers given to the President of the United States in the 1970's, that basically we allowed to expire in 1981. This state of energy emergency powers to the President gave the President the ability, similar to what States have, to look at this issue of price-gouging and to figure out remedies of what level of increase is realistic.

Second, that we also give the President more ability to look at transparency of wholesale gas prices. As I just pointed out, I do not believe that the FTC or the DOJ can move fast enough to even investigate and to stop this issue. If you think back to where we were in the electricity markets, we started making these claims in January 2001 and finally in June 2001 we finally got the Federal energy regulators to act in putting in price mitigation measures. I think that most people would agree that they were effective at stopping the rapid increase of prices.

Third, I believe that this investigation of zone pricing also needs to be looked at, given that we have such disparity. If we get to a point that the price continues to rise, I believe that price mitigation similar to the energy markets ought to be implemented as well.

The American consumer is paying a great price and I think that today's hearing is just another example of how you each have responsibilities, but no one has the clear oversight and responsibility to protect consumers today. So I recommend to my colleagues that we reinstate this legislation that was actually passed by my predecessor, Senator Scoop Jackson, and implemented, and it was a tool used by several Presidents in trying to address at that point in time the energy crisis that was felt in the 1970's.

Now, if I could, I have a question for you, Dr. Overdahl, and that is about the CFTC and the ability that the futures market has on setting price. If I look at prices in Seattle I say, well, gee, what it's costing to produce is not that much more, the oil that we are get-

ting out of Alaska, but it is a lot more expensive to the refineries, the four refineries that we have in Washington State. So why is that? And then you look at this futures price and helping to set what is considered the market-clearing price, or obviously being a reflection of the world oil price.

So what about it? What about actually tracking physical deliveries, understanding what is happening with those physical deliveries, what the payments and costs are on those physical deliveries? Do you believe that we should be doing that?

Mr. OVERDAHL. Thank you for that question. In the futures markets themselves, we of course do track the physical deliveries to the contracts that are under CFTC jurisdiction. The CFTC is not the regulator of over the counter markets, not the regulator of forward markets or cash markets. Much of that in the cash markets would come under the domain of the FERC. Our job is to protect the market integrity and to preserve the hedging and price discovery performance of the futures market, and we believe that the tools we have allow us to do that.

The CHAIRMAN. Thank you very much. Senator, I think your time has expired.

Senator CANTWELL. Yes, my time has expired, Mr. Chairman.

The CHAIRMAN. Now, on our side, I would just make an observation so we do not have any disputes on our side. We are going to let Senator Smith, who has an immediate need to leave, go next. The way I understand it, Senator Bunning would have been next, followed by Senator Thomas, and then Senator Smith. So we are going to let Senator Smith go ahead of both of them, if that is all right with Senator Bunning and Senator Thomas. Then the order will be Senator Smith, Senator Thomas and then Senator Bunning.

Senator Smith.

STATEMENT OF HON. GORDON SMITH, U.S. SENATOR FROM OREGON

Senator SMITH. Thank you, Mr. Chairman, and I thank my colleagues for their indulgence. I think all of us are appreciative of your leadership in holding this hearing. You began the hearing by indicating that this committee did not have jurisdiction over the FTC. I want my colleagues to know that the Commerce Committee has that jurisdiction and I chair the subcommittee over the FTC. We will soon—in fact, as I speak we are scheduling hearings on this very issue of the FTC.

I also want to express my sympathy to the people affected by Katrina. It is not in the province of the Congress to repeal acts of nature or certainly the avarice of the few. But it is in our province to try and deal with, as best we can, a dire emergency, and certainly one of the consequences of this emergency is the high price of energy.

I have heard some of my colleagues today talk about remedies tried in the past, price controls, excess profits taxes. I am old enough to remember the disastrous consequences when the Nixon administration pursued price controls. They did not work. I remember as a law student on a very short budget when Jimmy Carter pursued excess profits taxes, and I remember the gas lines in southern California. That did not work either. It may feel good in

the short term, but it does not feel very good when you are waiting in a gasoline line for many, many hours, which I did on many, many occasions.

Nevertheless, there is a point at which we have to figure out what can work. We know what history tells us did not work and we have heard some of the things proposed today that clearly will not work.

But I was one of those Senators—I think I may have been the only Senator with Senator Feinstein who proposed Federal intervention in the energy crisis in California and the Pacific Northwest to do something, for FERC to do something. What we are looking for right here is the tools of what best to do. I will defend free markets all day long. I will not defend a rigged or broken market. The question I think many Americans are having is if in fact we have a broken market.

It seems to me that the FTC is not aggressively enough pursuing the issue of price-gouging. That gouging in my mind does not represent a free market. It represents fraud in many cases or manipulation in a fashion that victimizes the most vulnerable people in our society. We should not spend 1 minute defending those kinds of activities.

I suspect when all the facts are out we are going to find many instances of manipulation and fraud. That is the kind of thing the FTC should be pursuing much more aggressively.

The question I have for you, any of you can comment: Are there any benchmarks that you know of that the FTC uses to trigger the 90 days and the Justice Department pursuing price-gouging and manipulation? I do not know of any and I am wondering if anyone here does, because, frankly, there ought to be a level at which an investigation is triggered, and I am not sure that that exists.

Do any of you have any knowledge of that?

[No response.]

Senator SMITH. Do any of you have any knowledge of a State law that does set a benchmark that triggers an investigation?

[No response.]

Senator SMITH. I do not know that either. But these are the kind of questions we are going to be investigating in our hearing in the Commerce Committee, because there needs to be a benchmark to trigger this kind of thing that can help us identify free markets versus manipulated markets, because I do not think that that currently exists.

The question of burden of proof. Do any of you know who has the burden of proof when the Justice Department initiates an action? I suspect I know the answer and I suspect you do as well.

[No response.]

Senator SMITH. It is the Government that has the burden of proof. But I am wondering if perhaps the most effective thing we could do is to change the burden of proof from the Government to the person or the company or the manipulator who is actually pursuing these kinds of trades or is guilty of it. It seems to me we need a mechanism far quicker, far more efficient, that can help to keep downward pressure on fraudulent and manipulative activities, because I think that there may be the key for providing some relief to the American consumer, because what we have got now just is

not cutting it, and I think a lot of people all over the country, as Senator Feinstein said, are deeply, deeply suspicious. They support free markets. They simply will not be quiet, though, when they feel like they are victims of fraud, and I think we may be at that point with many members.

But again I want to say, price controls and excess profit taxes, I know what those mean. I remember being a student when those things were tried and I remember how disastrously ineffective they were to the American consumer.

So, Mr. Chairman, know that we are going to pursue this in the Commerce Committee. The FTC, if they do not have the authority, they are going to get it. If they are not acting, then we need somebody that will act, because I think that the American people right now are being victimized more than any free market would warrant.

Thank you, Mr. Chairman.

Senator THOMAS [presiding]. Do you yield back the time?

Senator SMITH. I yield it back.

Senator THOMAS. Senator Salazar.

STATEMENT OF HON. KEN SALAZAR, U.S. SENATOR FROM COLORADO

Senator SALAZAR. Thank you, Senator Thomas. To both Senator Bingaman and to Chairman Domenici and to the members of the committee, I just want to say thank you again for the great bipartisan effort and the great work of staff on the energy bill. It was a good product and I talked a lot about it while I was in Colorado.

Let me say that I was very much looking forward to this hearing because I think that what my colleagues have said time and time again is very, very true, and that is that there is pain at the pump and there is pain in every American family and in every American business. I think that our taking some action in putting a spotlight on this issue that is affecting America today is something that is very important for us to do.

I for one am particularly concerned also about the impact that the high rising costs of gasoline and diesel is going to have on America's farmers and ranchers. We are in the midst of harvest season all across America today, and wherever I have gone in Colorado I have talked to farmers and ranchers who believe that they are possibly going to lose their farms and ranches simply because gas and diesel prices are so high.

I talked to one farmer who has spent more on his diesel prices than he is going to get out of his product this year alone. Certainly, when they were putting together their financials for their bank mortgages last year and for their operating lines, they were not anticipating that they were going to have this 200 percent plus rise in the cost of diesel.

So I have asked Chairman Chambliss and Senator Harkin from the Agriculture Committee to hold a hearing with respect to how these high rises on fuel costs are going to impact agriculture in America.

Second, let me ask a question to you, Mr. Caruso. That is, I am quite frankly at a loss about how your agency operates, because when I look back at the figures that you gave to us back in Sep-

tember 2004, it appeared to me that you were predicting that for this quarter or the upcoming quarter that we would be buying crude oil at about $34 to $35 a barrel. You were looking at the purchase of regular unleaded at $1.83, $1.73 in the third and fourth quarter of this year.

Obviously, we have missed the mark by some huge numbers. In fact, almost everywhere that I have gone in Colorado I think it has been over $3 a gallon over the last several weeks. Much of this preceded Katrina. I was on a western slope town a week or so before Katrina and I saw $3 a gallon gasoline for the first time in my life.

So my question to you as the person that is supposed to guide the United States of America, the Department of Energy, this Congress, with respect to looking ahead, how is it that we could have missed the mark by so much? Instead of having $1.75 or so gasoline today, we actually have $3 to $4 price for a gallon of gasoline. How is it that we could have missed the mark? Do we have a problem with our modeling? What is the issue?

Mr. CARUSO. Well, I think it is the problem of any forecaster, that there are certain things that you cannot predict. Obviously, Katrina is one, but clearly there are other issues with respect to the numbers you have mentioned. We certainly try to look at the best estimates of what economic growth would be, what the best estimates of world crude prices would be.

Senator SALAZAR. If I may, Mr. Caruso, though, we have been sitting in this Energy Committee now for the last 7 months looking at the charts of what our domestic production is, looking at what has happened in the last 30 or 40 years. It seems to me that we have a pretty good sense about what our supply side is going to be like. We also have seen what has happened with all of the information that we have on the increasing demand side of oil consumption here in our country and some of the global factors related to China and India coming into the marketplace.

As the energy expert of the country, it seems that you would have had all those factors in mind, or should have had them, a year ago. So, being the expert that you are, much more of an expert on energy pricing than I am, I do not understand how we could have missed the mark by as much as we did.

Mr. CARUSO. Well, it is a humbling experience, Senator. The only thing I can say in reference is, what is the benchmark? What were other forecasters saying then? I would say that we were probably on the higher end of others in the consulting business or others that published forecasts.

Senator SALAZAR. Mr. Caruso, I guess the request that I would make of you is to take a look at whether or not the model that the EIA is using is a correct model or whether there are changes that would be more predictive. That would help us figure out these long-term prices of energy as you are making those forecasts to us.

Let me change the subject and ask you another set of questions. I very much appreciated the remarks that were made by Senator Domenici and Senator Bingaman in terms of looking at a whole host of issues that we might take to try to address the issue of high gas and diesel and energy prices. I heard some of my other colleagues comment about how part of what we need to do is go out and increase supply, and that may be part of the answer here.

But at the end of the day, if we are going to deal with making some savings from the consumption of energy within our country, I heard Senator Domenici talk about encouragement of conservation, new CAFE standards, as something that we might look at. I have seen also another piece of legislation that essentially would put in a temporary freeze with respect to gas prices until supplies are restored to pre-hurricane levels. That is a piece of legislation that Senator Levin is introducing, I think today.

Talk to us just a little bit about what would be the effect on gasoline prices and energy prices if we were able to reduce consumption by, say, 5 percent or 10 percent? What would be the impact on prices?

Mr. CARUSO. Well, certainly any reduction in demand should have an impact on price, assuming that the supply is there. We have benchmarks for that and I would certainly be happy to provide the results for the record. But it is clearly, as you pointed out, important to deal with this issue from both sides, supply and demand.

Senator SALAZAR. I know my time is up, Mr. Chairman, but could I just ask a follow-up on that?

The CHAIRMAN. Yes.

Senator SALAZAR. In terms of just the concept of the reduction of consumption, how does that follow what happens in terms of the price of gasoline, based on your background and expertise on this issue?

Mr. CARUSO. Well, the price elasticity of gasoline is extremely low, so that indeed in the short run there would be relatively small changes to consumption. But in the long run, we would expect that something like a 10 percent reduction in consumption could make a significant difference. I would certainly be happy to provide the numbers to you, Senator.

[The information referred to follows:]

The Energy Information Administration (EIA) estimates that the short-term changes in gasoline prices have only a small impact on gasoline consumption. For example, EIA estimates that if gasoline prices were to increase by 100 percent for a period of six months consumption would only decrease by about 7 percent. This is due to the fact that the stock of automobiles changes very slowly and, therefore, higher prices can only affect driving habits in the short run and not the choice of cars.

Senator SALAZAR. I would appreciate that very much, Mr. Caruso. And thank you for your testimony here today.

[The prepared statement of Senator Salazar follows:]

PREPARED STATEMENT OF HON. KEN SALAZAR, U.S. SENATOR FROM COLORADO

Thank you, Mr. Chairman, for holding this hearing. I want to just take a minute to quantify the problem we face. Based on government numbers, in Colorado, the average driver drives about 14,000 miles per year and the average family drives about 27,000 miles per year. One year ago today, the average price for a gallon of gasoline in Colorado was $1.81, but today the average price for a gallon of gas in Colorado is $3.10. For an average driver, that will mean $900 more spent on fuel in the next year. For the average family, that will mean $1700 (one thousand seven hundred) more spent on fuel in the next year. That is a lot of money.

And this problem is hurting our farm communities even more. In Colorado the farming communities are being hit much harder than the average American, because it is now harvest time. At harvest time our farmers have to use a large amount of fuel to harvest their crops. *I have been receiving an increasing number of phone calls from Colorado farm groups whose members are extremely concerned*

with these rapid, rising costs. It is my understanding that one farmer in Kit Carson County will need an additional $46,000 more for fuel costs alone just to be able to harvest this year—that is not including any surcharges he might be charged for this fuel. I have also heard that a farmer in Morgan County has been turned down for additional loans at banks to cover these costs because they are already overextended with their existing loans.

Mr. Chairman, everything I do in Washington is based on what I think the people in Colorado want me to do—from Wray to Grand Junction, from Fort Collins to Trinidad. I have been busy touring every corner of my state this past month talking about energy and the energy bill. And the message I have come back with from every corner is clear: Coloradans want transparency and fairness with the way prices are set at the pump. This was what they asked me for before Hurricane Katrina, and their message is even stronger now.

Mr. Chairman, I know how we got ourselves in this position: years of malignant neglect. Just last month the Energy Bill was signed into law, and while it is a respectable bill—and one that I support—it is clear we must do more.

For years DC has closed its eyes to the rising demand for oil in our country, and instead of working to reduce that demand, we have only worked to increase its supply.

By temporarily reducing our national supply, the effect Katrina has had on the price of gasoline is really just an indication of things to come. If America's demand for oil continues to increase as it has in past years, prices will continue to go higher and higher, hurricane or not. What the hurricane has done to gasoline prices is simply accelerate the process.

We cannot drill our way out of this problem.

The current administration is singing a tired song, and will continue to do so in the weeks to come: they will say that if we just drill in more places, and drill faster, then the increase in supply will overcome our demand and prices will go back down. But this is not the case, as any earnest look at the numbers will show. China and India continue to consume more oil while production world wide is steadying and even declining. I repeat, we cannot drill our way out of this problem. We cannot go on with business as usual.

The long term solution is clear: we need to reduce our dependence on foreign oil. And that means we need to consume less. But an administration in league with the big oil producers won't look to this approach. Measures to reduce our dependence on foreign oil were adamantly opposed by the President—both the aggressive oil security amendment that I cosponsored, and even the weak oil savings clause that passed the Senate. Neither of these provisions made the final bill.

Mr. Chairman, I look forward to this hearing, and I look forward to learning some real answers to the very real problems we are facing.

The CHAIRMAN. Thank you very much, Senator.

Senator Thomas.

STATEMENT OF HON. CRAIG THOMAS, U.S. SENATOR FROM WYOMING

Senator THOMAS. Thank you, Mr. Chairman. Again, thank you for this hearing. We are all very concerned about where we are. You have heard a great deal about the concerns from the members here.

The purpose of this hearing as I understand it is to look at some ways, to find some ways that we can have an impact on this price in the short term. We have been dealing with policy. I think we have a policy out there, but that is a long-term policy. I am very happy about it, but that is not going to change things in the short term.

You have been invited here because you are experts in this area. So I am going to switch it around and, instead of talking about my concern, I would like to ask each of you to give me your top three things you would do. What things could we do to have an impact on this price short-term?

Ms. Watson?

Ms. WATSON. Well, I am afraid that my agency is more in the long-term business. We manage the offshore——

Senator THOMAS. But the issue here is what can we do in the short term. How about sharing that with us? Do you have any ideas at all?

Ms. WATSON. Well, I think that the energy bill has pointed us in the right direction. We need to increase our domestic supplies. That is in our control. I think that what the bill has pointed us in the direction is the right way to go, and I think we need to develop those supplies in ANWR, offshore, on the continental lands, and we need to increase our capacity to deliver those through refineries. The President has talked about the need to create refineries. Those are the types of things that will help bring down price.

Senator THOMAS. You want to increase production. You want to do something about refineries. I am asking you for three things. Shorten it up, and if you can write them down. We want three ideas from each of you as to what you would do.

Ms. WATSON. I think to look at the reduction of the different types of reformulated gas that one of the other Senators brought up is a good area to look at to reduce the complexity there.

Senator THOMAS. Okay, all right. Let me just say that we constantly hear it is not the supply of oil that is the problem, it is the refining capacity. That is what we hear, at any rate.

Mr. Caruso.

Mr. CARUSO. I think in the very short term response to the crisis, as the President and many of you have indicated, and as Mr. Salazar's question implies, consumers need to respond in a way that reduces consumption.

Senator THOMAS. You do not mean changing the consumption of automobiles?

Mr. CARUSO. No, I mean in the very short run. I am talking about in the next weeks and months.

Senator THOMAS. Shut down our travel, okay.

Mr. CARUSO. Second, something that has already been done is making the SPR available until the offshore oil production can be restored. Third, in terms of the restoration of refineries and other facilities, everything we can do to support the electric utilities to bring electricity back to the affected areas.

Senator THOMAS. Specifically on those in the New Orleans area, for example.

Mr. CARUSO. Yes, New Orleans, Mississippi.

Senator THOMAS. Mississippi.

Mr. CARUSO. Yes, sir.

Senator THOMAS. And that can be done fairly short-term?

Mr. CARUSO. Yes, sir.

Senator THOMAS. Mr. Overdahl.

Mr. OVERDAHL. Well, within the markets under CFTC jurisdiction, I guess what I would recommend is redoubling our efforts on market surveillance, which any time there is unusual activity in prices that happens.

Senator THOMAS. And who should be doing that? Who has the most authority to do that?

Mr. OVERDAHL. Well, that authority in the futures markets would be us.

Senator THOMAS. Well, is that, the futures market, where it needs to be?

Mr. OVERDAHL. Well, that is——

Senator THOMAS. You have kind of indicated the futures markets, not close.

Mr. OVERDAHL. That is what we can do within the scope of our jurisdiction.

Senator THOMAS. I see. How about the retail market?

Mr. OVERDAHL. We do not have jurisdiction over the retail market. But I think one thing we can do for consumers of information in these markets is to make sure that people are aware of the type of statistics that we publish, so they can see what is going on and have faith that these—that activity in that market is being tracked and that it is transparent.

Senator THOMAS. Transparent, okay. What else would you do?

Mr. OVERDAHL. Well, to make sure that our enforcement program is vigorously pursuing anyone who breaks the rules.

Senator THOMAS. I see.

Mr. Caruso, some people at home have suggested we ought to reduce speed limits. We could do that quickly. Is that a possibility? For those that are in a hurry to get to work, no, I suppose.

The CHAIRMAN. I did not hear your question, Senator. What did you say?

Senator THOMAS. I am told by an owner of a trucking company, for example, that if they reduced—in the West we have a lot of 75 mile an hour highways—that if that were reduced to 65 it would make a good deal of difference. I do not know that.

Mr. CARUSO. I think there are some specific studies on exactly what reducing the speed limit might bring.

Senator THOMAS. Any other ideas short-term, anyone?

Ms. WATSON. I guess I would just echo—having to go first, I was at a disadvantage. But I would agree that conservation is the best short-term initiative that we can take. So I think that that would also yield some benefits on the demand side in the short term.

Senator THOMAS. Thank you.

I will yield my time, Mr. Chairman.

The CHAIRMAN. Very good.

Senator Corzine.

STATEMENT OF HON. JON CORZINE, U.S. SENATOR FROM NEW JERSEY

Senator CORZINE. Thank you, Mr. Chairman. You and the ranking member should be commended for your foresight and timeliness of the hearing.

Let me echo what my colleagues have said with regard to the tragedy in the gulf coast and the call for shared sacrifice that I think that brings. I will note to the committee today that there were a group of our colleagues that were at the World Trade Center site for the laying of the first rail for the new transportation center. Only by sharing in the rebuilding have we been able to get to the point that we are there, and I know we all have to do that here.

That said, I have some serious concerns. I have rarely been asked as many questions about a single topic as I have been over

the last 3 or 4 days with regard to gas prices, seeing it as high in the metropolitan New York area as $3.79 per gallon—this is on Saturday—and as low as $2.99 less than a mile away. I do not know whether that is zone pricing. I do not know what kind of pricing that is. That is not a market that is sensible, 40 and 50 cent ranges for oil companies, or at least distributors for oil companies.

Just to give you a few raw numbers, a year ago, according to AAA, it was about $1.80 a gallon in northern New Jersey, $2.35 a month ago, and $3.10 today. For a 15-gallon tank of gas that was filled once a week, it was about $28 a year ago, $34 a month ago, $45 today.

That is a 60 percent increase in expenses for an average citizen just in the last year. I am not much of an economist, but that sounds like a heck of an imposition.

I put that in combination with what my colleague from Oregon talked about, where crude oil prices are up 64 percent over the least year. I am very sympathetic—I grew up on a farm and I know exactly what I hear from my colleagues in rural areas. If you are from a commuting State where you have no choice on how you get to and from work, which New Jersey is, this is a big problem and it is going to have real implications for an economy that is about two-thirds consumer-driven.

I am actually going to get to Dr. Overdahl, because one thing I actually do understand a little bit is how these futures markets work. But I do not understand retail price disparities of this proportion and factually, being real, I hope that Senator Smith is as effective in his hearings as he would indicate. There clearly is something going on with how it is being distributed.

New Jersey actually has four refineries. We are one of the major refining States in the country. So the refinery product is there. I do not understand the instantaneous price movement in all sections of the country where there are supplies and it does not sound like it is consistent with free market principles.

So there are enough indications that something is afoul in the market. I want to ask the CFTC, though, have we been following whether there is an increasing element of delivery being taken in the oil markets in the settlement months over the last 3 months, and could we have those statistics? And are you working with FERC or the other agencies to understand whether there is being an accumulation of supply of refined product, the price of which is up 132 percent?

By the way, we all know it is actually up 25 percent in 1 week, while crude oil prices have gone down. Now, some of it is because of the release from the Strategic Petroleum Reserve. There is something not right about how the market is working.

Can you answer, both specifically with regard to whether people are taking deliveries and the real question, is there a squeeze going on here with regard to refined products? Are there any indications in the underlying commodity markets, which I worked in for 25 years and have more than a little bit of standing, and have seen this occur in other markets at other times and other places?

Mr. OVERDAHL. I apologize for not having those numbers with me at this time, but that is something we would certainly track and know, just what exactly deliveries have been over time.

To date, we have not seen any evidence of manipulation or squeezes, but we are certainly vigorously surveilling those markets to make sure that that continues to be the case.

Senator CORZINE. Do you coordinate with the other agencies of government to understand what the underlying inventories are, where they lie, and whether they are controlled by some who might be taking delivery, to indicate that a squeeze might be in development?

Mr. OVERDAHL. Our futures markets specialists and economists within our market surveillance section look at a wide variety of data. They are gathering market intelligence, not only from other government agencies such as the FERC or from the Energy Information Agency, which is routinely tracked, but also talking to people in the markets to find out exactly what is going on.

Senator CORZINE. If those are being done, I can only hope that they are being done on a current and ongoing basis, because the red flags are there when you see the concentrations of inventories built up and then releases that occur, typical market behavior, and clearly something is afoul based on the differential that has occurred and the differentials and disparities that are showing up in the retail markets.

[The prepared statement of Senator Corzine follows:]

PREPARED STATEMENT OF HON. JON S. CORZINE, U.S. SENATOR FROM NEW JERSEY

Hurricane Katrina was devastating, and I would like to take a minute to express my personal grief over the events happening in the Gulf Coast region. This is a national tragedy and my deepest sympathies and prayers are with the families affected. My deepest admiration is with the relief workers and first responders, and members of the National Guard who are operating under the toughest of circumstances.

But I am also saddened and angered by the slow federal response to this disaster. I know it has failed to meet the expectations of the American people and has failed the people of New Orleans. At all levels, we must do more. First and foremost, we must worry about the immediate relief of those who are suffering. This should be a time of shared sacrifice, not exploitation.

I want to thank the Chairman and Ranking Member for holding this hearing on gas prices today. Even before the devastation of Hurricane Katrina, skyrocketing gas prices was a salient issue for the American consumer. But with an energy crisis looming, it is even more critical that we address it.

The high cost of gas affects every American. Families in New Jersey rely heavily on their cars to commute to work and drive their children to school. But it is getting harder and harder to afford these daily activities. Last weekend, gas prices in New Jersey increased by an average of three percent between Saturday and Sunday. In addition, the percentage increase between today and a month ago was 30 percent—again, that is just in the last month alone! In addition, last year at this time, it cost, on average, $27.32 to fill a 15-gallon tank. Today it costs, $45.21. This in an annual increase in cost of about $930 per year. Low and middle-income families in New Jersey and across the country cannot sustain this radical increase in prices.

With the devastation caused to oil production in the Gulf, I am pleased that Secretary Bodman has moved forward on releasing oil from the strategic petroleum reserve, or SPR. But more needs to be done. If this does not take pressure off of the market in the next couple of weeks and there is no relief for consumers, then we must consider other options such as a federal gas tax holiday. We can consider a windfall profits tax on oil companies to capture the lost tax revenue. But working Americans cannot continue to pay these exorbitant gas prices for an extended period of time.

In 2000, President Bush promised he would "get on the phone with the OPEC cartel and say we expect you to open your spigots." He hasn't done that—and if he's ever going to follow through on that promise, now is the time.

It is also imperative that we address the price gouging already being reported in my State and all across the country. This cannot be tolerated, and I urge the Chairman and Ranking Member to hold additional hearings on this issue.

I, along with my colleague, Senator Schumer, have written a letter to the FTC urging them to form an immediate task force to promptly identify and set up a system to prosecute the many cases of price gouging being reported across the country.

Just as this must not be used as an opportunity for price gouging, those who have been arguing for years that we must open up the Outer Continental Shelf (OCS) and the Arctic National Wildlife Refuge (ANWR) to drilling must not be allowed to use this tragedy as an excuse to drill. We are already seeing environmental hazards throughout the Gulf Coast as a result of oil rigs adrift that make it clear there is a better way.

One step toward weaning this country off of oil is investing in, and asking Americans to rely on, alternatives to driving like mass transit. Increased support for mass transit, including the $2.5 million to build a new trans-Hudson rail tunnel between New Jersey and New York in the transportation bill will not only offer alternatives to driving that help individual families save money, but they will also make a major impact on the wasted gasoline lost in traffic.

In addition, Congress and the President should encourage conservation while we take every step to restore our oil production and refining capacity in the Gulf Coast as quickly as possible.

We must take our energy policy in a different direction by increasing fuel economy through stronger CAFE standards, and promoting fuel diversity using renewable energy sources.

I look forward to hearing from the witnesses about effective ways to address rising gas prices and the growing energy supply crisis that will neither hurt our environment or economy in the long-term.

The CHAIRMAN. Are you finished, Senator? I did not hear it.

Senator Bunning, you are next.

Senator BUNNING. Thank you, Mr. Chairman.

The CHAIRMAN. I am sorry it has taken so long, but there is a lot of interest today.

STATEMENT OF HON. JIM BUNNING, U.S. SENATOR FROM KENTUCKY

Senator BUNNING. It is all right. There are Senators behind me, so I can understand.

First of all, I would like to send my condolences to everybody in the New Orleans, Louisiana, Mississippi, and Alabama area. It is the worst tragedy in my lifetime, natural disaster, and I guess for everybody sitting at this committee hearing it is the worst tragedy that any of us has seen. The devastation is almost totally beyond belief.

I do have some questions about energy and I would like to start off by asking anybody at the table: domestic oil production has long been limited to the gulf coast, particularly the area that was so devastated by Hurricane Katrina. U.S. refining and shipping capacity is also highly concentrated in this part of the country. Mr. Slaughter in his statement that is in testimony of the following panel has said: "Domestic exploration and production should be a No. 1 priority for future energy policies."

The United States has significant natural gas and oil reserves on the North Slope of Alaska, the Western United States and the Outer Continental Shelf. How would you envision the United States tapping these vast resources and what impact would it have in buffering the domestic energy supply from supply shock? In other words, if we acted in the things that we have available to us how would that impact any kind of future shock? Would anybody like to answer that?

Ms. WATSON. I guess I would go first and I guess I would just say that diversity of supply is security. Many have said that before,

but the President has said that and it is accurate. All of these sources of energy are domestic. They are something that we can produce and they are something that we know how to produce in an environmentally responsible way. I think this recent storm and the storm that preceded it, Ivan, demonstrates that we know how to produce energy offshore and we know how to put in safeguards to withstand even events such as this.

We have tremendous resources. The resource in ANWR I believe is equivalent to what we daily import from Saudi Arabia, so it is not an insignificant amount. So we have that opportunity in our country and diversifying the resources that we have at our disposal would be of benefit.

Senator BUNNING. Anyone else?

[No response.]

Senator BUNNING. Well, we had an oil crunch in the early 1970's, middle 1970's, in this country. the Congress of the United States did not do anything, did not do anything until this year, when we passed the energy bill. So it is not a big surprise that we find ourselves in this situation. We have been sitting on our hands in the Congress of the United States since the middle 1970's, when OPEC first acted against and supply was cut.

I do not offer that as an excuse. I offer it as a reason that you see the spiking. We produced about 65 percent of our natural oil and gas production at that time and now we are producing about 40 percent. So we are importing everything else. We do have a major problem in supply and demand, and we are not capable of really limiting the cost as the OPEC nations raise the price of oil, crude.

Of course, our 40 percent that we produce domestically is something that we are focusing on today because people think there has been gouging, and I do not know if that is true. But if there is, we ought to find it and root it out.

My problem is that 1974-75 is a long time ago and we had ample red flags in this country that we could have a problem. I think Katrina just emphasized the fact that we are at the mercy, not of our own domestic production, but of others' production. I want to send a flag that the energy bill is not going to solve the short-term problems in this country, but more the long-term problems.

Until we get more in tune with our own domestic production, both of crude oil and natural gas, I want everybody in the country to know that we have a 50-year supply of natural gas in the continental United States untapped, untapped, and environmentalists and others have restricted our ability on U.S. properties to drill for that natural gas. So we have to have a balanced policy here and we do not.

I would urge the Energy Committee and anyone else that has an opportunity that we start to balance the supply with the demand if we are going to have a problem. I hope that this committee does not drop the ball after passing the energy bill and we look for other areas for exploration. We have a chance with our reconciliation bill this year with the Alaskan Arctic Reserve. That is what it was designed for. That is what we should do with it, for production of petroleum and for the production of natural gas. I urge us to act

when we have a chance, which is in the next month or 2, to make sure that we get it done.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator.

I think now we are going to go to Senator Talent, Senator Burr, and then I will wrap it up. I want to ask the remaining witnesses—we have four. I gather, looking at this, two of you are from out of the city and two of you are from the city; is that correct? Who are our witnesses?

President of the National Petroleum Refiners, are you from here?

Mr. SLAUGHTER. Yes.

The CHAIRMAN. William Shipley, Shipley Stores, where are you from?

Mr. SHIPLEY. Pennsylvania.

The CHAIRMAN. Mr. Darbelnet, president and CEO of AAA.

Mr. DARBELNET. From Florida.

The CHAIRMAN. Mr. Dowd.

Mr. DOWD. New York City.

The CHAIRMAN. We are trying to figure out how we can get you in somehow before we abandon this hearing. So we are going to try. Just be patient.

Now let us move here with Senator Talent and Senator Burr.

STATEMENT OF HON. JAMES M. TALENT, U.S. SENATOR FROM MISSOURI

Senator TALENT. Thank you, Mr. Chairman. I think I get the message and I will be brief.

I did want to mention, I think it is owing to the committee with its great bipartisan work on the energy bill, just to say that the renewable fuel standard and the presence of renewables in the fuel supply is moderating somewhat prices. We conducted an informal survey of gas stations in Missouri that were pumping e-85, which is an 85 percent ethanol blend, and in a number of places as of September 2 it was selling for around $2 a gallon, a dollar less than unleaded gasoline was selling in Missouri. Once we get the distribution network worked out and enough stations pumping it to create a competitive market, then as supply increases I would expect that prices will go down as well. So that is part of the future and it was in the energy bill, and we put it in in this committee, and I think that that is the kind of thing that we need to do in the future to try and protect us against natural disasters or increases in world oil costs or blackmail from foreign oil producers.

Let me just ask one thing on the question of prices and what we can expect. Mr. Caruso, you say in your testimony that "Both spot market prices and near-month future prices for gasoline and distillate products have risen dramatically in the days following the hurricane. Retail prices are also rising. We expect that prices will begin to fall back as production and refining capacity are restored, although the pace of restoration is at present highly uncertain."

Now, Ms. Watson was, one hesitates to say optimistic or pleased in this context, because we are not optimistic about anything that is happening in that area, but she did seem to indicate that production was coming back on line in a manner that, if anything, exceeded our expectations maybe a week ago.

So that means we should expect prices to be falling, is that correct, Mr. Caruso?

Mr. CARUSO. Yes, sir, that is what we are saying in our latest short-term outlook, that over the next few weeks and particularly months, when the additional supply comes on-stream, particularly gasoline imports, that should put downward pressure on prices.

Senator TALENT. So, Dr. Overdahl, I take it your agency will be watching this very carefully, and if prices do not go down after this production comes back on line that would be a pretty clear sign that something is going on in the market that we do not like. Would you agree with that?

Mr. OVERDAHL. Well, I am not sure I would, because I think some of this is anticipated in those prices already. If you look at futures prices for gasoline at the New York Mercantile Exchange, you see the current October contract at $2.11 a gallon. This is for wholesale unleaded. If you go out to February 2006 you see $1.90. So in some ways that has already been built into their expectations, I think.

Senator TALENT. I appreciate your candor. I do not see how, though, if we are going to say that rapid and unexpected cuts in production are the reason prices go up, then when that production comes back on line prices will not necessarily go down. I do not understand why there would not be a parallelism in that.

Mr. OVERDAHL. Well, I think a lot of that is built into the expectations. So it is not just when the actual production comes on line, but the expectation that it will be on line.

Senator TALENT. You are saying the market has already discounted against the possibility of it coming back on line.

Mr. OVERDAHL. Exactly.

Senator TALENT. Well, I for one will be highly suspicious if we do not see prices go back down somewhat to reflect the situation before Hurricane Katrina. I would hope that would happen.

Thank you, Mr. Chairman, for holding the hearing. I know we have another panel you want to get to and I will yield back.

[The prepared statement of Senator Talent follows:]

PREPARED STATEMENT OF HON. JAMES M. TALENT, U.S. SENATOR FROM MISSOURI

First and foremost, I want to express my sincerest condolences for the families of the Katrina victims in Louisiana, Mississippi, Alabama, and Florida. My prayers are with all of the survivors who must now rebuild their lives and face a very uncertain future. I offer my sincerest thanks for all of those relief workers who are working around the clock to get aid to folks and restore power to the region.

I also want to thank Chairman Domenici and Ranking Member Bingaman for calling, then expediting, this critical hearing.

Nearly every caller to my office wants to know, "Why are gasoline prices so high? What are the oil companies doing with all of that money? What are you going to do about it?"

I'd like to be able to tell my fellow Missourians that we can legislate an immediate solution, but we know that's not possible. This is a long-term problem that requires long-term thinking, much of which is incorporated into the energy legislation signed into law by the President in July.

We need to remember that Katrina's impact on gasoline prices wouldn't be welcomed even if pre-hurricane gasoline prices were under $2.00. So, after doing what we can to help the communities that are under water and hurricane debris, we need to address the underlying concerns with energy supplies.

We need to remember that Katrina's impact on energy prices will be relatively short-lived—it will subside when electric power is restored and the refineries and pipelines come back on line.

However, the fuel price hikes we face as a result of Katrina are indicative of some of the fundamental problems we face and began to address in the recently-passed energy bill. Global demand is ever increasing, driving up gasoline prices (e.g., China and India). It's getting harder to find new supplies of oil to replace existing production. At home, refineries operating at capacity serve as a bottleneck for gasoline supply, since it prevents the crude oil from being turned into gasoline.

We need to increase and diversify our crude oil supplies and gasoline feedstocks. This nation has substantial oil and gas off its Atlantic and Pacific coasts, not to mention the reserves in Alaska's Arctic National Wildlife Refuge. These have gone untapped due largely to opposition from local residents or environmental groups. Similar opposition has prevented the construction of a single new refinery since 1976 and has made pipeline construction quite difficult.

Thirty percent of our domestic production is located in the Gulf of Mexico, and more than 60 percent of U.S. oil imports come through ports along the Gulf. Almost half of all U.S. refining capacity is located on the Gulf Coast. Hurricane and flooding damage and electricity outages have dramatically curtailed our available gasoline supplies.

Katrina has reduced the nation's daily refining capacity by 1.8 million barrels a day, or 11%. It seems to me that this may indicate that the nation has concentrated too much of its energy facilities in too small an area. This puts our energy supply at great risk, as evidenced by the ongoing price spikes at the pump.

Greater offshore production in other parts of the country would help us avoid the magnitude of oil supply disruption we are currently experiencing. We considered allowing states to decide whether they want to explore drilling off of their coasts during the debates over the energy bill. Perhaps we need to reconsider this proposal to increase our domestic energy supplies and to reduce our dependence on Gulf of Mexico production.

Similarly, drilling in ANWR would also increase supply from a region that doesn't face hurricane risks. The increase in supply, wherever we get it from, can only help bring down prices.

Likewise, one of the most important elements of the energy legislation was our encouragement of ethanol and biodiesel production.

e-85, which is auto fuel made of 85 percent ethanol and 15 percent gasoline, is considerably cheaper that even pre-Katrina gasoline. About 90% of the ethanol used in the U.S. is sold under 6 month contracts—the average price per gallon in these contracts is $1.50. Current spot market prices for ethanol range from about $1.50 to about $3.00, with a majority of the spot purchase at $2.00. An informal survey of gasoline prices across my state on September 2 shows that e-85 is selling anywhere from 20 cents to almost $1.00 less than regular gasoline.

MISSOURI GAS PRICES

[9/2/05]

	E85	Unleaded	Difference
Columbia, MO (Central)	2.79	2.99	0.20
Edina, MO (NW)	1.99	2.93	0.94
Higginsville, MO (W. Central)	2.79	2.99	0.20
Jefferson City, MO (Central)	2.74	2.99	0.25
Kansas City, MO (West)[1]			
Marshall, MO (W. Central)	2.77	2.97	0.20
Marshall, MO (W. Central)	1.99	2.97	0.98
Maryville, MO (NW)	2.03	3.01	0.98
Rolla, MO (S. Central)[2]			
Smithville, MO (West)	2.94	3.19	0.25
St. Charles, MO (East)	2.99	3.19	0.20
Average	2.56	3.03	0.47

[1] Wouldn't give over phone.
[2] Wouldn't give over phone. (0.20 price difference)

We are a long way away from being able to grow a substantial portion of our own fuel—we only sell 4 million gallons of e-85 fuel annually at this point—but we can't ignore the promise of these fuels, both from an environmental perspective and as a way to add supply to drop the price of gasoline. Ethanol is competitive at as little as $42 a barrel of crude oil, $48 without the current federal tax incentives, and has tremendous growth potential. Already there are 5 million flexible-fuel cars and

trucks on the road that can use regular gasoline or a blend of up to 85 percent ethanol. These vehicles are produced by Chevrolet, Dodge, and Ford, which has recently announced the production of a new flexible fuel pickup truck.

I know that there are many farmers and producers in the Midwest that are excited by the prospects of growing our own fuel and are actively pursuing building plants to produce ethanol and biodiesel as fast as possible to increase the supply of this fuel.

The recently passed energy bill includes tax incentives to encourage the conversion of gasoline pumps to handle ethanol blends so that this product can achieve greater availability outside of the Midwest.

We also need to consider ways of increasing refining capacity. I intend to explore why, with the importance of gasoline to this nation's economy, we are running at such a razor thin margin on refinery capacity. How are the oil company revenues being used, and why are returns on refinery investment insufficient to support expanding or building new refineries? We need to remove this bottleneck on our fuel supplies.

I am concerned that the lack of regulatory certainty is preventing investment in new refineries. I don't want to suggest the relaxation of environmental rules; rather I want investors to know that the rules won't change after they've committed their funds to a particular project. After committing to a project, industry cannot and should not have to recalculate plant profitability based on changing environmental requirements. If rules must change later, perhaps they either need to be applied uniformly, so the economics are the same for all existing refiners, or they need to be applied only to new plants that have not begun the regulatory approval process.

Lastly, the gasoline price crunch we are in points to the urgency of the fuel diversity encouraged by our recently signed-into-law energy bill. We simply must press on to find alternatives to dependence on crude oil, whether domestically or internationally produced.

We need to continue pursuing innovative energy sources such as hydrogen fuel cells for powering cars with hydrogen, developing more hybrid cars, expanding the use of ethanol, renewable energy, clean coal and nuclear energy. We need to make sure that we are not held hostage to any oil crisis, whether by natural disaster or OPEC decision.

I look forward to hearing from the witnesses and the chance to ask questions, though I am a bit disappointed that we don't have any oil company representatives who might be able to answer some of the difficult gasoline price questions asked by my fellow Missourians.

The CHAIRMAN. Senator Burr.

STATEMENT OF HON. RICHARD BURR, U.S. SENATOR FROM NORTH CAROLINA

Senator BURR. Thank you, Mr. Chairman.

I looked over at my good friend Ron Wyden and realized this is not the first time we have been through hearings together as it relates to the rapid increase in oil prices. I would also point out to my good friend Ron that today it is cheaper to buy a gallon of gas in California and Oregon than it is in North Carolina. So what a reversal we have seen in a period of time.

As a matter of fact, a year ago, on August 29, in the United States the average retail price of gasoline was $1.86 for regular. This year it was $2.61. The gasoline demand a year ago was 9.26 million barrels per day. This year it was 9.4 million barrels per day. Gasoline production a year ago was just shy of 8.9 million barrels a day. This year it was just shy of 8.8 million barrels a day.

Our imports of gasoline, refined gasoline, a year ago, just shy of .9 million barrels per day. This year in August, just shy of 1.3 million barrels per day. And the gasoline stock is down to 1.194 million barrels per day, and it was at 2.06 a year ago.

Clearly, a recipe for increases in prices as we see more reliance on foreign refined product, as we see demand go up, and as we see refinery capacity in the United States go down.

If I could, let me focus on a number of things, Mr. Caruso, for you. One, the General Accounting Office, GAO, issued a report in June that found the proliferation of special gasoline blends has made it more complicated to supply gasoline and has raised the cost, significantly affecting operations at refineries, pipelines, and storage terminals. A 2001 EPA study found that harmonization of fuel blends throughout the country could be done without major cost increases, increases in emissions, or reductions in gasoline supplies.

Has the EIA ever done an analysis on how the various blends of reformulated gas affect supply or a study on the harmonization of the number of blends?

Mr. CARUSO. We have not done that study specifically. But as I mentioned to Senator Allen, there is an incremental cost of making reformulated gasoline and the study we did specifically with reference to California and the banning of MTBE last year indicated that was about 7 to 8 cents. But in terms of the proliferation of, the term, "boutique fuels," we have not actually done a study.

Senator BURR. I think you also alluded to that there would be a tradeoff for that and that might be an environmental tradeoff. But in fact, if you accepted the 9 blends or 12 blends right at the top of the formulas, you would not have a tradeoff. Everybody would accept the higher, the California formula. That would not have a tradeoff with the environment.

Mr. CARUSO. No. It would have a tradeoff with the price of gasoline in States that did not have the more stringent requirements.

Senator BURR. If in fact, since we have gone from 321 refineries to 129 refineries, if we focused those refineries on longer runs of the same fuel regardless of where they were going because they could now go to 50 States, would we not reach new efficiencies in production that might actually bring the price down, even for the most stringent, environmentally stringent mixes?

Mr. CARUSO. It may. That would be something we would have to look at carefully.

Senator BURR. It is an interesting thing to look and study.

Let me ask you as it relates specifically—is OPEC price-gouging?

Mr. CARUSO. Well, I think probably by almost any definition the answer would have to be yes.

Senator BURR. I think the important thing is that gouging is a moving target from a standpoint of a definition.

When the shift in governments took place in Venezuela—and that at one time was 22 percent of our domestic supply we got from Venezuela—did that change in government have a positive or negative impact on the price of crude oil for the United States?

Mr. CARUSO. Well, certainly the strikes and the stoppage of Venezuelan oil in December 2002 and January 2003 had a negative impact.

Senator BURR. Caused the prices to go up.

Has the growth in the Chinese economy had a positive or a negative impact on the price of crude oil?

Mr. CARUSO. It would certainly be one of the most important factors in upward pressure on crude prices.

Senator BURR. In a study that was put out by EIA, I think, said that you anticipated no increase in non-OPEC production. Is that a pretty safe thing?

Mr. CARUSO. We expect a small increase this year.

Senator BURR. But enough to make up the growth in our economy and the growth in the world?

Mr. CARUSO. No. In our longer term forecast, a large share of the incremental production will have to come from OPEC.

Senator BURR. So we really are locked into the supply coming from the same individuals. This is a pretty predictable thing as we look 6 months out, a year out. We have refinery challenges, we have the same people supplying us. If they are gouging us today, without international pressure they are going to gouge us tomorrow.

Mr. CARUSO. What is predictable is a very tight oil market, yes, sir.

Senator BURR. How much pressure was taken off of the price of gasoline as a result of lifting the clean air standards, specifically the reformulated regulations that the President lifted?

Mr. CARUSO. The waiver that the EPA granted last week had to do with allowing refiners to market winter-grade gasoline earlier than normally would have been the case. We think that probably adds on a nationwide basis about 150,000 barrels a day to supply.

Senator BURR. Does a refining capacity cushion exist in the United States?

Mr. CARUSO. No, sir.

Senator BURR. We have no cushion, do we?

Mr. CARUSO. No, and that is one of the reasons prices spiked.

Senator BURR. Mr. Caruso, we strategically put crude oil in the ground. Should the United States think about a strategic refined petroleum reserve?

Mr. CARUSO. There have been a number of studies thinking about that over the years and they have always concluded that it would be a very expensive proposition because of where to store it, the right specifications, and the need to turn that product over. So it is something that certainly could be worth looking at.

Senator BURR. I want to thank our witnesses and I want to thank the chairman. I think every member, Mr. Chairman, agrees with the comments of these witnesses that short-term conservation, the restoration of the pipeline and the product coming through that pipeline, and—maybe one you did not add—predictable regulation, which I believe is the result of what we tried to accomplish in a bipartisan way in the energy bill, is in fact the best short-term recipe.

With that, I yield back.

The CHAIRMAN. Thank you very much, Senator.

I think I have gotten everybody except myself. Does that sound right? I did not ask any questions and I am going to be brief because we are committed to the proposition of bringing the other witnesses up, however late it is. We may have to not do as well a job of letting them be heard as they deserve.

Let me ask any of you, and perhaps Mr. Caruso or Dr. Overdahl, first I think just some primer ideas to get repeated. People look at the oil and gas industry and they include crude oil and obviously

refineries. You mentioned, Mr. Caruso, that we had a great diminution, reduction, in the number of refineries over a period of time in the United States, and your comment as to why was that the profits that refineries made was too small for the risks and the expenses involved in building them. Did I read you right?

Mr. CARUSO. Yes, during the 1980's and 1990's, that is accurate, Senator.

The CHAIRMAN. I know people listening will not believe that because they figure everybody involved in oil and gas must be awash in money. But I always heard that the refiners were at the tail end and for some reason they were not making very much money.

Now, quickly, has that changed today? If in fact we were trying to establish a policy of building some more refineries, are we running uphill, where it is not economically feasible because of the economics that you have just described of the 1970's? Or do you know?

Mr. CARUSO. Even excluding this current catastrophe, in which, of course, margins have grown tremendously, margins had improved quite substantially in the last 3 years or so. We do think that those kind of margins, if they could be counted on, would certainly make it worthwhile to make investments in refining and other downstream facilities.

The CHAIRMAN. I just want to say and the record will reflect that the Saudi minister was in town talking about many things. I saw him and he said: We want to build refineries; we would like the United States to have more refining capacity; it is your business, not ours. But he said: I have been looking for partners; we would like to build a couple of new refineries in America with partners. He said: We cannot find any; nobody wants to build them with us.

Does that strike you—and I just ask; I do not know why you would know, but you are the closest one on this panel to maybe having an idea. Why might that be? Is it still back to where we were, that the regulatory issues and the like, nobody wants to do it? Or why would that statement be? If it is true, why would it be so?

Mr. CARUSO. Of course, I am not familiar with their seeking of partners, but clearly it is the same sort of fundamentals that have caused that problem.

By the way, the Saudis themselves have now decided to go ahead with two large export refineries.

The CHAIRMAN. Well, they said that: We are going home and we are going to build two. And they said how much they were going to spend, and within a month they announced them.

Mr. CARUSO. Yes, sir.

The CHAIRMAN. So they are going to produce refined product; it is just not going to be here.

Mr. CARUSO. That is correct.

The CHAIRMAN. So they are going to add to the world's supply.

Now, when crude oil prices go up and down, is there a—and gasoline prices go up and down, obviously in between the crude oil prices and the gasoline something happens, like refining, right, and other things, but refining. Is it the up and down of the refined product that the price of gasoline is responding to quickly or is it the crude oil price? Which is quick and which is slow, oil prices

going up, quick responses on gasoline prices, or refining going up and down, quick response on gasoline?

Mr. CARUSO. It is the price of refined products at the wholesale level and in the NYMEX that gets fed through the retail most quickly. For most contracts, although they are volumetrically set, the price is indexed to either NYMEX or wholesale spot price.

The CHAIRMAN. Now again, I ask any of you, and it may be the next panel who knows more about this. But what I think the people are upset about and do not understand and I think I do not to some extent is that today they drove by a filling station and they saw the price of gasoline, and 2 days later they drive by the same filling station and the price of gasoline is substantially higher, not 5 cents but in some cases 25 cents or 30 cents higher.

Now, I ask you, in the regular market, assuming nobody is doing anything untoward, it is supply demand, it is a righteous fair play business, how does that occur? How does that price get determined and who does it, that it goes up so much in 48 hours? Does anybody know?

Mr. CARUSO. Well, the retailer is always pricing his product based on whatever the price was for the last tankwagon of supply that was delivered and thinking about what the price might be tomorrow. So sometimes they are pricing on the expectations of where the market is going, so it very easily could change with the delivery of each tank truck in each retail facility.

The CHAIRMAN. Now, let me ask, being absolutely honest—I do not believe there is gouging that is occurring by any conspiracy. I do not believe major oil has a conspiracy going on to gouge, nor do I think there is an ongoing competitive monopoly that is doing that. But I do think that it is very probable that individual retailers are not very concerned about the consumer in terms of how much they are going to raise the price, even under the scenario you have explained.

Example: You have a very big underground tank capacity. It has been filled. The price is X. You do not get any deliveries for 3 days, but the price each of those 3 days went up on the pump. Part of what you have just explained is that should not happen because there have been no refills, there is nothing in that that would cause it, but it might be expectations of future increases, right?

Mr. CARUSO. That is correct, sir.

The CHAIRMAN. And as an expert, that is probably something that is done?

Mr. CARUSO. That would be my opinion, yes, sir.

The CHAIRMAN. Now, what is the gauge for that? That is the best idea they have about their expectation of the future, or does somebody tell them?

Mr. CARUSO. Each individual operator has to make that determination. The constraining factor, as was pointed out by several Senators, is variations within the same area. The consumer obviously can just move to the next service station.

The CHAIRMAN. Now, we have been talking around this issue of gouging, so might I ask—and again, I do not hold you to this. I do not know if you want to do it or if you know. But Mr. Overdahl, what does the word "gouging" mean?

Mr. OVERDAHL. Well, I am not sure it is a well-defined term if you looked in an economics textbook. We have heard I think Senator Burr refer to it as a moving target. I guess in my own mind it has something to do with prices that take advantage of particular supply situations, when customers, when consumers have little or few choices.

The CHAIRMAN. Would you not say that it would probably be intentional, along with what you were just saying?

Mr. OVERDAHL. Likely so.

The CHAIRMAN. It would seem like it, would it not?

Mr. OVERDAHL. Yes.

The CHAIRMAN. More times than not.

What about, Mr. Caruso, do you have something in your mind that answers that question?

Mr. CARUSO. In terms of what is the definition of "gouging"?

The CHAIRMAN. Yes.

Mr. CARUSO. I would say unreasonable pricing, given the market principles.

The CHAIRMAN. Now, foreign countries that have been causing the price to go up and up, obviously somebody could say that it is all gouging because they have paid for everything, they have no expenses, the oil is very cheap to get out of the ground, but they are charging $50-$60 a barrel. Is that not what the market will bear, rather than gouging?

Mr. CARUSO. Except they are restricting supply as a cartel. So I think that would, in my view, satisfy a definition.

The CHAIRMAN. Okay. In that respect, so everybody will know, there does not seem to be anything we can do about that; is that correct?

Mr. CARUSO. Well, I think you have started it with EPACT 2005. You have to deal with this on a long-term basis.

The CHAIRMAN. But what I mean is we cannot tell them what to do or not to do, right?

Mr. CARUSO. Yes, sir.

The CHAIRMAN. So the price that we are talking about, that we are all so worried about for our constituents and for Americans, is predominantly, no matter what we talk about American supply, predominantly dictated by the price of crude charged by those companies delivering oil to the marketplace, right?

Mr. CARUSO. That is correct.

The CHAIRMAN. And currently we could have an effect by reducing our demand, but we are not the only spigot to demand, right? There are other countries and other actions that have spigots on this demand, one being China and India of late that are going up dramatically; is that correct?

Mr. CARUSO. That is correct, they have the fastest growing oil consumption.

The CHAIRMAN. You are an expert. What do you say about the next 10 years? Are we going to have prices of crude oil continuing to go up, meaning that the supply is very tight and demand is very big? Or are we going to have something different and the price of crude oil is going to come down? Just use a 10-year prediction for me.

Mr. CARUSO. Well, I would make it in two segments. One is that in the next 2 to 3 years I do not see much improvement in the tightness on the crude market, because of the lack of spare productive capacity and our demand forecast.

The CHAIRMAN. So that means we are talking about crude oil over $60 a barrel.

Mr. CARUSO. Our forecasts are not quite that high, but certainly even in the 3 to 4-year period in the $40 to $50 range. These are not official. This is my own view. You are getting the Guy Caruso view right now.

The CHAIRMAN. Okay. But you are the best we have here, so we have to listen to you.

Mr. CARUSO. Well, I do not know. Senator Salazar did not think very much of it.

The CHAIRMAN. No, he does not even try to be—where is Senator Salazar?

Mr. CARUSO. But I do think that these prices will do two things. They will attract investment in the upstream and bring forth some additional capacity. So over the 5 to 7-year period, I think the supply side will improve. The second thing it will do, unfortunately, as we have heard already, is it will have an impact on demand through both consumer behavior and the economic growth of our country and the world. We are going to see slower economic growth rates as a result of higher prices.

Our models indicate going from $30 to $60 for a full year takes about 1 percentage point off GDP, and that will reduce energy consumption.

The CHAIRMAN. That is not a very happy scenario, is it?

Mr. CARUSO. No.

The CHAIRMAN. Well, I want to tell you and for the record that it is good that we ask experts like you, but I do not believe it is even going to be that good. So I am acting based upon what I hear from other sources. I do not see where that new production is going to come from to make up for the demand that is going to increase, because it is not going to diminish that much unless something is really done to overtly cause it to happen, and price alone does not seem to be enough. I think it will have some, but it looks like the elasticity is not what it is for other commodities.

Having said that, I have just one question. What do you think would be the effect of a mandatory minimum level of inventory for products like gasoline and other products?

Mr. CARUSO. In my view it would reduce the flexibility of the industry and I personally think that would not be the right way to go.

The CHAIRMAN. My last question has to do with the charts we see where the major integrated companies have such large reserves of cash. What does that tell you, and why are they so big, if they are big?

Mr. CARUSO. Well, they are big I think because we have seen such a quick run-up in prices. Why are they accumulating? I think there is the long memory of oil prices peaking and declining in the 1980's and staying low in real terms. So I think it will take time, but ultimately these investments will be made and they will come to fruition. If indeed the individuals to whom you refer are correct

about holding a much more pessimistic view of what these investments will bring forth, then the prices will go even higher.

The CHAIRMAN. Is there any indication in that accumulation in that graph that I am seeing in my mind's eye as I have described to you that there might not be a good investment opportunity for additional production of oil and gas and-or refining capacity? If there was, would they not use it for that?

Mr. CARUSO. I think they will, as soon as the expectations shift. We have heard from some of the major oil companies they are still using expectations of $25 per barrel to evaluate investment prospects. That I believe is starting to change, but we will not know that until we actually see the results of those investments.

The CHAIRMAN. Well, speaking just as one Senator, I think the companies that have those accumulations—far be it from me to be talking about it, because I do not run them and I do not know what all this means, but I think there is a great vulnerability from a standpoint of policymakers looking at that if that is not used to produce something tangible and productive for the people. I do not know what that means, but it seems to me they ought to be investing it.

Having said that, I do not think there are any other questions and we thank you all. We are going to proceed to the next panel quickly. We apologize for asking so few questions and making such long-winded statements, but most of you are experienced at it.

Senator MURKOWSKI. Mr. Chairman, while the panel is assembling could I just make a comment following up on your point to Mr. Caruso? In our arguments and the debate to get ANWR open, some of the great frustration has been this reliance on a price that we have not seen this year, we did not see last year, and we are not going to see for the next 3 years, according to Mr. Caruso.

So it would be helpful to understand really the direction, both short-term, mid-term, and long-term. Thank you.

The CHAIRMAN. Thank you for your observation.

Now let me make a point here. We have a vote. If any of you Senators would like to go make it, I will wait and let you go, come back, and you can take over for me, any of you. We have 11 minutes.

Senator BURR. I will run.

Senator WYDEN. I will run and I will come back.

The CHAIRMAN. You will come back. I am not sure we will welcome Ron back, but anyway. The witnesses are geared up. We are going to start right now.

First let us start with Mr. Slaughter, Mr. Shipley—is it "Darbelnet"?

Mr. DARBELNET. Darbelnet.

The CHAIRMAN. Darbelnet.

Mr. DARBELNET. Yes.

The CHAIRMAN. And Mr. Dowd. Is that correct?

Mr. SLAUGHTER. Yes.

The CHAIRMAN. Let us start that way. Would you keep your statements to 3 minutes and we will put your written statements in the record. If there is anything we do not ask you afterwards that today has prompted, would you kindly help us by submitting

something later saying, you did not get this information but we heard such and such and we would like to share this with you.

Go ahead, Mr. Slaughter; you start.

STATEMENT OF BOB SLAUGHTER, PRESIDENT, NATIONAL PETROCHEMICAL AND REFINERS ASSOCIATION

Mr. SLAUGHTER. Thanks, Mr. Chairman. I am here for NPRA, the national association for petrochemicals.

The CHAIRMAN. Right.

Mr. SLAUGHTER. Just kind of skimming, I think sometimes we are losing appreciation of the magnitude of what happened last week. We lost 25 percent of our crude supply, 14 percent of natural gas supply, and 20 percent of our refining capacity, plus the ability to ship products to the Eastern United States for an indeterminate period.

Now, some people may be surprised that there was a market reaction to that news, but I think it is quite obvious that there would be. Now, hopefully, and we are making great progress in bringing those things back, we will see improvement soon. But we still are going to have some refineries, probably four refineries with about 900,000 barrels a day capacity, that do not yet have determined restart dates.

If I could just for a second show you my charts very quickly. I just want to make really quick points. The biggest determinant in gasoline price is the price of crude oil. You will see there that the chart shows that the curves follow one another. The FTC has found that 85 percent of the movements in gasoline are due to movements in the price and supply of crude oil.

The next one is just going to again show that 55 percent of the cost of gasoline delivered is attributable to the cost of crude oil and 20 percent or slightly less is taxes and refining just basically adds 18 percent.

This is just the blizzard of things, the different programs that refineries have to do, their environmental programs for the refineries or the fuels in the next 3 years. We are investing about $20 billion in that over this 10-year period.

This last one is the one that Senator Bingaman mentioned.

[The prepared statement of Mr. Slaughter follows:]

PREPARED STATEMENT OF BOB SLAUGHTER, PRESIDENT, NATIONAL PETROCHEMICAL & REFINERS ASSOCIATION

Mr. Chairman and members of the Committee, thank you for the opportunity to appear today to discuss the impact of the wide-spread devastation caused by Hurricane Katrina on transportation fuels markets. While I will focus: on that urgent matter, I will also discuss the many other factors impacting current transportation fuels markets. My name is Bob Slaughter and I am President of NPRA, the National Petrochemical & Refiners Association. NPRA is a national trade association with 450 members, including those who own or operate virtually all U.S. refining capacity, and most U.S. petrochemical manufacturers.

PART I. RESPONDING TO HURRICANE KATRINA

In the aftermath of Hurricane Katrina our nation confronts death, injuries and devastation of staggering proportions. The images of the tragedy displayed in the last several days on television and other media underscore the human toll and seeming hopelessness in ways more eloquent and compelling than could ever be captured in testimony. We share both the sense of dismay and increased humility felt by all Americans before this latest reminder of nature's power to devastate and con-

found the best efforts of human beings. NPRA offers our sympathy and prayers to those who have suffered the loss of loved ones among family members, or their neighbors and colleagues, as well as to those who have lost much or all of their personal assets and livelihood in this worst U.S. natural disaster.

Today's hearing has been called to inquire into the impact of Hurricane Katrina on the nation's energy supply. It is appropriate that Congress turn immediately to such questions because of the huge impact of that storm on the Gulf Coast, the energy heartland of the United States. This is a time when national, attention is and should be focused on human needs. Many industry employees and their families-have been victims as you will hear. Nevertheless, NPRA appreciates the committee's immediate attention to the issue of energy supply; which was the subject of considerable debate and attention even before the hurricane disaster occurred. We also appreciate the opportunity to respond to the committee's questions in person on this matter of critical national importance. Because our expertise lies in the area of refining and petrochemicals, we will focus on those areas, but will try to provide other. available. information insofar as is possible.

Thus, on behalf of our refining and petrochemical industry members we have attempted to respond to the questions most asked about Hurricane Katrina's impact on the industry and energy supply, as follows:

1. HOW MUCH OF THE NATION'S OIL AND GAS SUPPLIES COME FROM THIS REGION?

According to the U.S. Energy Information Administration (ETA),, the Gulf of Mexico produces 1.582 million barrels per day (mmb/d) of federal offshore crude production, which is 28.5% of the U.S. total federal offshore crude production (5.488 million barrels per day).

Again according to EIA, the region contains 8.068 million barrels per day of refining capacity, 47.4% of the nation's total refining capacity (17 million barrels per day).

The Gulf Coast region receives 6.490 mmb/d of crude oil imports, 60.4% of the nation's total crude oil imports (10.753 mmb/d): (23.5% of the nation's total comes into ports in Louisiana, Mississippi and Alabama, and 8.5% of the nation's total crude imports come into the LOOP.)

The Gulf Coast region produces 10.4 billion cubic feet (bcf/d) of natural gas per day, 19.2% of the nation's total offshore natural gas production (54.1 bcf/d).

2. HOW EXTENSIVE WAS THE DAMAGE?

Crude Oil, Natural Gas Production

According to the U.S. Minerals Management Service (MMS), as of September 2, 88.53% (1.328 mmb/d) of Gulf crude oil production was shut-in, and 72.48% (7.248 bcf/d) of Gulf natural gas production was shut-in. This amounts to 25% of total federal offshore crude production and 14% of the nation's offshore natural gas production.

Crude Oil Import Facilities

The storm resulted in temporary closure of LOOP, the Louisiana Offshore Oil Port. More than 10% (900,000 b/d) of the nation's crude oil imports enter through LOOP. Roughly 500,000 b/d of crude produced offshore is also unloaded at LOOP, which ceased operations on Sunday, August 28 as the storm approached.

REFINERIES

The following refineries were directly affected by Hurricane Katrina:

Belle Chasse, Louisiana (ConocoPhillips) 247,000 b/d; shut
Chalmette, Louisiana (ExxonMobil/PDVSA) 190,000 b/d; shut
Convent, Louisiana (Motiva) 235,000 b/d; shut
Garyville, Louisiana (Marathon) 245,000 b/d; shut
Meraux, Louisiana (Murphy) 125,000 b/d; shut
Norco, Louisiana (Motiva) 227,000 b/d; shut
Pascagoula, Mississippi (Chevron) 325,000 b/d; shut
Port Allen, Louisiana (Placid) 48,500 b/d; shut
St. Charles, Louisiana (Valero) 260,000 b/d; shut
Vicksburg, Mississippi (Ergon) 23000; shut

Together, these facilities constitute about 2 mmb/d, 12% of the nation's total refining capacity (17 mmb/d).

In addition, the following refineries were forced to reduce operations because of the impact of Hurricane Kristina:

Baton. Rouge, Louisiana (Exxon Mobil) 488,000 b/d; reduced runs

Krotz Springs, Louisiana (Valero) 85,000 b/d; reduced runs
Memphis, Tennessee (Valero) 180,000; reduced runs
Port Arthur, Texas (Total). 285,000 b/d; reduced runs
Tuscaloosa, Alabama (Hunt Refining: Co.), 35,000 b/d; reduced runs

In addition, several Midwestern refineries were affected by shutdown of the Capline Pipeline, which supplies crude oil from the Gulf region to refineries in the Midwest (16% of the nation's refining capacity is in the Midwest). For example, Marathon's refineries at Catlettsburg, West Virginia (222,000) and Robinson, Illinois (192,000) were affected by Capline's closure, as were other Midwestern facilities.

In total, we believe that at least 20% of the nation's refining capacity (3.4 mmb/d) ceased operations or reduced runs at some time due to the direct impact of Hurricane Katrina and the loss of crude supplies from pipelines affected by the storm. This is probably a conservative estimate.

Recent reports indicate that many of these refineries are either up and running or anticipate start-up as early as this week. But, unfortunately, there are some refineries representing a significant amount of capacity that will remain shut for an undetermined period.

The Gulf refineries were first impacted by the need to protect the personal and family safety of employees, as well as the high likelihood of wind and flood damage as a result of the hurricane. After the hurricane passed, many of these facilities remained totally off-line as damages were assessed. In some instances companies could not physically enter the facilities to conduct an assessment for several days, and had to first depend on flyovers to study the plant. Damages included flooding, wind damage, and lack of electricity.

Pipelines

In addition, the widespread damage caused by the storm disrupted the electricity supply, which affected all industry operations. From a refiner's point of view, among the most serious was closure of three pipelines:

The Colonial Pipeline, 5,500 miles of pipeline originating in Houston and ending in New York Harbor, carries a daily average of 100 million gallons of gasoline, diesel and other petroleum products from refineries in the Gulf to customers in the South and Eastern United States.

The Plantation Pipe Line, 3,100 miles of pipeline, performs a similar function along a slightly different route, delivering a total of 620,000 barrels (26 million gallons) of refined petroleum products per day to Birmingham, Alabama; Atlanta, Georgia; Charlotte, North Carolina; and Washington, D.C., among other cities.

The Capline Pipeline (previously mentioned), which carries 1.1 million b/d of crude oil to refineries in the Midwest where it is refined to produce gasoline, diesel and other petroleum products for distribution primarily in the Midwest.

All three of these pipelines were totally or partially out of service due to disruption of electricity supplies as a result of Hurricane Katrina. As a result, the major supply lines of refined products to the Southern and Eastern states were unavailable for shipment in whole or in part, during the initial period after the storm. Midwestern gasoline and diesel production was affected by lack of supply from the Capline Pipeline. This led to reduced supplies of gasoline, diesel, and other products in parts of the country often far removed from the Gulf area.

Petrochemical Facilities

The Gulf region is home to many of America's petrochemical plants, which manufacture plastics and other products made from oil and natural gas feedstocks, and which rely on these energy sources for fuel and electricity for power. The impact of Hurricane Katrina on these facilities is not currently known but is potentially quite serious, both in terms. of facility damage due to water or wind damage and temporary closure or reduced operations due to feedstock shortages, lack of fuel or electricity and transportation problems.

Petrochemical products serve as the building blocks for many ultimate products such as computers, medicines and other medical products, plastic packaging for food, and also automobile components, to name just a few. Disruption of petrochemical production due to the storm, if it continues, could affect the economy considerably due to the economic importance of petrochemical-based products.

Other Facilities

In addition to the major impacts outlined above, company pipelines and shore facilities and other operations were impacted by the hurricane, but information on these matters is less readily available to us. Company and government statements indicate that many of these facilities were not operating due to lack of electricity or because other related facilities (e.g. refineries) were down. Some natural gas proc-

essing plants were affected but NPRA does not have more information on this sector of the industry.

3. WHAT IS THE CURRENT STATE OF REPAIRS?

The many different sectors of the energy industry, working around the clock together with core service providers and with important help from local, state and federal government agencies, have made considerable progress in restoring some of the operations affected by the storm.

The magnitude of the impact outlined above clearly dictates caution in any assessment of when the energy production, refining, distribution and related facilities will be back in service and industry conditions will return to normal. Clearly, our national energy infrastructure has suffered a setback from which it will take some time to emerge completely.

Crue Oil, Natural Gas

According to the MMS as of Saturday, September 3, 78.98% of Gulf of Mexico crude oil offshore production remained shut-in, an improvement of 10% over Friday. Shut-in Gulf natural gas production stood at 57.80% of total Gulf gas marketed production, an improvement of 21% over Friday's figure. The number of manned offshore platforms that are evacuated declined by 25% over the same period. Thus, important but limited progress has been made both in restoring the flow of crude and natural gas necessary for refiners to manufacture gasoline, diesel, jet fuel and other petroleum products and to meet the needs of petrochemical manufacturers. In addition, it is reported that LOOP is operating at 75% of capacity.

These figures still leave significant amounts of offshore Gulf crude oil and natural gas shut-in, and oil and gas volumes not produced in the past several days are large. During the period 8/26-9/3 9.8 million barrels were shut-in, totaling 1.8% of yearly crude oil production in the Gulf. During the same period 53.2 billion cubic feet of natural gas were shut-in, roughly 1.45% of annual gas marketed production from offshore.

There are indications of progress as well regarding refineries. Marathon announced this weekend that, barring unforeseen problems, all seven of its refineries would be operating at capacity on Monday. This includes the Midwestern refineries impacted by the Capline Pipeline closure as well as the Garyville, Louisiana refinery impacted directly by the hurricane. Valero has announced that its St. Charles refinery will probably return to operation in the next two weeks. Shell has stated that the Convent refinery may be restarted Sunday and the Norco refinery midweek. Those refineries will be returned to full production gradually and safely as soon as start-ups take place. Assessments of physical damage to the Chalmette and Meraux refineries last week helped ascertain the extent of damage was. limited; no start=up date has been set.

The Colonial Pipe Line expected to return to 86% capacity service by the end of the Labor Day weekend. Plantation Pipe Line has returned to 100% operation as has the Capline-crude oil pipeline. This means that major pipeline links to the Midwest,, South and East have been gradually restored. Serious problems remain, however, due to the significant loss of product and crude volumes which would have been shipped on these lines last week.

In addition, it remains unclear when many, if not most, of the refineries impacted directly by Hurricane Katrina in the Gulf can return , to service. Problems with wind and water damage, electricity supply and other infrastructure remain to be addressed despite the best efforts of facility owners and operators. Thus, although some of the affected refineries may restart and return to capacity or near-capacity levels this week, there are indications that several facilities may be out of service for a longer period.

The industry is committed to operation of these facilities as soon as possible, but employee safety and overall safe start-up and operation concerns are paramount. Significant flooding and damage still affects some facilities. However, some refiners with operating facilities have indicated that they will be able to ramp-up production from currently reduced levels at refineries near the affected areas which should have a positive impact on product supplies.

4. WHAT ELSE IS INDUSTRY DOING TO IMPROVE THE SITUATION?

As indicated above, ,the industry has moved with considerable speed to restart the nation's energy infrastructure so severely damaged by Hurricane Katrina. Even more important than assessing and repairing physical damage however, was the need to locate and assist employees, many of whom experienced significant personal losses of family or friends in the tragedy as well as loss of or severe damage to their

homes. (All industry companies throughout this region have been deeply involved in locating and providing for the needs of their employees at the same time they. were attempting to assess and respond to facility damages and restore energy production).

Many companies are offering varying types of assistance to personnel arid their families who were impacted by the hurricane. These include interest free loans; temporary living supplements for housing and food; pay continuation while facilities are closed; transportation assistance; paid time off; medical and prescription drug assistance; temporary housing, including trailers, tents, and other available housing.

The oil, gas and petrochemical industries have already contributed millions of dollars to the American Red Cross and other relief agencies involved in assisting all residents of the affected communities. They are also matching employee contributions. Companies are also supplying in-kind assistance, often including fuel, for relief efforts as well. The industry will doubtless maintain its deep commitment to help end the suffering in the affected communities and to begin planning for the future.

5. WHAT HAS THE FEDERAL GOVERNMENT DONE TO ADDRESS THESE EMERGENCY CONDITIONS?

Federal authorities have taken several decisive actions to help relieve the many energy-related problems left in the wake of Hurricane Katrina.

SPR Release,

The Administration has released 9 million barrels of crude oil from the Strategic Petroleum Reserve (SPR) to assist refiners who are short crude supplies as a result of hurricane damage. The recipients will use this crude to manufacture more gasoline, diesel, jet fuel and home heating oil to be supplied to consumers across the nation. This is a dynamic process, and additional volumes may be needed as more refineries restart.

The current situation is precisely the type of event meant to trigger SPR release. It demonstrates the importance of careful SPR management.

Waivers to Increase Fuel Flexibility

EPA has provided temporary fuel waivers that will make it easier to provide fuels to affected areas. This action pertains to both gasoline and diesel specifications, and will help alleviate some of the supply problems in these areas by increasing the available supply of both domestic production and imports. Affected states participated in the EPA's decision process on this action.

Jones Act Waiver

DOT has temporarily lifted Jones Act requirements to allow non-U.S. flag vessels to transport much needed refined products from one U.S. port to another.

IEA (International Energy Agency) Exchange

The Secretary of Energy has announced that the IEA will make available 60 million barrels. of petroleum. This will provide relief in the form of refined products (gasoline, diesel, jet fuel, home heating oil) which are much needed due to disrupted supplies from several refineries. These products should begin to reach the U.S. in one to two weeks. The agreement with the IEA also requires the U.S. to release an additional 30 million barrels of SPR crude.

Industry appreciates these actions, which were taken by the Administration with bipartisan support from the Congress. They will be very helpful in dealing with the serious supply problems that have resulted from Hurricane Katrina.

6. WHAT IS THE IMPACT ON FUEL SUPPLY? WHEN WILL THE SITUATION RETURN TO NORMAL?

As indicated above, Hurricane Katrina's direct hit on the energy heartland of America resulted in significant damage to offshore energy production in the Gulf, to facilities that are critically important to imported oil supplies, to refineries in the affected states and beyond, and to pipelines that serve as the major providers of refined products and crude to large parts of the East, South and Midwest.

All segments of the industry are working together in an intensive effort to repair as much of the damage as is possible at this time in order to increase the flow of crude oil to refineries and refined products to consumers throughout the country. Safety considerations. and the immediate needs of the industry's workforce are of course taken into account at all times.

Industry and government are working together to provide: available supplies of product to areas that are experiencing supply concerns. The fuel and Jones Act waivers mentioned above will be of immediate and near-term assistance.

Increased product imports through the IEA should also help when they arrive. Refiners who. have the ability to do so will attempt to increase production to help meet the needs of the affected areas. The release of oil from the SPR will be helpful in supplying them with some of the crude needed to make these products.

Despite this hopeful news, our nation faces a disruption of the fuel supply system that should not be understated. The hurricane temporarily affected more than 90% of the Gulf's oil production and 80% of its gas production. It effectively removed 10% of the nation's gasoline supply by its impact on U.S. refining capacity located near the Gulf. It also impacted refineries hundreds of miles away that lost access to crude oil supplies. Although important progress has been made through the efforts of government and industry, and with some help from abroad, full recovery will take time. Hard work and cooperation throughout this difficult period will certainly help speed the return to normal conditions. The direct and indirect impact of the hurricane on energy demand, which cannot yet be determined, will also be a major factor during this period.

7. SHOULD WE CONTINUE TO RELY ON FREE MARKET FORCES DURING THIS PERIOD?

Absolutely. Continued reliance on market forces provides appropriate market signals to help balance supply and demand even during difficult times. President Reagan eliminated price controls on oil products immediately upon taking office in 1981. He was outspoken about the inefficiencies and added costs to consumers as a result of America's ten-year experiment with energy price controls.

The energy price and allocation controls of the 1970s resulted in supply shortages in the form of long gas lines. Studies have shown that, although intended to reduce costs, they actually resulted in increased costs and greater inconvenience for consumers. The benefits of market pricing became clear soon after their elimination. The U.S. Federal Trade Commission stated in an extensive study published this June that "Gasoline supply, demand and competition produced relatively low and stable annual average real U.S. gasoline prices from 1984 until 2004, despite substantial increases in U.S. gasoline consumption" and ". . . For most of the past 20 years, real annual average retail gasoline process in the U.S., including taxes, have been lower than at any time since 1919." Price caps and other forms of price regulation are no more effective in the 21st century than they turned out to be in the 1970s. Interference in market forces always creates inefficiencies in the marketplace and extra costs for consumers.

The same holds true for "windfall profit taxes." The U.S. had a "windfall profit tax" on crude oil from 1980 until 1988. That tax, which was actually an ad valorem tax imposed on crude oil, discouraged crude oil production in the United States and resulted in. other market distortions. It was repealed in 1988.

Calls for re-imposition of a windfall profits tax on refiners reflect a misunderstanding of refining industry economics. In the ten-year period 1993-2002, average return on investment in the refining industry was only about 5.5%. This is less than half of the S&P industrials average return of 12.7% for the same period. Refining industry profits as a percentage of operating capital are not excessive. In dollars, they seem large due to the massive scale needed to compete in a large, capital-intensive industry. For example, a new medium scale refinery (100,000 to 200,000 b/d) would cost $2 to $3 billion. In short, company revenues can be in the billions, but so, too are the costs of operations.

The FTC June 2005 study cited above had the following comments on industry profits: "Profits play necessary and important roles in a well-functioning market economy. Recent oil company profits are high but have varied widely over time, over industry segments and among firms . . . Profits also compensate firms for taking risks, such as the risks in the oil industry that war or terrorism may destroy crude production assets or, that new environmental requirements may require substantial new refinery capital. investments."

Many other industries enjoy higher earnings than the oil industry. Among these are telecommunication services, software, semiconductors, banking, pharmaceuticals, coal and real estate, to name just a few. Imposition of a, windfall profits tax on the industry would discourage investment at a time when significant capital commitments to all parts of the. industry, including refining, will be needed.

Tight gasoline market conditions have often led to calls for industry investigations. More than two dozen federal and state investigations over the last several decades have found no evidence of wrongdoing or illegal activity on our industry's part. For example, after a 9-month FTC investigation into the causes of price spikes

in local markets in the Midwest during the spring and summer of 2000, former FTC Chairman Robert Pitofsky stated, "There were many causes for the extraordinary price spikes in Midwest markets. Importantly, there is no evidence that the price increases were a result of conspiracy or any other antitrust violation. Indeed, most of the causes were beyond the immediate control of the oil companies." Similar investigations before and since have reached the same conclusion.

There have been, however, reports of price gouging by unscrupulous individuals who seek to profit during this time of national emergency and crisis. Federal and state laws prohibit actions of this kind in emergency situations like the present. Each alleged situation should be thoroughly investigated by the appropriate state and federal authorities and prosecuted when the law has been broken.

PART II. A SHORT DISCUSSION OF OIL AND OIL PRODUCT SUPPLY DRIVERS

1. INTRODUCTION

This hearing was originally intended to inquire into the factors affecting the gasoline market. The natural disaster resulting from Hurricane Katrina required an understandable shift in emphasis to the human needs damages resulting from that storm and only then to supply impacts. But it is important to remember that the effect of Hurricane Katrina is an overlay on a pre-existing condition. That was and is a situation characterized by high crude prices, strong demand for gasoline, diesel and other petroleum products, and a challenged energy infrastructure, especially in refining. In the interest of space and time, NPRA has shortened the following discussion of these conditions and policy recommendations for improving them. We urge members of the committee to consider the need for policy changes to increase the nation's supply of oil, oil products and natural gas as soon as possible.

As the nation moves forward in its resolve to address and overcome the effects of Katrina and the transportation fuels production and distribution systems regain much-needed pre-storm productivity levels, an underlying domestic fuel supply problem remains that requires immediate, bold, and perhaps politically unpopular actions. NPRA believes that policy changes must be put in place to enhance domestically-produced supplies of oil, oil products and natural gas. NPRA has consistently urged policy makers in gasoline. Over the last 20 years, changes in crude oil prices have explained 85 percent of the changes in the price of gasoline in the U.S."

Crude prices have been steadily increasing since 2004, largely because of surprising levels of growth in oil demand in countries such as China and India, and in the United States as well. Actual demand growth for oil and oil products in these countries in 2004 exceeded the experts' predictions and has remained strong this year. As a result, world demand for crude is bumping up against the worldwide ability to produce crude.

Strong demand for crude has dissipated the cushion of excess available worldwide oil supply, just as strong U.S. demand for refined products has eliminated excess refining capacity in the United States. The good news is that producing countries will probably be able to add crude production capacity in the years to come. The bad news is that the United States has thus far shown only limited willingness to-face up to its own energy supply problems.

As shown in Attachment I, gasoline costs closely track the cost of crude oil. Before hurricane Katrina, gasoline price increases lagged crude oil price increases on a gallon for gallon basis. This means that refiners did not pass through all of the increased costs in their raw material, crude oil. Crude oil accounts for 55-60% of the price of gasoline seen at the service station.

The cost of federal and state taxes adds another 19% to the cost of a finished gallon of gasoline. Therefore under current conditions, 74-79% of the total cost of a gallon of gasoline is pre-determined before the crude is delivered to the refiner for manufacture into gasoline. (See Attachment 2)*

Another contributor to gasoline costs is tightness in our nation's gasoline markets. While U.S. refiners are producing huge volumes of products, strong demand has tightened supply. Gasoline demand currently averages approximately 9 million barrels per day. Domestic refineries produce about 90 percent of U.S. gasoline supply, while about 10 percent is imported. Thus, strong and increasing demand can only be met by either adding new domestic refinery capacity or by relying on more foreign gasoline imports. Unfortunately, the desire for more domestic gasoline production capacity is often thwarted by other public priorities. Congress and the Administration to support environmentally sound, economically justifiable policies that en-

*The attachments have been returned in committee files.

courage the production of an abundant supply of petroleum and natural gas products for U.S. consumers.

NPRA supports requirements for the orderly production and use of cleaner burning fuels to address health and environmental concerns, while at the same time maintaining the flow of adequate and affordable gasoline and diesel supplies to the consuming public. Since 1970, clean fuels and clean vehicles have accounted for about 70% of all U.S. emission reductions from all sources, according to EPA. Over the past 10 years, U.S. refiners have invested about $47 billion in environmental improvements, much of that to make cleaner fuels. For example, according to EPA, the new Tier 2low sulfur gasoline program, initiated in January 2004, will have the same effect as removing 164 million cars from the road when fully implemented.

Unfortunately, however, federal environmental policies have often neglected to consider fully the impact of environmental regulations on fuel supply. Frankly, policy makers have often taken supply for granted, except in times of obvious market instability. This attitude must end. A healthy and growing U.S. economy requires a steady, secure, and predictable supply of petroleum products.

Unfortunately, there. are no silver bullet solutions for balancing supply and demand. Indeed most of the problems in today's gasoline market without factoring the market disruptions caused by Katrina—result from the high price of crude oil due to economic recovery abroad together with strong U.S. demand for gasoline and diesel due to the improving U.S. economy.

2. UNDERSTANDING GASOLINE MARKET FUNDAMENTALS: HIGH, CRUDE PRICES; STRONG GASOLINE DEMAND GROWTH

It is important to recognize the overwhelming factor affecting gasoline prices; crude oil. In June of this year the U.S. Federal Trade Commission released a landmark study titled: "Gasoline Price Changes: The Dynamic of Supply, Demand and Competition." To quote from the FTC's findings: "Worldwide supply, demand, and competition for crude oil are the most important factors in the national average price of gasoline in the U.S." and "The world price of crude oil is the most important factor in the price of gasoline. Over the last 20 years, change sin crude oil prices have explained 85 percent of the changes in the price of gasoline in the U.S."

Crude prices have been steadily increasing since 2004, largely because of surprising levels of growth in oil demand in countries such as China and India, and in the United States as well. Actual demand growth for oil and oil products in these countries in 2004 exceeded the experts' predictions and has remained strong this year. As a result, world demand for crude is bumping up against the worldwide ability to produce crude.

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Another contributor to gasoline costs is tightness in our nation's gasoline markets. While U.S. refiners are producing huge volumes of products, strong demand has tightened supply. Gasoline demand currently averages approximately 9 million barrels per day. Domestic refineries produce about 90 percent of U.S. gasoline supply, while about 10 percent is imported. Thus, strong and increasing demand can only be met by either adding new domestic refinery capacity or by relying on more foreign gasoline imports. Unfortunately, the desire for more domestic gasoline production capacity is often thwarted by other public priorities.

3. U.S. POLICY SHOULD ENCOURAGE ADDITIONAL DOMESTIC REFINING CAPACITY.

Domestic refining capacity is a scarce asset. There are currently 148 U.S. refineries owned by 55 companies in 33 states, with total crude oil processing capacity at roughly 17 million barrels per day. In 1981, there were 325 refineries in the U.S. with a capacity of 18.6 million barrels per day. Thus, while U.S. demand for gaso-

line has *increased* over 20% in the last twenty years, U.S. refining capacity has *decreased* by 10%. No new refinery has been built in the United States since 1976, and it will be difficult to change this situation. This is due to economic, public policy and political considerations, including siting costs, environmental requirements, a history of low refining industry profitability and, significantly, "not in my backyard" (NIMBY) public attitudes.

Nevertheless, existing refineries have been extensively updated to incorporate the technology needed to produce a large and predictable supply of clean fuels with significantly improved environmental performance. Capacity additions have taken place at some facilities as well; several of these projects implemented over several years can actually increase product output as much as a new refinery. But this increase in capacity at existing sites has not kept pace with the growth in U.S. demand for products, meaning that the nation is increasing its reliance on imports of gasoline and other petroleum products each year.

Proposed capacity expansions can often become controversial and contentious at the state and local level, even when necessary to produce cleaner fuels pursuant to regulatory requirements. We hope that policymakers will recognize the importance of domestic refining capacity expansion to the successful implementation of the nation's environmental policies, especially clean fuels programs. The Administration's New Source Review reform program will also provide one tool to help add and update capacity.

NPRA wants to recognize a provision in the recently enacted energy legislation that will help encourage additional refining investment. The provision allows 50% expensing of the costs associated with expanding a refinery's output by more than 5%. The refiner must have a signed contract for the work by 1/1/08, and the equipment must be put in service by 1/1/12.

Common sense dictates that it is in our nation's best interest to manufacture the lion's share of the petroleum products required for U.S. consumption in domestic refineries and petrochemical plants. Nevertheless, we currently import more than 62% of the crude oil and oil products we consume. Reduced U.S. refining capacity clearly affects our supply of refined petroleum products and the flexibility of the supply system, particularly in times of unforeseen disruption or other stress. Unfortunately, EIA currently predicts "substantial growth" in refining capacity only in the Middle East, Central and South America, and the Asia/Pacific region, not in the U.S.

4. THE U.S. REFINING INDUSTRY IS DIVERSE AND COMPETITIVE.

Today's U.S. refining industry is highly competitive. Some suggest past . mergers are responsible for higher prices. The data do not support such claims. In fact, companies have become more efficient and continue to compete fiercely. There are 55 refining companies in the U.S., hundreds of wholesale and marketing companies, and more than 165,000 retail outlets. The biggest refiner accounts for only about 13% of the nation's total refining capacity; and the large integrated companies own and operate only about 10% of the retail outlets. The Federal Trade Commission (FTC) thoroughly evaluates every merger proposal, holds industry mergers to the highest standards of review, and subjects normal industry operations to a higher level of ongoing scrutiny.

Critics of mergers sometimes suggest that industry is able to affect prices because it has become much more concentrated, with a handful of companies controlling most of the market. This is untrue. According to data compiled by the U.S. Department of Commerce and by Public Citizen, in 2003 the four largest U.S. refining companies controlled a little more than 40% of the nation's refining capacity. In contrast, the top four companies in the auto manufacturing, brewing, tobacco, floor coverings and breakfast cereals industries controlled between 80% and 90% of the market.

5. INDUSTRY IS WORKING HARD TO KEEP PACE WITH GROWING DEMAND FOR FUEL.

Despite the powerful factors that influence gasoline manufacturing, cost and demand, refiners are addressing current supply challenges and working hard to supply sufficient volumes of gasoline and other petroleum products to the public. Refineries have been running at very high levels, producing gasoline and distillate. Refiners operated at high utilization rates even before the start of the summer driving season. To put this in perspective, peak utilization rates for other manufacturers average about 82%. At times during summer, refiners often operate at rates close to 98%. However, such high rates cannot be sustained for long periods.

In addition to coping with higher fuel costs and growing demand, refiners are implementing significant transitions in major gasoline markets. Nationwide, the amount of sulfur in' gasoline will be reduced to an average of 30 parts per million

(ppm) effective January 1, 2006, giving refiners an additional challenge in both the manufacture and distribution of fuel. Equally significant, California, New York and Connecticut bans on use of MTBE are in effect. This is a major change affecting one-sixth of the nation's gasoline market. MTBE use as an oxygenate in reformulated gasoline accounted for as much as 11% of RFG supply at its peak, substitution of ethanol for MTBE does not replace all of the volume lost by removing MTBE. (Ethanol's properties generally cause it to replace only about 50% of the volume lost when MTBE is removed.) This lost volume must be supplied by additional gasoline or gasoline blendstocks. Especially during a period of supply concerns it is in the nation's interest to be prudent in taking any action that affects MTBE use. That product still accounts for 1.6% of the nation's gasoline supply on average, but it provides a larger portion of gasoline supplies in areas with RFG requirements that are not subject to an MTBE ban.

Obviously, refiners face a daunting task in completing many changes to deliver the fuels that consumers and the nation's economy require. But they are succeeding. And regardless of recent press stories, we need to remember that American gasoline and other petroleum product prices have long been low when compared to the price consumers in other large industrialized nations pay for those products. The Federal Trade Commission recently found that "Gasoline supply, demand and competition produced relatively low and stable annual average real U.S. gasoline prices from 1984 until 2004, despite substantial increases in U.S. gasoline consumption."

6. REFINERS FACE A BLIZZARD OF REGULATORY REQUIREMENTS AFFECTING BOTH FACILITIES AND PRODUCTS.

Refiners currently face the massive task of complying with fourteen new environmental regulatory programs with significant investment requirements, all in the same 2006-2012 timeframe. (See Attachment 3.) In addition, many programs start soon. (See Attachment 4.) For the most part, these regulations are required by the Clean Air Act. Some will require additional emission reductions at facilities and plants, while others will require further changes in clean fuel specifications. NPRA estimates that refiners are in the process of investing about $20 billion to sharply reduce the sulfur content of gasoline and both highway and off-road diesel. Refiners will face additional investment requirements to deal with limitations on ether use, as well as compliance costs for controls on Mobile Source Air Toxics and other limitations. These costs do not include the significant additional investments needed to comply with stationary source regulations that affect refineries.

Other potential environmental regulations on the horizon could force additional large investment requirements. They are: the challenges posed by increased ethanol use, possible additional changes in diesel fuel content involving cetane, and potential proliferation of new fuel specifications driven by the need for states to comply with the new eight-hour ozone NAAQS standard. The 8-hour standard could also result in more regulations affecting facilities such as refiners and petrochemical plants.

These are just some of the pending and potential air quality challenges that the industry faces. Refineries are also subject to extensive regulations under the Clean Water Act, Toxic Substances Control Act, Safe Drinking Water Act, Oil Pollution Act of 1990, Resource Conservation and Recovery Act, Emergency Planning and Community Right-To-Know (EPCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and other federal statutes. The industry also complies with OSHA standards and many state statutes. A complete list of federal regulations impacting refineries is included with this statement. (See Attachment 5.)

API estimates that, since 1993, about $89 billion (an average of $9 billion per year) has been spent by the oil and gas industry to protect the environment. This amounts to $308 for each person in the United States. More than half of the $89 billion was spent in the refining sector.

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7. A KEY GOVERNMENT ADVISORY PANEL HAS URGED MORE SENSITIVITY TO SUPPLY CONCERNS.

The National Petroleum Council (NPC) issued a landmark report on the state of the refining industry in 2000. Given the limited return on investment in the industry and the capital requirements of environmental regulations, the NPC urged policymakers to pay special attention to the timing and sequencing of any changes in product specifications. Failing such action, the report cautioned that adverse fuel supply ramifications may result. Unfortunately, this warning has been widely disregarded. On June 22, 2004 Energy Secretary Abraham asked NPC to update and expand its refining study and a report was released last December. NPRA again urges policymakers to take action to implement NPC's study recommendations in order to deal with U.S. refining problems.

8. NPRA RECOMMENDATIONS TO ADD REFINING CAPACITY AND INCREASE FUTURE PRODUCT SUPPLY

- Make increasing the nation's supply of oil, oil products and natural gas a number one public policy priority. Now, and for many years in the past, increasing oil and gas supply has often been a number 2 priority: Thus,-oil and gas supply concerns have been secondary and subjugated to whatever policy goal was more politically popular at the time. Enactment of the recent Energy Bill is a first step to making a first priority the supply of energy sources the nation depends upon.
- Remove barriers to increased supplies of domestic oil and gas resources. Recent criticism about the concentration of America's energy infrastructure in the western Gulf is misplaced. Refineries and other important onshore facilities have been welcome in this area but not in many other parts of the country. Policymakers have also restricted access to much-needed offshore oil and natural gas supplies in the eastern Gulf and off the shores of California and the East Coast. These areas must follow the example of Louisiana and many other states in sharing these energy resources with the rest of the nation because they are sorely needed.
- Resist tinkering with market forces when the supply/demand balance is tight. Market interference that may initially be politically popular leads to market inefficiencies and unnecessary costs. Policymakers must resist turning the clock backwards to the failed policies of the past. Experience with price constraints and allocation controls in the 1970s demonstrates the failure of price regulation, which adversely impacted both fuel supply and consumer cost.
- Expand the refining tax incentive provision in the Energy Act. Reduce the depreciation period for refining investments from 10 to seven or five years in order to remove a current disincentive for refining investment. Allow expensing under the current language to take place as the investment is made rather than when the equipment is actually placed in service. Or the percentage expensed could be increased as per the original legislation introduced by Senator Hatch.
- Review permitting procedures for new refinery construction and refinery capacity additions. Seek ways to encourage state authorities to recognize the national interest in more domestic capacity.
- Keep a close eye on several upcoming regulatory programs that could have significant impacts on gasoline and diesel supply. They are:
  - Design and implementation of the credit trading program for the ethanol mandate (RFS) contained in the recent Energy Act. This mechanism is vital to increase the chance that this program can be implemented next year without additional gasoline supply disruption. Additional resources are needed within EPA to accomplish this key task.
  - Implementation of the ultra low sulfur diesel highway diesel regulation. The refining industry has made large investments to meet the severe reductions in diesel sulfur that take effect next June. We remain concerned about the distribution system's ability to deliver this material at the required 15 ppm level at retail. If not resolved, these problems could affect America's critical diesel supply. Industry is working with EPA on this issue, but time left to solve this problem is growing short.
  - Phase II of the MSAT (mobile source air toxics) rule for gasoline. Many refiners are concerned that this new regulation, which we expect next year, will be overly stringent and impact gasoline supply. We are working with EPA to help develop a rule that protects the environment and avoids a reduction in gasoline supply.

- Implementation of the new 8-hour ozone NAAQS standard. The current implementation schedule determined by EPA has established ozone attainment deadlines for parts of the country that will be impossible to meet. EPA has to date not made changes that would provide realistic attainment dates for the areas. The result is that areas will be required to place sweeping new controls on both stationary and mobile sources, in a vain effort to attain the unattainable. The new lower-sulfur gasoline and ULSD diesel programs will provide significant reductions to emissions within these areas once implemented. But they will not come soon enough to be considered unless the current unrealistic schedule is revised. If not, the result will be additional fuel and stationary source controls which will have an adverse impact on fuel supply and could actually reduce U.S. refining capacity. This issue needs immediate attention.

NPRA's members are dedicated to working cooperatively with government at all levels to resolve the current emergency conditions that result from Hurricane Kristina. But we feel obliged to remind policymakers that action must also be taken to improve energy policy in order to increase supply and strengthen the nation's refining infrastructure. We look forward to answering the Committee's questions.

The CHAIRMAN. Could you just go back to that other one.

Mr. SLAUGHTER. Yes, sir, the other one.

The CHAIRMAN. Pull that down. In your statement do you tell us about those?

Mr. SLAUGHTER. Yes, sir.

The CHAIRMAN. Are some of those less important than you would think in terms of the urgency versus the cost imposed on society?

Mr. SLAUGHTER. Well, some have large costs and they do have large potential costs on supply. We have suggested in our statement that you ought to take a look at a few of them.

The CHAIRMAN. Okay. Will you remind us of that, staff, when you look at them? Thank you.

Next one.

Mr. SLAUGHTER. This last one basically just shows everything that refiners have to do between now and the end of 2007, some of which is mandated by the recently passed Energy Act, which is a great first step. But that just shows everything we have got to rationalize in the next 2 years, sir. Again, we are hoping that the members would pay some attention to that.

That is really my statement.

The CHAIRMAN. Thank you very much. I hope we do too. Thank you. Your statement examines all that for us, right?

Mr. SLAUGHTER. Yes, sir.

The CHAIRMAN. Mr. Shipley, nice to have you again.

STATEMENT OF WILLIAM S. SHIPLEY III, CHIEF EXECUTIVE OFFICER, SHIPLEY STORES, ON BEHALF OF THE NATIONAL ASSOCIATION OF CONVENIENCE STORES AND THE SOCIETY OF INDEPENDENT GASOLINE MARKETERS OF AMERICA

Mr. SHIPLEY. Thank you. Good afternoon, Mr. Chairman and members of the committee. My name is Bill Shipley. I am chief executive officer of Shipley Stores in York, Pennsylvania. Thank you for inviting me to testify before you today on behalf of NACS and SIGMA. I will concentrate much of my testimony on the personal experiences over the past week as a gasoline retailer in Pennsylvania.

This first chart depicts the daily movements of wholesale prices in south central Pennsylvania market last week. These wholesale prices jumped an average of over 15 cents per day for a total in-

crease between Monday and Friday, September 2 of 75 cents per gallon.

The second chart shows how my company reacted to these rack price increases in terms of our retail outlet prices. As you can see, our retail prices in general rose by a similar and in some cases lower amount than our wholesale costs.

Chart three provides a broader look at wholesale gasoline prices in the Philadelphia market last week and shows that my companies experience was not unique.

Chart four summarizes the changes in rack pricing in each region of the country, broken down by PAD.

Chart five, the final chart, provides a look at wholesale rack prices last week in five randomly chosen cities: Atlanta, Boston, Dallas-Fort Worth, Detroit, and Philadelphia. All of these cities witnessed substantial increases in rack gasoline prices last week.

There have been widespread media reports and even some comments by congressional leaders of gasoline price gouging by gasoline marketers in the wake of Katrina. I cannot assure the committee that isolated instances of profiteering for personal gain in the midst of this crisis did not occur last week. It is important for this committee to understand, however, before you rush to judgment on whether my or other retailers' actions were proper, how I and other retailers establish our retail prices in a market with escalating wholesale prices.

Simply stated, I try to sell my retail prices—set my retail prices on the basis of replacement cost of the gallons I have in my outlets. When wholesale prices are rising and I know that the next load of gasoline I purchase from my supplier will cost me substantially more than my last load, my sales must generate significant cash for me to make that next purchase and to pay my supplier.

If the only thing you knew about my company was that I raised gasoline prices by over 75 cents per gallon last week, would you suspect that I was attempting to profit by this crisis? Maybe, but based on the information I have given you today I trust that you would reach a different conclusion after you had investigated the facts.

I urge this committee and your colleagues to gather the facts on last week's gasoline supply and retail pricing situation before reaching conclusions about my actions or the actions of other motor fuel retail marketers.

I do commend you, Mr. Chairman and your colleagues, for taking the lead in making the energy bill a reality after 5 long years. This is a good first step.

With that, we can move on.

[The prepared statement of Mr. Shipley follows:]

PREPARED STATEMENT OF WILLIAM S. SHIPLEY, III, CHIEF EXECUTIVE OFFICER, SHIPLEY STORES, LLC, ON BEHALF OF THE NATIONAL ASSOCIATION OF CONVENIENCE STORES AND THE SOCIETY OF INDEPENDENT GASOLINE MARKETERS OF AMERICA

I. INTRODUCTION

Good afternoon, Mr. Chairman and members of the Committee. My name is Bill Shipley. I am Chairman and Chief Executive Officer of Shipley Stores, LLC, headquartered in York, Pennsylvania. I am proud to be the fourth generation leader of a family business started by my great-grandfather in 1929. My company owns

and operates 26 convenience stores and supplies gasoline and diesel fuel over 100 retail locations throughout the south central Pennsylvania.

I appear before the Committee today representing the National Association of Convenience Stores ("NACS") and the Society of Independent Gasoline Marketers of America ("SIGMA").

II. THE ASSOCIATIONS

NACS is an international trade association comprised of more than 2,200 retail member companies operating more than 100,000 stores. The convenience store industry as a whole sold 142.1 billion gallons of motor fuel in 2004 and employs 1.4 million workers across the nation.

SIGMA is an association of more than 240 independent motor fuel marketers operating in all 50 states. Last year, SIGMA members sold more than 58 billion gallons of motor fuel, representing more than 30 percent of all motor fuels sold in the United States in 2004. SIGMA members supply more than 35,000 retail outlets across the nation and employ more than 350,000 workers nationwide.

Together, NACS and SIGMA members sell approximately 80 percent of the motor fuel retailed in the United States each year.

III. SUMMARY OF TESTIMONY

Thank you for inviting me to testify before you today on the impact of Hurricane Katrina on the nation's wholesale and retail motor fuel supply and prices. The past ten days have been some of the most challenging in my twenty-five years as a motor fuel marketer and I welcome this opportunity to share my personal experiences, and the experiences and impressions of other NACS and SIGMA members with whom I have talked, with you.

As an initial matter, I would like to express my personal sympathy, and the sympathy of our entire industry, for the victims of Hurricane Katrina. Individually and collectively, our industry shares the suffering of our fellow citizens and will do all in our power to alleviate this suffering at the earliest possible date.

My testimony will touch on three broad topics today. First, I will provide the committee with as much information as I have available on the impact of Hurricane Katrina on gasoline supplies and prices. Specifically, I will share with you my personal experiences over the past ten days and summarize, to the extent possible, the information I have received from my fellow retailers.

Second, I am here to respond to allegations that I, and my industry, have taken advantage of this tragedy by "gouging" our customers by raising retail motor fuel prices. Such allegations are personally offensive to me, and in general reflect a lack of understanding of the market events that have led to the gasoline and diesel fuel price spikes of the last ten days. While it is certainly possible that some "bad actors" have sought to exploit this crisis for personal gain, I can assure you that their actions are not the actions of the vast majority of our industry.

Third, my testimony contains recommendations to the committee on steps that should be taken to lessen the likelihood that such supply disruptions and wholesale and retail price spikes will occur in the future. Unfortunately, these recommendations are remarkably similar to the steps NACS and SIGMA have been urging public policymakers to take for the last ten years. While the enactment of the "Energy Policy Act of 2005" earlier this summer was a good first step towards implementing some of these recommendations, much remains to be done.

IV. IMPACT OF HURRICANE KATRINA ON WHOLESALE AND RETAIL GASOLINE PRICES

For much of the eastern two-thirds of the nation, the impact of Katrina on wholesale and retail gasoline prices could not have been more immediate and profound. I will leave it to other witnesses here today to discuss the impact Katrina had on crude oil production and imports, crude oil movements from production to refineries, domestic refining capacity, and the movement of finished gasoline and diesel fuel throughout the country via pipeline, barge, and truck. That is not my area of expertise. Instead, I will concentrate my testimony on my personal expenses over the past ten days as a marketer in Pennsylvania, and on the experiences of fellow marketers in other areas over the past ten days.

It will be helpful for me to use several charts to graphically make these points. This first chart (Chart 1)* depicts the daily movements of wholesale prices in my south central Pennsylvania market last week. This is the "rack," or wholesale price—the price at which my suppliers are willing to sell me, and other marketers,

*The charts have been retained in committee files.

truckloads of 87 octane conventional gasoline. As you can see, these wholesale prices increased daily, and dramatically, last week. On August 28th, before Katrina struck, my wholesale gasoline cost was $2.44 per gallon including federal, state, and local taxes. Early last week, as Katrina struck the Gulf Coast, these wholesale prices jumped an average of over fifteen cents per day, for a total increase between Monday, August 29th and Friday, September 2nd of 75 cents per gallon.

I must point out that I am primarily a branded marketer—the stations .I own and supply fly the flag of a major refiner. The wholesale prices in this chart reflect branded rack prices, not unbranded, or independent, rack prices. However, I also operate two unbranded outlets. During this same five day period, wholesale prices for these unbranded stores rose $1.00 per gallon, or over 20 cents per day.

This second chart (Chart 2) shows how my company reacted to these rack price increases in terms of our retail outlet prices. As you can see, our retail prices in general rose by a similar, and in some cases, lower amount than our wholesale costs. In short, my company reacted primarily to changes in wholesale price increases when determining where to set our retail prices. In some cases, because of competition from other retailers in our market area, we did not pass the entire increase in rack prices through to retail. On these days, virtually every gallon we sold from our stations resulted in no or negative profit margins for our company, once our operating costs are taken into account.

My personal experience is similar to the experiences of other retailers across the nation. NACS and SIGMA obtained rack pricing data from the Lundberg Survey, an independent report on wholesale motor fuel prices, for several major metropolitan areas for last week. This chart (Chart 3) provides a broader look at wholesale gasoline prices in the Philadelphia market last week.

The next two charts (Charts 4 & 5) indicate that my experience in Pennsylvania was not unique. Chart 4 summarizes the changes in rack pricing in each region of the country, broken down by PADD. As you can see, wholesale prices were up significantly last week in all areas of the country. Chart 5 provides a look at wholesale rack prices last week in five randomly chosen cities—Atlanta, Boston, Dallas/Fort Worth, Detroit and Philadelphia. All of these cities witnessed substantial increases in rack gasoline prices last week.

I have used these charts to provide you with detailed evidence that Katrina had a widespread impact on gasoline prices in much of the country last week—not just in the areas devastated by the storm itself. Because crude production was reduced, refineries crippled, and gasoline pipelines were taken out of service, gasoline supply shortages began to occur, first in areas close to the areas hit by Katrina and rapidly moving outwards to areas of the country served directly or indirectly by the production, refining and transportation hub of the nation's Gulf Coast.

These statistics confirm that retail gasoline price increases last week were justified by movements in the wholesale cost of gasoline. While two months from now hindsight may provide us with additional facts that will indicate that the markets could have responded to this supply crisis differently, as we are going through this crisis, the fundamental laws of economics tend to apply forcefully—if demand remains the same or increases and supply is reduced, prices will rise. This is the situation we have experienced for the last ten days.

V. ALLEGATIONS OF PRICE "GOUGING"

Last week, there were widespread media reports, and even some comments by congressional leaders, of gasoline price "gouging" by gasoline marketers in the wake of Katrina. I can not assure the committee that all of these reports are false or that isolated instances of profiteering for personal gain in the midst of this crisis did not occur last week. I wish I could.

However, I can tell you that such actions were not the norm in our industry. The vast majority of gasoline marketers are fair and scrupulous businesses. As my testimony has shown, I personally responded to wholesale price hikes in my area in setting my retail prices. I am not aware of any credible instance in which retail price increases were not justified by the supply crisis faced by a retailer.

It is important for this committee to understand how I and other gasoline retailers establish our retail prices in a market with escalating wholesale prices. Simply stated, I try to set my prices on the basis of the replacement cost of the gallons I have at my outlets. This is an important concept which may not be readily grasped. When wholesale prices are rising, and I know that the next load of gasoline I purchase from my supplier will cost me substantially more than my last load, my sales must generate sufficient cash for me to make that next purchase and to pay my supplier.

For example, assume the gasoline at one of my retail stations cost me $2.00 per gallon yesterday. I know that the next gasoline truckload from my supplier, to be purchased tomorrow, will cost me $2.25 per gallon. I will, if I can based on competition in my area, set a retail price at my outlet today that will cover the higher price I will have to pay tomorrow. If I don't, I will be forced to borrow money from my company's banks to pay for tomorrow's gasoline. Such debt only increases my cost of staying in business and adds to the upward pressure on retail gasoline prices. It is a sound business practice for a retailer to price today on the replacement cost of gasoline at the outlet, not the cost of product actually at the outlet.

If instances of profiteering on this tragedy have occurred, federal and state officials have ample legal recourse for dealing with those bad actors, including Section 5 of the Federal Trade Commission Act. Such behavior must not be tolerated now or in the future in our industry or any industry.

However, just as such behavior must not be tolerated in our industry, neither should the media or other opinion leaders react to such anecdotal reports by issuing blanket indictments of all motor fuel marketers. Such generalizations may make for good "sound bites," but they do not reflect what is actually happening across the country and unfairly damage the reputations of many companies that are struggling to meet the challenges of the current crisis.

If the only thing you knew about my company was that I raised by retail gasoline prices by over 70 cents per gallon last week, would you suspect that I was attempting to profit from this crisis? Maybe. But based on the information I have given you today, I trust that you would reach a different conclusion after you had investigated the facts. I urged this committee and your colleagues to gather the facts on last week's gasoline supply and retail pricing situation before reaching conclusions about my actions or the actions of other motor fuel marketers.

As a final point with respect to retail pricing, I have one more chart to share with you (Chart 6). This chart outlines the approximate gross revenues that several different parties in the petroleum exploration, refining, and distribution system realize from each barrel of crude oil. Simply stated:

- In August 2003, the royalty owner of the crude oil received approximately $4 per barrel; in August 2005, the royalty owner received about $8 per barrel;
- In August 2003, the crude exploration and extraction company was receiving approximately $28 per barrel of oil; in August 2005, this company received about $67 per barrel;
- In August 2003, a refiner was receiving around $11 per barrel; in August 2005, this company received about $27 per barrel;
- In August 2003, a gasoline retailer was receiving approximately $6 per barrel; in 2005, that retailer still received about $6 per barrel; and,
- In August 2003, a credit card company was receiving approximately $1.50 per barrel; in 2005, that company is receiving approximately $3 per barrel.[1]

Based on this information, I question whether it is appropriate to single retailers out for pricing scrutiny.

VI. RECOMMENDATIONS FOR THE FUTURE

In 1996, Tom Robinson, a former president of SIGMA, offered the following testimony to this committee as part of a hearing on "Recent Increases in Gasoline Prices." "The federal and state governments regulate the gasoline refining and marketing industry with little or no thought given to costs, distribution difficulties, or market efficiencies. Congress must acknowledge that . . . the present course will lead to further market disruptions and higher gasoline prices at the pump." Mr. Robinson made that statement over nine years ago.

Last year, Bill Douglass testified on behalf of NACS and SIGMA at a House Energy and Commerce Committee hearing on gasoline prices and stated:

> "Our nation's gasoline and diesel refining industry is shrinking at a time when consumer demand continues to rise. Unless we collectively change course, domestic refining capacity will be unable to keep pace with demand, gasoline and diesel fuel price spikes such as the one we have experienced this year will become the norm rather than the exception, and our nation will become more reliant on imports of gasoline and diesel fuel to meet increased consumer demand in the coming years. Congress has a choice, it can either pursue policies that will encourage the expansion of domestic refining capacity, or it can turn its gaze overseas for our nation's future gasoline and diesel fuel needs."

[1] All information based on publicly available sources.

Unfortunately, both Mr. Robinson's and Mr. Douglass' predictions have come true. Domestic refining capacity continues to shrink, wholesale and retail motor fuel price spikes have become the norm rather than the exception, and more of our nation's gasoline needs are being met by foreign sources. NACS and SIGMA assert that it is time to stop talking about these problems and do something about them.

In my opinion, the enactment of the "Energy Policy Act of 2005" (EPAct 2005) is a good first step towards addressing these problems. I commend you, Mr. Chairman, and your colleagues for taking the lead in making this important legislation a reality after five long years. Specifically, EPAct 2005 gave the Environmental Protection Agency the statutory authority to waive certain gasoline and diesel fuel controls last week, providing the market with much needed flexibility to move product between markets to mitigate supply disruptions. This is an immediate example of the positive impact this energy bill has had on the market.

There are other important provisions in the 2005 energy bill that will assist in expanding domestic refining capacity and in mitigating gasoline supply dislocations and price spikes, including:

- Repeal of the reformulated gasoline program's oxygenate mandate;
- Restrictions on creation of new "boutique fuels" which strain refining capacity and the distribution system;
- Authority for retailers to blend compliant RFGs for limited periods each summer; and,
- Federal tax incentives to encourage the expansion of domestic refining capacity.

NACS and SIGMA urge this committee and this Congress to build on the progress made through EPAct 2005 in the following ways:

- Assure prompt implementation of the EPAct 2005 provisions outlined above, including the joint Environmental Protection Agency and Department of Energy study on increasing gasoline and diesel fuel supplies while protecting the environment;
- Streamline permitting and siting procedures for expanding existing domestic refining capacity and for the construction of new grassroots refineries;
- Adopt additional tax incentives to expand our domestic refining capacity, or a federal government-led effort to site and build three new 500,000 barrels per day refineries on federal lands to augment domestic production;
- Encourage increased price transparency and lower price volatility in the nation's gasoline futures markets by increasing the number of delivery points and product types under such contracts; and,
- Investigate the pricing policies of credit card companies, whose charges make up an ever-increasing portion of the price of gasoline at retail outlets, particularly when gasoline prices are high.

None of these recommendations will result in a substantial short-term increase in gasoline supplies or retail price decreases. However, if we do not undertake these initiatives now, we will be sure to repeat the experiences of the ten days in the future.

VII. CONCLUSION

Thank you for inviting me to testify today on this important topic. I would be pleased to answer any questions my testimony may have raised.

The CHAIRMAN. Let me say thank you, and let me also say I am very sorry that the hearings have proceeded as they have because you deserve, both of you deserve to be heard by a much larger audience, including different media than is here—there is not much media left—because I think both of you talk about some very practical things, one on some things we ought to be doing, another on rather realistically showing us what one chain company through its hierarchy is doing.

There is no chance that at the lower level that anybody is changing the prices you recommend in your chain? That is the price that is going to be charged, right?

Mr. SHIPLEY. You mean other than me setting prices?

The CHAIRMAN. Yes.

Mr. SHIPLEY. Actually, there are other people that are setting prices, but they are doing it at my direction.

The CHAIRMAN. That is what I mean. If we find one of your stations, it should be setting prices that you have already indicated are what you want?

Mr. SHIPLEY. That are consistent with—which is basically to be able to afford——

The CHAIRMAN. So it is basically pursuant to the plan you have just told us about?

Mr. SHIPLEY. Yes.

The CHAIRMAN. Are the business notions that mean survival for you.

Mr. SHIPLEY. Yes. Last week was one of the most unusual weeks we have ever been through. The uncertainty of not knowing what our cost is made it difficult to price it.

The CHAIRMAN. Right.

Mr. SHIPLEY. But also, we were threatened by the fact that we could end up in a situation where we could not buy.

The CHAIRMAN. Right. Very good.

Now we are going to go to you, Mr. Darbelnet. The same rules for you, if you please.

STATEMENT OF ROBERT L. DARBELNET, PRESIDENT AND CEO, AMERICAN AUTOMOBILE ASSOCIATION

Mr. DARBELNET. Thank you. Good afternoon, Mr. Chairman and remaining members of the committee. I am Robert Darbelnet, president and CEO of AAA. In a sense, every American has been visited by the emotional impact of Katrina and now many Americans have also been affected by the economic consequences of what has occurred. I will speak to the latter, but let me be clear. The greatest tragedy is on the gulf coast. Addressing the situation there must be the Nation's first priority.

I stated that many Americans would be impacted by the economic consequences of Katrina. That will occur through potentially limited availability of gasoline and increasing prices. In fact, gas is already selling at a dollar more than it was 12 months ago. The price of gas increased by 45 cents last week alone. That is not a function of increased costs of crude. In fact crude remained flat last week. It is not a function of increased cost of refining. Most of this gas was refined before the storm hit. It may be marginally a function of the fact that this was more expensive to transport under the circumstances. But the increase of 45 last week is primarily a function of what the market will bear.

To avoid this escalating into a nationwide crisis, the country needs a broad and well-coordinated effort. This gets to Senator Thomas's question about what are some of the near-term measures. Some of the near-term measures involve motorists, oil companies, Federal authorities, local authorities, and the media. The required measures include the following:

Motorists must reduce consumption by using their most fuel efficient car and avoiding unnecessary trips. Oil companies must ensure that their pricing yields what they need and deserve, but no more. Federal authorities need to relax requirements for blended fuels and release crude oil from the SPR. We applaud that they have.

Local authorities must be vigilant with regard to any retail pricing abuses which may occur. The media must carefully cover the situation. Overreporting a limited number of shortages could provoke panic buying or hoarding.

But doing all of these things will not put an end to the crisis. There are three other things that Congress could do that would help the situation. First, you could require that the EPA modify its MPG testing procedures to accurately reflect real world driving conditions. Current tests assume drivers never go over 55, never go up hills, and never use air conditioning. The American people deserve better if we expect them to make intelligent purchases of vehicles.

Second, we ought to seek a Federal standard for clean gasoline that does not result in a patchwork of fuel blends, which was amply discussed earlier.

Third, we must commit to achieving higher fuel economy standards on all vehicles. We acknowledge that the administration has issued a proposal to revise the current CAFE program. However, this proposal does nothing to address the largest and heaviest passenger vehicles on the road today and that simply is not right.

[The prepared statement of Mr. Darbelnet follows:]

PREPARED STATEMENT OF ROBERT L. DARBELNET, PRESIDENT & CEO, AAA

Good afternoon, Mr. Chairman, and members of the committee. I am Robert Darbelnet, President and CEO of AAA.

The devastation resulting from Hurricane Katrina is unfathomable. I suspect all of us have been moved over the last few days by the heartbreaking pictures of those who have lost everything and are now homeless.

In a sense, every American has been visited by the *emotional impact* of Katrina. Soon though, many American's will also be affected by the *economic impact* of what has occurred.

I will speak to the latter, but let me be clear—the greatest tragedy is on the Gulf coast. Addressing that situation must be the nation's first priority.

Mr. Chairman, not only has this hurricane wreaked havoc on the inhabitants of the Gulf region, it has added considerably to an energy market already on edge. In addition to laying waste to millions of homes, it has devastated much of our nation's fragile gasoline infrastructure. Many people were already paying nearly $3.00 a gallon for gasoline before the storm with no end in site. Katrina had made what was a bad situation, worse.

I stated that soon many Americans would be impacted by the economic consequences of Katrina.

That will occur through potentially limited availability of gasoline and increasing prices. Gas may soon be selling at a dollar more a gallon than it was 12 months ago. In some areas, it already is.

In times of abundance and low prices, we don't realize how critical fuel is to our economy and our way of life. As a public service, AAA maintains a nationwide gasoline price report on the Internet, the Fuel Gauge Report (*www.fuelgaugereport.com*). We list daily average prices for 250 metropolitan locations and all 50 states which is updated every 24 hours. At the end of last week the Fuel Gauge Report showed that the national average price for a gallon of regular unleaded gasoline was $2.867. This compares to $1.852 per gallon a year ago, or an increase of over $1 per gallon.

Although AAA is not involved in the production, shipping, refining, or retailing of gasoline, we have serious concerns about policy decisions and approaches to the nation's price and supply of gasoline, and the resulting impact on consumers.

The *uninterrupted availability* of *reasonably priced* gasoline is what allows:

- people to get to work,
- children to get to school,
- goods to be transported,
- business people to travel, and
- families to vacation.

Katrina has disrupted our access to crude oil and our refining capability, both of which were already under enormous pressure.

To avoid this escalating into a nationwide crisis, the country needs a broad and well-coordinated effort.

To be successful, this immediate effort must involve:

- motorists
- oil companies
- federal authorities
- local authorities, and
- media.

The required measures include the following, some of which are already under way:

- *Motorists* must reduce consumption by using their most fuel efficient car, avoiding unnecessary trips, maintaining their vehicle, driving "gently" and car-pooling whenever possible.

  We should also avoid the impulse to hoard gas or constantly top off tanks. Even in the best of times there is not enough fuel in the system to fill every car and truck to the top of their fuel gauge.

  Effective use of energy is a learned behavior. To conserve, Americans must find ways to lessen their demand for gasoline and do more with less. But Americans are faced with marketing messages that promote a bigger, high-powered automotive culture. We are urged to "drive bigger," "go faster," and "do more." Such messages are inconsistent with fuel conservation, let alone traffic safety.

  Americans can do a great deal to conserve gasoline. They can use public transportation wherever and whenever feasible. They can form carpools for commuting. They can purchase fuel-efficient vehicles. And they can take everyday actions that will help reduce the amount of gasoline they have to purchase.

  In particular, the car or truck you drive, how it's maintained, where you drive and how you drive are the most important factors in conserving fuel:

  - Routinely maintaining your vehicle by keeping tires properly inflated, keeping moving components well lubricated, and emissions systems operating properly will help you achieve maximum fuel economy and extend its useful life.
  - A heavier vehicle uses more gasoline so don't haul extra weight or cargo if you don't have to.
  - Take a look at your owner's manual. If your vehicle does not require premium or mid-grade fuel, purchase less expensive regular unleaded.
  - Consolidate trips and errands to cut down on driving time and slow down. Leave enough time to reach your destination at a proper speed.
  - Avoid sudden stops and "jack rabbit" starts that waste fuel and are hard on your vehicle's components.
  - Finally, comparison shop for gasoline prices just like you would any other consumer good.

- *Employers* can do their share too. Many companies have telecommuting policies, allowing staff to work from home. Now is the time to apply those policies more liberally, especially while refining capacity is diminished.
- *Oil companies* must ensure that their pricing yields what they need and deserve, but not more.
- *Federal authorities* needed to relax requirements for blended fuels and release crude oil from the Strategic Petroleum Reserve. We applaud that they have.
- *Local authorities* must be vigilant with regard to any retail pricing abuses which may occur. Also, they must be prepared to institute fuel purchase management programs if the need arises.
- The *media* must carefully cover the situation. Over-reporting a limited number of shortages may provoke panic buying or hoarding, and that will only make the situation worse.

Doing all of these things will not end the crisis, but will mitigate its impact.

There are *three* other things Congress could encourage that would also help the situation:

1. Require that the EPA modify its MPG testing procedures to accurately reflect real-world driving conditions.

Current MPG tests assume drivers never go over 55 miles per hour, drive up hills or use their air conditioners. That's wrong and the American people deserve better, especially if we expect them to make informed car purchases.

Americans need to be smarter, better informed consumers when it comes to fuel efficiency. Unfortunately, people who shop for new vehicles are experiencing a dif-

ferent kind of "sticker shock" when it comes to the posted mileage estimate for highway and city driving. Unfortunately, motorists find out after they've bought that new vehicle that the posted estimated mileage by the Environmental Protection Agency (EPA) is not going to reflect the results they experience in the real world.

The EPA uses tests designed in the mid-1970s, to measure vehicle miles per gallon under ideal circumstances that reflect little of the actual driving conditions that face most motorists. AAA has urged the EPA repeatedly to use whatever means at its disposal to enhance these mileage tests to better reflect the manner in which people actually drive. We were very appreciative of Senator Cantwell's efforts to address this issue during consideration of the Senate version of the transportation bill. But AAA believes the MPG provision in the recently enacted energy bill will not solve this problem and we will therefore continue to advocate an effective standard to achieve more accurate mileage estimates.

Another tool that consumers can utilize is AAA's Fuel Price Finder. This is a new Internet-based tool to research local gasoline prices. When prompted by a ZIP code or a city name, the site will identify recent prices for fuel stations within a three, five, or ten-mile radius with addresses and a map of their locations. This is a new service that is currently available to approximately 50 percent of AAA's membership in the United States. Just like you shop around for other consumer products, AAA recommends you shop around, when possible, for gasoline.

2. Seek a federal standard for clean gasoline that does not result in a patchwork of fuel blends.

AAA has no interest in scaling back improvements in air quality, but so-called "Boutique Fuels" have contributed to price volatility and regional disruptions. We need to find a way to achieve both our clean air and supply goals.

3. Commit to achieving higher fuel economy standards on all vehicles.

We would prefer to see automakers commit to this challenge voluntarily, but if they are unwilling to do that, Congress should require improvements through changes in CAFE standards. AAA acknowledges that the Administration has issued a proposal to revise the current CAFE program. However, this proposal does nothing to address the largest and heaviest passenger vehicles on the road today. That's not right.

AAA believes the proposal is flawed: it is merely a small step toward fuel efficiency and does nothing to capture the heaviest passenger vehicles on the road. This is unacceptable while the nation faces the reality of high gasoline prices and potential supply problems.

AAA understands that Americans want choice in their vehicles, but we also believe choice is possible among much more fuel efficient vehicles. We can no more ignore these vehicles in CAFE standards than we can when we try to park next to one.

When things do return to normal, we should not forget the fragility of our situation.

As Katrina has reminded us, we are never more than a disaster away from this type of crisis.

If we do not reduce our dependency on fossil fuel or increase our access to a reliable source of it—or both—the narrow margin we rely on for stability will continue to erode.

There are also longer term strategies that are important, such as:

- developing alternate fuel sources,
- building more fuel efficient vehicles,
- expanding efficient public transit,
- reducing our dependency on foreign oil, etc.

These will all take time and thus won't resolve our more immediate problems.

But these longer term strategies are important and are deserving of your attention. These are not new issues, but it is now clearly time for them to be elevated in importance and priority.

Mr. Chairman, a word of caution. In the Spring and Summer of 2000 as the nation grew alarmed by $2 per gallon gas prices, Congress seriously considered a temporary repeal of federal gasoline taxes. AAA opposed those efforts then, and would caution against such an effort now as well.

While attractive at first glance, such a course of action will do little to address the root causes of our gasoline price problem today. The resulting loss in receipts to the Highway Trust Fund would severely compromise the safety of the traveling public. Asking the American people to choose between a gas tax reduction and safety is posing the wrong question. Short term fixes, while politically popular, are not

the answer to a long-simmering national energy problem, and are not in the best interests of highway safety and the overall economic well-being of the nation.

Let me reiterate that the greatest hardship resulting from Katrina is not at a fuel pump that displays a high price or—even worse—the word "empty".

The greatest hardship is that faced by the people of the Gulf coast, and our hearts go out to them.

In conclusion, Mr. Chairman, AAA will continue to urge motorists to do their part, but we are also looking to our leaders in government and industry for answers.

If we consider the issues in a comprehensive fashion, we will better be able to serve our constituents—and yours—together.

Once again, thank you for the opportunity to testify today. I will be happy to answer any questions.

The CHAIRMAN. Mr. Darbelnet, would you give me a moment. I must vote or I will miss it. Senator Burr is here, Senator Wyden is here. My recommendation as chairman is that the next witness proceed and that we go, collectively not go beyond 6 o'clock, meaning that the two of you could take over and ask some questions, but that we not stay open for very long.

Senator BURR. Mr. Chairman, before you leave could I ask unanimous consent that all members be allowed to submit written questions to the second panel?

The CHAIRMAN. That will be done. I have already asked if you would submit questions to things you have heard that we might not have time today to inquire of you because of this problem.

Senator WYDEN. Mr. Chairman.

The CHAIRMAN. Yes?

Senator WYDEN. You have been very gracious. Could I amend that UC to perhaps say 10 after 6?

The CHAIRMAN. Yes.

Senator WYDEN. Would that be acceptable?

The CHAIRMAN. That would be fine.

Senator WYDEN. Thank you.

The CHAIRMAN. If it is all right with you, if you do not mind.

I would say to all of you, it has been most enlightening, just the little bit I have heard, and I think, Mr. Dowd, you will contribute to a continuation of that. I think that the most interesting thing is that there is nobody here yelling and screaming. They are being very productive. AAA, I commend you. You know what is out there and I think what you are talking about in terms of practical things are very good.

Senator Burr will be in charge because that is the way it is. We are in the majority, regardless of his experience, age, and baldheadedness. No, you are about the same. But with that, I am going to relinquish the chair. Thank you.

Senator BURR [presiding]. Mr. Darbelnet, please continue.

Mr. DARBELNET. Thank you.

If we do not reduce our dependency on fossil fuel or increase our access to a reliable source of it or both, the narrow margin we rely on for stability will continue to erode. There are also longer term strategies that are important, such as developing alternate fuel sources, building more fuel efficient vehicles, expanding efficient public transit, and reducing our dependency on foreign oil. But all of these will take time and thus will not resolve our more immediate problems. However, these long-term strategies are important and they are deserving of your attention.

These are not new issues, but it is now clearly time for them to be elevated in importance and in priority. Let me reiterate that the greatest hardship resulting from Katrina is not at a fuel pump that displays a high price or, even worse, the word "empty." The greatest hardship is faced by the people of the gulf coast and our hearts go out to them.

As it relates to fuel, gentlemen, we at AAA will do our part to calm the public and to calm our 48 million members, but only if we are confident that you are doing your part, too. Katrina has shown the public and perhaps the world how vulnerable our transportation and energy networks are. There is an opportunity here, in fact an obligation, to go beyond the energy bill and to make the changes that will keep this from ever happening again.

Thank you for the opportunity to testify today.

Senator BURR. Thank you, sir.

At this time the chair would recognize Mr. Dowd.

STATEMENT OF JOHN DOWD, SENIOR RESEARCH ANALYST, SANFORD C. BERNSTEIN AND CO., LLC

Mr. DOWD. Thank you. I would first like to thank you for the opportunity to speak today. My name is John Dowd. I am a senior energy analyst at Sanford Bernstein, which is a firm that specializes in providing expert advice to Wall Street investors.

Actually, I would like to deviate from the script a little bit because there are some key points that have not been addressed. The key point: This is a global problem. Changing U.S. consumption by 5 percent would alter global demand by 1.3 percent. Now, 1.3 percent is a large number, depending on how you look at it. It would double the amount of spare capacity in the oil markets today. But 1.3 percent is also about enough to offset 2 years of Chinese demand growth. The point is this is not just us.

Also, energy independence is a sense a myth. Even if the United States were an exporter of crude, it is not clear that would help out the U.S. consumers. The UK is a net exporter of crude and gasoline prices in the UK are above where they are right here in the United States I think it is important to recognize the global extent of these issues.

With spare capacity in the energy industry at the lowest level in decades, not just in the United States but globally, it really was just a matter of time before a disruption somewhere upset what is currently a very delicate balance in the markets. At present the world has only 1.4 million barrels per day of spare capacity, and this assumes that all of the Gulf of Mexico production that is offline today comes back immediately. That is less than 2 percent of current oil demand, less than 1 year of demand growth.

Two months ago my company provided expert analysis to support a simulation exercise called Oil Shockwave that examined the sensitivity of the oil markets to supply shocks and potential policy responses. The simulation brought together nine former high-level White House Cabinet officials right here in Washington. It was sponsored by two independent organizations, SAFE, which is Securing America's Future Energy, and the National Commission on Energy Policy.

I would like to include in my testimony two reports issued as a result of that simulation.

Senator BURR. Without objection.

Mr. DOWD. The conclusion is that our policy response is really straightforward. We can either increase spare capacity—well, that is it. We can increase spare capacity. We can do that either by increasing world oil supplies or by reducing global demand, either of which will reduce the risk premium and prices will fall.

In practice, accomplishing that task of increasing spare capacity is anything but straightforward. My key point is that the reason we find ourselves with such limited spare capacity in the global hydrocarbon markets is because it has been so difficult to accelerate supply. This is not intuitive. Conventional wisdom holds that if an industry invests more money then supply growth will accelerate. Unfortunately, conventional wisdom has not been working and that is why we are in the situation we are in today.

The data is fairly stunning. Coming from Wall Street, we talk primarily in terms of data. The investment in the U.S. oil and gas industry has doubled over the past decade to one of the highest levels in history. Nonetheless, domestic hydrocarbon production continues to decline. My point being it is going to be very difficult to solve the world's supply issues through additional investment in the United States.

There are striking examples overseas as well. A decade ago, the hope of the industry was that new reserves in deep water basins would provide for the next wave of global supply additions. The industry invested aggressively and tripled the number of deep water rigs in order to tap reservoirs beyond the continental shelves. However, after the initial flurry of exploration success, discovery rates stabilized despite the jump in drilling activity. Reserves outside of OPEC and the former Soviet Union peaked in 1997 despite all of the exploration in the deep water and the record investment by the oil industry since that timeframe.

This lack of sizable discoveries is one reason why non-OPEC production growth rates have slowed. Excluding the former Soviet Union, production growth rates from non-OPEC countries have slowed in each decade over the past 5 years. It does not seem to be tied to investment.

A major concern—there are two going forward. First, E&P spending, spending by the energy industry, is already at a record high level. Virtually every rig in the world is already being used. There are four quality offshore drilling rigs that are idle. It is about 1 percent of supply. This industry is running hard today. Adding new equipment to the drilling rig industry will take 3 to 5 years. That is how long it takes to build a modern piece of equipment.

Another concern is that events outside our border will influence oil prices here. Much attention has been focused on the growth in China, which has been responsible for 25 percent of the growth in global oil demand over the past 10 years. All of the increase in Chinese oil demand, however, has been offset by increased exports from the former Soviet Union. What makes that an alarming statement is that, while Chinese demand continues to grow, Russian production growth stopped last September. This is potentially a

game-changing event for the oil markets and one that we in the United States have limited control over.

We are probably all familiar with the well-worn homily about having the serenity to accept what you can change, the courage to change what you can, and the wisdom to know the difference. I do not know that anyone would counsel serenity under the current circumstances, but courage and wisdom are certainly called for.

We cannot control hurricanes, terrorists, or the investment climate in foreign countries. We cannot stop international oil markets from adding a sizable risk premium to oil prices as long as global spare capacity is as low as it is. The only way that we can really help the U.S. consumer mitigate the effects of global price inflation is to help them conserve. I would recommend stronger fuel efficiency rules. That could make a difference. Increasing U.S. production really is not likely to make a difference to the global crude price. We should build more refineries, we can build more refineries. Refining investment in the United States this year is going to be the highest in 10 years, so I know that efforts are under way to do that.

But I caution that this is global. This is not a U.S.-specific event. And I thank you for your time.

[The prepared statement of Mr. Dowd follows:]

PREPARED STATEMENT OF JOHN DOWD, SENIOR RESEARCH ANALYST, SANFORD C. BERNSTEIN & CO., LLC

INTRODUCTION

Good afternoon. I am John Dowd, Senior Research Analyst at Sanford Bernstein & Co., a firm that specializes in providing expert advice and research to Wall Street investors. I would first like to thank you for the opportunity to speak today about why gasoline prices are so high and how we might better protect ourselves in the future from the kinds of price shocks we have been seeing over the last few years and more recently, of course, in just the last few days.

This hearing was scheduled weeks before Hurricane Katrina barreled into the Gulf Coast, setting off a chain reaction in energy markets that has now raised the visibility and the urgency of the issues we are discussing to a whole new level. Once again we find ourselves wondering if an energy crisis is at hand and how long and how bad it might be. Once again, we find ourselves asking: Isn't there some way to stop having these crises in the future?

My esteemed colleagues on this panel can speak with authority to the specifics of our current situation and to the pain it is causing the average American consumer and the larger economy. It is, of course, important that we address these specifics and that we take whatever steps we can to ameliorate the effects and minimize the duration of the present crisis. Hurricane Katrina has exposed the vulnerabilities created by a critical shortage of refinery capacity in our country and I agree with many of my fellow panelists that this must be addressed.

But I would also like to take the opportunity in my testimony to step back from the specifics of the pre-and post-Katrina situation to address some of the bigger-picture forces of oil supply and demand that have brought us here. For I believe that, unless we address some of these underlying dynamics now, we will be back in a few months or a few years, re-examining the same issues we are discussing today.

I would like to highlight five main points about our current oil predicament and what we can and can't do about it.

1. The oil industry is inherently volatile in the sense that it is driven by a host of supply and demand factors which are largely beyond our control, at least in the short-run. That volatility becomes acute when, as now, spare production capacity is extremely tight. Under these circumstances, even a small disruption can produce large price spikes.

2. The primary reason that we find ourselves with such limited spare capacity is because the record investment by the energy industry aimed at expanding oil production has not resulted in the expected supply response. Conventional wisdom holds that more investment will lead to more supply. In the case of global oil pro-

duction, the validity of conventional wisdom does not appear to be certain. This uncertainty emanates from several sources:

a. Global oil production growth rates outside of OPEC and the Former Soviet Union have slowed each decade over the past five, regardless of the level of investment.

b. Investment in U.S. hydrocarbon production has doubled over the past decade and production has not grown. The record investment undertaken by the industry over the past five years has not been sufficient to cause global oil reserves outside of OPEC and Russia to expand. Furthermore, exploration success rates in deepwater basins have been substantially below initial expectations.

c. Virtually every rig and every petroleum engineer in the world is already working. Materially increasing the level of activity beyond the current level is not feasible over the coming 3-5 years.

3. In the case of the refining industry, conventional wisdom regarding the effectiveness of additional investment does appear to be correct. We can and should build more refining capacity. Nonetheless, the industry today finds itself operating at a very high level of utilization due to the robust economic growth over the past decade, the slowdown in efficiency improvements in the auto fleet, more stringent environmental requirements, and the deteriorating quality of crude available to the industry.

4. This is not only a U.S. predicament. Gasoline prices this year have risen equally in Europe and the Far East. This is a global supply and demand issue. Important trends taking place overseas will likely exacerbate the situation. For instance, China has accounted for 1/4 of the global increase in oil demand over the past decade. To date, this increase in demand from China has been entirely offset by accelerated production from the Former Soviet Union (FSU). What is alarming is that while Chinese demand continues to expand, Russian production stopped growing last September.

5. In the short run we have relatively few options for addressing a crisis beyond tapping the Strategic Petroleum Reserve. So even as we cope with today's realities we must begin to think—and act—*beyond* the short run. In doing so it's important to recognize that U.S. consumers and policymakers have far more control over long-term demand than they do over long-term supply. The demand side of the equation is where we have the most leverage and where we must focus our effort and resources.

HIGH UTILIZATION IS THE CAUSE OF HIGHER PRICES

With spare production and refinery capacity at the lowest levels they have been in decades—not just in the United States, but globally—it was only a matter of time before some disruption, somewhere, would have the dramatic impact on oil markets and on our economy that we are seeing as a result of Katrina today. In fact, as you well know, gasoline prices have been rising for some time now, largely because rapidly growing global demand has outpaced the oil industry's ability to bring new supplies to the market. This created a situation in which any disruption to existing supplies, even a relatively small one, would inevitably have an exaggerated impact on oil markets and on gasoline prices.

Just two months ago, in fact, my company provided expert analysis to support a simulation exercise called *Oil ShockWave* that attempted to examine how we might respond to a short to medium-term oil supply crisis of just the sort are experiencing now. The simulation brought together nine former high-level White House and Cabinet officials right here in Washington D.C. It was sponsored by two independent non-profit organizations—Securing America's Future Energy or SAFE and the National Commission on Energy Policy—that see our nation's oil dependence as constituting one of the preeminent public policy challenges of our time. In *Oil ShockWave*, the hypothetical events that trigger a crisis primarily involved terrorist attacks and political unrest in far-off lands. But the point of the exercise was that, due to the lack of spare capacity, it really doesn't take much of a disruption to trigger a crisis in today's market and it doesn't really matter how that disruption comes about. Indeed, recent events may be proving, all too tragically, that Mother Nature can do just as well as Al Qaeda at sending a shockwave through the world's advanced economies.

In addition, because there is so much overlap between these points and the findings that emerged not only from *Oil ShockWave* but also from the bipartisan National Commission on Energy Policy, which issued a comprehensive set of policy recommendations last December, I am including with my testimony the two reports issued as a result of both those efforts.

As I have already mentioned, our growing susceptibility to a supply disruption like that caused by Katrina is rooted in a dramatic decline in spare production capacity as global demand for oil has grown more quickly than the ability to bring new supplies to market. The volatility and high prices we've been seeing since well before last week are a direct consequence of historically low spare production capacity, not only in the United States but in the world as a whole. When spare capacity is low, even a relatively small disruption in global supply can cause shortages and produce sharply higher prices. The market responds to the increased risk of future shortages by attaching a premium to the prices they would otherwise charge based on current inventories and current demand. This premium appears to be directly proportional to the amount of spare production capacity held in reserve.

For example: if there were 6 million barrels per day of idle capacity worldwide, no single terrorist act or natural catastrophe would be sufficient to cause a shortage. The risk premium would be low. At present, however, the world has only 1.4 million barrels per day of spare production capacity (assuming that all of the Gulf of Mexico capacity returns imminently), or less than 2 percent of current global demand. This is only enough spare capacity to meet a little more than one year of expected demand growth and it leaves world oil markets at the mercy of political conditions in Venezuela, Nigeria, and Iraq, not to mention natural disasters and potential terrorist acts. In fact, the price of oil over the last year has hovered somewhere between the cost of producing it and the $100-per-barrel price (in real terms) witnessed during past crises, indicating that the market was already factoring in some probability that a shortage would occur at some point in the future. In the weeks before Katrina, oil prices were fluctuating near $60 per barrel; last week, after the storm, they hit a high of $70 per barrel. Analysts have since speculated that at this point, any additional supply disruption—in the United States or elsewhere—could easily send prices into the triple-digits. In this context, the situation depicted in Oil Shockwave—where a global supply shortfall of less than 4 percent produces a world oil price of $160 per barrel—looks prescient.

WHY HAS SUPPLY GROWTH LAGGED EXPECTATIONS?

In theory, the policy response to this situation is straightforward. If we can increase spare capacity—either by increasing world oil supplies or by reducing world demand—we will reduce the risk premium and crude oil prices will fall. In practice, accomplishing either is anything but straightforward. On the supply-side, the primary concern stems from the apparent inability of non-OPEC producers to materially increase production in recent years despite increased investment and rising prices. The conventional wisdom within the energy industry for decades has been that the price of oil could not permanently move above $25 per barrel because if it did, this would invite a non-OPEC production response. High prices would attract more oil investment and production would rise.

Unfortunately, recent history suggests that the relationship between investment and output is not quite so simple, at least when it comes to this industry. The primary reason that capacity growth has been slower than expected is that the productivity of new basins has been substantially less than expected. A stark example can be seen in Exhibit 1.* In the United States, capital investment by the oil and natural gas industry has doubled since 1994—yet natural gas production has not grown and oil production has actually fallen. This situation does not appear to be an aberration.

A decade ago, the hope of the industry was that new reserves in the deepwater regions of the world would provide the next wave of global supply additions. The industry invested sizable sums in building new drilling equipment in order to tap the hoped-for reservoirs beyond the continental shelves in the Gulf of Mexico, Brazil, West Africa, and the North Sea. However, after an initial flurry of exploration success, discovery rates have been stable despite a jump in drilling activity (Exhibit 2).

While the deepwater basins are a source of supply growth, it is important to keep the size of this production growth in context. For instance, roughly 1/3 of the deepwater drilling equipment in the world is operating offshore Brazil, and has been for a decade.

Nonetheless, Brazil is still a net importer of crude oil. Viewed more broadly, even with the opening of the deepwater basins to exploration, reserve discoveries outside of OPEC producing countries and the Former Soviet Union have not kept pace with production from those regions. As seen in Exhibit 3, discovered oil reserves outside

*The exhibits and other attachments have been retained in committee files.

of OPEC and the Former Soviet Union peaked in 1997, despite the record investment by the oil industry since that time.

In fact, the same trend has occurred in all non-OPEC countries outside the former Soviet Union. Collectively, these countries have not only been unable to sustain production growth rates, they have witnessed a decline in production growth rates in each of the last five decades. During the 1970s, oil production in these countries grew by 3.1 percent annually. Over the past decade, production in these countries grew only 1.1 percent annually, despite considerably higher levels of investment, as seen in Exhibit 4.

Non-OPEC countries outside the former Soviet Union have experienced sub-par reserve discoveries despite an increase in exploratory drilling and the development of more sophisticated locating equipment. In fact, annual reserve discoveries in these countries have failed to substantially increase over the past 20 years. Worse, over the past four years the discovery of new reserves has fallen behind current production, resulting in a decline in total reserves for these countries.

To some extent, these recent trends are explained by simple geologic reality. As reservoirs are gradually depleted, the remaining oil becomes harder and more expensive to extract. New discoveries must constantly be made just to compensate for the depletion of existing basins, let alone to meet a substantial new increment of global demand growth each year. The world's largest and most accessible reservoirs have already been tapped. As a result, we are now pursuing the less accessible and/or smaller reserves which typically cost more and experience more rapid production declines once they are developed (Exhibit 5). The U.S. experience with natural gas production provides a worrisome analog in this regard. Hence, I am including with this testimony a separate short paper that provides some additional detail about that experience.

We are also pursuing development of crude oil reserves that in prior times, under lower pricing scenarios, were considered to be of unacceptably poor quality. The implications are significant not only for the oil producing industry, but also for the oil refining industry. When lower-quality crude oil enters the refining system, it must be refined more intensively in order to yield the same amount of gasoline. This is one of the factors that has contributed to the high utilization of the refining system. The performance of the U.S. refining industry in particular has been impressive. The industry has been able to increase gasoline production by 10 percent over the past decade, despite a reduction in the absolute number of refineries, more stringent environmental requirements, and a slow but persistent deterioration in the quality of crude oil available to the market (see Exhibit 6).

To grossly oversimplify the energy sector, the exploration industry is essentially the business of finding gasoline, while the refining industry is the business of making gasoline. It is not possible to analyze one without the other. One of the major reasons that refining industry is tight today is because the lack of success of the E&P industry in finding new resources. Because we have not found substantial new deposits of light sweet crude oil, we have been forced to refine the barrels that we have found more intensively. Further deterioration in the quality of crude supplies will likely mitigate the benefits of future refining capacity additions.

One major concern is that the lack of necessary equipment and expertise may limit the future supply response. For example, there are today only four competitive offshore drilling rigs that are idle available to go to work tomorrow (by contrast, some 422 offshore rigs are already working). While demand for offshore drilling equipment has recently spiked, supply is expected to rise by only 3 percent annually through 2008 based on already signed construction contracts. One difficulty in quickly expanding offshore production capacity is that building a modern drilling rig requires 3-5 years and costs between $150 million and $500 million, depending on the type of equipment. Another difficulty is that qualified labor in the oil industry is limited, and we are already running into shortages of skilled workers.

THESE ARE INTERNATIONAL, NOT DOMESTIC, ISSUES

Meanwhile, a lively debate about whether we are, in fact, beginning to "run out" of oil has recently been picked up even by the mainstream press. My first response to that debate is to say that no one really knows. My second response is to say that I'm not sure it really matters. The question is not whether global oil production has begun to reach a peak. The question is whether the growth rate of supply can continue to keep pace with the growth rate of demand. Much attention has recently focused on the impacts of China's growth on world oil markets. In fact, all of the increase in Chinese oil demand over the last decade has been offset by increased exports from the former Soviet Union (Exhibit 7). This does not, however, appear likely going forward. The fact that production in Russia stopped growing last Sep-

tember is potentially a game-changing development that will further exacerbate the risks of a major supply crisis. Unforeseen changes on the demand side could equally accentuate these risks. For instance, if global oil consumption were to grow at a pace of 3.1 percent next year rather than current expectations of 2.1 percent, the forecast surplus global production capacity would be cut in half.

Not only is the sensitivity of oil prices to supply disruptions heightened today because of the lack of spare capacity, the frequency of such disruptions is likely to increase because of where new oil producing facilities are being located. Throughout history, oil companies have taken a very rational approach to investment, weighing political risk against geologic risk when deciding where to explore and drill. As the world's oil basins have matured and geologic risks have increased, the industry has demonstrated an increasing propensity to invest in politically risky areas. Today our attentions are understandably focused on the risks posed by nature, but any number of eminently plausible scenarios involving terrorism or political unrest could have similarly profound effects on world oil markets.

CONCLUSIONS/RECOMMENDATIONS

We may soon find out what our immediate options are for responding to a sustained supply crisis and how far those options will take us. At the moment it is still too soon to know whether recent events in the Gulf region constitute such a crisis. If they do I think we will find, as the Oil ShockWave participants discovered, that our near-term options are limited. The President has called for releasing some oil from the Strategic

Reserve and for voluntary conservation efforts, while other countries have indicated that they too will tap emergency reserves. The relaxation of environmental constraints in the refining industry should be a small positive for supply. I would recommend a stronger call for conservation. If, as a country, we were to obey speed limits for the next two months, we would probably conserve more fuel than will be lost by the refinery outages. Reducing speeds from 70 mph to 60 mph, for example, improves fuel efficiency by 15 percent. If Americans want to know what they can do to limit gasoline price inflation, the answer is simple: slow down. I don't think this is generally known, or believed, by the U.S. public, and it should be. That may be all we can do in the weeks and months ahead.

Longer-term of course, we must look for more fundamental ways to shift the current balance of supply and demand as a means of reducing our vulnerability to oil price shocks that we cannot control. Many will instinctively reach for supply-side solutions and for measures to increase U.S. oil output. For the reasons discussed above, however, it's not clear that further incentives for expanded domestic production will do much good. And even if we succeeded in boosting domestic production for a time, our nation's oil resources are simply too limited to make a lasting dent in the global market that determines the prices we all pay. Some of the provisions in the Energy Bill of 2005 will also help in the long run, especially those that seek to diversify the nation's energy resources and promote efficiency, but most address the needs of the electricity industry, and not transportation fuels such as gasoline.

Our current predicament, simply put, is rooted in the near-total dependence of our transportation sector on petroleum fuels. Our nation possesses only 3 percent of the world's estimated oil reserves but accounts for as much as 25 percent of global oil demand, the great bulk of it for use in our cars and trucks. When you look at these numbers it's obvious that controlling our destiny in terms of oil security comes down to controlling the relentlessly growing demand of our transportation sector for gasoline and diesel fuel. Fortunately, the potential for efficiency improvements in this sector is also substantial if the political obstacles can be overcome. The National Commission on Energy Policy found, for example, that a concerted effort to increase fuel economy standards, and promoting hybrid and advanced diesel vehicles, could substantially reduce future petroleum consumption by the U.S. transportation sector. We estimate that improving the average fuel efficiency of the entire U.S. vehicle fleet by 2 miles per gallon—an objective that can be readily achieved using already available, conventional vehicle technologies—would reduce total U.S. gasoline demand by roughly 1 million barrels per day. This amount is equivalent to all of the growth in U.S. gasoline consumption over the past eight years.

Of course, to matter at a global level, demand reductions must be significant, especially given the growth pressures we face in other parts of the world. And significant demand reductions cannot be realized overnight any more than significant supply enhancements or refinery expansions can be. But it is reasonable to aim to achieve gradual yet steady progress that can yield substantial dividends over time. Gradually improving vehicle fuel economy through a combination of higher standards, manufacturer and consumer incentives, and other initiatives would essentially

"buy us time" to develop the more advanced vehicle technologies and alternative fuels that will someday allow for a more decisive shift away from our current petroleum dependence. Even in the short run, moreover, the benefits of any efficiency improvements introduced in the U.S. vehicle market would likely be amplified as a result of their diffusion to markets in other countries, most of which have as keen an interest as we do in slowing demand growth and blunting their exposure to future oil shocks.

We are probably all familiar with the well-worn homily about having the serenity to accept what you cannot change, the courage to change what you can, and the wisdom to know the difference. I don't know that anyone would counsel serenity under current circumstances, but courage and wisdom are certainly called for. We can't control hurricanes, terrorists, or the investment climate in foreign countries. We can't stop international oil markets from adding a sizable risk premium to oil prices as long as worldwide spare production capacity remains dangerously low. What we can do is limit our future dependence on oil and our exposure to these risks through thoughtful, long-term policies aimed at promoting a greater supply and diversity of fuel options while at the same time significantly improving the efficiency of our nation's vehicle fleet. Something good will have come of the current crisis if it impels us to take the long view. We should try to control what we can control. And we should start doing that now.

Thank you again for the opportunity to testify.

Senator BURR. Thank you, Mr. Dowd. Thank you to all the witnesses.

The chair would recognize Senator Thomas.

Senator THOMAS. For questions?

Senator BURR. Right.

Senator THOMAS. Thank you.

Sorry we missed much of your testimony. Mr. Darbelnet, I read your statement and I appreciate your listing some of the things that you think are something we can do in the short time. Again, as I said earlier, we have covered what we do in the long range. What we are talking about here is what we do I think a little more soon.

Mr. Slaughter, in respect to the Nation's refining capacity, 47 percent is in the gulf coast region, I think you pointed out.

Mr. SLAUGHTER. Yes, sir.

Senator THOMAS. Only one new refinery being developed since the 1970's. What can we do to facilitate more refining capacity and get regional diversity in it?

Mr. SLAUGHTER. Thank you, Senator, for the question. Of course one of the problems and one of the reasons why there is not a lot of regional diversity, as is the case with production, is that a lot of other areas really are not that receptive to refineries. The one that was added in 1976 that was the last one was added in Garyville, Louisiana, and is one of those near New Orleans.

One of the things that was started—and we are talking about things being first steps—the energy bill had an important provision, the first one in 50 years, that would actually have encouraged investment in refining. There was a provision that came through the Senate bill that basically allowed expensing of 50 percent of the investment of basically increasing the capacity of a refinery by 5 percent or more.

Now, there were other things that were looked at. That was a bill originally introduced by Senator Hatch. He originally also wanted to change the depreciation rate for refining investments. 40 years ago it was decided that refining should have a 17-year life and therefore have a 10-year write-off period. Everything else, all industries like us, have a 5-year write-off period. If you could make

that change, it also would encourage people to invest money in refining.

The other thing is, and Mr. Dowd just mentioned it, perhaps the last 2 years, which were good years for refining, will encourage more people to make refining-related investments. It will take a lot bigger investment, $3 billion, to build a new refinery as opposed to adding capacity at existing sites. But hopefully—before that we had 10 years in which the return on investment in the industry was only 5 percent, which you can get on a T-bill with no risks.

So if more people think that the last 5 years are what the next 10 are going to be like, it would be very helpful. But it would be very helpful to have an extension of that tax cut idea to actually encourage more investment in domestic refining.

Senator THOMAS. I guess, Mr. Shipley, you represent more retail outlets. You heard all the discussion about the change in price over the day and the difference between when you filled your tank and when you changed. How do you react—maybe you did in your statement. How do you react to that concern about it seeming like just automatically setting different prices?

Mr. SHIPLEY. The arbitrariness——

Senator THOMAS. Yes.

Mr. SHIPLEY [continuing]. Or apparent arbitrariness. I guess the first thought I have is I share it as a buyer of gasoline for retail. We are experiencing that uncertainty and fast moves in the cost, rising cost of fuel that we need to put in our tanks.

Our company with 26 stores has 100 tanks with 10,000 gallons, a million gallons of storage. We need to fill that with gasoline before we can sell it. In your car you might have a 20-gallon tank. We are really dealing with the same thing that consumers are dealing with on a slightly larger scale, right before consumers deal with it.

Senator THOMAS. But if you fill your million gallons on Tuesday and suddenly the guy down the street increases his price, do you increase yours too just because it is competitive?

Mr. SHIPLEY. No. If I can get the gallons from the guy down the street, I will do it.

Senator THOMAS. I am not talking about that. I am saying if you are basing your price on what it costs you to fill your wholesale tank, are you going to change it simply because the community is going higher and you can make a higher profit? Or are you going to base it on the cost in addition, your profit in addition to the cost of your product?

Mr. SHIPLEY. On the replacement cost of the product.

Senator THOMAS. Which you are guessing.

Mr. SHIPLEY. Last week there is no question about, there was an element of trying to get a handle on what the next cost was, what the cost was going to be.

Senator THOMAS. I see.

Mr. SHIPLEY. We do get price—we knew what the price was from our supplier.

Senator THOMAS. Sure.

Mr. SHIPLEY. And as we are continuously filling our tanks, we are buying at those prices.

Senator THOMAS. Well, the allegation, whether it is right or wrong, or suspicion is that your tanks are full, but because the price changed that day, why, you raised your prices 20 cents even though you are still using the same gas. Do you find that to be the case?

Mr. SHIPLEY. That could happen at a certain spot. But when it is time to fill that tank again, we still need to have the money. We need to be able to sell that product at a price that we can buy the next gallon of gasoline.

Senator THOMAS. Thank you. Thank you, sir.

Senator BURR. Senator Wyden.

Senator WYDEN. Mr. Chairman, are we going 5-minute rounds here? What is your pleasure here?

Senator BURR. Based on your unanimous consent, you and I are splitting between now and 6:10.

Senator WYDEN. I am going to ask then for a UC to go to 6:15.

Senator BURR. What if I do not agree with that?

Senator WYDEN. You and I have only been friends about 20 years. I think my odds are okay.

Senator BURR. I will be here as you have questions.

Senator WYDEN. Great, thank you. This will be very brief.

Mr. Slaughter, you represent all of the major oil companies in your association. Right now those companies are awash in money. They have got record profits. We have got record prices. We have got huge margins. I would like you to tell me what those companies are going to do with all that money. What are they going to do particularly with that money in the next 90 days when we have these tremendous needs for affordable energy in our country? What are they going to do with all this money that they are sitting on?

Mr. SLAUGHTER. Well, obviously one of the things they will be doing is helping basically put the gulf coast back in order and keeping the supply lines, improving the supply lines, putting them back together for the rest of the country to supply fuel.

There is a lot of talk about profits in the oil industry, but there is not much talk about profit margin. The reason there is not is because it takes huge amounts of money to be in this business. Actually, the only measure of profitability really is how much you actually make after you put money in the business.

These companies, many of our companies, not all but many, are international companies that invest billions of dollars around the world. They may invest it in some particular country that has promising oil reserves, but they may lose that investment overnight because of terrorism or some kind of change of government in that country. You look at what is happening on the world stage to the United States and you look at what is going on with world terrorism. Our companies that deal in exploration and production have to invest money in those types of places all the time. It takes vast amounts.

We are talking about need to increase refining investment in the United States. It takes a vast amount of money to be in refining business in the United States. We will spend $20 billion in this industry on environmental program compliance in this decade, on top of what we put into maintaining the business and do what upgrades we can.

There are tremendous calls for money in this business. The good thing is—you talk about LNG terminals, you talk about expanded gas production. Much of this hearing is about what needs to be done. It takes capital to do that and the energy companies are going to have capital to reinvest into the business to produce more energy for not just the American people, but globally, which will help us too.

Senator WYDEN. You just told me that profits could be marginal. You told Senator Thomas you might need additional tax credits. That just defies everything that I read in independent sectors of the press and everywhere else. What I would like you to do, would you get to me personally a written response to my question by the end of this week?

Mr. SLAUGHTER. I would be happy to, Senator.

Senator WYDEN. I would like—and I appreciate that. I appreciate your responsiveness. I would like to know what the oil industry, your member companies, are going to do with all this money that they are sitting on in the next 90 days. I appreciate your responsiveness and I will look forward to getting it by the close of business on Friday.

My question for the AAA president is essentially this. On your website you have a daily fuel gauge report that shows current oil and gasoline prices. Today's report shows how gasoline prices have been spiking up at the same time that crude oil prices are going down. The chart shows a 50-cent increase from $2.55 to over $3 a gallon for gas at the same time crude oil dropped 50 cents a gallon.

So how can the run-up in gasoline at the same time crude prices are dropping not essentially be price-gouging?

Mr. DARBELNET. Well, I am not sure that that question can be properly answered by myself. It might be one best directed at those who produce and distribute and sell the product. But to the extent that your question reflects the difficulty that the public has understanding why prices rise as quickly as they do, I think it is on target in that regard.

As I said earlier, last week the price of retail gas increased by 45 cents a gallon, the price of crude remained roughly flat during that period. The gas that was sold was refined before the storm hit and one can only conclude that the price at which gas is being sold is perhaps marginally affected by the fact that it is more costly to distribute it, but predominantly affected by the fact that it is being priced at the level that the market will pay.

I noted that it was suggested that in setting the price one has to think about the replacement cost of future gasoline and I think that leads a lot of consumers to wonder when the trend is in the other direction and the price, the foreseeable price of the replacement fuel, is going down, are we under those circumstances decreasing the price of the gas we sell or are we relying on the price we purchased it for. I think it is the latter.

Senator WYDEN. One last question for you, Mr. Slaughter, involving the west coast market. What I have heard—I do not know if you were here when I asked Mr. Caruso—is that oil industries have claimed for years when the west coast prices were 20 cents per gallon higher than the national average, they constantly told me and other west coast members that the west coast was a sepa-

rate market. That was the argument, it is a separate market from the rest of the country.

So now we have seen our prices go up dramatically just in the last few days. We do not get gasoline from the gulf, and it seems to me either the oil industry was gouging for years when it routinely charged higher prices on the west coast or it is gouging now when west coast prices are going up because of a tragedy that had no impact on west coast supplies. What is going on here?

Mr. SLAUGHTER. First of all, as has been pointed out here, we are talking about a global market and 25 percent of American crude production was called into question last week and still has not been completely restored. That affects the global market for oil.

Now, California is largely an isolated market. There are limited pipelines in and out of California, although there are some. Material can be brought to California from the gulf coast through the Panama Canal, but it takes a while to do that. But there are ways in which that market is going to be affected by what the overall world price of oil is and what products generally are going for in the United States.

Other products now, as has been pointed out, are now higher than they are in California, which very rarely happens. But essentially, when you have an outage of the magnitude of the one we have, it basically radiates throughout the country, generally slowly, as material basically is brought in from different parts of the country as prices go up to try to get more product into areas that are short. That will affect California and people in California will see a tightening of the market immediately as a result of what happened of the magnitude it did on the gulf coast.

So you do have your own fuel specifications out there, which are difficult to make. It is very difficult to resupply those fuels. But those fuels can be used anywhere else. You can always use a more environmentally pure blend of fuel, which is what you have out there. So there is a chance that some of the fuel that would have been used in California would be brought around to the gulf coast area to solve the outages there or to the Southeast. That is just simply competition, Senator Wyden.

Senator WYDEN. The trouble—my time is up and I am going to leave it with this. The trouble with that argument, Mr. Slaughter, is that the industry says it is a global market when they are trying to justify price increases as a result of a national tragedy, which we have obviously had, but we never get the pricing relief. We never see the prices go down, which is essentially what our man from the AAA said, when global forces would dictate it.

In other words, the industry's argument shifts almost from occasion to occasion. When it is convenient to raise prices, well, we are part of a global market. When we make an argument for lowering prices, it is a different occasion: Well, you are an isolated market.

I will look forward, though, to getting the response by the close of business on Friday. I think it will be very helpful. I think the American people want to know what the oil industry is doing with this enormous amount of money that the industry is collectively sitting on. They do not want to know what will happen in 5 years, 10 years. First, they want to know what is going to happen quickly,

and to have that from you about the next 90 days is responsive and I appreciate it.

Thank you, Mr. Chairman.

Senator BURR. Gentlemen, I will be extremely brief. Mr. Shipley, how if at all were you notified of potential shortages being the result of two east coast pipelines down, and did you experience shortages?

Mr. SHIPLEY. We in Pennsylvania were relatively, from what I have heard of people in other parts of the country, fortunate that we were put on 100 percent allocation by our branded suppliers. So what that meant generally was that whatever we bought in July was what we were allocated to buy during the last couple days of August and indefinitely until we hear further.

So that is how we were notified. I have heard in North Carolina they are on 50 percent allocation.

Senator BURR. Yes, it has been tight.

Let me ask you, is there a standard process that you follow in the convenience store business relative to any notification to customers as to what you see happening from the standpoint of supply?

Mr. SHIPLEY. To retail customers?

Senator BURR. Clearly some retail customers drove up and the sign was "out of gas."

Mr. SHIPLEY. Actually, again, in Pennsylvania we did not have that, but we had high prices, which was still not good from the customer's standpoint. I can tell you the way I handled that in my company. I addressed it to the people behind the sales counter and the people that answer the telephone at our company, they are really the ones who are hearing from our customers about the high prices.

Senator BURR. We were the next phone call, just so you know it.

Mr. SHIPLEY. Right. What I said to them is that we do need to offer ideas for conserving. We cannot control. We do not know anything about these prices other than that it is telling us now is a good time to save.

Senator BURR. Do we have too many boutique fuels?

Mr. SHIPLEY. I think so, yes.

Senator BURR. So you would not——

Mr. SHIPLEY. I think that has actually been a good thing in the last week. The prices would have even maybe been higher if we had not relaxed standards.

Senator BURR. But it would not upset you if we went to a much smaller stable of products, that we allowed refineries to produce product that could be shipped in the regions where the refineries actually are, and they could have longer runs of that?

Mr. SHIPLEY. Particularly as a marketer, I can say fungibility is good. The more we can buy and sell fuels across borders, whether it is State borders or county borders, the better.

Senator BURR. Mr. Slaughter, you stated in your testimony that 177 refineries have been closed in the United States since 1981. Can you tell me how many, if any, could potentially reopen if in fact we saw that as the greatest opportunity to increase the refinery capacity?

Mr. SLAUGHTER. Not too many, Senator Burr. A number of those at the beginning that shut down in the 1980's were particular refineries that had been encouraged to operate as a result of price controls. Given what is going on in the refining industry in the last couple years, anyone who had additional equipment to restart would have restarted. Some of those refineries have been disassembled and other refineries have bought them and are using them now. So you will not find a great many, I think, Senator, if that is the route you decide to go.

Senator BURR. Is it safe then for us to assume that we have two options? We can expand the current refineries that we have and/or build new ones?

Mr. SLAUGHTER. Yes. Those are—and you are going to get most of the bang for your buck in adding capacity at existing sites, which is not quite as costly, and you may be able to get permits more easily. There is a group in Arizona that for 10 years has been trying to build a refinery for a couple billion dollars out there, a 150,000 barrels a day, in one of the fastest growing States, that does not have a refinery, with a lot of demand for products, and they have not been able to get it built. But people like that, who are willing to take the risk, put up the up-front money and try to build a refinery, ought to be able to build one, too. So I would encourage you to go after both.

Senator BURR. No question that we have got to have a streamlined process if we want people to make that capital investment.

One last thing as it relates to refineries. The first panel sort of laughed when I talked about a refinery cushion. Basically they said we do not have one. Do we need one?

Mr. SLAUGHTER. Well, you are always better off when you have a bit of a cushion. We did have one, but we have worked it off about the last 5 to 6 years.

Senator BURR. Are we at 97 percent capacity of refineries in this country?

Mr. SLAUGHTER. Well, right now, with the outages, the numbers would not be that. But on August 26, which are the last numbers that came out from EIA, we were running at 98 percent of capacity. So we are back. We had had some outages early in the summer, which is why the numbers that you mentioned earlier were down somewhat from last year. But those were cured by the time of August 26 and we were way back up at the top in utilization again.

Senator BURR. Given that refineries are at that point annually that they shift over to focus on home heating oil, and clearly we have some gasoline stock requirements out there, is this going to throw our home heating oil off from a standpoint of the refinery time that we need?

Mr. SLAUGHTER. Well, the good news is that home heating oil inventory had been going up and got well into the upper average level. So it all depends on how quickly everything comes back, Senator. If things come back quickly enough or if we—we are getting additional product from abroad through the EIA—if we can make it up quickly enough, we will not pull down those inventories and cause problems in the winter. But we will have to wait and see.

Senator BURR. Thank you.

Mr. Shipley, let me come back to you for just a quick question. I remember back the once or twice that Ron Wyden and I have gone through this in the House and I think the one thing I learned from North Carolina petroleum marketers was that there is a tendency as the price goes up, especially when it is quick, that the price that you post and sell at is not always reflective of every gallon you have in the ground, and there is an offset to your increased profits as price goes up; and that if you have a similar event on the back side, which is usually the result, where price goes down, the tendency is you have to be competitive with whoever got the last load of oil. So the tendency is that you are always in a position where you may be selling at the pump at what you bought it for, which is not a profit. Potentially, if you sat on it you could eventually lose money.

Is your experience in these years that it is pretty much a wash on one side and the other?

Mr. SHIPLEY. It is generally, the retail price will move slower than the wholesale price both ways, on the way up and on the way down. That means for a retailer that our margins get squeezed on the way up. I showed you a little bit of that with 1 percent margin, gross margin, last week. We cannot operate our business on that kind of a margin sustaining it continuously.

There is a tendency also to lag on the way down. Even with these rises, even with these rapid increases that we have had in the last week, they are not as fast as the wholesale price is rising. We have not gone up on the street at the same rate or held it at the same rate as the wholesale price.

Senator BURR. Once again let me thank all of our panelists. We apologize for the time of the evening that it is and for the fact that we lost some members, but they are in a briefing on Katrina right now with a number of secretaries of Federal agencies. I hope all four of you will make yourselves available to the written comments and questions that they might have.

At this time, the hearing is adjourned.

[Whereupon, at 6:24 p.m., the hearing was adjourned.]

APPENDIXES

APPENDIX I

Responses to Additional Questions

RESPONSES OF ROBERT L. DARBELNET TO QUESTIONS FROM SENATOR DOMENICI

Question 1. In your written testimony, you state that oil companies must ensure that their pricing yield what they "need and deserve but no more." Do you believe that the current price environment suggests that companies are exceeding what they need and deserve?

Answer. AAA understands that oil is a commodity subject to market fluctuations and that there are multiple issues that can impact the price and supply of refined products. At the same time, consumers have every right to voice their concerns when they observed prices increasing dramatically even before the full effects of Hurricane Katrina were evident. Retail prices went up 45 cents a gallon in the week after the storm, but the price of crude oil remained flat. Of further concern to consumers was the realization that the product being sold at these sky-high prices had been refined and sold at lower prices to gas stations before the storm. I would simply say in the aftermath of Katrina, AAA urges caution on the part of the oil companies and others involved in the pricing and sale of gasoline. While gasoline price increases in the face of major supply disruptions are unavoidable, the American public will not tolerate unjustifiably high prices that seem to take unfair advantage of tragic circumstances. Rapid increases in retail prices can also have the effect of causing consumers to panic and line up for gasoline, creating artificial shortages.

Question 2. If you could suggest one reasonable step that each American driver could take to help reduce the high price at the pump, what is it?

Answer. First and foremost, make conservation top of mind. Attitude is everything. If we could all slow down just a little, leave more time so we are not rushing from place-to-place, avoid the sudden starts and stops that lower fuel mileage, we can all get a little more out of each gallon of gas. Properly maintaining your vehicle and keeping your tires properly inflated also contribute to better fuel efficiency. And, then over the longer-term, motorists should consider replacing their existing vehicles with ones that offer the benefits of safe-design and increased fuel efficiency.

Question 3. You assert that if automakers do not voluntarily commit to changes, Congress should require improvements through changes to CAFE standards. What specifically do you think these standards should be?

Answer. AAA is not recommending any specific standard. AAA believes that the federal government should establish fuel economy standards that are ambitious enough to result in significant improvements in overall fuel efficiency, but realistic enough to ensure passenger safety and consumer choice. The existing CAFE program is no longer accomplishing this objective. In terms of specific recommendations, AAA would urge the first step be to capture those vehicles between 8,500 lbs and 10,000 lbs gross vehicle weight that are currently not covered by the CAFE standards. We also want consumers to have access to more realistic fuel economy ratings for new cars and trucks, so they can accurately compare one vehicle's fuel efficiency to another.

Question 4. Do you have any data with respect to the percentage of disposable income that Americans spend on gasoline now against what they have spent in years past?

Answer. AAA's tracking of fuel prices does not encompass this type of data collection.

RESPONSES OF ROBERT L. DARBELNET TO QUESTIONS FROM SENATOR BUNNING

Question 1. The recently passed Energy Bill included an important tax provision that will allow 50% expensing of investment that expands a refinery's capacity by more than 5%. Do you think this is enough to stimulate growth or are additional incentives needed?

Answer. It is obvious that our current problems can be attributed in substantial part to a deficit in refining capacity. The new tax incentives in the energy bill, coupled with the substantial profits already being reaped by the oil industry, should be all the financial motivation necessary to create more capacity. Estimating the size of tax incentives is outside of the scope of AAA's purview.

Question 2. As you may know, Kentucky has an abundance of coal. Among other things, this supply of coal allows Kentucky to offer its citizens and industries some of the lowest utility rates in the country. I am deeply concerned that the increasing cost of oil will increase the cost of producing and transporting Kentucky coal. Do you have any additional information on how the price of gasoline will affect the cost of other energy sources such as Kentucky coal?

Answer. There is no doubt that the cost of oil raises the cost of producing and transporting energy supplies. However, AAA's tracking and analysis of gasoline prices do not include the economic impact on other energy sources.

Question 3. The number of domestic refineries has decreased by more than 50% in the last 30 years, and the real-volume capacity of the domestic refinery network has decreased 10% in that same time period. What factors do you believe have suppressed U.S. refining capacity?

Answer. Factors include lack of economic incentives during the 1990's and government regulatory processes. While we fully support the goals of the Clean Air Act, we believe the overly complex set of state and local clean fuel regulations that have been adopted over the last 10 years have discouraged investment in large, new refining facilities that can freely ship products when and where they are most needed.

Question 4. The cost of gasoline is largely determined before it reaches the pump. The cost of crude oil and federal and states taxes make up 74 to 79% of the retail price of gas. Could you describe how the remaining 20 to 25% is determined and what profit each part of the supply chain receives?

Answer. Because the price of oil changes each day along with the price of gasoline, the percentage cost and profit of each component in the supply chain is in constant fluctuation. Only the oil industry knows the percentages of cost and profit in gasoline at any given time with the exception of the federal, state and local taxes on gasoline.

Question 5. As the price of oil skyrockets, alternative fuels will become more price competitive. What segments of the energy market will see growth in investment because of higher oil and gas prices? What impact will this have on the domestic energy market?

Answer. Other forms of energy will undoubtedly attract investment as oil prices rise, however, AAA's area of immediate concern is for the price and availability of gasoline and diesel fuel. New investments in alternative energy, as well as in expanded oil and gasoline production, will help bring global supplies more in line with demand over the next several years. These trends are unlikely to contain fuel prices over the long-term, however, unless more emphasis is placed on fuel conservation and the elimination of barriers to the production, shipment and sale of gasoline across the nation.

Question 6. Global spare production capacity has decreased dramatically in the past decade and it appears it will decrease even more. This will provide international suppliers with an even smaller ability to combat supply disruptions. Do you think the international oil supply is secure or is another price spike just around the corner?

Answer. I would not want to speculate on whether another price spike is "just around the corner". AAA suggests that Congress look at what actions can be taken to encourage the oil industry to hold larger inventories of gasoline and diesel fuel to guard against sudden shortages and better protect our citizens in times of national emergencies.

RESPONSE OF ROBERT L. DARBELNET TO QUESTION FROM SENATOR BINGAMAN

Question 1. Hurricane Katrina has underscored the concentration of U.S. petroleum production, refining and energy infrastructure in the Gulf of Mexico region. In recent correspondence with the President, I have mentioned the need to bring together the necessary stakeholders to focus on ways to facilitate a more robust and distributed infrastructure for refining petroleum products in the U.S. Would you

and your respective stakeholder organization, be willing to take part in such a discussion? How would you see this proceeding?

Answer. AAA participates in various stakeholder groups as a representative of the consumer. We would consider participation in any such group as long as it is positively directed toward solving problems. It's important to begin such an effort with a clear set of objectives and a willingness to include all relevant stakeholders.

RESPONSES OF ROBERT L. DARBELNET TO QUESTIONS FROM SENATOR CORZINE

Question 1. Right now, my constituents and consumers across the country are paying exorbitant prices for a necessary commodity. In your testimony, you say that a federal gas tax holiday would not be the best solution because of the resulting loss in receipts to the Highway Trust Fund. If we were to offset the loss to the Highway Trust Fund by implementing a windfall profits tax on oil companies, would that be more effective in stabilizing prices and preventing a loss of revenue?

Answer. There have been calls for relief from the federal gas tax in the wake of increased prices. This would do nothing to address the root causes of our gasoline price and supply problems. The resulting loss in receipts to the Highway Trust Fund, however, would severely compromise the safety of the traveling public because we already suffer from a lack of investment in our transportation infrastructure. Asking the American people to choose between a gas tax reduction and safety is posing the wrong question.

Neither would AAA support a wind-fall profits tax which would keep high fuel prices in place for consumers, while redistributing profits from the oil companies to the federal government.

AAA is interested in policies that promote fuel conservation, consumer choice, and more competition between those who make and sell refined fuel products in the United States. We are urging the federal government to consider adoption of a uniform clean gasoline standard in the United States, to revisit the federal CAFE standard, to engage in more careful scrutiny of mergers and other business activity in the oil industry and its related financial markets, and to do all that is possible to limit America's reliance on razor-thin inventories of gasoline and diesel fuel. This last point is especially important for economic as well as national security reasons.

Question 2. According to *AAA.com*, the average price for a gallon of unleaded regular at stations within 10 miles of downtown Newark reported today to be $3.133. On Saturday, it was reported to be $2.926; on Sunday, it was reported at 3.006. So on average a 15-gallon tank costs $45.21 to fill. A year ago it was $27.32. Just to put it in perspective, the annual increase in cost from a year ago works out to $930 at current prices compared to a year earlier. In addition, the percentage jump from just a month ago is 30 percent. (From $34.66 to $45.21). Prices before Hurricane Katrina were already skyrocketing, how much of a spike in prices last week is due to price gouging? What do you think are the most effective ways to prevent price gouging by the oil companies as well as by retailers?

Answer. Because there is no uniform definition of price gouging, it is difficult to determine what percentage of recent price spikes could be attributed to the phenomenon. AAA is aware that a number of states have anti-price gouging statutes. The regulations define price-gouging and set penalties. More state governments should look to the adoption and strict enforcement of similar statutes.

RESPONSES OF WILLIAM S. SHIPLEY, III, TO QUESTIONS FROM SENATOR DOMENICI

Question 1. In your testimony, you concede that there may be some "bad actors" who may be taking advantage of the current shortage of gasoline supplies by overcharging customers. Do your organizations have any mechanisms for monitoring the behavior of your members? Do you have a process for disciplining members who may be found guilty of such practices?

Answer. Neither the Society of Independent Gasoline Marketers of America nor the National Association of Convenience Stores has any mechanism for monitoring the behavior of its individual members with respect to pricing practices. Pricing decisions are made by individual entrepreneurs and the associations scrupulously avoid any behavior which appears to influence such decisions. It is the associations concern that such behavior could be construed as violative of Section 1 of the Sherman Act. As a consequence, both associations scrupulously avoid such behavior.

Question 2. Can you give us a brief status report on the current state of gasoline supplies at retail? Are the major sources of gasoline supplies such as the Colonial and Plantation pipeline systems now back in service? If not, do you have any idea when deliveries of supplies might resume and thereby alleviate the pressure on gasoline and aviation fuel prices?

Answer. The current status of gasoline supplies at retail is adequate but tight. The Colonial and Plantation pipeline systems are back in service. However, a not inconsequential percentage of U.S. refining capacity remains out of service as a consequence of Hurricane Katrina. As the Committee is aware, the balance between U.S. domestic manufacturing capacity and demand for motor fuels has been in a delicate balance for an extended period of time. While alternative supplies, including imports, are providing relief in the sense of sufficiency of raw physical volume, it is likely to require, at least in our opinion, the restoration of refining capacity operations to take the pressure off of gasoline and aviation fuel prices. As the pipelines and refineries come back on line, they will help alleviate supply tightness providing for daily demand. However, it will take an extended period of time before supplies are returned to the limited pre-Katrina levels. The restoration of these systems will provide relief, but full recovery will not be immediate.

Question 3. In your written testimony you explain how you establish prices at retail based on the prices charged you by your wholesale supplier. Would you please elaborate for the Committee how real time pricing decisions are made by gasoline retailers?

Answer. In a rapidly ascending market, most retailers will do their best to obtain a price for gasoline which will cover the replacement costs of the inventory being sold. In the context of a static or declining market, retailers will attempt to achieve the best price for their product that the market will allow them. As prices decline, normal competitive forces operate to lower prices when individual competitors, seeking to improve their volume, seek to increase volume by lowering price and attracting customers from other retailers.

This set of decisions is made by each entrepreneur based on the capacity of that competitor's outlets, supplies and the costs thereof, and that competitor's strategy for maximizing his or her profit.

Question 4. How will the recently passed energy bill's restrictions on the proliferation of so-called "boutique fuels" impact retail gasoline prices?

Answer. It is the hope of SIGMA and NACS that the recently passed energy bill's restrictions on the proliferation of so-called "boutique fuels" will tend to stabilize supplies, perhaps leading to more stable or decreased gasoline prices. As the Committee is aware, since the enactment of the Clean Air Act amendments of the early 1990s, the increase in the number of different grades of gasoline and other motor fuels which must be transported and stored in the Nation's distribution system has had the effect of decreasing supply by decreasing the efficiency of that distribution system. The energy bill, by preventing the continued loss of efficiency presented by additional boutique fuels, should benefit the market.

Question 5. What, if any, affect has the increase in the average price of gasoline had on driving patterns? Does AAA see any indications that Americans are driving less frequently as a result of the rising cost of gasoline?

Answer. While neither SIGMA nor NACS currently have available to them any scientifically-obtained data responsive to this question, anecdotes indicate that increased retail prices might have reduced demand, although not significantly. They have, however, had the unintended consequence of increasing the number of transactions using credit cards as motorists charge their higher fuel bills.

RESPONSES OF WILLIAM S. SHIPLEY, III, TO QUESTIONS FROM SENATOR BUNNING

Question 1. The recently passed Energy Bill included an important tax provision that will allow 50% expensing of investment that expands a refinery's capacity by more than 5%. Do you think this is enough to stimulate growth or are additional incentives needed?

Answer. The Society of Independent Gasoline Marketers of America and the National Association of Convenience Stores believe that the provisions of the recently passed energy bill encouraging the expansion of refiners' capacity are an excellent first step. Only time will tell if these incentives are sufficient to stimulate the kind of investment in the Nation's manufacturing capacity that both SIGMA and NACS believe would be required to reduce the volatility of motor fuel prices. Both associations are concerned that more incentives may be required.

Question 2. As you may know, Kentucky has an abundance of coal. Among other things, this supply of coal allows Kentucky to offer its citizens and industries some of the lowest utility rates in the country. I am deeply concerned that the increasing cost of oil will increase the cost of producing and transporting Kentucky coal. Do you have any additional information on how the price of gasoline will affect the cost of other energy sources such as Kentucky coal?

Answer. Increasing fuel prices cannot avoid generating a significant and unfortunate upward pressure in the cost of not only Kentucky coal but other sources of fuel.

While most attention is focused upon gasoline prices because of their prominent display and the average motorist's almost daily interaction with them, SIGMA and NACS believe that Congress should be equally concerned about diesel fuel prices. Diesel fuel price escalation has a ripple effect in the economy as it increases the costs of not only truck transportation but rail costs and in some instances jet fuel. In addition, as distillate prices rise, fuels with which they complete, such as natural gas and propane in the home heating market, also increase.

Question 3. The number of domestic refineries has decreased by more than 50% in the last 30 years, and the real-volume capacity of the domestic refinery network has decreased 10% in that same time period. What factors do you believe have suppressed U.S. refining capacity?

Answer. SIGMA and NACS believe that a number of factors have suppressed U.S. refining capacity. First, for an extended period of time the returns on investment in refining capacity were abysmal. As a consequence, when compliance with new environmental regulations required significant investments in refineries, many refinery operations decided to cease operations. With respect to new capacity, if one assumes that the average return on invested capital in a manufacturing enterprise is somewhere between five and eight percent per year, through the 90s the refining industry performed on a substandard basis. Thus, drawing capital for expansion is difficult. Secondly, siting a new refinery involves not only significant permitting issues at the federal, state, and local levels, it also involves facing significant resistance from many communities. While everyone would like the benefit of increased manufacturing capacity, only a few communities are prepared to accept a significant refinery as a part of their daily lives.

Question 4. The cost of gasoline is largely determined before it reaches the pump. The cost of crude oil and federal and states taxes make up 74 to 79% of the retail price of gas. Could you describe how the remaining 20 to 25% is determined and what profit each part of the supply chain receives?

Answer. Please see attached chart.*

Question 5. As the price of oil skyrockets, alternative fuels will become more price competitive. What segments of the energy market will see growth in investment because of higher oil and gas prices? What impact will this have on the domestic energy market?

Answer. SIGMA and NACS do not predict which segments of the energy market will see growth and investment because of higher oil and gas prices. In markets other than motor fuels, one assumes that sources of power such as wind, solar, and hydroelectricity will see increased demand.

Question 6. Global spare production capacity has decreased dramatically in the past decade and it appears it will decrease even more. This will provide international suppliers with an even smaller ability to combat supply disruptions. Do you think the international oil supply is secure or is another price spike just around the corner?

Answer. It appears that crude oil production capacity is becoming increasingly tight. SIGMA and NACS both hope that this may be offset by the development of sources such as Canadian tar sands or other unconventional sources of crude petroleum. Refining capacity likewise has become increasingly tight worldwide. Moreover, as the United States has gone off world specification products, our ability to obtain relief from non-domestic sources in the event of a domestic problem such as experienced in the wake of Katrina, become more limited. Consequently, a disruption in crude oil supply or another significant blow to domestic manufacturing capacity could generate volatility such as that recently experienced again.

RESPONSES OF WILLIAM S. SHIPLEY, III, TO QUESTIONS FROM SENATOR SALAZAR

Question 1. Mr. Shipley, I saw an expert on CNBC saying that convenience store owners don't know what they are paying for gasoline until after they have had it delivered and after they have started selling it at the pump. Is that even possible?

Answer. It is in fact possible, and not altogether uncommon, for a gasoline retailer literally not to know what it is paying for gasoline until after that product has been delivered and after that retailer has actually started selling. This happens because of timing differences between the need to supply an outlet and the supplier's price. In addition, suppliers may change prices more than once a day and because of scheduling problems and the logistics of making sure that trucks arrive at a retail outlet with replacement supplies in a timely way, that product may literally have been delivered before the price for it is recognized by the individual or individuals responsible for pricing it.

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*The chart has been retained in committee files.

Question 2. From your testimony, I see that the money going back to the refiners, royalty holders, and exploration companies has doubled in two years. Surely that is not due to the cost of doing business; otherwise these industries could not suddenly be awash in profits. Is anyone besides the producers and refiners benefiting from these higher prices? Since your testimony has been so candid—and I thank you for that—how would you propose the prices you are being charged to be held in check?

Answer. Yes, one of the principal beneficiaries of higher fuel prices has been the credit card industry. The amount of money which most consumers carry in their pockets at one time has not changed dramatically since the mid 80s—somewhere between $20.00 and $30.00. As the cost of a typical fill up (around 11 gallons) escalates past $20.00 consumers increasingly charge their motor fuel. Because credit card fees are calculated as a percent of sales price, this has resulted in a significant increase in the credit car fees associated with the purchase of every gallon of gasoline.

The prices which retailers charge can best be held in check by market forces. Specifically, if the country has a manufacturing base for motor fuels which can promptly and effectively increase supplies in the event of a price spike, prices will decline rapidly.

RESPONSES OF REBECCA WATSON TO QUESTIONS FROM SENATOR DOMENICI

Question 1. It appears that many facilities could come back online in days and weeks rather than months. Has MMS formulated a more specific timetable or goals for getting production online? If so, what is it?

Answer. The timing of resumption of activity is largely in the hands of industry and has been exacerbated by the impacts of Hurricane Rita. MMS is working with the private sector to monitor, facilitate, and expedite any permits necessary to get production on line as soon as possible. Daily oil shut-in production has gone from 95% on August 30th to 57% on September 12; daily gas shut-in production has gone from 88% to 38%. These shut-in numbers went back up to 100% for oil and 80% for natural gas immediately post-Hurricane Rita. As of October 3, 2005, 92.8% for oil and 74.95% for gas remain shut-in. Approximately 85 percent of Gulf oil production comes from facilities that suffered no or minor damage and this production could return to the market in three months if refineries, processing plants, pipelines and other onshore infrastructure are in place to receive process and transport it.

Question 2. Can you clarify reports of damage to specific platforms, in particular the MARS facility operated by Shell Oil Company?

Answer. MMS does not report on individual facilities but defers to the operator to assess and report these damages. This approach helps to quickly identify issues that need to be resolved, the overall impact from the storm, and where MMS efforts will be most effective in helping to restore our nation's oil and gas supplies from the affected area. Out of 4000 producing facilities, 43 have been destroyed (some are single well caissons) and 16 have sustained major damage. Most of these are older facilities which do not provide much production. The largest impact will be from four damaged deep water facilities, including MARS. Only 4 drilling rigs were destroyed and 9 rigs have extensive damage, 6 rigs went adrift and all have been remanned and are beginning to power up. Our inspectors are working with industry on the major facilities to expedite the process of returning these facilities to production.

Question 3. Is it still correct to say that there have been no reports of significant oil spills in the GOM as a result of Hurricane Katrina?

Answer. As to the OCS, there have been no reports of significant spills related to offshore production. There are some spills from tanks that were knocked overboard from facilities which were toppled or damaged. OCS facilities maintain redundant safety systems to shut-in production with sub-surface and surface safety valves which prevent the flow from wells even if the facility is completely destroyed. All safety systems worked to successfully shut-in production on the OCS platforms. We understand there were some significant onshore spills.

Question 4. Can you comment on any pipeline damage, or lack thereof, in the Gulf?

Answer. Pipelines are difficult to inspect because pipelines segments are below the surface and often must be physically inspected to determine the extent of damage. Industry is early in this process, however at this point the damage does not appear to be as great as Hurricane Ivan when massive offshore mudslides caused significant pipeline movement. However, as of October 18, 2005, there have been 90 preliminary reports of damage to offshore pipelines post Katrina and Rita. Industry

continues its preliminary assessment of pipeline damage and, as a result of a Notice to Lessees (NTL) issued September 27, 2005, has until May 1, 2006 to complete its inspections and surveys of OCS structures.

Question 5. Does it make sense for this country to have all of its offshore production consolidated in one area of the OCS? If not, how do you suggest the government can alleviate this problem?

Answer. The difficulty is that, but for the states bordering the central and western portions of the Gulf, historically coastal states and other interested parties have opposed offshore oil and gas activity off their coasts. The result is that 85% of the OCS is under moratoria. The Administration gives great weight to the views of adjacent states, as does the law. We believe that the nation's energy security resides in diversity of energy supply to provide Americans with reliable, affordable energy. We recently solicited public comment on all areas of the OCS as we initiated the first step for the 5-Year OCS Program for 2007-2012. This will provide the Secretary an opportunity to gather the current views of all interested parties in considering the future direction of the program.

Response of Rebecca Watson to Question From Senator Talent

Question 1. Compare the historical and projected growth of demand to growth in production, refinery, and delivery capability, 1980-2030.

Answer. This question is outside the purview of the Department of the Interior, and we defer to the expertise of other witnesses from the Department of Energy.

Responses of Rebecca Watson to Questions From Senator Bunning

Question 1. Global spare production capacity has decreased dramatically in the past decade and it appears it will decrease even more with the continued growth of demand in China and the United States, as well as the leveling of Russian oil production. This will provide international suppliers with an even smaller ability to combat supply disruptions. Do you think the international oil supply is secure or is another price spike just around the corner?

Answer. This question is outside the purview of the Department of the Interior, and we defer to the expertise of other witnesses.

Question 2. I've heard stories in the news media that a significant factor contributing to the current extraordinarily high oil prices is bidding by speculators in the worldwide oil commodity futures markets. Can you comment on the extent to which profit taking in the oil futures market is influencing the price of crude and gasoline? Is this phenomenon expected and how does it affect price spikes?

Answer. This question is outside the purview of the Department of the Interior, and we defer to the expertise of the witnesses.

Question 3. OPEC and other oil producing countries have expressed the desire to keep oil prices well above prior target range. What should we expect going forward as far as market-level crude oil prices?

Answer. This question is outside the purview of the Department of the Interior, and we defer to the expertise of the witnesses.

Question 4. As you know, the United States now imports over 60% of its crude. A significant portion of these imports come from unstable regions of the world. Yet we have vast untapped energy resources in the United States. Can you please discuss what the federal government can do to help to encourage the development of these secure, domestic energy supplies?

Answer. The President's National Energy Policy includes directives to diversify and increase all forms of energy supply in an environmentally sound manner, encourage conservation, and ensure adequate energy distribution. The Department has implemented a number of NEP directives to increase domestic energy supplies and enhance national energy security by ensuring continued access to Federal lands for domestic energy development, and by expediting permits and other federal actions necessary for energy-related project approvals.

For example, we are helping to ensure that the OCS remains a solid contributor to the Nation's energy and economic security by holding OCS lease sales in available areas on schedule. Since May 2001, DOI has held 17 OCS oil and natural gas lease sales on schedule while undertaking a comprehensive consultation process with other Federal agencies, State and local governments, and the public. These sales resulted in leasing of almost 24 million acres of OCS lands to industry for oil and gas exploration and development, and generated about $3.2 billion dollars in bonus bid revenue (not counting future royalties and rentals) for the U.S. Treasury. Production from leases issued as a result of these sales will contribute substantially to future domestic oil and gas production.

The Bureau of Land Management's (BLM) Oil and Gas Management program is one of the major mineral leasing programs in the Federal government and BLM has been making a concerted effort to help bring additional oil and gas supplies to the market. For example, the processing of Applications for Permits to Drill (APDs) and offering parcels of Federal land for oil and gas leasing continues to be a major priority for the BLM.

Increased funding provided by Congress and management improvements have enabled the BLM to make significant progress in responding to the greatly increased number of APDs being submitted by industry. In FY 2004, the BLM processed 7,351 APDs, approving 6,452 (on both Federal and Indian lands). As of September 3, 2005, the BLM had processed approximately 6,928 APDs (about 400 ahead of FY-2004's pace), approved 6,257 APDs (about 600 ahead of FY-2004's pace). By the end of Fiscal Year 2006, the BLM plans to substantially reduce the inventory of APDs pending for more than 60 days to 1,800, a reduction of 20 percent from 2004.

BLM is also working to make oil and gas resources in Alaska available through its leasing, exploration and development activities in the National Petroleum Reserve-Alaska (NPR-A), an area covering more than 23 million acres in the northwest corner of the state. Development of these oil and gas resources is an important component of the President's National Energy Policy. The first significant commercial production from the NPR-A is expected as early as 2008.

The BLM will also participate in the inter-agency activities relating to the siting of an Alaska Natural Gas Pipeline. On October 13, 2004, the President signed into law the Alaska Natural Gas Pipeline Act, (ANGPA), legislation that greatly enhances the prospects for approval of the Alaska Natural Gas Pipeline, which will provide enhanced access to the natural gas supplies on the North Slope of Alaska. In order to meet the intent and provisions of the ANGPA, Federal agencies, including BLM, with jurisdiction have been meeting regularly and are developing an inter-agency Memorandum of Understanding to define regulatory alignment.

The Energy Policy Act of 2005 contains several provisions through which the BLM can further work to improve the APD permit approval process and expedite oil and gas leasing, development and production on public lands. The Energy Policy Act of 2005 will allow the BLM to continue streamlining efforts in leasing and permitting. The BLM will work with other regulating agencies to develop a one-stop permitting process for oil and gas activities in the 8 offices in 5 states where 70% of all APDs are processed. The objective of grouping the appropriate agency personnel is to create a more efficient and effective process through which to issue permits for oil and gas activities to interested parties while ensuring that the Nation's energy resources are developed in an environmentally-responsible manner.

Question 5. In most areas of the world, including the oil-rich Middle East, we are looking at diminishing excess supply capacity. Mr. Dowd explained that other countries throughout the world are now exploring smaller oil fields and recovering lower-grade crude. How do our domestic oil sources compare in retrieval cost and quality?

Answer. This question is outside the purview of the Department of the Interior, and we defer to the expertise of the witnesses.

RESPONSES OF REBECCA WATSON TO QUESTIONS FROM SENATOR BINGAMAN

Question 1. Hattiesburg, MS is a major distribution center for propane which is an important energy source in many rural areas. How has the hurricane affected Hattiesburg and propane supplies?

Answer. This question is outside the purview of the Department of the Interior, and we defer to the expertise of the witnesses.

Question 2. I understand that the National Oceanic and Atmospheric Administration is predicting that, during the current hurricane season, as many as nine hurricanes will hit the Gulf, including at least two more hurricanes of a similar strength to Hurricane Katrina. What additional steps can be taken if any to lessen the impact of future natural disasters in the Gulf of Mexico area and to the refining industry in the United States?

Answer. Following recent hurricanes such as Ivan and Andrew MMS has conducted oceanographic, engineering and other studies reviewing offshore infrastructure or environmental damage. Our Technology and Research Program is used to assess and understand the areas of our regulatory program that could be improved. The results of these studies are incorporated into the MMS offshore program. Changes may include structure or facility engineering specifications, response or regulatory changes. MMS will conduct additional reviews and studies focusing on the damage and response after both Katrina and Rita.

Internally, MMS has a continuity of operations plan (COOP) that we practice each year where Gulf of Mexico operations are moved to Houston. The COOP team occu-

pied the emergency quarters prior to Hurricane Katrina entering the oil and gas areas of the Gulf of Mexico. The COOP was moved briefly to Herndon, VA during Hurricane Rita but has since moved back to Houston. This plan will be reviewed to assess if modifications are needed for longer-term disaster response and to identify any lessons learned.

Question 3. Hurricane Katrina has underscored the concentration of U.S. petroleum production, refining and energy infrastructure in the Gulf of Mexico region. In recent correspondence with the President, I have mentioned the need to bring together the necessary stakeholders to focus on ways to facilitate a more robust and distributed infrastructure for refining petroleum products in the U.S. Would you and your respective stakeholder organization, be willing to take part in such a discussion? How would you see this proceeding?

Answer. The Department of the Interior would be pleased to participate in any effort to work with the energy industry sector to find ways to improve and enhance the distribution infrastructure necessary to move OCS production to market centers and refining facilities.

RESPONSE OF REBECCA WATSON TO QUESTION FROM SENATOR CORZINE

Question 1. We've already heard Members of Congress exploiting the tragic events of last week and its effect on our oil production and refining capacity by calling for drilling for more oil in both the Outer Continental Shelf and ANWR. In 2000, the MMS estimated that there were only 196 million barrels of oil off the coast of the Mid Atlantic region, only enough to last the country ten days. Considering the minimal benefit and significant downside of drilling off of areas such as the coast of New Jersey, is it worth threatening over 800,000 New Jersey jobs that are dependent on the Jersey Shore economy by opening up the coast to potential oil spills and other environmental impacts. Wouldn't it be more prudent for Congress to look for ways to reduce our dependence on oil and diversify our energy sources?

Answer. The fact that America faces an energy challenge is exactly why the President developed the National Energy Policy report and worked with Congress to enact The Energy Policy Act of 2005. Together, these two initiatives provide a balanced, comprehensive energy program. Energy use sustains our economy and our quality of life, but a fundamental imbalance exists between our energy consumption and domestic energy production. We must look at ways to narrow the gap between the amount of energy we use and the amount we produce. There is no one single solution. Achieving the goal of secure, affordable and environmentally sound energy will require diligent, concerted efforts on many fronts on both the supply and demand sides of the energy equation.

President Bush's National Energy Policy report laid out a comprehensive, long-term energy strategy for securing America's energy future. That strategy recognized that to reduce our rising dependence on imported oil and gas, we must also increase domestic production. The President proposes to open a small portion of the Arctic National Wildlife Refuge (ANWR) to environmentally responsible oil and gas exploration using newly available, environmentally friendly technology. ANWR is by far the largest untapped source of domestic petroleum and would equal nearly 60 years of imports from Iraq.

Presidential withdrawals or congressional moratoria have placed more than 85 percent of the Outer Continental Shelf (OCS) off the lower 48 states off limits to energy development. The Federal OCS is a major supplier of oil and natural gas for the domestic market, contributing more oil and natural gas for U.S. consumption than any single state or country in the world, accounting for about 30 percent of the Nation's domestic oil production and 21 percent of our domestic natural gas production. The OCS contains billions of barrels of oil and trillions of cubic feet of natural gas that can be safely produced.

The Federal offshore oil and gas program has an excellent environmental record. Of the approximately 8.7 billion barrels of oil which have been produced from the OCS since 1985, only 73,400 barrels of all liquids (which includes condensates, oil and diesel) connected with offshore operations have been released into the marine environment less than .001% of produced liquids. According to the National Academy of Sciences, more than 150 times the amount of oil seeps into U.S. waters from natural cracks in the sea bed than from offshore platforms.

With our reliance on imports of foreign oil climbing each year, we would be irresponsible if we did not consider how we might develop these abundant domestic resources. The Department's Minerals Management Service announced in late August that it is seeking initial public comment on the development of its 2007-2012 five-year leasing plan for energy development on the Outer Continental Shelf (OCS) and accompanying environmental impact statement.

Most media coverage of the President's National Energy Policy and the recently enacted Energy Policy Act of 2005 focused on the parts dealing with production of traditional energy. However, both call for increased energy conservation and alternative and renewable sources as critical components to a balanced energy program. Good stewardship of resources dictates that we use energy efficiently and conserve resources. Thus, fossil fuel development is only a part of the solution to our Nation's energy issues. Americans have already made great strides in using energy more efficiently. Since 1973, the United States economy has grown nearly three times faster than energy use, in part due to more efficient use of energy. Efforts over the past 20 years have proven that simple conservation actions by individuals and small business can yield impressive results in demand reduction.

Alternative and renewable sources of energy can also play an important role in helping meet our increased energy needs. To this end, the President and the Energy Policy Act of 2005 encourage development of a cleaner, more diverse portfolio of domestic energy supplies, and include measures to aid in the development and expansion of renewable energy technologies in use today, including geothermal, wind, solar, and biomass, as well as continued research into using hydrogen as an alternative energy carrier. Such diversity helps to ensure that Americans will continue to have access to the energy they need.

RESPONSES OF REBECCA WATSON TO QUESTIONS FROM SENATOR SALAZAR

Question 1. For the panel, here's something I don't understand but would really like to know: where does the money go? Big Oil has been making money hand over fist in the past year—billions upon billions of dollars—and all of that extra profit is paid for by the consumers. All of that profit makes me think that a good chunk of that price at the pump must be some form of price gouging, even if it isn't being exacted at the last step. So what I want to know is who buys the barrels of oil, and where does the money from that purchase end up? Does Big Oil buy their own product from their own subsidiaries, for pure profit? And next, when I buy a gallon of gasoline at the pump, where does that money go? It seems that Big Oil takes a cut every step along the way, and by the time it gets to a citizen of Colorado filling up at the gas station, that person's pocketbook is feeling the greed of the entire system.

Answer. This question is outside the purview of the Department of the Interior, and we defer to the expertise of the witnesses.

Question 2. How can the price of a gallon of gasoline at the pump go up 50 cents in one day? Isn't that the same gas in the station's storage tank that was 50 cents cheaper yesterday? And if gas goes up that fast why does it go down so slow, if it goes down at all? I am hoping you can explain it to me and to the people of Colorado I represent.

Answer. This question is outside the purview of the Department of the Interior, and we defer to the expertise of the witnesses.

Question 3. Since last week we have seen wholesale gas prices surge above $2.50 but they are now down to around $2. What I don't understand is why the country saw stations raising their prices multiple times a day and multiple times during the week, but with wholesale prices now falling, there has not been a corresponding change in the price at the pump. In other words, while there seems to be a rush to raise prices under any excuse, is there no similar incentive to lower prices? Why aren't prices going back down just as quickly?

Answer. This question is outside the purview of the Department of the Interior, and we defer to the expertise of the witnesses.

RESPONSES OF JAMES A. OVERDAHL TO QUESTIONS FROM SENATOR DOMENICI

Question 1. Is the recent trend of high prices the result of more speculation in oil markets?

Answer. I do not believe that oil prices are being driven by speculation in the crude oil futures market. Moreover, I do not believe that the level of speculative positions has increased, as a percentage of all open positions, in the crude oil futures market, at least over the past couple of years.

The CFTC's primary tool for monitoring the role of speculative traders in the futures market is its Large Trader Reporting System. There is no bright line for differentiating between speculative traders and hedgers. As a rule of thumb, the CFTC uses the term "speculator" to describe traders who are classified as "non-commercial," that is, traders who do not have a commercial interest in the commodity upon which the futures contract is written.

Since the beginning of 2003, non-commercial traders in the crude oil futures market at the New York Mercantile Exchange have, in aggregate, held nearly equally-

sized positions on both the "long" side and the "short" side of the market. Currently, the long positions of non-commercial traders account for approximately 13 percent of all open long futures positions, while short positions by non-commercials account for approximately 14 percent of all open short futures positions. The current numbers are nearly identical to the average numbers compiled since the beginning of 2003. This balanced holding of long and short positions is inconsistent with the notion that the positions of non-commercial traders have driven crude oil futures prices upward. In addition, approximately 16 percent of open positions are held by non-commercial traders in "spread" positions, that is, in offsetting positions across related contracts. These spread positions are structured to speculate on relative price differences (e.g., prices for October delivery vs. prices for November delivery), and when structured as such, are unrelated to the overall level of crude oil futures prices, and therefore cannot be responsible for changes in the level of these prices. These spread trades play a vital role in keeping prices of related markets (and prices of related contracts within the same market complex) in proper alignment with one another.

An analysis by the CFTC's Office of the Chief Economist shows that in general, futures price changes are positively correlated with changes in positions of non-commercial traders, meaning that prices rise as they buy and fall as they sell. However, we also observe this same correlation with commercial traders, that is, prices rise when they buy and fall as they sell. Therefore, in determining whether non-commercial traders cause futures prices to change, it is necessary to understand the market interaction between non-commercial and commercial traders. What we observe is that non-commercial traders respond to position changes by commercial traders, that is, as commercial traders alter their positions, non-commercial traders take the opposite side of these positions in response. In other words, when a commercial trader sells, it will often be a non-commercial trader who takes the other side of the transaction, that is, is the buyer. And when a commercial trader buys, it will often be a non-commercial trader who is the seller. What we observe is consistent with the notion that non-commercial traders respond to price changes and are not the cause of price changes.

Finally, the futures market does not sit in isolation from other markets. Futures markets and cash markets are highly integrated. If trading in the futures market causes futures prices to differ from its cost-of-carry relationship with the underlying cash market, the resulting arbitrage opportunities will attract other traders whose trades will drive futures and cash markets back into their proper alignment. Indeed delivery of the cash commodity on futures contracts, and the prospect of delivery, while infrequent, leads to a predictable economic relationship between cash and futures prices.

Question 2. What are the futures prices saying about future prices for crude oil, natural gas and gasoline?

Answer. As a general policy, the CFTC refrains from predicting prices. However, prices from futures markets can be viewed as reflecting the markets' expectation of future cash market prices. Based on crude oil futures prices as of September 21, one can see that the market expects crude oil prices to fall slightly on a year-over-year basis over the next three years.

[Quoted in dollars per Barrel]

Delivery Date	Futures Price as of 9/21/2005
January 2006	66.66
January 2007	65.97
January 2008	63.61

Market expectations reflected in natural gas futures markets show generally falling prices on a year-over-year basis. The table below displays futures prices for January delivery in each of the next five years:

[Quoted in dollars per mmBtu]

Delivery Date	Futures Price as of 9/21/2005
January 2006	13.812
January 2007	11.454
January 2008	10.217
January 2009	9.307
January 2010	8.582

Contracts for summer delivery are lower by approximately $2 to $3 from the January prices across years.

Although the unleaded gasoline futures market lists contracts for 12 consecutive months, it is only actively traded in the four nearest months. The contract for October delivery is priced currently (as of September 21, 2005) at $1.98 per gallon of wholesale unleaded New York Harbor gasoline. The contracts for delivery in November, December, and January are at $1.93, $1.88, and $1.86 respectively, reflecting the markets' expectation that cash market wholesale gasoline prices will fall slightly.

Futures market prices represent estimates of future cash market prices but do not tell us anything about the range of possible outcomes. Prices for options on futures contracts can reveal additional information about the probability of future cash market prices falling within specified price ranges.

Question 3. The chart you included in your written testimony shows clearly how hedge funds significantly reduced their position following the Hurricane. What factors do you think motivated that trend?

Answer. I do not know for sure what motivated managed money traders, including hedge funds, to reduce their long positions in the unleaded gasoline futures market following Hurricane Katrina. I have heard anecdotally that some funds use volatility filters, in addition to other information, to guide their participation in the market. If volatility is too high, these funds will pull back their participation in the market. Others have suggested that the sell-off was due to profit taking following the run-up in prices preceding Hurricane Katrina. Yet others have suggested that many speculators simply underestimated the impact of Hurricane Katrina on prices and therefore sold on the basis of incorrect expectations. All of these theories are explored in a "Heard On The Street" column entitled "Many Speculators on High Oil Prices Bailed Too Soon," in the September 2nd *Wall Street Journal*.

Question 4. What would happen to the level of price for oil and natural gas if non-commercials were not allowed to participate in the market?

Answer. It is difficult to say for certain what the effect would be. The only thing we know for sure is that if non-commercials were not allowed to participate in futures markets, hedges constructed with futures contracts would be less efficient. In addition, the liquidity provided by non-commercial traders would be absent from the market, increasing trading costs faced by commercial traders remaining in the market.

First, as a factual matter, in recent times non-commercial traders as a group have had nearly equally balanced long and short positions in both crude oil and natural gas futures markets. This means that their presence is unlikely to have had any systematic affect on the direction of the market. In fact, in both the crude oil and natural gas futures markets, the most recent statistics from the CFTC's Commitments of Traders report show that the net overall position of non-commercial traders has been skewed slightly to the short side, meaning that if anything, non-commercial traders are exerting downward pressure on prices.

Second, prohibiting non-commercials from trading in futures markets will necessarily reduce participation by commercial traders. This is because commercial traders, who are attempting to use their futures position to reduce risk, need to trade with someone, that is, a non-commercial trader, who is willing to accept the risk the hedger is trying to shed. If the non-commercial trader is absent from the market, the commercial trader must either buy at a higher price, or sell at a lower price, in order to induce other commercial traders, who are themselves trying to shed the same risk, to trade. The bottom line is that the cost of constructing hedges in the futures market for all commercial traders will be higher, and many will simply refrain from participating in the market. Assuming, prior to a prohibition, that non-commercial traders and commercial traders are on opposite sides of the market (which will often be the case), eliminating the price influence of non-commercial traders will also eliminate the offsetting influence of commercial traders. Therefore,

attempting to influence the futures price by prohibiting participation by non-commercial traders may be self-defeating.

Third, as mentioned in response to a previous question, an analysis by the CFTC's Office of the Chief Economist contains results consistent with the notion that non-commercial traders in the crude oil futures market and the natural gas futures market respond to price changes and are not the cause of price changes.

Question 5. As an economist, how do you define price gouging?

Answer. "Price gouging" is not a formal term within the economics profession. I would define the term as a sudden and unjustified increase in the price of essential goods caused by an event that leaves consumers with few choices and little bargaining power. The term necessarily appeals to a notion of what is a "just" or "fair" price, as well a notion of which goods are considered "essential." Such notions are generally outside of the scope of economic analysis. Price gouging, as I understand the term, is primarily a retail concept in cash markets outside of the CFTC's jurisdiction.

Within the markets under the jurisdiction of the CFTC, it is difficult to conceive of how price gouging could occur because the prices determined in these markets reflect information brought to the market by thousands of sophisticated traders who vigorously compete with one another to receive the best price they can when executing orders, either for themselves, or on behalf of their customers.

Question 6. In your testimony, you state that non-commercials hold 25% of the long positions for unleaded gasoline futures. How much can that 25% force an upward trend in the price of gasoline futures if they all behaved as though they expected prices to increase?

Answer. Although it is true that non-commercial traders have held approximately 25 percent of the long positions in unleaded gasoline futures most recently (as of September 6, 2005), they also have held approximately five percent of the short positions. In net, non-commercial traders have been long most recently, and over the past couple of years, within the unleaded gasoline futures market.

In general, futures price changes are positively correlated with changes in positions of non-commercial traders, meaning that prices rise as they buy and fall as they sell. However, we also observe this same correlation with commercial traders. Therefore, in determining the cause of futures prices changes, it is necessary to understand the market interaction between non-commercial and commercial traders. What we observe is that non-commercial traders respond to position changes by commercial traders, that is, as commercial traders alter their positions, non-commercial traders take the opposite side in response. Therefore, the long positions we see held by non-commercial traders may be a reflection of the desire by commercial traders to hold short positions. What we observe is consistent with the notion that non-commercial traders respond to price changes and are not the cause of price changes.

RESPONSES OF JAMES A. OVERDAHL TO QUESTIONS FROM SENATOR SMITH

Question 1. How much gasoline is now refined off-short and imported as a finished product into the United States?

[No response received.]

Question 2. How many ports in the United States accept gasoline imports? Which ports are they?

[No response received.]

Question 3. Which in the United States can handle oil supertankers?

[No response received.]

Question 4. What has happened in the last two weeks to the price and availability of aviation fuel?

[No response received.]

Question 5. What are EIA's projections of the availability and price of aviation fuel for the rest of the year?

[No response received.]

Question 6. About 55 percent of all Americans heat their homes with natural gas. The Petroleum Industry Research Foundation projects that, for these households, it will cost an extra $700 to heat their homes this winter. Is this an assessment with which you agree?

[No response received.]

RESPONSES OF JAMES A. OVERDAHL TO QUESTIONS FROM SENATOR BUNNING

Question 1. Global spare production capacity has decreased dramatically in the past decade and it appears it will decrease even more with the continued growth of demand in China and the United States, as well as the leveling of Russian oil

production. This will provide international suppliers with an even smaller ability to combat supply disruptions. Do you think the international oil supply is secure or is another price spike just around the corner?

[No response received.]

Question 2. I've heard stories in the news media that a significant factor contributing to the current extraordinarily high oil prices is bidding by speculators in the worldwide oil commodity futures markets. Can you comment on the extent to which profit taking in the oil futures market is influencing the price of crude and gasoline? Is this phenomenon expected and how does it affect price spikes?

Answer. I do not believe that oil prices are being driven by speculation in the crude oil futures market.

The CFTC's primary tool for monitoring large speculative futures traders is the Large Trader Reporting System. There is no bright line for differentiating between speculative traders and hedgers. As a rule of thumb, the CFTC uses the term "speculator" to describe traders who are classified as "non-commercial."

Since the beginning of 2003, non-commercial traders in the crude oil futures market at the New York Mercantile Exchange have, in aggregate, held nearly equally-sized positions on both the "long" side and the "short" side of the market. Currently, the long positions of non-commercial traders account for approximately 13 percent of open futures positions, while short positions by non-commercials account for approximately 14 percent of open interest. The current numbers are nearly identical to the average numbers compiled since the beginning of 2003. This balanced holding of long and short positions is inconsistent with the notion that the positions of non-commercial traders have driven crude oil futures prices upward. In addition, approximately 16 percent of open positions are held by non-commercial traders in "spread" positions, that is in offsetting positions across related contracts. These spread positions are structured to speculate on relative price differences (e.g., prices for October delivery vs. November delivery), and when structured as such, are unrelated to the overall level of crude oil futures prices.

In the unleaded gasoline futures market, non-commercial traders have held approximately 25 percent of the long positions and five percent of the short positions most recently. In net, non-commercial traders have been long in this market most recently, and over the past two years. Immediately following Hurricane Katrina, we observed non-commercial traders reducing their long positions, that is, they were selling, as gasoline futures prices were rising. Some of this selling may have been the result of profit-taking by covering previously-established long positions This observation is inconsistent with the notion that non-commercial traders were causing futures prices to rise after Hurricane Katrina.

In general, futures prices are positively correlated with changes in positions of non-commercial traders, meaning that prices usually rise as they buy and usually fall as they sell. However, we also observe this same correlation with non-commercial traders. Therefore, in gauging the cause of futures prices changes, it is necessary to understand the market interaction between non-commercial and commercial traders. What we observe is that non-commercial traders respond to position changes by commercial traders, that is, as commercial traders alter their positions, non-commercial traders take the opposite side in response. Therefore, the long positions we see held by non-commercial traders may be a reflection of the desire by commercial traders to hold short positions. What we observe is consistent with the notion that non-commercial traders respond to price changes and are not the cause of price changes.

Non-commercial traders are an important source of liquidity in both the crude oil and unleaded gasoline futures markets. In a liquid market, prices are less likely to "spike" in response to one-sided order flow arriving in the market. If anything, the presence of non-commercial traders has contributed to fewer price spikes in the market.

Question 3. OPEC and other oil producing countries have expressed the desire to keep oil prices well above prior target range. What should we expect going forward as far as market-level crude oil prices?

[No response received.]

Question 4. As you know, the United States now imports over 60% of its crude. A significant portion of these imports come from unstable regions of the world. Yet we have vast untapped energy resources in the United States. Can you please discuss what the federal government can do to help to encourage the development of these secure, domestic energy supplies?

[No response received.]

Question 5. In most areas of the world, including the oil-rich Middle East, we are looking at diminishing excess supply capacity. Mr. Dowd explained that other coun-

tries throughout the world are now exploring smaller oil fields and recovering lower-grade crude. How do our domestic oil sources compare in retrieval cost and quality?

[No response received.]

RESPONSES OF JAMES A. OVERDAHL TO QUESTIONS FROM SENATOR SALAZAR

Question 1. For the panel, here's something I don't understand but would really like to know: where does the money go? Big Oil has been making money hand over fist in the past year—billions upon billions of dollars—and all of that extra profit is paid for by the consumers. All of that profit makes me think that there a good chunk of that price at the pump must be some form of price gouging, even if it isn't being exacted at the last step. So what I want to know is who buys the barrels of oil, and where does the money from that purchase end up? Does Big Oil buy their own product from their own subsidiaries, for pure profit? And next, when I buy a gallon of gasoline at the pump, where does that money go? It seems that Big Oil takes a cut every step along the way, and by the time it gets to a citizen of Colorado filling up at the gas station, that person's pocketbook is feeling the greed of the entire system.

[No response received.]

Question 2. How can the price of a gallon of gasoline at the pump go up 50 cents in one day? Isn't that the same gas in the station's storage tank that was 50 cents cheaper yesterday? And if gas goes up that fast why does it go down so slow, if it goes down at all? I am hoping you can explain it to me and to the people in Colorado I represent.

[No response received.]

Question 3. Since last week we have seen wholesale gas prices surge above $2.50 but they are now down to around $2. What I don't understand is why the country saw stations raising their prices multiple times a day and multiple times during the week, but with wholesale prices now falling, there not been a corresponding change in the price at the pump. In other words, while there seems to be a rush to raise prices under any excuse, is there no similar incentive to lower prices? Why aren't prices going back down just as quickly?

Answer. Several studies within the academic economics literature suggest that prices rise rapidly when costs go up, but fall gradually when costs fall. However, as has been noted in this literature, the facts do not really support any particular explanation for this effect which has been labeled as the "rockets and feathers" phenomenon. For markets we do regulate, that is futures markets, prices do not seem to follow this pattern.

RESPONSES OF BOB SLAUGHTER TO QUESTIONS FROM SENATOR DOMENICI

Question 1. Can you please give the Committee an update on the current situation with respect to the refineries affected by Katrina? How much capacity has been restored? Have your members made any projections regarding restoration of fuel production at those refineries remaining out of commission?

Answer. As of October 17, three refineries (a total of 554,000 barrels/day refining capacity) are still shut down from Hurricane Katrina. ExxonMobil's Chalmette and Murphy Oil's Meraux refineries in Louisiana have partial power. ConocoPhillips' Belle Chase refinery in Louisiana has full power. These companies have not yet released projected dates for full production.

Chevron's Pascagoula refinery in Mississippi (325,000 barrels/day reining capacity), also shutdown by Hurricane Katrina, has recently restarted and the estimated date for normal production is late October.

In addition, there are many refineries that were affected by Hurricane Rita:

Port Arthur (TX)/Lake Charles (LA) area

Citgo in Lake Charles 324,300 b/d restarting
ConocoPhillips in West Lake (LA) 239,400 b/d restarting
Calcasieu in Lake Charles 30,000 b/d operating at full rate
ExxonMobil in Beaumont (TX) 348,500 b/d attempting to restart
Motiva in Port Arthur 285,000 b/d attempting to restart
Total Petrochemicals USA refinery in Port Arthur 233,500 b/d restarting
Valero in Port Arthur 255,000 b/d restarting

Houston/Texas City area

Shell in Deer Park 333,700 b/d operating at full rate
Lyondell-Citgo in Houston 270,200 b/d reduced rates
Astra Oil/Pasadena Refining in Pasadena 100,000 b/d operating at full rate

Valero in Houston 83,000 b/d reduced rates
ExxonMobil in Baytown 557,000 b/d operating at full rate
BP in Texas City 437,000 b/d expected restart late Oct./early Nov.
Valero in Texas City 209,950 b/d operating at full rate
Marathon in Texas City 72,000 b/d operating at full rate
ConocoPhillips in Sweeny 229,000 operating at full rate

Question 2. What impact do you believe that loans from the Strategic Petroleum Reserve will have on the nation's supplies of gasoline and other critical fuels?

Answer. The release of crude oil from the Strategic Petroleum Reserve (SPR) enabled several refineries that were otherwise unaffected by the devastation of Hurricane Katrina to regain full productive capacity in a relatively short time frame. Lacking access to the SPR supply these refineries, representing approximately 17% of the nation's supply of refined product capacity, most certainly would have been forced to further limit or even completely shut down their operations. This unpredictable event is precisely the type of situation that requires the release of SPR supplies; it underscores the need for judicious management of the SPR.

Question 3. Can you tell us how much finished product the refining industry is bringing into the country now *and*, can imports of finished products like gasoline and diesel help alleviate the current supply situation?

Answer. On average, the imports of either finished refined products or blending products used for refined products is 10% of the nation's supplies. However, the Northeast U.S. receives the bulk of these imported fuel products which account for over 20% of this region's demand.

More specifically, the Energy Information Administration (EIA) publishes data on imports of finished petroleum products on a weekly basis. See Table 11 in EIA's Weekly Petroleum Status Report (*http://www.eia.doe.gov/oil_gas/petroleum/data_publications/weekly_petroleum_status_report/w psr.html*). There is considerable detail on Table 11. National data in summary form:

IMPORTS OF FINISHED PETROLEUM PRODUCTS

[million b/d]

	Week ending				
	8/19	8/26	9/02	9/09	9/16
Gasoline					
Reformulated	0.478	0.336	0.259	0.220	
Conventional	0.269	0.314	0.273	0.297	
Blending components	0.478	0.621	0.330	0.581	
Jet fuel	0.031	0.165	0.105	0.143	
Distillate fuel oil					
>15ppm S	0.0	0.0	0.0	0.0	0.0
16-500 ppm S	0.066	0.129	0.113	0.099	
501-2000 ppm S	0.072	0.087	0.082	0.060	
2000 ppm S	0.091	0.098	0.085	0.017	
Residual fuel oil	0.415	0.658	0.547	0.472	
Propane/propylene	0.234	0.136	0.081	0.203	
Other[1]	1.329	1.117	1.029	1.381	
Refined products	3.463	3.661	2.904	3.473	

[1] Includes kerosene, unfinished oils, liquefied petroleum gases (except propane/propylene), and other oils.

While imports can alleviate petroleum product supply disruptions, they take a longer time to reach a U.S. port. Perhaps more importantly, however, is the overriding policy question of whether it is in the nation's best interest for continued reliance on foreign supplies of refined products to meet the current and projected demands of U.S. consumers.

Question 4. Will temporary relaxation of federal fuel requirements, such as sulfur content, help alleviate the situation?

Answer. Temporary relaxation of summer Reid vapor pressure (RVP) regulations permits the early introduction of winter gasoline, which would occur normally on September 16 in most areas of the country. Less stringent RVP limitations in the winter increase gasoline production because some gasoline components, such as butanes and pentanes which raise RVP, can be used concern of additional impact

on ozone formation. It is estimated that the RVP waivers issued by EPA in the aftermath of Hurricane Katrina increased overall gasoline supply by roughly 4%.

The temporary relaxation of sulfur regulations in highway diesel fuel was instrumental production of additional diesel supplies for highway vehicles. This higher sulfur diesel is normally used only in off-road vehicles (e.g., road construction equipment, tractors). Aside from the direct impact on refineries caused by Katrina, the main facility providing hydrogen to many refineries in the area shut down due to the storm. Hydrogen is a vital component used in the process for removing sulfur from diesel fuel. Without the diesel sulfur waiver, critical supplies of fuel would have been lost.

The Administration's swift and decisive actions concerning emergency fuel waivers for certain gasoline and diesel fuel standards are certainly appreciated and clearly helped alleviate potential supply disruptions throughout the nation. The cooperative spirit and information sharing between EPA and other agencies with the refining and pipeline industries was instrumental in making the best of a terrible situation.

Question 5. How do you justify the record level of the profits the refining sector has experienced?

Answer. Despite recent profit data, the refining sector of the oil and gas industry has not historically enjoyed generous returns on investment. In the ten-year period 1993-2002, average return on investment in the refining industry was only about 5.5%. This is less than half of the S&P industrials average return of 12.7% for the same period. Refining industry profits as a percentage of operating capital are not excessive. In dollars, they seem large due to the massive scale needed to compete in a large, capital-intensive industry. For example, a new medium scale refinery (100,000 to 200,000 b/d) would cost $2 to $3 billion. In short, company revenues can be in the billions, but so, too are the costs of operations.

The Federal Trade Commission released a study in June 2005 that made the following comments on industry profits: "Profits play necessary and important roles in a well-functioning market economy. Recent oil company profits are high but have varied widely over time, over industry segments and among firms . . . Profits also compensate firms for taking risks, such as the risks in the oil industry that war or terrorism may destroy crude production assets or, that new environmental requirements may require substantial new refinery capital investments."

Many other industries enjoy higher earnings than the oil industry. Among these are telecommunication services, software, semiconductors, banking, pharmaceuticals, coal and real estate, to name just a few. Imposition of a windfall profits tax on the industry would discourage investment at a time when significant capital commitments to all parts of the industry, including refining, will be needed.

Tight gasoline market conditions have often led to calls for industry investigations. More than two dozen federal and state investigations over the last several decades have found no evidence of wrongdoing or illegal activity on our industry's part. For example, after a 9-month FTC investigation into the causes of price spikes in local markets in the Midwest during the spring and summer of 2000, former FTC Chairman Robert Pitofsky stated, "There were many causes for the extraordinary price spikes in Midwest markets. Importantly, there is no evidence that the price increases were a result of conspiracy or any other antitrust violation. Indeed, most of the causes were beyond the immediate control of the oil companies."

Question 6. Two important facts stand out with respect to the nation's refining capacity: First, 47% of the nation's refining capacity is in the Gulf Coast Region. And, secondly, we have heard of only one new refinery being developed since the mid-1970's—it is in Yuma, Arizona. In your view, what additional steps, both direct and indirect, can Congress take to facilitate the construction of new refinery capacity? In addition, is it possible to secure greater geographic diversity of refineries so that we do not have a repeat of the problems caused by Hurricane Katrina?

Answer. It is true that 47% of the nation's refining capacity is located in the Gulf Coast region. It is also true that crude oil and natural gas production and processing are not only unwelcome in other resource rich regions of the nation, current and long-lasting policy prohibits their development. This attitude must change if the nation is to increase its ability to produce domestic energy supplies. There is no shortage of resources, only shortage of political will to amend failed policies of the past. There is no need to pit environmental protection or impact on tourism against energy development. They are not mutually exclusive.

Focusing more specifically on refinery capacity, NPRA believe that there exists a basic misconception that domestic refiners have not increased capacity at their operations. On the contrary, capacity increases over the past four years have netted an additional 520,000 barrels of crude input capacity. This is the equivalent of 2 new refineries. Unfortunately, even these remarkable accomplishments have not been

able to keep up with continued domestic demand for both gasoline and diesel fuels. It must also be kept in mind that these capacity additions were accomplished at the same time when refiners were faced with increasing regulatory compliance requirements from both plant and fuel parameters.

New refineries have not been built in almost 30 years for many reasons, including economic, public policy and political considerations, such as siting costs, environmental requirements, a history of low refining industry profitability, and, significantly, "not in my backyard" (NIMBY) public attitudes. It will be difficult to change this situation.

There are, however, several steps and programs that Congress should consider that may very well spur refinery capacity expansions. These include:

- Make increasing the nation's supply of oil, oil products and natural gas a number one public policy priority. Now, and for many years in the past, increasing oil and gas supply has often been a number 2 priority. Thus, oil and gas supply concerns have been secondary and subjugated to whatever policy goal was more politically popular at the time. Enactment of the recent Energy Bill is a first step to making a first priority the supply of energy sources the nation depends upon.
- Remove barriers to increased supplies of domestic oil and gas resources. Recent criticism about the concentration of America's energy infrastructure in the western Gulf is misplaced. Refineries and other important onshore facilities have been welcome in this area but not in many other parts of the country. Policymakers have also restricted access to much-needed offshore oil and natural gas supplies in the eastern Gulf and off the shores of California and the East Coast. These areas must follow the example of Louisiana and many other states in sharing these energy resources with the rest of the nation because they are sorely needed.
- Resist tinkering with market forces when the supply/demand balance is tight. Market interference that may initially be politically popular results in market inefficiencies and unnecessary costs. Policymakers must resist turning the clock backwards to the failed policies of the past. Experience with price constraints and allocation controls in the 1970s demonstrates the failure of price regulation, which adversely impacted both fuel supply and consumer cost.
- Consider expanding the refining tax incentive provision in the Energy Act. Reducing the depreciation period for refining investments from ten to seven or five years would remove a current disincentive for refining investment. Changes could allow expensing under the current language to take place as the investment is made rather than when the equipment is actually placed in service, or the percentage expensed could be increased as per the original legislation introduced by Senator Hatch.

In addition, NPRA urges Congress to keep a close eye on several upcoming regulatory programs that could have significant impacts on gasoline and diesel supply. They are:

- Implementation of the new 8-hour ozone NAAQS standard.
- Design and implementation of the credit trading program for the ethanol mandate (RFS) contained in the recent Energy Act
- Implementation of the ultra low sulfur diesel highway diesel regulation.
- Phase II of the MSAT (mobile source air toxics) rule for gasoline.

Further and expanding on several of the above mentioned items, the National Petroleum Council (NPC) released a study last December, "Observations on Petroleum Product Supply." The NPC review of refining and inventory issues presents observations on petroleum product supply and a response to the Secretary's request for advice on both refining and inventory issues. It is intended to update the 1998 and 2000 NPC reports on these subjects. The report provides insights on petroleum market dynamics, as well as advice on actions that can be taken by industry and government to ensure adequate and reliable supplies of petroleum products to meet the energy and environmental requirements of American consumers. The report recommends actions that, if implemented, would:

- help avoid policies that hinder refining capacity expansions;
- improve the environment for investment in domestic refining and logistics capability; and
- allow the current supply system to continue to operate efficiently.

More specifically, the NPC study focused on precise topics of immediate impact and concern to the refining industry and recommended appropriate actions that should be taken to ameliorate current and potential problems. These recommenda-

tions represent appropriate Congressional action. These topics and associated recommendations include:

New Source Review

"Immediate implementation of comprehensive NSR reform is a very important policy step needed to improve the climate for investment in domestic refinery expansion. The NSR reforms promulgated by the Administration, including the Equipment Replacement Rule currently under judicial review, should be implemented as soon as possible. Attempts to delay or overturn the reforms should be vigorously opposed. Additional NSR reform proposals regarding debottlenecking and product aggregation should be issued and finalized."

National Ambient Air Quality Standards

"The U.S. Environmental Protection Agency (EPA) should revise the NAAQS compliance deadlines and procedures to take full advantage of emissions reduction benefits from current regulatory programs such as cleaner fuels/engines and reduction of regional emissions transport. As currently structured, attainment deadlines precede the benefits that will be achieved from emissions reductions already planned . . . The current deadlines could result in:

- Requirements for additional emissions offsets for any refinery modifications, reducing the economic attractiveness of investment in refinery capacity expansion
- Additional investment in stationary controls at refineries, reducing the overall profitability and viability of domestic refining versus imports
- Additional requirements for boutique fuels . . ."

Implementation of Ultra Low Sulfur Diesel (ULSD) Regulations

". . . there are concerns about meeting Ultra Low Sulfur Diesel (ULSD) demand during the transition to the 15 ppm maximum sulfur specification beginning in mid-2006 . . .

To reduce the potential for supply disruption, EPA should work with the Department of Energy (DOE) and the various fuels supply industries to consider emerging information about the behavior of ULSD moving through the entire distribution system and to consider how to achieve the goals of the program while recognizing distribution system realities. EPA's current testing tolerance for ULSD should be adjusted to reflect the reproducibility of the tests that will be available for regulatory compliance; otherwise, enforcement actions based on testing inaccuracy may result in disruption to the supply system."

Sound Science, Cost Effectiveness, and Energy Analysis

"The 2000 NPC refining report recommended that: 'Regulations should be based on sound science and thorough analysis of cost effectiveness.'

Executive Order 13211, signed by President Bush in 2001, requires agencies to prepare a 'Statement of Energy Effects' including impacts on energy supply, distribution and use, when undertaking regulatory actions. The NPC recommends that Executive Order 13211 be made law and strictly enforced. The NPC is not suggesting elimination or rollback of environmental requirements, but rather that the cost analysis of proposed regulations should include a thorough analysis of energy supply effects from production to end-use. Examples of regulations that the NPC does not believe reflect a thorough analysis of the energy supply effects include ULSD and NAAQS regulations. As a result, implementation of these regulations may impose unintended costs without commensurate benefit . . . ."

Permitting

"Streamlining the permitting process would help improve the environment for domestic refining capacity investment."

Alternative Fuels

"Mandates or subsidies for alternative fuels increase uncertainty and reduce the incentive for investment in additional domestic petroleum refining capacity. Therefore, these mandates and subsidies may not reduce petroleum product imports as intended and could increase the cost to consumers."

RESPONSES OF BOB SLAUGHTER TO QUESTIONS FROM SENATOR TALENT

Question 1. What level of refinery operation could be supported by current crude oil supply and demand?

Answer. It is difficult to answer this question with precision without reference to the fact that the market dictates what level of refining operations is supported by current supply and demand. Of course, in addition to the historically problematic

returns on investment in the refining sector, there are non-market complications that constrain investments in refining. These include multiple layers of regulatory standards, fuel mandates, failure to create an appropriate risk environment by addressing liability concerns arising out of those mandates, and community opposition to construction and expansion.

Question 2. How long does it take for a refiner to recover its capital investment for a new or expanded refinery? Are any analysts predicting a decline in U.S. gasoline consumption over that time period?

Answer. The answer to this question will vary, depending on the return on investment for refining as a whole. Despite recent profit data, the refining sector of the oil and gas industry has not historically enjoyed generous returns on investment. In the ten-year period 1993-2002, average return on investment in the refining industry was only about 5.5%. This is less than half of the S&P industrials average return of 12.7% for the same period. Refining industry profits as a percentage of operating capital are not excessive. In dollars, they seem large due to the massive scale needed to compete in a large, capital-intensive industry. For example, a new medium scale refinery (100,000 to 200,000 b/d) would cost $2 to $3 billion. In short, company revenues can be in the billions, but so, too are the costs of operations. The Federal Trade Commission recently found that these highly variable returns on investment have hampered new capital investment in the sector.

Question 3. Is there sufficient competition for refining crude oil into finished products like gasoline?

Answer. Today's U.S. refining industry is highly competitive. Some suggest past mergers are responsible for higher prices. The data do not support such claims. In fact, companies have become more efficient and continue to compete fiercely. There are 54 refining companies in the U.S., hundreds of wholesale and marketing companies, and more than 165,000 retail outlets. The biggest refiner accounts for only about 13% of the nation's total refining capacity; and the large integrated companies own and operate only about 10% of the retail outlets. The Federal Trade Commission (FTC) thoroughly evaluates every merger proposal, holds industry mergers to the highest standards of review, and subjects normal industry operations to a higher level of ongoing scrutiny.

In 2004 the FTC published an FTC Staff Study "The Petroleum Industry: Mergers, Structural Change, and Antitrust Enforcement." Among the points made in that publication was the following: ". . . mergers have contributed to the restructuring of the petroleum industry in the past two decades but have had only a limited impact on industry concentration. The FTC has investigated all major petroleum mergers and required relief when it had reason to believe that a merger was likely to lead to competitive harm . . ."

According to data compiled by the U.S. Department of Commerce and by Public Citizen, in 2003 the four largest U.S. refining companies controlled a little more than 40% of the nation's refining capacity. In contrast, the top four companies in the auto manufacturing, brewing, tobacco, floor coverings and breakfast cereals industries controlled between 80% and 90% of the market. Further, several mergers in the refining industry have actively maintained or even increased refining capacity when, without such consolidation, the individual refineries involved might not have been economically viable. One such example involves over 550,000 barrels/day of capacity. Also, Valero Energy Corporation has increased the productive capacity of the refineries it has acquired by an aggregate of nearly 400,000 barrels per day over the past several years.

Question 4. According to Fortune magazine, in 2004 when oil prices were a lot lower than they are now, the average return for both independent refiners and integrated majors was 23.9 percent and it is higher this year. Over the past decade, according to Fortune, the return on equity in the sector has averaged 16 percent. However, the American Petroleum Institute claims these returns are as low as 6 percent. Can you explain this vast difference? For refineries owned by oil producing companies, is this an issue of how they assign profits between production and refining?

Answer. As noted above, when viewed over a decade or so, average return on investment in the refining industry was only about 5.5%, less than half of the S&P industrials average return of 12.7% for the same period. However, the Federal Trade Commission released a study in June 2005 that made the following comments on industry profits: "Profits play necessary and important roles in a well-functioning market economy. Recent oil company profits are high but have varied widely over time, over industry segments and among firms . . . Profits also compensate firms for taking risks, such as the risks in the oil industry that war or terrorism may destroy crude production assets or, that new environmental requirements may require substantial new refinery capital investments."

Many other industries enjoy higher earnings than the oil industry. Among these are telecommunication services, software, semiconductors, banking, pharmaceuticals, coal and real estate, to name just a few. Imposition of a windfall profits tax on the industry would discourage investment at a time when significant capital commitments to all parts of the industry, including refining, will be needed.

Question 5. What are the factors in preventing refinery investment? To the extent environmental and siting issues are among these, explain the importance to investors of streamlining the applicable environmental requirements and ensuring regulatory certainty, i.e., locking in requirements prior to start of refinery construction.

Answer. The decision to invest in new refinery construction is constrained by three factors: poor historical economics; a changing but pervasive landscape of environmental rules; and community opposition. While new refinery construction has not occurred, refiners have made and will continue to make significant investments in expanding capacity at existing refineries. All refineries engage in maintenance and debottlenecking projects that maintain or expand capacity. One NPRA member, Valero, recently announced its capital expenditure plans. The result from the program will be to add 105,000 barrels per day of capacity in 2006, and another 66,000 barrels per day in 2007. At one refinery in Detroit, Marathon Ashland Petroleum announced an expansion of about 26,000 barrels a day.

In addition to expansion of capacity, several Gulf Coast refiners have made investments to enhance the ability of their refineries to handle less expensive, high-sulfur (or "sour") crudes. These investments expand the total pool of crude input available to refiners and, according to the Federal Trade Commission, the crude input represents some 85 percent of the cost of the refined product excluding taxes.

While it is tempting to view recent refining margins as indicative of trend favorable to refinery investment, the truth is that allocation of capital is based upon the historic performance of the sector. As the data cited above indicates, the average return on investment for refining (1993-2002) is about 5.5 percent. After a recent economic assessment of the refining sector, Oklahoma Secretary of Energy David Fleischaker put it simply, "People aren't going to invest in a 5 to 7 percent rate of return when money costs you 8 percent . . . Unfortunately, bankers aren't looking for welcome mats. They're looking for high rates of return."

While NPRA does not represent exploration and production interests, it goes without saying that a macroeconomic examination of much of the oil and gas sector will show that the industry is making large investments in these activities. Exploration and production can be highly risky investments—one field off-shore Angola alone has cost $7 billion to develop—and such investments can be decimated by political instability, terrorism, and the like.

The changing environmental landscape affects the economics of the refining sector in two ways: by making changes in the products we produce, and by limiting changes we can make in our actual operations. Refiners currently face the massive task of complying with fourteen new environmental regulatory programs with significant investment requirements, all in the same 2006—2012 timeframe. In addition, many programs start soon. For the most part, these regulations are required by the Clean Air Act. Some will require additional emission reductions at facilities and plants, while others will require further changes in clean fuel specifications. NPRA estimates that refiners are in the process of investing about $20 billion to sharply reduce the sulfur content of gasoline and both highway and off-road diesel. Refiners will face additional investment requirements to deal with limitations on ether use, as well as compliance costs for controls on Mobile Source Air Toxics and other limitations. These costs do not include the significant additional investments needed to comply with stationary source regulations that affect refineries.

Coming to grips with the newly enacted renewable fuels mandate and the diminished role MTBE will play in the supply of clean octane further exacerbates cost and supply concerns. Congress' failure to adopt limit liability provisions in the last energy bill was another missed opportunity to encourage investment in refining. As the Council of Economic Advisors has found, "tort liability raises the cost of capital . . . and mobile capital will seek relatively higher return elsewhere until rates of return are again equalized. The result is that the capital stock in the United States may be smaller with high tort costs than with low tort costs."

Other potential environmental regulations on the horizon could force additional large investment requirements. They are: the challenges posed by increased ethanol use, possible additional changes in diesel fuel content involving cetane, and potential proliferation of new fuel specifications driven by the need for states to comply with the new eight-hour ozone NAAQS standard. The 8-hour standard could also result in more regulations affecting facilities such as refiners and petrochemical plants. These are just some of the pending and potential air quality challenges that the industry faces. Refineries are also subject to extensive regulations under the

Clean Water Act, Toxic Substances Control Act, Safe Drinking Water Act, Oil Pollution Act of 1990, Resource Conservation and Recovery Act, Emergency Planning and Community Right-To-Know (EPCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and other federal statutes. The industry also complies with OSHA standards and many state statutes.

API estimates that, since 1993, about $89 billion (an average of $9 billion per year) has been spent by the oil and gas industry to protect the environment. This amounts to $308 for each person in the United States. More than half of the $89 billion was spent in the refining sector.

As for limitations on actual operations, consider the effect of the new source review, or NSR, program on refinery expansions. When the last Administration abruptly changed its interpretation of the NSR program, it became more difficult to undertake debottlenecking projects that can have the effect of maintaining or growing capacity. This rule change was made without notice-and-comment rulemaking. The result, of course, is uncertainty and cost.

For a case study of how the Clean Air Act can complicate refinery investments, the Arizona Clean Fuels (ACF) project is an example. ACF is based in Phoenix, AZ, and intends to build a state of the art, $2.5 billion refinery that could provide significant product to the Southwest and West Coast using crude input supplied by the Mexican national oil company, PEMEX. Unfortunately, ACF has been trying to obtain necessary permits to proceed for almost seven years.

A remaining impediment to the new refinery investment has been community reaction, or the so-called not-in-my-back-yard syndrome. Some critics who complain the loudest about industry investment practices unfortunately also oppose the construction of new facilities in new communities. Indeed, when the media began to question why so much refining capacity is concentrated on the Gulf Coast, the answers includes access to infrastructure and supply, but also community acceptance of the refining industry. To say the least, this acceptance is not typical of many other regions of the country where product demand is quite high.

RESPONSES OF BOB SLAUGHTER TO QUESTIONS FROM SENATOR BUNNING

Question 1. The recently passed Energy Bill included an important tax provision that will allow 50% expensing of investment that expands a refinery's capacity by more than 5%. Do you think this is enough to stimulate growth or are additional incentives needed?

Answer. The decision to invest in new refining capacity or in expansion of existing capacity is complicated by three factors—low historic rates of return on investment; significant regulatory hurdles (including complex environmental regulations); and local opposition to refinery construction. The tax treatment of refining investments complicates these factors. NPRA appreciates a provision in the recently enacted energy legislation that will help encourage additional refining investment. This provision allows 50% expensing of the costs associated with expanding a refinery's output by more than 5%. The refiner must have a signed contract for the work by 1/1/08, and the equipment must be put in service by 1/1/12. This provision is a good first step, but NPRA also supports reduction of the current 10 year depreciation period for refining investments to five years.

Question 2. As you may know, Kentucky has an abundance of coal. Among other things, this supply of coal allows Kentucky to offer its citizens and industries some of the lowest utility rates in the country. I am deeply concerned that the increasing cost of oil will increase the cost of producing and transporting Kentucky coal. Do you have any additional information on how the price of gasoline will affect the cost of other energy sources such as Kentucky coal?

Answer. While NPRA does not possess specific knowledge of particular impacts transportation fuel prices might have on the economics of Kentucky coal, we understand your concern. As we understand it, the cost associated with shipping coal can cost as much or more than the cost of mining it. The Energy Information Administration notes that almost 60 percent of coal in the U.S. is transported, for at least part of its trip to market, by train. While barge traffic may be preferable from an economic perspective, barges simply cannot take coal everywhere that it needs to go. While we are by no means experts on rail transportation, shippers typically pay a destination charge that is based on the distance traveled. Similar to renting a passenger car, the shipper may pay a daily rate just to get use of the car, then pay for the fuel depending on how far it is driven. As a result, increases in price or scarcity of diesel fuel can have a significant impact on the cost of getting coal to market.

NPRA is sensitive to the issue of diesel fuel economics. NPRA has called upon EPA to ensure that its non-road, locomotive and marine (NRLM) diesel fuel sulfur reductions are undertaken with maximum flexibility. Market economics ensure that,

in the long run, supply will match demand. However, when new regulatory fuels requirements are implemented, short-term supply disruptions have typically occurred. Two earlier diesel programs are examples: implementation of the EPA highway diesel requirement for maximum 500 ppm sulfur (low sulfur diesel, LSD) in 1993 led to supply disruptions for several months and the CARB diesel program led to supply disruptions that lasted for more than a year.

Specifically, NPRA recommends cautious implementation of the ultra low sulfur diesel highway diesel regulation. The refining industry has made large investments to meet the severe reductions in diesel sulfur that take effect next June. We remain concerned about the distribution system's ability to deliver this material at the required 15 ppm level at retail. If not resolved, these problems could affect America's critical diesel supply. Industry is working with EPA on this issue, but time left to solve this problem is growing short.

Question 3. The number of domestic refineries has decreased by more than 50% in the last 30 years, and the real-volume capacity of the domestic refinery network has decreased 10% in that same time period. What factors do you believe have suppressed U.S. refining capacity?

Answer. The decision to invest in new refinery construction is constrained by three factors: poor historical economics; a changing landscape of environmental rules; and community opposition. But while new refinery construction has not occurred, refiners have made and will continue to make significant investments in expanding capacity at existing refineries. All refineries engage in maintenance and debottlenecking projects that maintain or expand capacity. One NPRA member, Valero, recently announced its capital expenditures plans. The result of the program will be to add 105,000 barrels per day of capacity in 2006, and another 66,000 barrels per day in 2007. At one refinery in Detroit, Marathon Ashland Petroleum announced an expansion of about 26,000 barrels a day.

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While it is tempting to view recent refining margins as indicative of a trend favorable to refinery investment, the truth is that allocation of capital is based upon the historic performance of the sector. As the data cited above indicates, the average return on investment for refining (1993-2002) is about 5.5 percent. After a recent economic assessment of the refining sector, Oklahoma Secretary of Energy David Fleischaker put it simply, "People aren't going to invest in a 5 to 7 percent rate of return when money costs you 8 percent . . . Unfortunately, bankers aren't looking for welcome mats. They're looking for high rates of return."

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Other potential environmental regulations on the horizon could force additional large investment requirements. They are: the challenges posed by increased ethanol use, possible additional changes in diesel fuel content involving cetane, and potential proliferation of new fuel specifications driven by the need for states to comply with the new eight-hour ozone NAAQS standard. The 8-hour standard could also result in more regulations affecting facilities such as refiners and petrochemical plants. These are just some of the pending and potential air quality challenges that the industry faces. Refineries are also subject to extensive regulations under the Clean Water Act, Toxic Substances Control Act, Safe Drinking Water Act, Oil Pollution Act of 1990, Resource Conservation and Recovery Act, Emergency Planning and Community Right-To-Know (EPCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and other federal statutes. The industry also complies with OSHA standards and many state statutes.

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A last impediment to the new refinery investment has been community reaction, or the so-called not-in-my-back-yard syndrome. Some critics that complain the loudest about industry investment practices unfortunately also oppose the construction of new facilities in new communities. Indeed, when the media began to question why so much refining capacity is concentrated on the Gulf Coast, the answers includes access to infrastructure and supply, but also community acceptability of the refining industry. To say the least, this acceptability is not typical of many other regions of the country where product demand is quite high.

Question 4. The cost of gasoline is largely determined before in reaches the pump. The cost of crude oil and federal and states taxes make up 74 to 79% of the retail price of gas. Could you describe how the remaining 20 to 25% is determined and what profit each part of the supply chain receives?

Answer. The overwhelming factor affecting gasoline and distillate prices is the supply and price of crude oil. In June of this year the U.S. Federal Trade Commission released a landmark study titled: "Gasoline Price Changes: The Dynamic of Supply, Demand and Competition." To quote from the FTC's findings: "Worldwide supply, demand, and competition for crude oil are the most important factors in the national average price of gasoline in the U.S." and "The world price of crude oil is the most important factor in the price of gasoline. Over the last 20 years, changes in crude oil prices have explained 85 percent of the changes in the price of gasoline in the U.S."

Crude prices have been steadily increasing since 2004, largely because of surprising levels of growth in oil demand in countries such as China and India, and in the United States as well. Actual demand growth for oil and oil products in these countries in 2004 exceeded the experts' predictions and has remained strong this year. As a result, world demand for crude is bumping up against the worldwide ability to produce crude.

Strong demand for crude has dissipated the cushion of excess available worldwide oil supply, just as strong U.S. demand for refined products has eliminated excess refining capacity in the United States. The good news is that producing countries will probably be able to add crude production capacity in the years to come. The bad news is that the United States has thus far shown only limited willingness to confront its own energy supply problems.

Gasoline costs closely track the cost of crude oil. Before hurricane Katrina, gasoline price increases lagged crude oil price increases on a gallon for gallon basis. This means that refiners did not pass through all of the increased costs in their raw material, crude oil. Crude oil accounts for 55-60% of the price of gasoline seen at the service station. The cost of federal and state taxes adds another 19% to the cost of a finished gallon of gasoline. Therefore under current conditions, 74-79% of the total

cost of a gallon of gasoline is pre-determined before the crude is delivered to the refiner for manufacture into gasoline.

Another contributor to gasoline costs is tightness in our nation's gasoline markets. While U.S. refiners are producing huge volumes of products, continued strong demand has tightened supply. Gasoline demand currently averages approximately 9 million barrels per day. Domestic refineries produce about 90 percent of U.S. gasoline supply, while about 10 percent is imported. These imports make up over 20% of the refined product demand of the Northeast U.S. Thus, steadily increasing demand can only be met either by adding new domestic refinery capacity or by relying on more foreign gasoline imports. Unfortunately, the need to add more domestic gasoline production capacity—the option NPRA believes to be the prudent choice—is often thwarted by other public priorities.

Question 5. As the price of oil skyrockets, alternative fuels will become more price competitive. What segments of the energy market will see growth in investment because of higher oil and gas prices? What impact will this have on the domestic energy market?

Answer. There is no doubt that relatively high prices for transportation fuels such gasoline and diesel stimulate the development of alternatives as well as conservation strategies. Recent legislation introduced in the Senate (S. 1772) seeks to create a favorable environment for certain "future fuels." Legislation recently passed on the House floor (H.R. 3893) encourages demand side strategies like carpooling and vanpooling. Proposals like these should be carefully considered.

Frequently-discussed alternative transportation fuels include those based on hydrogen. However, one of the major issues in meeting Ultra Low Sulfur (ULS) targets is the availability and effective use of hydrogen. The availability and cost of hydrogen has been and will increasingly become a challenge to refiners making these clean fuels. More stringent gasoline and diesel specifications increase the demand for hydrogen while they constrain the hydrogen production of catalytic reformers.

Of course, recently adopted energy legislation contains a renewable fuels mandate. NPRA is not opposed to the use of ethanol as a fuel additive—in fact, many of its members produce ethanol-blended fuel for the market. However, NPRA has always maintained that national ethanol mandates jeopardize fuel supplies and hurt consumers, while not enhancing the nation's energy independence. Now that such a mandate has been adopted, the federal government must do all it can to implement the program in a cost-effective manner sensitive to supply and demand realities. The government should encourage access to alternative sources of ethanol supply, including imports or cellulosic production, in order to augment traditional starch-based ethanol production.

In addition, EPA must exercise care in the design and implementation of the credit trading program for the ethanol mandate. This mechanism is vital to increase the chance that this program can be implemented next year without additional gasoline supply disruption. Additional resources are needed within EPA to accomplish this key task.

Many alternative transportation fuels also rely on petrochemical production. In light of this, NPRA is also extremely concerned about the current natural gas supply situation. We must implement policy changes to encourage increased natural gas supplies for use by U.S. consumers. NPRA favors policies that will encourage increased natural gas production from domestic sources, both onshore and offshore. U.S. petrochemical producers rely on an adequate supply of natural gas and gas liquids at reasonably predictable prices to maintain their competitive position in a difficult global market.

Question 6. Global spare production capacity has decreased dramatically in the past decade and it appears it will decrease even more. This will provide international suppliers with an even smaller ability to combat supply disruptions. Do you think the International oil supply is secure or is another price spike around the corner?

Answer. NPRA shares the concern of many policy makers and academic experts that crude oil supply presents a major challenge. Given that the FTC has demonstrated that as much as 85%, excluding taxes, of the cost of refined product is determined by the underlying cost of crude input, securing sufficient supply is very important to NPRA and its members. NPRA believes increasing the nation's supply of oil, oil products and natural gas should be a number one public policy priority. Now, and for many years in the past, increasing oil and gas supply has often been a lower priority. Thus, oil and gas supply concerns have been secondary and subjugated to whatever policy goal was more politically popular at the time. Enactment of the recent Energy Bill is a first step to making the supply of energy sources the nation depends upon a first priority.

Congress should further act to remove barriers to increased supplies of domestic oil and gas resources. Recent criticism about the concentration of America's energy infrastructure in the western Gulf is misplaced. Refineries and other important onshore facilities have been welcome in this area but not in many other parts of the country. Policymakers have also restricted access to much-needed offshore oil and natural gas supplies in the eastern Gulf and off the shores of California and the East Coast. These areas must follow the example of Louisiana and many other states in sharing these energy resources with the rest of the nation because they are sorely needed.

RESPONSES OF BOB SLAUGHTER TO QUESTIONS FROM SENATOR BINGAMAN

Question 1. Measures such as the institution of a windfall profits tax on energy producing companies, a Federal gasoline excise tax holiday, and/or a price caps on wholesale and or retail gasoline prices have been put forth as possible solutions to the problem at hand. Would these measures have the intended outcome of bringing down gasoline prices?

Answer. The U.S. had a "windfall profit tax" on crude oil from 1980 until 1988. That tax, which was actually an ad valorem tax imposed on crude oil, discouraged crude oil production in the United States and resulted in other market distortions. It was repealed in 1988.

Current suggestions for re-imposition of a windfall profits tax on refiners reflect a misunderstanding of refining industry economics. In the ten-year period 1993-2002, average return on investment in the refining industry was only about 5.5%. This is less than half of the S&P industrials average return of 12.7% for the same period. Refining industry profits as a percentage of operating capital are not excessive. In dollars, they seem large due to the massive scale needed to compete in a large, capital-intensive industry. For example, a new medium scale refinery (100,000 to 200,000 b/d) would cost $2 to $3 billion. In short, company revenues can be in the billions, but so, too are the costs of operations.

The FTC June 2005 study cited above had the following comments on industry profits: "Profits play necessary and important roles in a well functioning market economy. Recent oil company profits are high but have varied widely over time, over industry segments and among firms . . . Profits also compensate firms for taking risks, such as the risks in the oil industry that war or terrorism may destroy crude production assets or, that new environmental requirements may require substantial new refinery capital investments."

Many other industries have higher earnings than the oil industry. Among these are telecommunication services, software, semiconductors, banking, pharmaceuticals, coal and real estate, to name just a few. Imposition of a windfall profits tax on the industry would discourage investment at a time when significant capital commitments to all parts of the industry, including refining, will be needed.

Question 2. I understand that the National Oceanic and Atmospheric Administration is predicting that, during the current hurricane season, as many as nine hurricanes will hit the Gulf, including at least two more hurricanes of a similar strength to Hurricane Katrina. What additional steps can be taken if any to lessen the impact of future natural disasters in the Gulf of Mexico area and to the reining industry in the United States?

Answer. Of course, since this question was posed, an additional hurricane (Rita) did hit the Gulf Coast, making landfall at the Sabine Pass at the Louisiana-Texas border. This storm hit at the heart of much of the nation's refining and petrochemical sector. The fresh experience of Katrina made local, state and federal officials more aware of the potential consequences of storms, both to the energy sector and to Gulf communities as a whole. As a result, more and better response and evacuation plans were evident. Still, the issue of on-site temporary housing for reconstruction activities could be better addressed. In the recent legislation approved by the House (H.R. 3893), the final provision (introduced as an amendment at markup by Texas Congressman Gene Green) vests emergency planning and federal response responsibility with the U.S. Department of Energy as opposed to the Federal Emergency Management Agency. Given the specific nature of the challenges to this vital infrastructure, the approach of the Green Amendment should be considered.

Question 3. Hurricane Katrina has underscored the concentration of U.S. petroleum production, refining and energy infrastructure in the Gulf of Mexico region. In recent correspondence with the President, I have mentioned the need to bring together the necessary stakeholders to focus on ways to facilitate a more robust and distributed infrastructure for refining petroleum products in the U.S. Would you and your respective stakeholder organization, be willing to take part in such a discussion? How would you see this proceeding?

Answer. There are important reasons for the location of much of the refining assets of this nation along the Gulf Coast. First, much of the domestic oil and gas production in the lower 48 states of the United States is sequestered in the area of the Western Gulf off the coast of Texas and Louisiana. This fact derives from national and state legislation, as well as geological realities. Second, the area of the Gulf Coast near which much refining capacity is built is a unique confluence of transportation infrastructure, including the Mississippi River, the significant ports of New Orleans, Houston, Texas City, Corpus Christi, Galveston, and others, as well as the Intercoastal Waterway. The Gulf Coast also plays host to a significant portion of the nation's crude, refined product and natural gas pipeline infrastructure, as well as the Louisiana Offshore Oil Port, or LOOP. The states of Texas and Louisiana, further, have a tradition of creating a hospitable business environment for petroleum refining and petrochemical production not likely to be found elsewhere in the United States.

That said, NPRA is always interested in dialogue for the betterment of U.S. energy security. We stand ready to participate in any constructive stakeholder process that addresses vital energy infrastructure.

Question 4. The Defense Production Act is the primary legislation for ensuring domestic availability of industrial resources and critical technology items that are essential for national defense. The Title III Program provides a vehicle to create, maintain, modernize or expand domestic production capability for technology items, components and resources essential for national defense and for which there is insufficient production capacity to meet these needs. This Act might be used to help the refining industry acquire the materials that it may need to get the refineries impacted by the storm up and running again. Have you looked at this? Do you suspect that you will be able to obtain all of the materials that you will need to restore the refining capacity that Hurricane Katrina took off line?

Answer. NPRA and its members are interested in examining all sources of materials and authority that can assist in more timely reconstruction of vital infrastructure. We have identified the need for greater coordination in the areas of emergency housing, National Guard support, Coast Guard support, and other specific but limited federal services. That said, the primary responsibility for reconstruction of these facilities will remain with the industry itself. And, despite storm impacts taking as much as a quarter of refining capacity off line at one time, we believe the industry is well on its way to restoring shut-in capacity in a timely fashion.

Question 5. I have requested a study of global refining issues from the CBO that should reach us some time this fall. What kind of issues and recommendations should we be looking for?

Answer. NPRA is encouraged that CBO will be taking a serious look at policy options that may address refining issues. As suggested at the hearing and subsequently before the Senate Commerce Committee (September 21, 2005), NPRA made the following recommendations:

- Make increasing the nation's supply of oil, oil products and natural gas a number one public policy priority. Now, and for many years in the past, increasing oil and gas supply has often been a number 2 priority. Thus, oil and gas supply concerns have been secondary and subjugated to whatever policy goal was more politically popular at the time. Enactment of the recent Energy Bill is a first step to making a first priority the supply of energy sources the nation depends upon.
- Remove barriers to increased supplies of domestic oil and gas resources. Recent criticism about the concentration of America's energy infrastructure in the western Gulf is misplaced. Refineries and other important onshore facilities have been welcome in this area but not in many other parts of the country. Policymakers have also restricted access to much-needed offshore oil and natural gas supplies in the eastern Gulf and off the shores of California and the East Coast. These areas must follow the example of Louisiana and many other states in sharing these energy resources with the rest of the nation because they are sorely needed.
- Resist tinkering with market forces when the supply/demand balance is tight. Market interference that may initially be politically popular results in market inefficiencies and unnecessary costs. Policymakers must resist turning the clock backwards to the failed policies of the past. Experience with price constraints and allocation controls in the 1970s demonstrates the failure of price regulation, which adversely impacted both fuel supply and consumer cost.
- Consider expanding the refining tax incentive provision in the Energy Act. Reducing the depreciation period for refining investments from ten to seven or five years would remove a current disincentive for refining investment. Changes

could allow expensing under the current language to take place as the investment is made rather than when the equipment is actually placed in service, or the percentage expensed could be increased as per the original legislation introduced by Senator Hatch.

- Review and streamline permitting procedures for new refinery construction and refinery capacity additions. Seek ways to encourage state authorities to recognize the national interest in more U.S. domestic capacity.
- Keep a close eye on several upcoming regulatory programs that could have significant impacts on gasoline and diesel supply. They are:

a. Implementation of the new 8-hour ozone NAAQS standard. The current implementation schedule determined by EPA has established ozone attainment deadlines for parts of the country that will be impossible to meet. EPA has to date not made changes that would provide realistic attainment dates for the areas. The result is that areas will be required to place sweeping new controls on both stationary and mobile sources, in a vain effort to attain the unattainable. The new lower-sulfur gasoline and ULSD diesel programs will provide significant reductions to emissions within these areas once implemented. But they will not come soon enough to be considered unless the current unrealistic schedule is revised. If not, the result will be additional fuel and stationary source controls which will have an adverse impact on fuel supply and could actually reduce U.S. refining capacity. This issue needs immediate attention.

b. Design and implementation of the credit trading program for the ethanol mandate (RFS) contained in the recent Energy Act. This mechanism is vital to increase the chance that this program can be implemented next year without additional gasoline supply disruption. Additional resources are needed within EPA to accomplish this key task.

c. Implementation of the ultra low sulfur diesel highway diesel regulation. The refining industry has made large investments to meet the severe reductions in diesel sulfur that take effect next June. We remain concerned about the distribution system's ability to deliver this material at the required 15 ppm level at retail. If not resolved, these problems could affect America's critical diesel supply. Industry is working with EPA on this issue, but time left to solve this problem is growing short.

d. Phase II of the MSAT (mobile source air toxics) rule for gasoline. Many refiners are concerned that this new regulation, which we expect next year, will be overly stringent and impact gasoline supply. We are working with EPA to help develop a rule that protects the environment and avoids a reduction in gasoline supply.

RESPONSES OF BOB SLAUGHTER TO QUESTIONS FROM SENATOR AKAKA

Question 1. Mr. Slaughter, I would like to ask you the same question I asked of Panel I. Do you expect there will be wholesale price increases on the West coast due to the lost production and refining capacity in the Gulf of Mexico due to Hurricane Katrina? If so, can you provide me with an estimate of the magnitude of the increase or decrease?

Answer. The West Coast of the United States faces particular challenges when it comes to transportation-fuel price and supply. While the Federal Trade Commission has estimated that some 85% of fuel cost is related to crude prices, the West Coast—notably California—suffers from additional complications beyond the world price of crude. The largest regional market, California, constitutes about one-third of the U.S. market. California imposes significant additional regulations on its fuel, thus making fuel less fungible in that market. In addition, California has proved to be challenging business environment for petroleum refining. Not only do supply complications resulting from the hurricanes cause price increases across the nation, but the West Coast is not in the best position to respond because of geography and regulatory constraints.

Question 2. With respect to refining capacity, you testified that refiners make an average return on investment of about 5.5 percent, which is very low. This suggests that encouraging new refinery capacity will be difficult. Do you have any policy suggestion for increasing either refinery efficiency or investment in increasing capacity that will be useful in places where the market is relatively small, as in Hawaii?

Answer. Despite recent profit data, the refining sector of the oil and gas industry has not historically enjoyed generous returns on investment. In the ten-year period 1993-2002, average return on investment in the refining industry was only about 5.5%. This is less than half of the S&P industrials average return of 12.7% for the same period. Refining industry profits as a percentage of operating capital are not excessive. In dollars, they seem large due to the massive scale needed to compete

in a large, capital-intensive industry. For example, a new medium scale refinery (100,000 to 200,000 b/d) would cost $2 to $3 billion. In short, company revenues can be in the billions, but so, too are the costs of operations. The Federal Trade Commission recently found that these highly variable returns on investment have hampered new capital investment in the sector.

Responding to these factors is likely all the more acute when facing a small or isolated market. That said, NPRA believes that Congress and the Administration are asking the right questions. Policies that focus on depreciation of refinery assets, appropriate regulatory reform, and crude and natural gas availability are critically important.

RESPONSES OF BOB SLAUGHTER TO QUESTIONS FROM SENATOR SALAZAR

Question 1. Mr. Slaughter, I have a very pointed question for you. Isn't it true that refiners benefit by restricting supply—that is, by restricting the refining capacity of the United States? We all know we need refineries to turn crude oil imports into gasoline. But even though we have been using more and more oil every year for decades, there hasn't been a new refinery built for 30 years in this country! I think simple supply and demand concepts tell us that if the country had more refining capacity, gasoline would be cheaper, and we would be better able to weather a disaster like Hurricane Katrina. But if you want to squeeze profits out of every drop, then you would restrict your refining capacity. In fact, you would probably try to reduce refining capacity over time, because you will make more money that way. So again, isn't it true that if you reduce the ability of the United States to refine crude oil into gasoline, you are creating a supply squeeze, and that causes the price of gasoline to go up? How much do you think this affects the price at the pump right now?

Answer. While it is true that utilization of refineries has crept upward to about 98 percent in recent years, the decision to build new refineries unfortunately is more complicated than a simple supply-demand curve might dictate. The decision to invest in new refinery construction is constrained by three factors: poor historical economics; a changing landscape of environmental rules; and community opposition.

While it is tempting to view recent refining margins as indicative of trend favorable to refinery investment, the truth is that allocation of capital is based upon the historic performance of the sector. As the data cited above indicates, the average return on investment for refining (1993-2002) is about 5.5 percent. After a recent economic assessment of the refining sector, Oklahoma Secretary of Energy David Fleischaker put it simply, "People aren't going to invest in a 5 to 7 percent rate of return when money costs you 8 percent . . . Unfortunately, bankers aren't looking for welcome mats. They're looking for high rates of return."

While NPRA does not represent exploration and production interests, it goes without saying that a macroeconomic examination of much of the oil and gas sector will show that the industry is making large investments in these activities. Exploration and production can be highly risky investments—one field off-shore Angola alone has cost $7 billion to develop—and such investments can be decimated by political instability, terrorism, and the like.

The changing environmental landscape affects the economics of the refining sector in two ways: by making changes in the products we produce, and by limiting changes we can make in our actual operations. Refiners currently face the massive task of complying with fourteen new environmental regulatory programs with significant investment requirements, all in the same 2006—2012 timeframe. In addition, many programs start soon. For the most part, these regulations are required by the Clean Air Act. Some will require additional emission reductions at facilities and plants, while others will require further changes in clean fuel specifications. NPRA estimates that refiners are in the process of investing about $20 billion to sharply reduce the sulfur content of gasoline and both highway and off-road diesel. Refiners will face additional investment requirements to deal with limitations on ether use, as well as compliance costs for controls on Mobile Source Air Toxics and other limitations. These costs do not include the significant additional investments needed to comply with stationary source regulations that affect refineries.

Coming to grips with the newly enacted renewable fuels mandate and the diminished role MTBE will play in the supply of clean octane further exacerbates cost and supply concerns. Congress' failure to adopt limit liability provisions in the last energy bill was another missed opportunity to encourage investment in refining. As the Council of Economic Advisors has found, "tort liability raises the cost of capital . . . and mobile capital will seek relatively higher return elsewhere until rates of return are again equalized. The result is that the capital stock in the United States may be smaller with high tort costs than with low tort costs."

Other potential environmental regulations on the horizon could force additional large investment requirements. They are: the challenges posed by increased ethanol use, possible additional changes in diesel fuel content involving cetane, and potential proliferation of new fuel specifications driven by the need for states to comply with the new eight-hour ozone NAAQS standard. The 8-hour standard could also result in more regulations affecting facilities such as refiners and petrochemical plants. These are just some of the pending and potential air quality challenges that the industry faces. Refineries are also subject to extensive regulations under the Clean Water Act, Toxic Substances Control Act, Safe Drinking Water Act, Oil Pollution Act of 1990, Resource Conservation and Recovery Act, Emergency Planning and Community Right-To-Know (EPCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and other federal statutes. The industry also complies with OSHA standards and many state statutes.

API estimates that, since 1993, about $89 billion (an average of $9 billion per year) has been spent by the oil and gas industry to protect the environment. This amounts to $308 for each person in the United States. More than half of the $89 billion was spent in the refining sector.

As for limitations on actual operations, consider the effect of the new source review, or NSR, program on refinery expansions. When the last Administration abruptly changed its interpretation of the NSR program, it made more difficult debottlenecking projects that can have the effect of maintaining or growing capacity. This change was made without notice and comment rulemaking, and without regard to the downside consequences for environmental and energy policy that result from retarding plant maintenance. The result, of course, is uncertainty and cost.

A last impediment to the new refinery investment has been community reaction, or the so-called not-in-my-back-yard syndrome. Some critics that complain the loudest about industry investment practices unfortunately also oppose the construction of new facilities in new communities. Indeed, when the media began to question why so much refining capacity is concentrated on the Gulf Coast, the answers includes access to infrastructure and supply, but also community acceptance of the refining industry. To say the least, this acceptance is not typical of many other regions of the country where product demand is quite high.

Question 2. As a follow up, do you know of any new refineries being planned? How could this Congress encourage your industry to build more capacity—will the provisions we put in the Energy Bill have any teeth?

Answer. The only new refinery project widely discussed is the Arizona Clean Fuels (ACF) project. ACF is based in Phoenix, AZ, and intends to build a state of the art, $2.5 billion refinery that could provide significant product to the Southwest and West Coast using crude input supplied by the Mexican national oil company, PEMEX. Unfortunately, ACF has been trying to obtain the necessary permits to proceed for almost seven years.

As noted, the decision to invest in new refinery construction is constrained by three factors: poor historical economics; a changing landscape of environmental rules; and community opposition. But while new refinery construction has not occurred, refiners have made and will continue to make significant investments in expanding capacity at existing refineries. All refineries engage in maintenance and debottlenecking projects that maintain or expand capacity. One NPRA member, Valero, recently announced its capital expenditures plans. The result of the program will be to add 105,000 barrels per day of capacity in 2006, and another 66,000 barrels per day in 2007. At one refinery in Detroit, Marathon Ashland Petroleum announced an expansion of about 26,000 barrels a day. On the whole, existing refineries have been extensively updated to incorporate the technology needed to produce a large and predictable supply of clean fuels with significantly improved environmental performance. Capacity additions have taken place at many facilities as well. Between 1985 and 2004, U.S. refineries increased their total capacity to refine crude oil by 7.8%, from 15.7 mmb/d in 1985 to 16.9 mmb/d in May 2004. This increase is equivalent to adding several mid-size refineries, but it occurred at existing facilities to take advantage of economies of scale.

In addition to expansion of capacity, refiners also changed processing methods to broaden the range of crude oil they can process and to allow them to produce more refined product for each barrel of crude processed. (2005 FTC analysis). Several Gulf Coast refiners have made investments to enhance the ability of their refineries to handle less expensive, high-sulfur (or "sour") crudes. These investments expand the total pool of crude input available to refiners and, according to the Federal Trade Commission, the crude input represents some 85 percent of the cost of the refined product excluding taxes.

[Note: Responses to the following questions were not received at the time the hearing went to press.]

QUESTIONS FROM SENATOR DOMENICI FOR GUY F. CARUSO

Question 1. What would be the effect on prices if a windfalls tax profit or price caps were instituted?

Question 2. What do you think would be the effect of a mandatory minimum level of inventory for products like gasoline and other products?

Question 3. Many observe that gasoline prices respond quickly, that is go up, when crude prices go up, but they don't seem to come down as quickly when crude starts to fall. Explain to us the how the price of oil affects the price of gasoline and what price stickiness is.

Question 4. The high price trend in oil that we have seen in the past couple of years has been described as a demand-led shock. Hurricane Katrina has added a supply shock to the situation. Has the U.S. ever experienced a demand-led shock in oil and natural gas before?

Question 5. According the EIA's International Energy Outlook, Gross Domestic Product is expected to grow at about 3% between 2005 and 2015. Will sustained high energy prices change that estimation, and if so, by how much?

Question 6. How much of the recent $60 plus oil prices we have been seeing can be contributed to the so called "fear premium"?

Question 7. In your written testimony, you use the West Texas Intermediate price of $55 for crude oil for 2006 projections. Can you explain to us the relationship between the WTI price benchmark and other prices like the NYMEX futures and OPEC basket price? Which price should we look to as the one that sets the international oil price? Also, tell us about the relationship between the price of domestic oil production and the international price.

Question 8. In your testimony, you note that OPEC members have expressed an interest in maintaining prices above the prior target range. What do you think the OPEC target range is today? Do you think OPEC purposefully created inventory tightness in 2001 and 2002 and continues to keep production at levels that deprive the market of the ability to build inventories?

Question 9. Has the trend of running our refineries at high levels like 97% and the failure to build more refineries undermined the effectiveness of the Strategic Petroleum Reserve?

Question 10. Over the past 20 years, is it true that demand for refined products has increased by about 30% and capacity has only increased about 9%?

Question 11. Did Europe's dieselization program affect incentives to add refinery capacity? Are there other examples of other country's fuel choice decisions that have affected our markets and refinery capacity?

QUESTIONS FROM SENATOR TALENT FOR GUY F. CARUSO

Question 1. Compare the historical and projected growth of demand to growth in production, refinery, and delivery capability, 1980-2030.

Question 2. How long does it take for a refiner to recover its capital investment for a new or expanded refinery? Are any analysts predicting a decline in U.S. gasoline consumption over that time period?

QUESTIONS FROM SENATOR SMITH FOR GUY F. CARUSO

Question 1. How much gasoline is now refined off-short and imported as a finished product into the United States?

Question 2. How many ports in the United States accept gasoline imports? Which ports are they?

Question 3. Which in the United States can handle oil supertankers?

Question 4. What has happened in the last two weeks to the price and availability of aviation fuel?

Question 5. What are EIA's projections of the availability and price of aviation fuel for the rest of the year?

Question 6. About 55 percent of all Americans heat their homes with natural gas. The Petroleum Industry Research Foundation projects that, for these households, it will cost an extra $700 to heat their homes this winter. Is this an assessment with which you agree?

QUESTIONS FROM SENATOR BUNNING FOR GUY F. CARUSO

Question 1. Global spare production capacity has decreased dramatically in the past decade and it appears it will decrease even more with the continued growth of demand in China and the United States, as well as the leveling of Russian oil production. This will provide international suppliers with an even smaller ability to combat supply disruptions. Do you think the international oil supply is secure or is another price spike just around the corner?

Question 2. I've heard stories in the news media that a significant factor contributing to the current extraordinarily high oil prices is bidding by speculators in the worldwide oil commodity futures markets. Can you comment on the extent to which profit taking in the oil futures market is influencing the price of crude and gasoline? Is this phenomenon expected and how does it affect price spikes?

Question 3. OPEC and other oil producing countries have expressed the desire to keep oil prices well above prior target range. What should we expect going forward as far as market-level crude oil prices?

Question 4. As you know, the United States now imports over 60% of its crude. A significant portion of these imports come from unstable regions of the world. Yet we have vast untapped energy resources in the United States. Can you please discuss what the federal government can do to help to encourage the development of these secure, domestic energy supplies?

Question 5. In most areas of the world, including the oil-rich Middle East, we are looking at diminishing excess supply capacity. Mr. Dowd explained that other countries throughout the world are now exploring smaller oil fields and recovering lower-grade crude. How do our domestic oil sources compare in retrieval cost and quality?

QUESTIONS FROM SENATOR BINGAMAN FOR GUY F. CARUSO

Question 1. Natural gas prices were over $11 per MMBtu on Friday—this compares to $6.51 in early July 2005. According to several industry analysts annual natural gas prices are at an all-time high share of GDP (over 1.4%) How much of an increase will consumers see in their winter heating bills this season?

Question 2. The Energy Policy Act of 2005 includes tax incentives for energy efficiency improvements to existing homes, including efficient furnaces, air-conditioners and heat pumps. These incentives would help many residential consumers reduce their energy costs this winter. However, the IRS must issue regulations to implement these provisions. Will the Administration place a priority on making sure that consumers can take advantage of these energy saving provisions?

Question 3. Similarly, the Energy bill authorizes the States to offer rebates to consumers who replace inefficient energy equipment with Energy Star rated products. New York state has had tremendous success reducing peak demand for electricity with a "bounty" program for old appliances. Will the Administration request funding for this state grant program in the supplemental appropriations or the FY07 budget?

Question 4. The Energy Policy Act also provides tax incentives for building new homes that meet specified energy efficiency standards. These incentives apply to manufactured housing as well. Again, the IRS should place a high priority on implementing these provisions and developing the necessary regulations and guidelines so that consumers can take advantage of them. Many communities hit by Hurricane Katrina will require significant quantities of new housing. This is an opportunity to improve the energy efficiency of the housing stock—reducing the demand for energy and improving the quality of life of for homeowners and renters. Will the Department of Energy work with FEMA and HUD to assure that the new housing meets cost-effective energy efficiency standards?

Question 5. I have requested a study of global refining issues from the CBO that should reach us some time this fall. What kind of issues and recommendations should we be looking for?

Question 6. Hurricane Katrina has underscored the concentration of U.S. petroleum production, refining and energy infrastructure in the Gulf of Mexico region. In recent correspondence with the President, I have mentioned the need to bring together the necessary stakeholders to focus on ways to facilitate a more robust and distributed infrastructure for refining petroleum products in the U.S. Would you and your respective stakeholder organization, be willing to take part in such a discussion? How would you see this proceeding?

QUESTIONS FROM SENATOR AKAKA FOR GUY F. CARUSO

Question 1. Mr. Caruso, my question has to do with gasoline prices on the West coast and in Hawaii. As you may know, our wholesale gasoline prices are based on

West coast wholesale prices, under a Hawaii state law just implemented on September 1, 2005. As an example, this week, our Hawaii State Public Utility Commission is allowing up to a 30-cent increase per gallon, in order to keep up with West Coast prices.

Question 2. In your analysis, do you expect that the events of Hurricane Katrina and the disruption in supply from the Gulf of Mexico will affect the West coast gasoline prices? And if so, by how much or how little?

Question 3. Do you have any indication that there are likely to be gas shortages in areas like Hawaii where all oil must be shipped in and refined on the island?

QUESTION FROM SENATOR CORZINE FOR GUY F. CARUSO

Question 1. The EIA's energy outlook predicts that the U.S. demand for oil will continue to increase in the near future. Wouldn't one of the best ways of getting a handle on gas prices be to take long term steps to reduce the demand for oil? Wouldn't raising CAFE standards and promoting the use of hybrid vehicles significantly reduce the consumption of gasoline? Ultimately, wouldn't the best way to avoid the situation we are now in, with gasoline prices skyrocketing, be to reduce the country's reliance on gasoline?

QUESTIONS FROM SENATOR SALAZAR FOR GUY F. CARUSO

Question 1. I am concerned about our refining capacity in this nation. Releasing oil from the Strategic Petroleum Reserve doesn't do much for the country unless we can turn that oil into gasoline. What kind of excess refining capacity do we have in normal times? How much do you think this lack of refining capacity impacts the price Coloradans—any Americans, in fact— end up paying at the pump? Will you provide me with an estimate of how much excess capacity we would need in this country—in terms of new refineries—to smooth out gasoline prices?

Question 2. For the panel, here's something I don't understand but would really like to know: where does the money go? Big Oil has been making money hand over fist in the past year—billions upon billions of dollars—and all of that extra profit is paid for by the consumers. ALl of that profit makes me think that a good chunk of that price at the pump must be some form of price gouging, even if it isn't being exacted at the last step. So what I want to know is who buys the barrels of oil, and where does the money from that purchase end up? Does Big Oil buy their own product from their own subsidiaries, for pure profit? And next, when I buy a gallon of gasoline at the pump, where does that money go? It seems that Big Oil takes a cut every step along the way, and by the time it gets to a citizen of Colorado filling up at the gas station, that person's pocketbook is feeling the greed of the entire system.

Question 3. How can the price of a gallon of gasoline at the pump go up 50 cents in one day? Isn't that the same gas in the station's storage tank that was 50 cents cheaper yesterday? And if gas goes up that fast why does it go down so slow, if it goes down at all? I am hoping you can explain it to me and to the people in Colorado I represent.

*Question 4.*Since last week we have seen wholesale gas prices surge above $2.50 but they are now down to around $2. What I don't understand is why the country saw stations raising their prices multiple times a day and multiple times during the week, but with wholesale prices now falling, there has not been a corresponding change in the price at the pump. In other words, while there seems to be a rush to raise prices under any excuse, is there no similar incentive to lower prices? Why aren't prices going back down just as quickly?

QUESTIONS FROM SENATOR DOMENICI FOR JOHN DOWD

Question 1. You suggest that a record investment by the energy industry aimed at expanding oil production gas has not resulted in the expected supply response. Why? Has industry not invested wisely to increase supply? Is it a case of depletion of available reason? Is it due to the failure to make additional areas accessible for production?

Question 2. Is it a combination of these factors or perhaps others?

Question 3. You testify that U.S. consumers and policymakers have more control over long-term demand than they do over long-term supply. What specific, practicable steps do you suggest that policy makers can take in the near term to affect demand? What can we do by way of long-term steps?

Question 4. If your contention is that the key issue that Congress has not addressed is consumption, what steps do you believe that Congress could take to best address this issue?

Question 5. Friday's Wall Street Journal suggests that executives from large U.S. retailers are now worried that one affect of Hurricane Katrina will be to drive sales lower as middle-income shoppers now respond to rising fuel prices by reducing spending. This would follow the trend set earlier in the year by lower income shoppers. Please comment on this fear from retailers and on the overall affect of these rising fuel prices on the overall economy.

QUESTIONS FROM SENATOR TALENT FOR JOHN DOWD

Question 1. What level of refinery operation could be supported by current crude oil supply and demand?

Question 2. How long does it take for a refiner to recover its capital investment for a new or expanded refinery? Are any analysts predicting a decline in U.S. gasoline consumption over that time period?

Question 3. Is there sufficient competition for refining crude oil into finished products like gasoline?

Question 4. According to Fortune magazine, in 2004 when oil prices were a lot lower than they are now, the average return for both independent refiners and integrated majors was 23.9 percent and it is higher this year. Over the past decade, according to Fortune, the return on equity in the sector has averaged 16 percent. However, the American Petroleum Institute claims these returns are as low as 6 percent. Can you explain this vast difference? For refineries owned by oil producing companies, is this an issue of how they assign profits between production and refining?

Question 5. What are the factors preventing refinery investment? To the extent environmental and siting issues are among these, explain the importance to investors of streamlining the applicable environmental requirements and ensuring regulatory certainty, i.e., locking in requirements prior to start of refinery construction.

QUESTIONS FROM SENATOR BUNNING FOR JOHN DOWD

Question 1. The recently passed Energy Bill included an important tax provision that will allow 50% expensing of investment that expands a refinery's capacity by more than 5%. Do you think this is enough to stimulate growth or are additional incentives needed?

Question 2. As you may know, Kentucky has an abundance of coal. Among other things, this supply of coal allows Kentucky to offer its citizens and industries some of the lowest utility rates in the country. I am deeply concerned that the increasing cost of oil will increase the cost of producing and transporting Kentucky coal. Do you have nay additional information on how the price of gasoline will affect the cost of other energy sources such as Kentucky coal?

Question 3. The number of domestic refineries has decreased by more than 50% in the last 30 years, and the real-volume capacity of the domestic refinery network has decreased 10% in that same time period. What factors do you believe have suppressed U.S. refining capacity?

Question 4. The cost of gasoline is largely determined before it reaches the pump. The cost of crude oil and federal and state taxes make up 74 to 79% of the retail price of gas. Could you describe how the remaining 20 to 25% is determined and what profit each part of the supply chain receives?

Question 5. As the price of oil skyrockets, alternative fuels will become more price competitive. What segments of the energy market will see growth in investment because of higher oil and gas prices? What impact will this have on the domestic energy market?

Question 6. Global spare production capacity has decreased dramatically in the past decade and it appears it will decrease even more. This will provide international suppliers with an even smaller ability to combat supply disruptions. Do you think the international oil supply is secure or is another price spike just around the corner?

APPENDIX II

Additional Material Submitted for the Record

STATEMENT OF BETH A. NAGUSKY, DIRECTOR OF ENERGY INDEPENDENCE AND SECURITY, STATE OF MAINE

Chairman Domenici, Senator Bingaman, and distinguished members of the U.S. Senate Energy Committee, I am Beth Nagusky, Governor John Baldacci's Director of Energy Independence and Security. I had hoped to offer this testimony at the hearing scheduled for September 8th. I would like to provide it now because of the serious impact of rising energy prices on Maine people. Maine is a small, rural state with a significant percentage of its population living below and at the poverty level.

Maine is worried, and is taking action now, to prepare for what is likely to be the most difficult winter on record for many Maine people. While today's gasoline prices are a major source of concern to a state with few viable transportation alternatives, our bigger fear revolves around what lies ahead this winter. Nearly 50,000 of Maine's homeowners receive federal fuel assistance. This number, while staggering, in no way reflects the actual number of Maine people who cannot afford heating fuel that could reach $3 per gallon.

As gasoline prices began to soar, the Governor and my office have worked closely with Maine's Attorney General G. Steven Rowe, The Governor has made it clear that any retail gas or oil dealer who is found to be violating Maine's laws against unfair trade practices, profiteering, or collusion will be prosecuted to the full extent of those laws. At the same time, we are urging Maine citizens to conserve gasoline and not to hoard.

We are becoming increasingly convinced that recent rapid gasoline price increases.may be tied not only to the supply disruptions caused by Hurricane Katrina, but also to the possibility that the mega-mergers of recent years in the oil and gas industry have created an oligopoly acting like a monopoly. We believe that the Department of Justice should undertake a thorough and objective analysis of the oil industry and report to Congress on its competitiveness. If the analysis shows a market that is too highly concentrated, then aggressive action must be taken to restore a healthy level of competition.

In the meantime, I am calling on Congress to recognize and acknowledge the fact that the major oil companies have made record profits for the last six quarters.[1] These profits are unconscionable when contrasted with the prices Maine people are paying at the gas pumps. These profits are outrageous when contrasted against the decision Maine people face this winter as they are forced to choose between paying for heat, for medicine, or for food.

At the same time the federal Energy Bill asks taxpayers to pay billions to these same oil companies. We urge you to rethink and repeal tax credits for the oil and gas industry. It is past time to get serious about reducing our dependence on imported fossil fuels, and it is high time to provide significant financial incentives for conservation, energy efficiency, and renewable energy. We urge you to join Maine's delegation and support significant improved fuel economy standards for cars, SUVs and light duty trucks; a federal renewable energy portfolio standard; and, a federal renewable fuel standard.

I also ask that you increase funding for federal fuel assistance. Last winter fuel prices were 35% higher than they were the year before. This year they are projected to be at least 25% higher than last year. Yet, our federal fuel assistance funding

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[1] ExxonMobil, the world's most profitable company, made $25.3 billion last year. The combined profits of it and BP, Royal Dutch Shell, and ChevronTexaco, last year were $72.8 billion. A month ago, ExxonMobil, ChevronTexaco, and ConocoPhillips announced record second-quarter profits of $7.6 billion,$3.7.billion, and $3.1 billion, respectively. Royal Dutch Shell's quarterly profits of $5.2 billion were up by 34 percent over the same period last year. Other well-known companies like Sunoco also had record second-quarter earnings.

has not increased. Last year Maine launched a unique program using teams of volunteers to winterize the homes of our neediest citizens. We installed window, door, and pipe insulation to cut cold air leakage. We gave out compact fluorescent light bulbs to cut electricity bills. This year we are expanding the program. But, it is not enough. We need more funding, and we need it soon.

Under Governor Baldacci, Maine has become a leader when it comes to promoting and practicing a 21st century energy policy. We have improved the fuel economy of the state fleet through downsizing our vehicles and the purchase of hybrid vehicles. We have reduced state travel through greater use of conferencing technologies. We have expanded the state vanpool program and provided preferential parking for employees who carpool to work. We have cut our motor fuel usage by over half a million gallons in two years. We have installed efficient lighting in state office buildings and purchase only the most efficient office products. We buy 30 to 40% of our electricity from renewable power, and we use a biodiesel blend to heat some state offices.

In addition to saving state government money, we are reducing our greenhouse gas emissions. The Baldacci Administration takes climate change seriously. Maine is the first state to measure and track its greenhouse gas emissions. We have cut them 8% since 2002.

When it comes to energy policy, perhaps it is time to resurrect the old expression, "As Maine goes, so goes the Nation."

Thank you.

STATEMENT OF AMERICAN TRUCKING ASSOCIATIONS, INC.

American Trucking Associations (ATA) appreciates the opportunity to submit written testimony on the impact of rising fuel prices on the trucking industry. ATA is a federation of motor carriers, state trucking associations, and national trucking conferences created to promote and protect the interests of the trucking industry. ATA's membership includes more than 2,000 trucking companies and industry suppliers of equipment and services. Directly and through its affiliated organizations, ATA encompasses over 37,000 companies and every type and class of motor carrier operation.

Concerns about rising fuel prices often focus on the troubled airline industry, but the impact high diesel fuel prices are having on the U.S. trucking industry should not be underestimated. The trucking industry is the lynchpin of the transportation system, hauling more than two-thirds of all the domestic freight transportation tonnage in the United States and accounting for 88% of the nation's freight bill. Trucking also accounts for over 70% of the value of trade between the U.S. and Mexico and Canada.

Fuel prices were a significant concern for the trucking industry well before last week's devastating hurricane. According to the Energy Information Administration (EIA), the national average price of diesel rose from $1.32 per gallon in 2002 to $1.51 in 2003 and $1.81 in 2004. This year, we expect the price to average over $2.40 per gallon. Now, with 5% of America's refining capacity shut down and fuel supplies limited, we are seeing fuel prices skyrocket. The average cost of diesel fuel has risen from $2.59 per gallon the week prior to Hurricane Katrina to $2.90 as of September 5.

This year, the industry will consume more than 35 billion gallons of diesel fuel at an estimated record cost of $85 billion—$23 billion more than in 2004; $33 billion over 2003 levels, and nearly double the industry's cost of fuel in 2002.

For most motor carriers, the cost of fuel is their second-highest operating expense after labor expenses. For many long-haul carriers, fuel equals as much as 25 percent of all operating costs. One carrier recently noted that if crude oil hits $85 per barrel, diesel will overtake labor as its largest expense. Small carriers are particularly vulnerable to large and swift increases in fuel prices. Typically, the smaller the carrier, the larger percentage fuel represents of total operating expenses. The motor carrier industry is comprised of thousands of small carriers. According to the Federal Motor Carrier Safety Administration (FMCSA), as of August 2005, 95.8 percent of the 564,000 interstate motor carriers operated fewer than twenty trucks.

ATA recently asked motor carriers to describe the impact of fuel prices on their businesses. Here is what several carriers had to say:

> "Fuel prices, along with insurance, are keeping us hanging on by our fingernails. We cannot afford to replace our equipment any more."
>
> "Fuel costs per mile have increased by 17 cents per mile in the last year. When 6 cents a mile is considered a good profit, this is bad news. We have been able to increase rates and get fuel surcharges from some customers to offset

some, but not all, of the fuel cost increase. We have had to cut insurance expenses by offering less health-care benefits. We also have had to delay the purchase of much needed new equipment."

"During the first seven months of 2005, we have spent $2,171,922.73 for fuel. This represents an increase of $547,447.27 over 2004. During the first seven months of 2005 and 2004 our fuel cost has increased $958,037.53. This increase cost has impacted our customers, and we are now seeing a slowdown in their business, which impacts ours."

"We have governed our trucks to control speed. We have asked our drivers to shop carefully for fuel and only purchase limited amounts of fuel in those areas where the price is high. So far, our drivers have been very co-operative. They realize what is at risk. Last year our fuel expense was 21.64% of our bottom line. This year, that number has increased to 25.84%. Our year to date profit is 1.09%. Not much room for a mistake."

While the trucking industry may pass along some of the added fuel costs to shippers (which ultimately impacts consumers), frequently not all such costs are recouped by motor carriers. Despite increasing fuel costs, ATA has not sought legislative imposition of fuel surcharges in transportation agreements. However, steps to increase the supply of affordable fuel would benefit motor carriers, shippers, and ultimately consumers.

Due to extreme volatility in fuel prices in the wake of Hurricane Katrina, on September 6, ATA requested the Secretary of Energy to direct the Energy Information Administration to report diesel prices twice a week, instead of the normal once a week, until fuel pricing becomes more stable. This change would provide the trucking industry with more accurate fuel pricing and help it make better business decisions.

The trucking industry will face an added challenge beginning October 15, 2006, when "ultra low sulfur diesel" (ULSD) fuel will be introduced at the retail level in advance of the introduction, in 2007, of lower-emission diesel engines. EPA has stated that upon introduction, ULSD will quickly become the standard diesel fuel for the trucking industry. The petroleum industry cannot yet estimate what the added cost of ULSD will be (estimates have ranged from 5 cents to 13 cents per gallon), but we are certain that the fuel will be both more expensive and have less energy content than the diesel fuel used today.

ATA recognizes that it is difficult for the government to impact world crude prices, but there are some steps that can be taken to lessen the severity of future spikes in diesel fuel prices.

REFINING CAPACITY

For years now it has been apparent that the U.S. has underinvested in refining capacity. Regardless of the reason for this underinvestment (e.g., environmental restrictions or economic factors), it is time to reverse this trend.

It became apparent in the aftermath of Katrina that we simply do not have enough spare refining capacity. As refiners shut down in the Gulf Coast, other refiners across the nation were unable to make up the difference because, on average, refiners already were running near 95 percent of total capacity, according to the American Petroleum Institute.

Congress needs to get involved in this issue now. Even if world oil exploration increases due to the high price of crude, U.S. refiners will be unable to refine more diesel, gasoline, or jet fuel.

ONE NATIONAL DIESEL FUEL STANDARD

We believe that Congress should amend section 211 of the Clean Air Act to restore a single national diesel fuel standard. A single national diesel fuel standard is critical to limiting the duration and magnitude of fuel price spikes, which are devastating to the economic health of the trucking industry.

Varying state diesel fuel requirements ("boutique fuels") typically result in fuel price differentials and prevent diesel fuel from simply being transported from one jurisdiction to another in times of shortage. Boutique fuels, due to their limited markets, are produced by only a handful of refineries, which results in less competition and higher fuel prices.

California, which requires a boutique diesel fuel, provides a perfect example of this principle. The state's CARB-diesel is a specially formulated diesel fuel with a higher cetane index and lower aromatic content than the diesel fuel sold in the rest of the country. As of August 29, 2005, according to EIA, the average retail price of CARB-diesel was $3.05 per gallon, which is 46 cents higher than the $2.59 national average. The cost of manufacturing CARB-diesel adds 4—5 cents extra per gallon.

The difference in state fuel taxes adds another 12 cents per gallon. This leaves a 29 cent difference that can only be explained by higher distribution costs and the oligopolistic pricing associated with boutique fuels.

The price disparity that results from state-mandated boutique fuel blends hurts the trucking industry by creating an uneven playing field and causing damaging fuel price spikes. Due to the competitive nature of the trucking industry, which has average operating margins of only two to four percent, a sudden increase in the price of diesel fuel turns a marginally profitable truck route into an unprofitable obligation. Moreover, the companies located within the boutique fuel jurisdiction have an economic incentive to refuel their trucks outside the jurisdiction, resulting in additional vehicle miles traveled, additional fuel consumed, and additional air emissions.

The Clean Air Act provides for a national diesel fuel standard and prohibits states (except California) from requiring fuel formulations that differ from the standard established by the EPA. EPA, however, may grant states a waiver to adopt a unique fuel formulation where the state demonstrates that the boutique fuel is necessary to achieve compliance with the National Ambient Air Quality Standards and that other pollution control measures are either unreasonable or impracticable.

In addition to California's boutique diesel fuel (i.e., CARB diesel), EPA has granted a diesel fuel waiver to the state of Texas. Beginning in October 2005, Texas will require the sale of a boutique fuel that is similar to CARB diesel. Minnesota is poised to implement a boutique biodiesel fuel in October.

ATA strongly supports a single national diesel fuel standard. We believe that the restoration of a single national diesel fuel standard will prevent localized supply shortages and price spikes and request that this Committee consider amending section 211 of the Clean Air Act to achieve this goal.

DOMESTIC EXPLORATION OF CRUDE OIL

An uninterrupted fuel supply is essential to meet the nation's transportation needs. ATA supports the goals of increased national energy self-sufficiency and reduced vulnerability of future energy disruptions. Therefore, the industry supports government efforts to promote offshore exploration and development of domestic oil and natural gas reserves. This includes drilling in Alaska's Arctic National Wildlife Refuge (ANWR) in an environmentally sensitive manner.

CONCLUSION

The trucking industry is primarily a small business industry with relatively slim profit margins. Rapid escalation in the price of diesel fuel, like we've seen in 2005, is devastating to the industry and will result in failures, lower capital investment, and negative employment trends.

ATA knows that there is little that Congress can do to impact the price of crude oil on the world market. However, steps can be taken to reduce the magnitude of price spikes.

First, Congress needs to address the lack of investment in new refining capacity. If refining capacity continues to operate at near full utilization, price spikes will be more extreme than necessary. And if several refiners go down, like with Katrina, then other refiners are unable to make up the difference.

Complexity in the refining industry also adds to price spikes. By creating one national diesel fuel standard, Congress would be reducing complexity in the refining network and thus reduce the magnitude of price spikes when they occur.

The American trucking industry is the backbone of the U.S. economy. Congress needs to ensure that the industry has access to enough fuel and reasonable prices so that motor carriers can continue to deliver America.

STATEMENT OF MARCIA MERRY BAKER AND RICHARD FREEMAN, LYNDON LAROUCHE POLITICAL ACTION COMMITTEE

ESTABLISH EMERGENCY, INTERIM ENERGY RE-REGULATION; END THE ENRONOMICS-THINKING BEHIND 'UN-NATURAL' DISASTERS

To the Honorable Senators Pete V. Domenici and Jeff Bingaman, and Members of the Committee: The merits of swift action by the Senate, to initiate intervention to establish re-regulation of the United States national energy system, are obvious in the face of requirements for dealing with the vast impact of Hurricane Katrina; but also, were apparent even at the time of Aug. 19, when the Committee announced its Sept. 8th hearing and its purpose in the first place, to address out-of-control oil and gas prices.

Given that we now face a huge natural disaster made into a horrible catastrophe, by the negligence and inaction of the Executive Branch on infrastructure-maintenance generally, as well as in the case of the immediate epic storm, it is even more urgent for the Senate to rise to its unique advise-and-consent role, and initiate a long overdue shift to an economy-building policy. This is not a partisan question, but a matter of national public interest of the most profound and urgent kind.

In this testimony, we wish to provide back-up for initiative of the Senate to institute energy re-regulation and related policies, in terms of three vital considerations. These have been reiterated in recent months by economist Lyndon LaRouche, in a series of policy briefs, webcasts, and international discussions, some of which directly addressed to the Senate, from which we summarily quote. Internationally, Mr. LaRouche has been meeting with national leaders anxious to see and support such a shift in the United States.

We can provide full documentation to the Committee of the following summary points, including animated graphics of the economic processes involved, at request.

First, the context for the dramatic run-up of energy prices, is that the financial/monetary system itself is in crisis. Hyper-inflation is underway across most all essential commodities and services, as contrarily, "financials"—derivatives, debts, speculation of all kinds, soar, to the point of an imminent crash.

Secondly, the specifics involved in energy hyper-inflation—speculation, gaming of supplies, creation of shortages, cartelization mergers, etc.—are all {characteristic}, not aberrations, of the practices of the past several decades of the shift to policies of de-regulation of utilities, imposition of outsourcing of manufacturing and agriculture, and globalization generally.

Thirdly, action by the Senate is in particular urgent, because in addition to the vital matter of energy, there is the responsibility of the Senate to take action in the broadest way to restore nation-saving policies in the face of the negligence of the Executive Branch regarding lack of Federal government functions before, during, and after Hurricane Katrina. We have devolved to where states, localities, charities, and others are casting about on their own to try to fill the breach in Federal functions of all kinds.

CONTEXT: FINANCIAL, MONETARY CRISIS

The run-away energy prices are best understood in terms of the overall end-phase crisis we have entered, of the disintegration of the international financial system itself. Increasingly over the past three decades, the divergence of volumes of debts, deficits, and financial valuations of all kinds (stocks, derivatives, mortgages, etc.) as against the decline in condition and activity of physical economic input and output (manufacturing, agriculture, infrastructure) has widened to the point of financial blow-out and economic breakdown. The other way to say it, as many commentators finally admit, is that financial bubbles of home mortgage securities, hedge fund bets of all kinds, etc., are now beginning to burst.

Looking to what must be done, LaRouche summarized it this way at a June 16 international webcast this year: "Now, the situation is, such that people now generally realize that the United States is in deep trouble. The U.S. economy's in trouble. It's about to go under in a chain-reaction collapse. When, nobody knows exactly. But we know it's oncoming. That's why I say, as Roosevelt said, "We have nothing to fear, as much as fear itself." (Because there are things we could do about this.)

"There are things the American people could force the United States government to do about this.

"But the average person doesn't understand this problem. Therefore, they're not sure of what to do, and they're not sure about what kind of proposal they should support. But they know they've got to get some action, from government, to protect them from the danger of a collapse, which, in point of fact, is much bigger than the 1929-1933 collapse; 1929-1933, which was given to you by Presidents Coolidge and Hoover, was relatively mild in its effect compared with the threat to the world, as well as the United States, from the presently onrushing crash.

"The situation is this: The entire world system is coming down. Not just the United States' system, but the entire world system. Now, there are many people who're whistling in the dark, and saying, 'It's not going to happen. It couldn't happen'—well, it IS going to happen! It's inevitable!

"What do we do about it?" (from "Dialogue with the Senate on Economic Policy; LaRouche's Historic Webcast of June 16, 2005", *www.larouchepac.com*).

"ROOSEVELT MODEL": RE-REGULATE, BUILD INFRASTRUCTURE

In brief, LaRouche is calling for a series of steps, in the spirit of the "Roosevelt Model." Using the "experience of 1933 through 1945, we have to guarantee the sta-

bility of U.S. Treasuries, which is the basis for the security of the U.S. dollar. We have to enter into agreements with Europe and with other parts of the world, on a fixed-exchange-rate system, which can be fairly described as a New Bretton Woods system—the kind of system which Roosevelt created at the closing period of the war, the fixed-exchange-rate system. It worked. It worked fine until the middle of the 1960s. it was the system under which we in the United States helped Europe rebuild itself from war . . .

"We have to go back to that kind of system, which was destroyed by Nixon, where our troubles really began. And by getting long-term credit, instead of having short-term credit, we have to have agreements on long-term credit: credit in terms of investment in infrastructure . . . We have to rebuild the world economy. We have to build new infrastructure for places that don't have it. We have to rebuild the infrastructure of the United States and Europe. This is going to require long-term investment." (Also from, "Dialogue with the Senate on Economic Policy," op. cit.)

The character of what kind of infrastructure is needed is underscored by the catastrophe at hand: transportation, water systems, medical systems and public health, power generation and transmission, land improvements, housing, education and R&D facilities, etc.

Most important for the energy base of the United States, is to resume a full-scale nuclear power plant program. By Y2000, had we continued our original pathway, we would by now have been 50 percent nuclear-generated instead of 20 percent. We have at present 28 sites for new nuclear electricity units, on the pre-existing nuclear plant sites.

"PAPER OIL," CONTRIVED SHORTAGES

In direct contrast to this approach, are the wild gyrations in prices of gasoline, petroleum and all other energy prices—fuel oil, natural gas, LP, jet fuel, even coal, etc.

There is no need for us to document the current price spikes here, which data your Committee will have before you on Sept. 6. Instead, we make the point that the very pattern of such economy-bashing prices, results from the continuation of radical practices, euphemistically called "free-market," that caused the undermining of the U.S. and worldwide economy to begin with, over the past 30 years.

Look at "paper oil." This is the well-known term to describe the fact that for every barrel of petroleum pumped somewhere, shipped and refined, there are hundreds of "paper barrels" worth of trades on the speculative commodity markets. German Economics Minister Wolfgang Clement recently estimated that, at present, $18 per barrel of oil is attributable to speculation. On Sept. 2, when German Chancellor Gerhard Schroeder announced his commitment for Germany to come to U.S. aid by oil and gas shipments, his spokesman Thomas Steg stressed that there must be collaboration between countries now, to crack down on energy companies to keep prices stable.

Especially during the episode of the so-called "California Energy Crisis" of 2000-2001, and since, the Senate Energy Committee, and individual Senators have assembled all the evidence needed to document the whole range of fundamental malpractices that are systematically involved—namely, mergers and consolidation of control, speculation, gaming, shorting supplies, etc. These practices are done either illegally outright, or "legally"—technically defined as such, under the insane energy de-regulation laws perpetrated over the last 15 years. Until these practices are rolled back, "Enron" lives.

The Senate has what it needs to act to restore regulation of energy supplies—in the American tradition of public utility supervision of private corporations, which worked to the public good for decades. Therefore, we here identify only a few selected aspects of the present crisis, for the purpose of underscoring the general point.

U.S. Refinery Capacity Lacking.

Over the past three decades, the U.S. could and should have expanded significantly its refining capacity, but under decision-making by the increasingly de regulated energy/financial conglomerates, the U.S. capacity was shrunken, and geographically concentrated in ever more vulnerable locations, such as the Gulf Coast. In 1981, according to the Department of Energy, the U.S. had 324 refineries, with a refining capacity of 17.99 million bpd. In January 2005, after a period of sweeping shutdown, it had only 148 refineries with a capacity of 17.12 million bpd. To meet the deficit, refined product now is imported from a number of sources, including Canada, the U.K., and the Netherlands. From 1995 to 2005, imports of refined product have nearly doubled, rising from 1.6 million barrels per day, to more than 3.1 million for the first half of 2005.

The last time a new major refinery was built in the lower 48 states was in 1976, in Louisiana. As of Jan. 1, 2005, fully 52 percent of all U.S. refining capacity was owned and controlled by only six companies: Conoco-Phillips, 12.8%; ExxonMobil, 10.9%; BP 8.8%; and Chevron Texaco, 5.9%; as well, Royal Dutch Shell, 5.7%; and Marathon Oil, 5.5%.

Therefore, under these circumstances, when a "market-excuse" is given to justify gas and oil price run-ups—namely such citations as, 'the effect of the Iraq War,' or 'hostile OPEC action,' or now, 'Katrina Storm Damage'—no matter how partially true, the larger truth, from the vantage point of the responsibility of government to provide for energy security, is that the entire system of energy provision is in the hands of predator cartels, which must be brought under control.

Look at simply the dramatic rise in per barrel crude oil futures prices on the New York Mercantile Exchange, for late August, yearly from 2002 to 2005, and you see that the {price more than doubled, well before Hurricane Katrina}!: Aug. 28, 2002—$28.34; Aug. 28, 2003—$31.50; Aug. 28, 2004—$43.18; and Aug. 26, 2005—$66.13. (On Aug. 30, 2005, the price hit 'only' $69.81.

2001 Senator Wyden Report on Contrived Shortages.

A study commissioned by Sen. Ron Wyden (D-Oregon) during the California crisis, focuses on the essential, and defining, threat involved. In June 14, 2001, soon after the release of the Cheney Taskforce Energy Report, Sen. Wyden released an investigative report which concluded, "The oil industry and its allies would have the public believe that insufficient refining capacity, restrictive environmental standards, growing gasoline demand, and OPEC production cutbacks are the primary reason for the current oil and gas supply problem. However, the record shows . . . that major oil companies pursued efforts to curtail refinery capacity as a strategy for improving profit margins."

Wyden included as documentation an internal document obtained from Chevron Oil, dated Nov. 30, 1995, which asserts, "A senior energy analyst at the recent API [American Petroleum Institute] convention warned that if the U.S. petroleum industry doesn't reduce its refining capacity it will never see any increase in refining [profit] margins."

Mega-Mergers.

This year, Y2005, is the busiest for energy-industry deals since 2001, with about $100 billion of takeovers announced so far. The total, including pipelines, utilities, and coal producers, is more than the full-year total in 2002, 2003 or 2004, and if the pace continues, will be nearing 1999, when $200 billion of energy industry consolidations occurred. The period 1998 to 2000 was the biggest span in history for energy mega-mergers, including the mega-deal of Exxon Corp. acquiring Mobil Corp. for about $79 billion. Soon afterward—in the wake of the 1996 electricity deregulation laws, and the earlier gas and oil dereg, the stage was set for the California energy debacle, and the largest energy rip-off in history . . . until now.

In the recent buy-out frenzy of energy commodity companies, Chevron in August acquired Unocal for $17.8 billion, and other mergers are underway. The menace is clear.

SENATE'S UNIQUE ROLE

We can't afford to stand back, in the lax spirit of waiting two years from now for a post mortem, Enron-style, on what went wrong in 2005. The Senate needs to act now.

Already at the state and local level, lawmakers are casting about for fall-back measures to defend their functioning under the gas price hikes.

Hawaii. This week, Hawaii imposed a wholesale gas price cap at $2.74 a gallon, including tax, which is indexed to average wholesale prices around the U.S.A. The cap level stands for a pump price in the range of $2.86 a gallon in Honolulu.

Massachusetts. Commonwealth leaders are considering a moratorium on natural gas price hikes through the winter months, and direct purchases of oil by the state. Secretary of State William Galvin and others are raising this. Galvin said, "We're all suffering from the high price of gasoline, but you have no option about heating your home. We need a comprehensive effort within 90 days, because once heating season begins, you have to heat your house 24 hours a day." State Sen. Michael Morissey (D-Quincy), Chairman of the Telecommunications, Utilities and Energy Committee, intends to hold hearings.

Wisconsin, Michigan, Missouri are talking about declaring a moratorium on state sales taxes on gasoline.

In the face of this scrambling, on Sept. 1, President Bush told the American public, as if in a daze, "Don't buy any gas you don't need . . ."

The U.S. Senate must act.

NEEDED EMERGENCY MEASURES

At the time of the energy price run-up in 2000, LaRouche issued a memorandum Sept. 19, stressing the principles involved in needed Federal government action. These guidelines are now even more urgently needed.

Excerpts:

1. The following statement constitutes a preliminary statement of policy "On the Subject of Emergency Action by Governments to Bring the Present Petroleum-Price Inflation Under Control."

2. Broadly, the current global inflation in petroleum prices threatens to be the detonator of a chaotic breakdown in many, if not all of the economies of the world. The actions proposed here to deal with that emergency situation will not solve the more general problem of the world's financial and monetary systems at large, but will contribute an important, and perhaps decisive step in that direction.

3. The underlying cause of the crisis, of which the petroleum-price crisis is but the presently leading political-economic consequence, is a general hyperinflation in financial asset-prices, which is now being expressed, at increasing rates, as a hyperinflation in commodity prices now following a trend similar to that suffered by Weimar Germany during the interval March-November 1923.

4. For sundry, converging, and relatively obvious reasons, the most brutal effect of that upward spiral of financial hyperinflation is being expressed in devastating rates and magnitudes of rises in the costs of petroleum. The increasingly desperate effort to secure inflows of financial assets into the U.S. dollar sector, has seized upon several combined factors, as the opportunity to increase asset-price accumulations from hyperinflationary trends in the delivery prices of petroleum products.

These factors include: recently increased concentration of ownership of major oil companies through mergers and acquisitions, the increased role of the spot market in petroleum deliveries, the significance of denomination of deliveries in U.S. dollars, and an intensity of speculative activity, especially in the form of financial derivatives, in this area which threatens to bring the per-barrel price of petroleum to between $40 and $50 per barrel, soon, and not much later, much higher.

5. No ordinary means could bring this problem under control during even the short term. Only drastic measures taken in concert between and among sovereign national governments, could bring the petroleum-price crisis itself under control. Any other proposal would be a childish delusion. For the immediate future, either such governmental action will be taken, or the eruption of international chaos within the weeks ahead were the likely result.

6. The appropriate action, which must be led by the U.S. government, must aim at immediate emergency cooperation among the governments of principal petroleum-exporting and principal petroleum-consuming nations.

7. These governments must: a) Declare a general strategic emergency in the matter of stability of flows and prices of essential energy-supplies of national economies; b) Establish contracts, directly between and among governments, of not less than twelve months, government-scheduled deliveries of petroleum from exporting to consuming nations; c) Define reasonable prices for these contracts; d) On the grounds of a global strategy emergency in petroleum prices and supplies, these governments must set priority on processing of such contracted petroleum flows through relevant refiners to priority categories of consumers in each nation, causing other stocks to be shunted to one side in the degree that these priority deliveries must be processed first.

8. Such action will, obviously, collapse much of the current hyperinflationary trends in petroleum. That will have a significant political effect, in the form of reactions from the speculators currently gorging themselves on the suffering of national economies suffering zooming speculative prices of petroleum. We can not permit the cupidity of a powerful few speculators to destroy enterprises essential to the national interests of nations, and to the relations among those national economies. That opposition to urgently needed measures must be resisted on grounds of overriding national strategic interests.

9. This proposed action will not cure the more general hyperinflationary trend in progress. It will only bring a most critical segment of this speculative inflation under control; but it will set standards of cooperation now urgently needed, for dealing with the general international banking and related crises about to strike the world as a whole during the weeks and months immediately ahead.

10. There are many details of the current speculative marketing of petroleum contracts which require closer scrutiny and related assessment. That investigation should proceed; it is urgent. However, those representatives of governments who un-

derstand the politics of oil, must play a leading role in implementing the general measures I have indicated, now, without delay. After a thirty-to ninety-day initial period of operation of the proposed agreements, secondary and tertiary features of the problem will be clearer, and, most important, governments and others will have developed the mechanisms needed for further courses of action.

STATEMENT OF DR. JAMES NEWSOME, PRESIDENT,
NEW YORK MERCANTILE EXCHANGE, INC.

Mr. Chairman and members of the Committee, my name is Jim Newsome and I am the President of the New York Mercantile Exchange (NYMEX or Exchange). NYMEX is the world's largest forum for trading and clearing physical-commodity based futures contracts, including energy and metals products. We have been in the business for 135 years and are a federally chartered marketplace, fully regulated by the Commodity Futures Trading Commission. On behalf of the Exchange, its Board of Directors and shareholders, I thank you and the members of the Committee for the opportunity to submit testimony for the record of the hearing on global oil demand and gasoline prices.

First and foremost, we would like to acknowledge that not only has the nation's energy supply been severely affected, but lives have been lost, homes have been destroyed, and entire cities are in ruins. Our thoughts and prayers are with all the families that have suffered from the destruction of Katrina.

INTRODUCTION

NYMEX provides an important economic benefit to the public by facilitating competitive price discovery and hedging. As the benchmark for energy prices around the world, trading on NYMEX is transparent, open and competitive and heavily regulated. Contrary to some beliefs, NYMEX does not set prices for commodities trading on the exchange. NYMEX does not trade in the market and, being price neutral, does not influence price movement. NYMEX provides the forum for traders to come together and execute trades at prices which best represent what market participants think prices should be in the future, given today's information.

Periods of market uncertainty and volatility often result from extreme supply disruptions as we see with the numerous refineries shut down due to Hurricane Katrina, which brings me to the reason I was asked to testify today. There is a strong beneficial and interdependent relationship between the futures and cash markets. The primary motivation for using the futures market is to hedge against price risk in the cash market. Prudent business managers rely on the futures market to protect their business against price swings in the cash market. Price volatility following Hurricane Katrina drove many into the futures markets, as is reflected by the record volumes traded on NYMEX since the hurricane.

Futures markets provide a reference point for use in arranging trades at competitively determined prices. An understanding of the NYMEX market, its pricing mechanism and the relationship between the futures price and the cash price will provide useful instruction and clarity to what is often perceived as an esoteric area of financial dealings.

OVERVIEW

Futures markets fulfill two primary functions: (1) They permit hedging, giving market participants the ability to shift price risk to others who have inverse risk profiles or are willing to assume that risk for profit; and (2) They facilitate price discovery and market transparency. Transparency involves many factors, including: (1) Continuous price reporting during the trading session; (2) Daily reporting of trading volume and open interest; and (3) Monthly reporting of deliveries against the futures contract.

NYMEX futures contracts trade by open outcry on the Exchange floor during the day and during the evening on NYMEX ACCESS[sm], our after-hours electronic trading platform. Transactions are executed in a transparent and competitive environment between NYMEX members who are registered futures industry professionals. The daily settlement price for each contract is calculated pursuant to Exchange rules, which generally is the average price for all outright transactions during the closing range.

NYMEX energy futures markets are highly liquid and transparent, representing the views and expectations of a wide variety of participants from every sector of the energy marketplace. Customers from around the globe can call into a broker on the NYMEX trading floor to place buy and sell orders. On behalf of the customers, buy-

ers announce their bids and sellers announce offers. The price agreed upon for sale of any futures contract trade is immediately transmitted to the Exchange's electronic price reporting system and to the news wires and information vendors who inform the world of accurate futures prices.

Price signals are the most efficient transmitters of economic information, telling us when supplies are short or in surplus, when demand is robust or wanting, or when we should take notice of longer-term trends. NYMEX futures markets are the messengers carrying this information from the energy industry to the public. The wide dissemination of futures prices generates competition in the establishment of current cash values for commodities.

GASOLINE

Gasoline is the largest single volume refined product by volume sold in the United States and accounts for almost half of national oil consumption. It is a highly diverse market, with hundreds of wholesale distributors and thousands of retail outlets, often making it subject to intense competition and price volatility.

NYMEX trades, among other things, New York Harbor leaded and unleaded regular gasoline futures contracts. The New York harbor gasoline futures contract trades in units of 42,000 gallons (1,000 barrels). It is based on delivery of petroleum products to terminals in the New York harbor, the major East Coast trading center for imports and domestic shipments, from refineries in the New York harbor area or from the Gulf Coast refining centers.

Average daily trading volume in these contracts has hit record levels in recent months and prices have been volatile. These market conditions reflect the basic market fundamentals where there is an imbalance of supply and demand. Tight gasoline supplies due to lack of refinery capacity, compounded by the impact of hurricane Katrina, which resulted in the closing of 9 refineries, has driven prices upward dramatically in the cash and futures market.

The importance of the Gulf Coast refineries as a key supply source for the New York Harbor via Colonial Pipeline directly impacts the physical gasoline market and the futures gasoline market. During the one-week period prior to hurricane Katrina, the cash market price for Gulf Coast gasoline averaged $1.82 per gallon (using the Platts wholesale assessment at the Colonial Pipeline), which was $.08 per gallon lower than the weekly average NYMEX futures settlement price. After the supply disruption due to hurricane Katrina, the Gulf Coast gasoline cash market rose more than one dollar to $2.84 per gallon for the daily average on August 30 (one day after the storm), $.37 higher than the NYMEX futures settlement price on August 30. This differential between the cash and futures prices represents the free market price that is derived in light of the extreme supply disruption and reflects a new equilibrium in the marketplace in response to the shock to the demand and supply balance.

NYMEX has closely monitored the gasoline futures market during this recent period of price increases in the aftermath of hurricane Katrina and has initially concluded that the market behaved rationally and the market participants acted responsibly in their futures and options trading.

SURVEILLANCE

Hurricane Katrina has had a devastating economic impact. Nine refineries in the Gulf of Mexico have been damaged beyond immediate repair and critical petroleum supplies have been lost. Prior to Hurricane Katrina, the U.S. refineries had already been running at maximum capacity for years, struggling to keep up with rising gasoline demand. This huge natural disaster in a key refining region only further exacerbated an already growing problem.

The NYMEX Market Surveillance staff routinely follows trends in the cash markets, focusing on whether the futures markets are converging with the spot physical market as the NYMEX contract nears expiration. In light of the market uncertainties that resulted from hurricane Katrina, the NYMEX staff also monitored the supply and demand fundamentals in the underlying cash market to ensure that NYMEX prices reflect cash market price movements, that there are no price distortions and no market manipulation.

After analyzing events and developments over the past week, NYMEX staff believes that price increases experienced were due to fundamental market factors tied to supply disruptions in the wake of hurricane Katrina. The NYMEX system worked according to design, and added a level of economic stability to the situation by providing a viable price discovery and risk management forum.

SPECULATORS

It is widely, yet inaccurately, theorized that speculators can drive prices up. Placing blame on speculators may grab the attention of the media, but does not accurately reflect the realities of how markets work. With hundreds of commercial participants and instantaneous price dissemination, any "speculative" price would be met with an equally strong "commercial" reaction. If markets move in a direction inconsistent with actual market factors, there is a vast number of participants including energy producers, wholesalers, retailers, and government agencies that have comparable access to information. These participants will respond to ensure that prices rapidly return to where the industry consensus believes they should be.

Speculators do exist and they actually play a valuable, even necessary role in the market. They add liquidity to the market and enable commercial traders to get in and out of the market when necessary. By the nature of their role, speculative traders seek to take advantage of price trends, but because they lack the real product to back up their investment, they cannot control the price. They create virtually no impact on daily settlement prices, the primary benchmark used by the marketplace.

The Exchange has been scrutinized in the past on the role of hedge fund participation in causing market volatility. The effects of hurricane Katrina further emphasize the minimal impact hedge funds and speculators have on futures prices when compared to the real impacts of true market factors. hurricane Katrina is a natural disaster that severely disrupted the U.S. supply system and in effect drove prices higher.

Hedge funds do not account for anywhere near enough volume to affect prices. According to a NYMEX study on the participation of hedge funds in the energy markets over a one year period beginning in January 2004, hedge funds only accounted for 4.6% of overall futures volume. Of this total, the crude oil futures market had 3.07% hedge fund participation and, its products, heating oil and unleaded gasoline, had 3.62% and 3.26% hedge fund participation, respectively.

MARKET IMPACT OF KATRINA

NYMEX directly felt the disruptive effects of Katrina in our energy futures markets. The Exchange experienced several unprecedented market events in the aftermath of Katrina. Significant price moves occurred in the energy complex on Sunday evening during the NYMEX ACCESS[sm] trading session which commenced at 7:00 PM. During this session (which is effectively the commencement of the Monday business day) gasoline moved upward due to severe concerns around the immediate and longer term effect to refineries in Louisiana, as well as pipeline distribution systems in the region.

During regular trading hours on Tuesday, August 30, the September 2005 unleaded gasoline contract traded to its maximum upward price limit, resulting in a temporary trading halt. Exchange rules impose a price fluctuation limit of $0.25 per gallon of unleaded gasoline above or below the previous day's settlement price. When that limit is hit, a five minute temporary trading halt is triggered. This limit was reached last Tuesday when the September 2005 contract traded at $2.31. In accordance with NYMEX Rules, the market was halted at 11:15 AM and re-opened after 5-minutes with an expanded limit of $0.50 cents above the previous day's settlement.

In response to the price volatility, NYMEX increased margins on several occasions for a variety of the energy futures contracts, including gasoline and crude oil. Margin is the money or collateral deposited with the clearinghouse to protect the clearinghouse against loss on open futures or options positions. In all cases, NYMEX required additional margin to maintain the integrity of the clearinghouse. Margin is vital to ensuring the financial integrity of the Exchange and provides the clearinghouse with the ability to protect customers against counterparty credit risk. On August 30, 2005, NYMEX managed and cleared the *greatest single intra-day variation margin call scenario, when it moved nearly $2 Billion.*

During the August 30 trading session, NYMEX set daily volume records for overall Exchange volume and for gasoline and crude oil futures, as well as for the Exchanges electronic clearing platform NYMEX Clearport[sm]. The following day, August 31, Exchange-wide options, NYMEX Division options, and NYMEX ClearPort[sm] clearing once again reached record volumes. These record volume numbers, clearly reflect NYMEX's importance as a transparent trading forum where customers can effectively manage their price risk. It is precisely during such times of market volatility and uncertainty that the Exchange's vital role in facilitating price discovery and risk management is most crucial to our customers.

During the entire week following hurricane Katrina, NYMEX Compliance and CFTC officials have had a heightened presence on the trading floor overseeing all

markets. All activity has been thoroughly reviewed utilizing all available electronic tools to detect any abusive activities.

CONCLUSION

At all times during this period of extreme uncertainty in the market, NYMEX has been the source for transparent prices in the energy markets. Our price reporting systems to the world's vendors have worked flawlessly and without delay. Our trading systems during regular trading hours and during after hours trading on our electronic platforms have performed flawlessly.

Even though as consumers we may not like the result, the NYMEX marketplace performed its responsibility to create open, competitive and transparent energy pricing. We can only imagine the market uncertainty and further devastation to consumers if NYMEX were unable to perform its duty and prices were determined behind closed doors.

I thank you for the opportunity to share the viewpoint of the New York Mercantile Exchange with you today.

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