S. HRG. 106–765

GAS SUPPLY AND PRICE ISSUES

HEARING

BEFORE THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE

ONE HUNDRED SIXTH CONGRESS

SECOND SESSION

ON

GASOLINE SUPPLY PROBLEMS: ARE DELIVERABILITY, TRANSPORTATION, AND REFINING/BLENDING RESOURCES ADEQUATE TO SUPPLY AMERICANS AT A REASONABLE PRICE?

JULY 13, 2000

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

U.S. GOVERNMENT PRINTING OFFICE

68–224 DTP WASHINGTON : 2000

For sale by the U.S. Government Printing Office
Superintendent of Documents, Congressional Sales Office, Washington, DC 20402

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GAS SUPPLY AND PRICE ISSUES

THURSDAY, JULY 13, 2000

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

The committee met, pursuant to notice, at 9:30 a.m. in room SD–366, Dirksen Senate Office Building, Hon. Frank Murkowski, chairman, presiding.

OPENING STATEMENT OF HON. FRANK H. MURKOWSKI, U.S. SENATOR FROM ALASKA

The CHAIRMAN. I call the hearing to order. We have a number of witnesses this morning. The purpose of the hearing is an oversight hearing on gasoline supply problems, deliverability, transportation, and refining, blending, resource adequacy to supply America at a reasonable price structure.

Our first witness is Mr. Robert Perciasepe, who is the Assistant Administrator, Office of Air and Regulation, Environmental Protection Agency, joined by Mr. John Cook, Director of the Petroleum Division of the Energy Information Administration at the Department of Energy, joined by Richard G. Parker, Director of the Bureau of Competition, Federal Trade Commission, joined by Lawrence Kumins, the Specialist in Energy Policy, Congressional Research Service, Library of Congress, Red Cavaney, president and CEO, American Petroleum Institute, Bob Slaughter, general counsel, National Petrochemical & Refining Association, and W. H. Eric Vaughn, president and CEO of Renewable Fuels Association.

Gentlemen, today's hearing will examine some of the reasons for last month's steep price hikes for gasoline in the Nation as well as the Midwest specifically. A few weeks ago gas prices in the Midwest were the talk of the country. A gallon of gas was going for about $2.50, and there has been a lot of finger-pointing, everybody from the administration and the EPA, almost everybody imaginable.

While we have got some people here that hopefully will address some of these accusations, in any event everyone seems to be a culprit, big oil, big Government, OPEC, and so forth. Have I missed any out there? Well, they can stand up.

Our hearing today will focus on what happened in the Midwest, also on what is happening Nation-wide. The Midwest problem is part of an overall energy delivery system in the United States that in my opinion has deteriorated to almost a breaking point, and while prices in the Midwest are moderating, free markets work. Price spikes tell us something is wrong, while I think we are head-

ing for a serious energy problem in this country after years of neglect, and a few examples of that follow.

Last winter, Northeast heating oil prices hit the roof when cold weather caused supply problems which could not be offset by higher sulfur imported heating oils. However, at no time did we actually run out of fuel and the availability of fuel in the Northeast, but the stocks were very low.

This summer, Clean Air Act requirements, pipeline outages, refining problems, coupled with low inventories, led to high prices that prompted this hearing. Black-outs, brown-outs in our electric system are already occurring, and we are being warned by the Secretary of Energy they are likely to occur. The reality is we may have serious shortfalls before the summer is over.

There is a coming price shock for consumers this winter when they start using natural gas. Even though demand has skyrocketed for this fuel, a lot of conversions in the electric industry, supply has remained constant. However, prices that were $2.50, $2.40 6 months are now approaching $4 deliveries in January and February up to $4.20, so prices are reaching historic highs. Storage for gas is low in the summer, when normal storage is high.

Price, since over 50 percent of Americans heat with natural gas in the Northeast, heating oil problems last year may look like a picnic compared to the howling that we will likely hear this winter.

So I think the realization is evident something is wrong. Our energy use is growing, but we are producing less and importing more. as far as natural gas is concerned, I believe we are about 160 trillion a year ago. Our reserves are about 150 currently. We are using our reserves faster than we are replacing them. Our delivery system is stretched to capacity, but regulations are being heaped upon regulations, making the delivery process a lot tougher.

Consumers are paying the price for a system being asked to do more things with less. We have not built a major refinery in 30 years in this country and the question is, why? Our current refineries are running at full capacity. Obviously it is not a very attractive investment, or American capital would be investing in it.

Our pipelines, according to the EIA, handle 30 different grades of gasoline. What is the cost for that to the consumer, and is that necessary? Our domestic energy production for oil is approaching all-time lows, while our consumption is at an all-time high. Since 1992, domestic production is down 17 percent.

Well, I think we are in trouble. The administration does not appear to recognize it, and I am troubled by that. In fact, the Secretary of Energy has said we were caught napping. Well, I do not know if that is going to wake us up or not.

Energy is much too important to too many Americans for our Government to treat it like a luxury. It is used to produce and deliver our food, and provides our jobs, heats our homes and so forth. It runs our computers, our lights, our machinery.

Ten years ago when we went to war over energy we lost 147 lives in that Iraqi conflict. We could have lost many more. Now Iraq has become our fastest-growing supplier, even as we bomb them regularly. It is kind of ironic. We seem to buy their oil, put it in our airplanes to go bomb them. Maybe that is an oversimplification of foreign policy, but it is one it is apparent.

It is high time that we get serious about this. The recent spikes and dislocations that we have seen and others we know we will soon see, but maybe they are like the old canaries in the coal mines. Some of you might remember them. They are the early warning system of a system reaching its breaking point.

Well, I think we need to conserve more. We need to produce more at home. We need to consider the impacts of our actions and develop policies which make sense. If we do not quickly and seriously come to grips with the situation, we will soon face the inevitable economic and national security consequences of a policy that is adrift, and I do not think we can afford that.

Senator Bingaman.

Senator BINGAMAN. Mr. Chairman, I think the hearing is very timely. I thank you for holding the hearing. Unfortunately, as you know, the joint leaders scheduled, I guess, three votes right now, one of which is about half over with, and we are going to have to deal with that, which fouls up our ability to be here on a continuous basis this morning, but I do think the issues are very important and I welcome all the witnesses.

The CHAIRMAN. Gentlemen.

Senator THOMAS. Mr. Chairman, I will not make a statement. We have talked about the lack of policy. We have talked about the lack of domestic production, overregulation, reformulated gas, incentives for low production. All those things need to be talked about, so I am anxious to hear from the witnesses. Thank you.

The CHAIRMAN. Anybody on this side?

[The prepared statement of Senator Johnson follows:]

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

Mr. Chairman, I am pleased that we are holding this hearing today. The rapid rise in gas prices over the last several months has been a major cause of concern for both my state of South Dakota and the entire nation. There is growing frustration about the causes and effect of the gas prices on our economy and our livelihood.

South Dakota currently has the second highest gas prices in the United States. This has caused a heavy burden on the citizens of my state, particularly on the farmers who are already hurting from low grain prices. Some farmers are losing net income of $4 to $5 an acre because of growing diesel costs. Moreover, in a large state like South Dakota, the everyday costs of getting around and conducting personal and business activities is causing great strain.

What is frustrating about the current situation is the difficulty in getting straight answers on the causes of the price hikes. I believe most Americans understand normal supply and demand and their effects on prices and the economy. But the speed with which prices have gone up, especially in our healthy economy, and the lack of answers from the oil industry is confusing, to say the least. The fact that we need to hold a hearing on this matter demonstrates the need for answers.

Moreover, the lack of answers lends credence to charges of price gouging at a time when oil companies are recording profits at record levels. Even in recent weeks, wholesale prices were coming down but prices continued to go up nationwide. On the surface, there appears to be no other explanation than to say that some profit taking is going on at the expense of our economy and at the expense of every American that uses gasoline.

One thing is clear from this experience: we need to reduce our dependence on foreign oil. I have continually supported efforts to encourage the development and use of alternative fuels, particularly ethanol. Most recently, I have cosponsored a measure authored by Senators Daschle and Lugar that would establish nationwide standards for the use of renewable fuels such as ethanol and biodiesel. South Dakota has made use of these fuels to great effect: currently, E–85 fuel, which is 85% ethanol and 15% gasoline, is 35 cents/gallon less than standard gasoline. It is clear that efforts to encourage the use of alternative fuels will help to lower prices and lower our dependency on foreign oil. Moreover, charges by the oil industry who blame the

requirements for the production of reformulated gasoline (RFG) for the gas price increases are patently false when there is ample evidence that to the contrary that RFG is cheaper.

Mr. Chairman, I plan to direct my questions on these issues and I look forward to hearing the testimony of the witnesses.

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

Senator AKAKA. Mr. Chairman, I have a statement here I would like to place in the record. My statement is that we should, at this point in time, when we are having problems with OPEC on prices, begin to really look at future strategies on fuels. I would even mention that we should really seriously look at natural gas as a fuel that we have in the United States, and we could certainly use, and begin to look in that direction.

Mr. Chairman, I thank you for this hearing, and we hope that this will certainly improve the situation in our country.

[The statement of Senator Akaka follows:]

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

Mr. Chairman, there has been no shortage of blame for recent increases in gasoline prices—short supplies, pipeline problems, cleaner gasoline requirements, too much driving and gas guzzlers, oil company manipulations, even an esoteric patent dispute, to name a few.

These are simple manifestations of a deeper problem which is import dependence. Our import dependence has been rising for the past two decades. Lower domestic production and increased demand has led to imports making up a larger share of total oil consumed in the United States. We were importing 34 percent of our oil before the embargo in 1973. The Energy Information Administration forecasts that oil imports will exceed 60 percent of total demand this year. Long-term forecasts have oil imports constituting 66 percent of U.S. supply by 2010, and more than 71 percent by 2020.

Continued reliance on such large quantities of imported oil will frustrate our efforts to develop a national energy policy and set the stage for energy emergencies in the future.

Our import dependence has allowed a small band of countries to manipulate the oil prices through production controls. Our economy has suffered greatly at the hands of OPEC. Estimates of the cost to U.S. economy as a result of excess prices over those that would prevail in a relatively free market, run into several trillions of dollars.

If we are to have a comprehensive energy policy that strengthens our economy and serves the real needs of Americans, then we need to dismantle our dependence on foreign oil as soon as possible. We need to send a clear message to OPEC about America's resolve.

The way to improve our energy outlook is to adopt energy conservation, encourage energy efficiency, and support renewable energy programs. Above all, we must develop energy resources that diversify our energy mix and strengthen our energy security.

Natural gas appears to be the most attractive fuel to form the cornerstone of our energy policy. It is the right fuel to bridge the energy and environmental issues facing us. Natural gas is the cleanest fossil fuel. Wider use of natural gas will be more benign to the environment compared to some other fuel sources.

And the way to do this is to begin using more natural gas—a domestically abundant fuel—that is safe and reliable to deliver, and is more environmentally friendly than oil.

We must invest in technologies that help facilitate wider application of natural gas. New technologies such as micro turbines, fuel cells, and other on-site power systems are environmentally attractive. Wider use of these technologies in the private and public sectors must be facilitated. All Federal research and development programs should be reevaluated to provide them with a clear direction. We must boost support for those programs that help replace imported oil.

I am interested in hearing what our witnesses have to say.

The CHAIRMAN. Thank you.

Senator Gorton.

STATEMENT OF HON. SLADE GORTON, U.S. SENATOR FROM WASHINGTON

Senator GORTON. Mr. Chairman, I have a written statement I would like to be included in the record.

The CHAIRMAN. Without objection.

Senator GORTON. I cannot let the opportunity go by without saying that the phenomenon we have seen of huge spikes in gasoline prices, the phenomenon we have seen that you have noted of huge spikes in the cost for electricity, which we are going through right now, are all the inevitable consequences of energy policy that has totally deemphasized supply while at the same time ignoring demand.

Every year, the share of our petroleum products that come from overseas increases. Obviously, that gives the suppliers, those countries a tremendous degree of control over prices here in the United States, and it seems to me that an appropriate energy policy must go at both, must be directed at both supply and demand, at supply by increasing the availability of supplies of petroleum and other energy sources, from sources within the control of the United States, both fossil fuels and artificially created fuels. We need a greater encouragement for the development and use of at least fuel supplements, or fuels from reliable resources here in the United States.

At the same time, it seems to me it is very clear that we need to look at the demand side. As you know, and as Senator Bingaman knows, I believe we are far overdue in requiring greater fuel efficiency on the part of our automobiles and trucks. I think the House was unwise, and I may say my committee in the Senate has not been unwise. It has been wise in continuing the partnership for a new generation of vehicles to which Senator Bingaman and I have both spoken.

At the same time, we need a policy that stops discouraging, particularly renewable energy in the United States. It is bizarre that at this time of great and increasing demand we have so many agencies of the Federal Government who want to remove dams from our rivers and lessen a source of electrical power that is renewable, pollution-free, and totally within our own control.

The huge increase of fossil fuel use and in air pollution that will accompany removal of dams on the Columbia-Snake River System just adds to the problems that we already have. A proper energy policy emphasizes both supply, and particularly a supply of power that is within the control of the United States, and it also requires significant efforts to reduce demand by using the energy that we have more efficiently.

Thank you.

[The prepared statement of Senator Gorton follows:]

PREPARED STATEMENT OF HON. SLADE GORTON, U.S. SENATOR FROM WASHINGTON

Mr. Chairman, thank you for holding this hearing this morning on the issue of our nation's increasing gas prices. The need to consider a number of positive alternatives to the Clinton/Gore Administration's chaotic and empty energy policy has become one of the top priorities facing this Congress.

I've spoken many times already about the troubling energy situation our nation now faces under the Clinton/Gore Administration. This hearing focuses once again

on the high gas prices in many areas of the country. One major reason the prices are so high is because the United States has become over-dependent on foreign sources of oil. 56 percent of the petroleum products that American consumers use—most of that for oil—comes from foreign nations.

While gas prices in the Pacific Northwest may not be higher than they are in the Midwest, the Northeast or other parts of the country, the Pacific Northwest is facing one of the most serious threats to its power supply. Tight supply and increased demand for electricity has resulted in a dramatic increase in peak power prices throughout the Western part of the United States. In just a few days, the rise in wholesale prices rose from $20 per megawatt-hour to more than $1,200.

The Clinton/Gore Administration itself acknowledges the dire situation the West faces this summer. Just three weeks ago, the Secretary of Energy testified before a House committee that California and the Pacific Northwest face an "imminent" threat of electric power shortages. He was right. California citizens are now being urged voluntarily to reduce their electricity use to avoid power outages. And hundreds of mill workers in Washington were recently laid off due to the dramatic increase in operation costs caused by increased electricity rates.

About 87 percent of electricity-generating capability in Washington comes from hydroelectric power. Hydroelectric power is cleaner and less expensive than coal, oil, or natural gas. Water provides electricity for homes, businesses, cities, as well as an important resource for irrigation, fish, and recreation. In low water years or high demand periods, energy must often be imported to meet power needs.

Hydroelectric power from dams in Washington also supplies surplus electricity to California, Montana, and other states in times of shortages. Unfortunately, already this year, the increased demand has lessened Washington's ability to produce the extra power that these states need. To quote Secretary Richardson, California and the Northwest have been "barely able to avoid rolling blackouts."

The outlook is not encouraging. The North American Power Council recently announced that this summer's peak demand for electricity is expected to be 1.7 percent higher than last summer, and the Northwest Power Planning Council has indicated that there is a one in four chance that there will be a blackout in the next three years.

I cite these facts to illustrate how off-the-mark the Clinton/Gore Administration's response to our energy problems has been. They've sent the Secretary of Energy around the world hat in hand to beg countries to lower the costs of the oil they send us. They've discouraged or cut off efforts to create new sources of energy supply. They've given short shrift to renewable sources of energy that we should use to supplement our dwindling oil supply. They've discouraged hydroelectric and nuclear power sources from being relicensed. In fact, no major new power plants have been built in the Northwest in over ten years.

And, worst of all, they've continued to advocate tearing out hydroelectric dams in Washington state that provide a cheap, reliable, clean, and renewable source of energy supply and provide a vital barge transportation system for millions of people in the Pacific Northwest and other areas of the country—a source that is critical this summer as power shortages intensify.

Replacing the clean electricity generated by the dams with the next cheapest source—natural gas—would cost an estimated $308 million per year, as well as $250 million to pay for lost sales and transfer capability costs of power to California, Washington, and Montana. Those costs do not factor in the likely increased costs created by larger demands for oil and natural gas. Hydroelectric dams would be replaced by sources that would certainly produce more air pollution.

If the barge transportation system were eliminated, the cargo would have to be transported by alternative methods—rail or truck. To replace the capacity that these barges now provide, 120,000 more train cars or 700,000 more diesel trucks would be required annually. Forcing that many diesel trucks onto the road would require ten times the amount of gasoline currently used by river barges in the region. Increased diesel fuel would drive up consumer prices and require millions of dollars of taxpayer-funded highway or rail system improvements to accommodate the increased traffic. It would also, of course, dramatically increase the amount of pollutants emitted into the air.

I will take this opportunity to once again call on the President and Vice President to stop exacerbating the serious energy crisis America now faces and to abandon proposals such as tearing out our hydroelectric dams in the Pacific Northwest.

The CHAIRMAN. Thank you.

Senator Dorgan.

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

Senator DORGAN. Mr. Chairman, very briefly, I suspect much of what everybody says is accurate. You are perfectly correct in saying we are far too dependent on foreign-source energy, far too dependent, and we have become even more dependent in recent years. I think the jeopardy in that is demonstrated in recent months, where we sit and gnash our teeth and wipe our brow wondering whether a group of countries will decide to increase or decrease production, and what kind of impact that will have on the American people and the American economy. We are too dependent.

Senator Gorton indicated we should be concerned about both supply and demand. He is absolutely correct about that. We need, in my judgment, some additional incentives for domestic production, but we especially ought to encourage more ethanol production. I am a big fan of ethanol. I see Eric Vaughn is here. I know some are not big fans of ethanol in this country. They put ads in the newspaper telling us we ought not do it, and when you look at who is sponsoring those ads, well, I figure that is probably a good case for doing it. I think we really ought to be concerned about much more production of renewable energy, and I would love to see ethanol plants starting in the prairies in the Midwest and taking the alcohol content from a kernel of corn or a kernel of barley and extending our energy supply and having the protein feedstock remaining.

But having said all that, I think it is also true that when you drive down the street almost anywhere, you see what is out on the road these days, and we have an appetite in this country to drive bigger, heavier, less efficient vehicles all over the country.

You can drive down the road and five of six vehicles you find are vehicles that are moving gas through it at a record pace, because they are thousands of pounds and huge vehicles. People have a right to drive those things, but then we ought to understand the consequences of that as well.

On the demand side, that puts a pretty big hit on the increased use of petroleum energy in this country, so we should be concerned about a whole range of issues here. This hearing is timely.

I regret we have got three votes. I guess the first one has started.

The CHAIRMAN. We have 3 minutes left.

Senator DORGAN. I think almost everything people say about this is probably reasonably accurate. We have to do a lot of things in a coordinated way to address these issues.

The CHAIRMAN. Senator Burns.

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

Senator BURNS. Thank you, Mr. Chairman. I will not take long. I just want to submit my statement for the record this morning.

I think as we look at the new generation in automobiles and the way we power our automobiles, that work has got to continue to go on as far as conservation is concerned and using other fuels.

But let us not be dishonest with the American people. We have got supplies of fuel. We cannot get to them. We cannot move because we need about 40 miles of pipeline in Montana, and we cannot do it because some NIMBY's—not in my backyard—and we

have got to go across the Forest Service land and we are not going to get that done, and they are just not going to allow it. Then they wonder why we do not get fuel.

We have got a recommendation now that we want to make national monuments out of the Upper Missouri River, and what you will do is take out two gas fields of natural gas. The man said we should be using more natural gas, and we have got a lot of it, but we are going to withdraw that. We withdrew it from the sweet grass hills, yet we have pipelines coming out of Alberta, Canada going across Montana carrying natural gas.

Let us be honest with the American people, because right now we are being prevented from getting to our energy supplies that are huge—huge—by folks who have an attitude that they are going to drive us back, and we can all go back to riding horses. I do not see anything wrong with that at all. I have still got my saddle, my tack. I can hustle up an old buggy. I ain't going nowhere. I'm getting to the age where I am just circling the drain. Where am I going? I ain't in no big hurry.

But if you want us to go back to horseback and horse power, where we produced our own energy on the farm for the horse, we can do that, but I am not real sure all of America is ready to do that yet, and so I just—let's be honest with the American people. We have got some people in this country that are standing in the way of us doing what we should be doing with our distribution, and also our discovery and development of our resources that we have now.

We have coal, we have natural gas, but they will not let us participate in the marketplace, so let's don't be scaring the American people and telling them we have a shortage, because there is none out there. It is out there. We just cannot get to it. Thank you.

[The prepared statement of Senator Burns follows:]

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

Mr. Chairman, thank you for the opportunity to address the committee today. We have held numerous hearings on gasoline prices and shortages over the past few months. I have joined you in taking a very critical look at the current situation facing this country's fuel needs.

One thing is very clear, we have not been building the infrastructure to meet America's increasing energy needs. We have invested in conservation, and we need to continue to do so. We have invested in new technologies, and we should continue to do so. However, we must not forget the realities that face us. America is dependent upon fossil fuel and nothing will change that overnight.

Whether it is transmitting electricity over wires or fuel through pipelines, we have not done enough to keep the energy flowing from source to point of consumption. All too often bottlenecks are created and inefficiencies drive consumer prices upward.

In the Commerce Committee we recently passed legislation making pipelines more safe, and hopefully aiding in our ability to place pipelines in areas where they are urgently needed. However, this committee needs to look at the roadblocks faced in putting pipelines across public land. I have detailed the nightmarish exercise we went through in Montana trying to relocate a very short section of the Yellowstone Pipeline. To this day the pipeline is still incomplete and we are utilizing a much more unsafe, less reliable and more expensive method of transportation.

Mr. Chairman, I also want to take the opportunity to discuss the need to diversify our energy consumption. I am from a state that produces natural gas, oil and a lot of grain that can be converted into ethanol. Some Senators seem to think that oil and ethanol are naturally at odds with one another, but I have to disagree. While we are held hostage by OPEC and consistently bemoan dependency on foreign en-

ergy, we have an abundance of grain so severe that our farmers are forced to sell their grain at well below half its estimated cost of production.

I hope that today we will see a reinvigorated push to look at ways to ease the transportation problems facing us as we try to deliver the country's fuel to its end users. I hope we get into a candid discussion regarding the use of ethanol as both an oxygenate and as a large percentage of our fuel supply in the near future.

The CHAIRMAN. I am going to recess the hearing and go vote. We have got two votes back-to-back, so I will catch both votes and then come back and we will proceed, and then we will have to break for the third vote.

[Recess.]

The CHAIRMAN. Let's try it again, gentlemen. I will call the committee back to order.

The gasoline supply problems in the country. I think we might start with Mr. Cook, Director of the Petroleum Division, Energy Information Administration, and I apologize for the delay, but that is the best we can do. Please proceed, Mr. Cook, and I would appreciate it if we could keep it to 5 to 7 minutes, because we will have several questions. Go ahead.

STATEMENT OF JOHN COOK, DIRECTOR, PETROLEUM DIVISION, ENERGY INFORMATION ADMINISTRATION, DEPARTMENT OF ENERGY

Mr. COOK. Thank you, Mr. Chairman. I would like to thank the committee——

The CHAIRMAN. Excuse me. Do we have the mikes working? The answer is, now, yes.

Mr. COOK. With gasoline prices at $1.59 Nation-wide, compared to just $1.16 last July, consumers want an explanation. In EIA's view this summer's run-up, like other recent price spikes, stem from a number of factors. The stage was set for gasoline volatility as early as last winter as a result of tight crude oil supplies, which in turn led to low crude oil and product stocks and high crude prices.

With little stock cushion to absorb unexpected events, Midwest gasoline prices surged when a number of added supply problems developed, including pipeline and refinery problems and a difficult transition to phase II reformulated gasoline, RFG.

Crude oil continues to be an important factor in explaining the price increases. Crude prices have risen from about $10 in December 1998 to $34 recently. While $34 is far from the inflation-adjusted, $70 highs we saw in 1981, for many it is the rapidity of these increases that may be as disruptive as the higher levels.

Regardless, since June of 1999 crude prices account for about 33 cents of the overall increase in gasoline.

The CHAIRMAN. Would you repeat that again?

Mr. COOK. Year-over, June to June, crude oil prices account for about 33 cents per gallon of the overall increase.

The CHAIRMAN. Crude oil prices—I want to make sure the record reflects what you are saying. Crude oil price increase contributes 33 cents?

Mr. COOK. Right, on average.

The CHAIRMAN. Even though you're comparing a year ago, and crude oil prices a year ago were, per barrel, roughly 10, 12——

Mr. COOK. I think it was more like $17, $18 for the monthly average in June. I kind of switched references. I was just pointing out initially that crude is up from about $10 in December 1998 to $34, but in doing a year-over-year comparison of summer gasoline issues, if you will, we just took the monthly average price for June last year and compared it to this year, and it amounts to about 33 cents a gallon.

The CHAIRMAN. Please proceed.

Mr. COOK. Crude oil prices, of course, rose because of a shift in the balance of global supply and demand. Crude markets tightened last year as OPEC and several other exporting countries reduced supply, while at the same time the economic recovery in Asia stimulated demand growth. As a result, crude oil and product inventory fell, and by the end of 1999 global stocks were very low, especially in the United States, as shown in figure 1.

The CHAIRMAN. Why don't you take us through figure 1?

Mr. COOK. The top panel shows us crude oil inventories. The blue region is the normal band. You can see from the black line what the observed crude oil stock levels are, and they have been low for quite sometime now, and we project them to remain low for the balance of the year.

The CHAIRMAN. Why?

Mr. COOK. Basically, strong demand again on the one hand, and undersupply from OPEC and other producers will keep crude oil supplies tight for the rest of the year.

Gasoline is the green region at the bottom. That is also the normal band. The red shows the actual path, and somewhat ironically it looks, relatively speaking, better than crude oil, but it is still low.

It got low last winter, and strong gasoline demand again, even though refinery production is relatively high, just not high enough to match demand and rebuild stocks to significant levels, and we think that situation will continue at the low end of the band for the rest of the year.

In particular, last year, as markets tightened, crude oil prices rose faster than product prices, squeezing refinery margins and discouraging refinery production of all products, not just gasoline. This added a downward pressure on inventories.

Figure 2 shows that in June of last year the difference between wholesale gasoline prices and crude oil prices averaged less than 6 cents a gallon compared to the more typical 12 cents a gallon seen in June. Nevertheless, by spring of this year low product stocks had generated much higher product prices relative to crude.

While these margins then were low last year, they are now high at about 20 cents a gallon, 14 cents more than last year and, in short, low gasoline inventories are probably adding about 10 cents a gallon to the price over what we would typically expect.

The CHAIRMAN. Now, that is 10 cents more on the 33 cents?

Mr. COOK. Yes, sir.

The CHAIRMAN. And a little explanation of that. You are not out of gasoline, but you theoretically do not have an abundance.

Mr. COOK. There is a seasonal thing going on here with refineries and maintenance in the spring. Typically they are not at maximum gasoline production, yet gasoline demand starts to rise, so as that balance between supply and demand tightens in the spring,

you get a little bit of an increase in wholesale prices over the price of crude, putting that at about 4 cents for that time of year.

The 14-cent increase between wholesale and crude gives you a measure of how much tighter than normal the spring gasoline markets have been, and that extra 10 cents is what I am talking about here, seasonal, plus extra tightness, plus crude, is 47 cents, 33, 4, and 10. This is Nation-wide. We ought to expect the 47 cents higher gasoline prices just from these factors, and yet some regions experience much higher prices than that.

Why? We pointed out on several occasions that when you get a combination of very low gasoline stocks and a market short on crude oil the environment is ripe for price volatility in gasoline both during the spring and the peak summer period. The West Coast has experienced such volatility on a regular basis since 1995, and did again in March of this year, while the Midwest erupted in May. Several pipeline and refinery problems in the Midwest caused oil stocks to fall 13 percent below their 5-year average by the end of May.

To give you a comparison, U.S. gasoline inventories are only 5 percent below normal. Thus, with inventories in the Midwest at extremely low levels, prices were bid up rapidly as marketers scrambled for limited supplies of both conventional and RFG.

As shown in figure 3, both RFG and conventional prices rose quickly, but RFG began rising earlier and at a faster pace. RFG prices in the Chicago-Milwaukee areas——

The CHAIRMAN. Now, that is reformulated gasoline?

Mr. COOK. Right. Prices in the Chicago area drew most of the attention as they climbed more than 30 cents higher than conventional.

If we look at figure 4, we see the Midwest RFG price increases appear to be similar to the surges we have seen often in California. In other words, it is not a unique first-time event. We have seen it quite often in California since the start of their program. With respect to the Midwest, the numerous reasons for the strong price response are as follows.

First, the Midwest RFG market is very small. Only 13 percent of all gasoline sales there are reformulated. This limits nearby supply options. Secondly, this is the first year of the phase II program, and some refiners clearly had difficulty making the transition to summer grade gasoline. In the Midwest, ethanol is used to make reformulated, which requires a unique blend of gasoline blending components with a very low vapor pressure.

Third, the dramatic change in gasoline specifications for summer grade RFG impacted refineries in a different manner. While each was able to produce enough to meet its own system's needs, some produced extra reformulated gasoline, and some were unable to do so. In other words, some were only able to produce enough to meet their own requirement, which left independents scrambling to find new sources of supply in a market that was initially very tight.

Finally, with few alternative sources or readily available supply, it simply takes time for supply-demand imbalances to be resolved. The RFG markets in the Chicago areas are similar to those in California, in that they are isolated and use a unique gasoline blend.

Less than 10 refiners supply the Chicago-Milwaukee area, and they responded to the incentive for more supply by arranging for blending components to be brought in from the gulf coast, but that process takes several weeks. In fact, today the U.S. refining system has little excess capacity, and is confronted with continuing growth in the number of distinct gasoline types that must be delivered to different locations. This increases the potential for temporary supply disruptions and price volatility.

Fortunately, however, wholesale prices in the Midwest began to decline in the first half of June. This reflected increasing supplies, as confirmed by EIA data. Midwest gasoline stocks have now climbed 15 percent—excuse me, 15 percent by the end of May, and in June returned to normal levels.

In direct response to this supply increase, reformulated retail prices have now dropped 37 cents a gallon and conventional prices have dropped over 26 cents in the last 3 weeks. These decreases put the Midwest back in line with other regions.

In closing, while the first hurdle of the transition to summer grade gasoline is behind us, we may experience more volatility before the summer is over. While Midwest stocks are recovering, East Coast stocks at the end of June were still 8 per cent below the normal level, with RFG even lower than that. California gasoline stocks were 6 percent below the 5-year average.

So as we enter the peak season this month, refiners will be pushed just to meet demand. With low stocks and refineries operating at very high levels, any supply disruptions could trigger yet another price run-up.

This concludes my testimony.

[The prepared statement of Mr. Cook follows:]

PREPARED STATEMENT OF JOHN COOK, DIRECTOR, PETROLEUM DIVISION, ENERGY INFORMATION ADMINISTRATION, DEPARTMENT OF ENERGY

RISING CRUDE OIL AND GASOLINE PRICES

Thank you, Mr. Chairman. I would like to begin by thanking the Committee for the opportunity to testify on behalf of Mark Mazur for the Energy Information Administration (EIA).

With gasoline prices at $1.59 nationwide, compared to $1.16 on average last July, consumers want an explanation. In EIA's view, this summer's run-up, like other recent price spikes, stemmed from a number of factors. The stage was set for gasoline volatility as a result of tight crude oil supplies, which led to low crude oil and low product stocks and high crude oil prices. With little stock cushion to absorb unexpected events, Midwest gasoline prices surged when a number of supply problems developed, including pipeline and refinery supply problems, and a difficult transition to summer-grade Phase II reformulated gasoline (RFG).

Crude oil continues to be an important factor in explaining price increases over year-ago levels. West Texas Intermediate (WTI) crude oil prices have risen from a low point in December 1998 of under $11 per barrel to $34 recently. While $34 is far from the inflation-adjusted $70-per-barrel historical highs seen in 1981, for many, the pace of these increases may be as disruptive as the higher absolute levels. From a year-ago June, crude oil price increases have contributed about 33 cents per gallon to the increase in the price of gasoline.

Crude oil prices rose as a result of a shift in the global balance between production and demand. Crude markets tightened in 1999 as OPEC and several other exporting countries reduced supply, while, at the same time, the economic recovery in Asia stimulated demand growth. In 1999, world oil demand exceeded production by over 800 thousand barrels per day, reducing world inventories by about 300 million barrels. By the end of 1999, global inventories were at very low levels—especially in the United States as shown in Figure 1.

In 1999, as markets tightened, crude oil prices rose faster than product prices, squeezing refinery margins, discouraging refinery production of all products, and thereby adding to downward pressure on inventories. Figure 2 shows that in June 1999, the difference between wholesale gasoline prices and WTI crude oil prices averaged less than 6 cents per gallon, compared to the more typical 10–12 cents per gallon seen at that time of year. However, by spring 2000, low crude oil and product stocks generated much higher product prices relative to crude oil. Where the wholesale margins were low last year, they are now high at about 20 cents per gallon, 14 cents higher than in June last year. That is, the low gasoline inventories are probably adding about 10 cents per gallon to the price of gasoline over what we would typically expect this time of year. Yet some regions have experienced much higher price increases since June 1999 than the 47-cent calculation implied here (33 cents from crude oil and 14 cents from wholesale gasoline margins).

EIA has pointed out on several occasions that very low gasoline stocks, combined with a market short on crude oil, generates an environment ripe for price volatility. The West Coast experienced such volatility in February and early March, and the Midwest erupted in May. Several pipeline and refinery problems in the Midwest caused already low stocks to fall to 13 percent below their 5-year average by the end of May. In comparison, U.S. gasoline inventories were only 5 percent below average.

With inventories in the Midwest at extremely low levels, prices were bid up rapidly as marketers scrambled for limited supplies of both conventional and RFG. As shown in Figure 3, both RFG and conventional prices rose quickly, but RFG began rising earlier and at a faster pace. RFG prices in the Chicago and Milwaukee areas drew most of the attention initially as these prices increased more than 30 cents per gallon over conventional prices in the surrounding areas.

As shown in Figure 4, the Midwest RFG price increases appeared to be similar to price surges often seen in California since the start of their RFG program. There are several reasons for this strong price response:

—The Midwest RFG market is small (13% of Midwest gasoline), which limits nearby supply options;

—This was the first year of Phase II RFG, and some refiners had difficulty making the transition from winter to summer grade. In the Midwest, ethanol is used to make RFG, which requires a unique blend of gasoline components with very low vapor pressure (i.e., tendency to evaporate). In several cases, refiners had to bring gasoline components in from other refineries to meet the new gasoline specifications;

—The large change in gasoline specifications for summer-grade RFG resulted in different refineries in the Midwest producing different amounts of RFG than in prior years. While each refinery produced enough to meet its own company's marketing needs, some produced extra RFG and some were unable to produce at historical levels. That is, independent marketers had to scramble to find new supply sources in a market that was initially very tight.

—Finally, with few alternative sources of readily available supply, it took time for the supply/demand imbalances to be resolved. The RFG markets in the Chicago/Milwaukee areas and California are alike in that they are isolated and use unique gasoline blends. Less than 10 refiners supply the Chicago/Milwaukee areas. They responded to the incentive for more supply by arranging for blending components to be brought in from the Gulf Coast—a process that took several weeks.

Today, the U.S. refinery system has little excess capacity, and continuing growth in the number of distinct gasoline types that must be delivered to different locations increases the potential for temporary supply disruptions and increased volatility.

Fortunately, wholesale prices in the Midwest began declining in the first half of June, reflecting increasing supplies, as confirmed by EIA's weekly data. Midwest gasoline stocks have climbed 15% since the end of May and have returned to near normal levels for June. RFG retail prices fell 37 cents per gallon and conventional gasoline fell over 26 cents during the past three weeks.

While the first hurdle of the transition to summer-grade gasoline is behind us, we may experience more volatility before the summer is over. Midwest stocks are recovering, but East Coast gasoline stocks at the end of June were 8 percent below their 5-year average, with RFG 13% below average. California gasoline stocks were 6% below average. Consumers are not expected to reduce consumption much in the short term. As we enter the peak gasoline season, refiners will be pushed to just meet demand. With low stocks and refineries operating at high levels, any supply disruptions could trigger another price runup.

In closing, I want to direct your attention to the upcoming heating season. Although consumers are now focusing on gasoline, EIA is concerned about winter heating fuel supplies. Distillate stocks remain well below normal. Even with a typical inventory build this summer, we likely will enter the winter heating season with

lower-than-normal stocks. Strong gasoline and diesel demand this summer will effectively limit heating oil stock building as refinery production is used to meet consumption.

Partly for the same reasons, natural gas has yet to show signs of building adequate inventories ahead of next winter. Not only does this mean industrial and utility consumption of more distillate this winter, it suggest utilities may use more distillate this summer to meet peak cooling needs, if natural gas prices remain high through the summer months. This could further reduce distillate stock building, resulting in very low distillate inventories before winter begins.

This concludes my testimony. I would be glad to answer any questions.

Figure 1

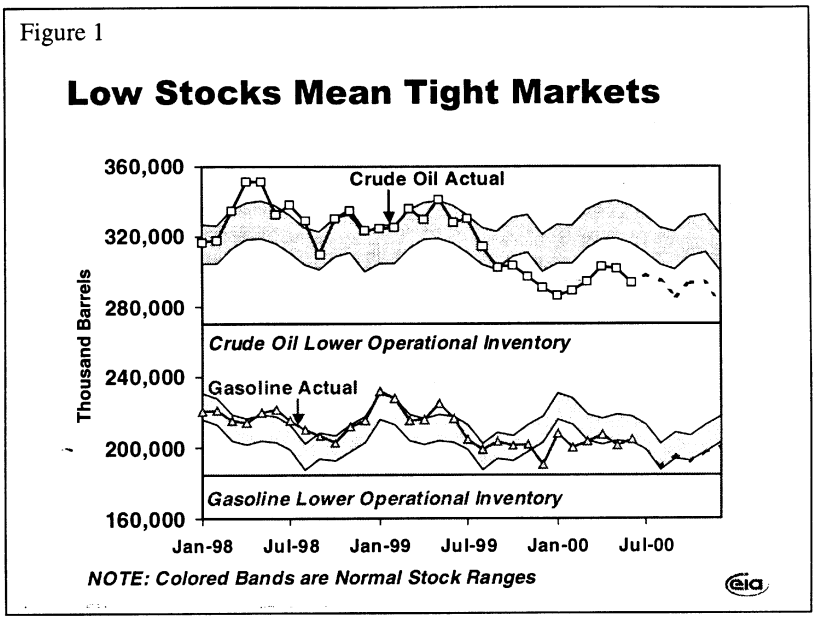


Figure 2

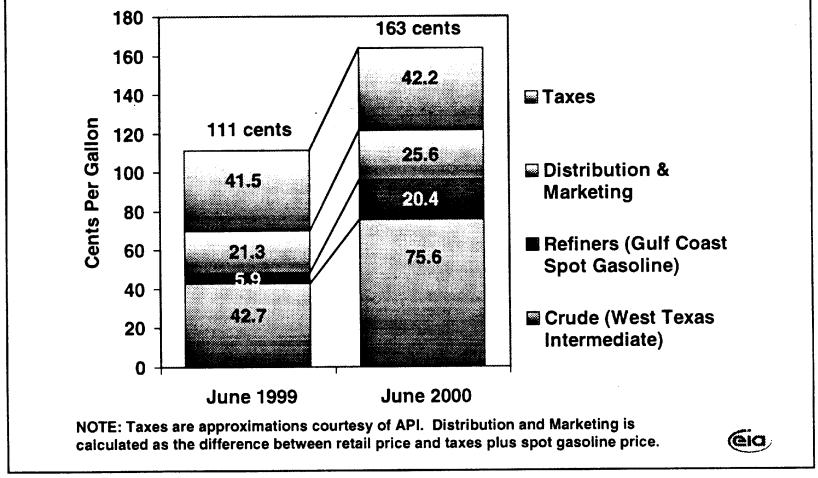


Figure 3

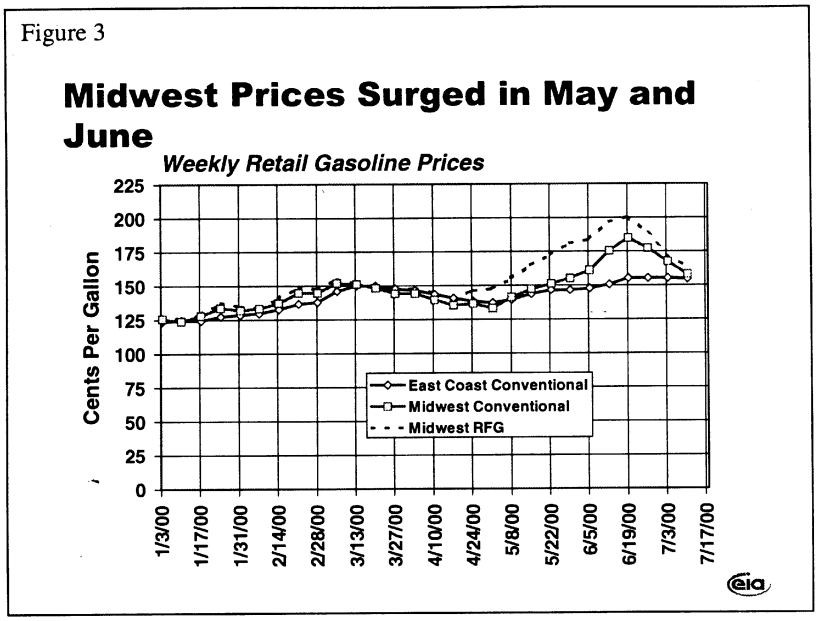
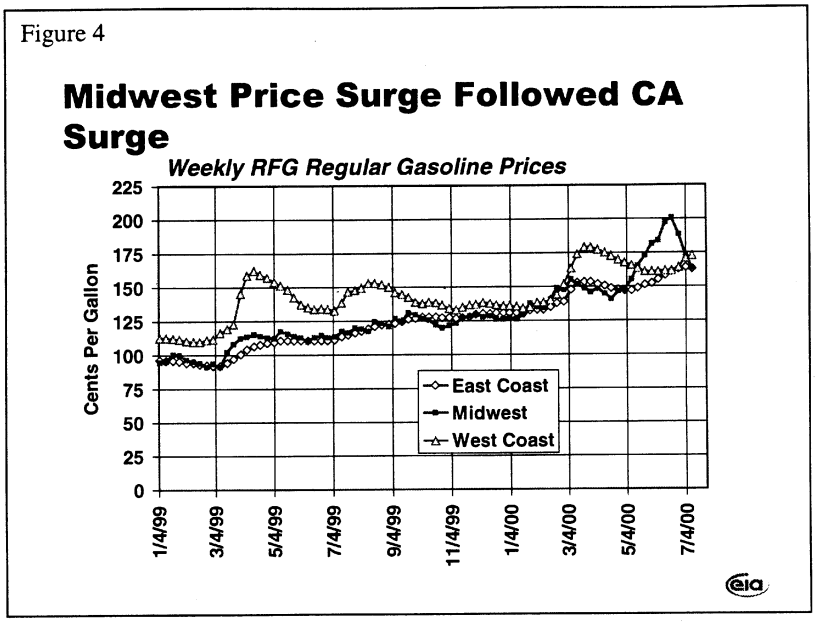


Figure 4



The CHAIRMAN. Thank you very much. If you were going to generalize and start off with an explanation of 33 cents increase in the price of gasoline, and then we added 10 cents for a lack of supply and inventory, then I think you generalize 47 cents overall, would you stick with the 47 cents as the average increase associated with this combination of factors?

Mr. COOK. I would attribute that just to lower crude and oil gasoline stocks generally Nation-wide.

The CHAIRMAN. And not to reformulated gasoline, necessarily?

Mr. COOK. Not to reformulated.

The CHAIRMAN. How much more would you add for reformulated gasoline?

Mr. COOK. I do not think anybody has a good answer to that question. It adds something.

The CHAIRMAN. Well, ethanol is what, how much a barrel?

Mr. COOK. Well, we said 47 cents Nation-wide. In the Midwest we saw Chicago anyway——

The CHAIRMAN. Up to $2.40, $2.50?

Mr. COOK. Retail prices were up 66 cents, so not the reformulated program per se, but that combination of factors, including the reformulated specifications, the difficulty of producing it, the refinery operating problems we experienced, the pipeline problems that were there, all of those things combined give you the extra 20 cents or so.

The CHAIRMAN. And if you compare reformulated gasoline in California vis-à-vis the reformulated gasoline in the Chicago market, Milwaukee and so forth, where they are dependent on ethanol, what is the price differential roughly on the reformulated gasoline, recognizing you use different additives?

Mr. COOK. Typically, California gasoline runs 10 to 15 cents higher, and at times it will spike much higher when you get the tight supply-demand balance out of whack, with a few refinery problems. To give you a comparison of Midwest reformulated gasoline prices versus West Coast would take me a minute or so to look that up.

The CHAIRMAN. What I am concerned with is the assumption that ethanol as an additive brings in a higher cost associated with the retail price of the gasoline vis-à-vis other reformulated gasolines. Of course, the ethanol is subsidized as well, and what we are trying to get at is a comparison of reformulated gasoline.

Mr. COOK. That is a hard one to do.

The CHAIRMAN. And why they dictate a specific type of reformulated gasoline for a specific area, indeed, if there are substitutes. That is what I am getting at.

Mr. COOK. I understand. The problem is that there are a lot of factors that enter into the pricing, and what I was trying to do was in some ways the opposite. I was trying to compare the Chicago market, draw the analogy with California market. It is not the same unique fuel, but it is an expensive fuel to produce, and unique fuel to the area.

The CHAIRMAN. What I would like you to do is to converse—perhaps you can discuss this with other members of the panel, because I have to vote now, and my question is going to be, okay, if we dictate reformulated gasoline in various parts of the country, we have MTBE, which we are phasing out, and we are replacing it with a combination of things, is there the availability of a lesser priced additive to substitute for higher priced additives, or is the formula dictated under a different set of circumstances that mandate, in effect say ethanol in the Midwest, and I will be back in a few minutes, and we can pursue that.

Thank you.

[Recess.]

The CHAIRMAN. This is hopefully the end of the interruptions and we can proceed with your testimony, and we were in the process of posing a question. I think my colleague from Oregon wants recognition.

Senator WYDEN. Mr. Chairman, given the votes, would it be possible either now, or at a time when you designate, to make a brief opening statement?

The CHAIRMAN. Well, I would like to have the statement submitted for the record, but if you want to summarize—ordinarily we are in the middle of testimony and—but if you want to summarize, go ahead.

Senator WYDEN. I would be happy to wait until after the witnesses, but because of the votes if I could make a brief opening statement, then I would be very appreciative.

The CHAIRMAN. Fine. Senator Bayh.

Senator BAYH. Mr. Chairman, I would like to thank you for having this hearing today, and I have a statement that I will submit for the record.

[The prepared statement of Senator Bayh follows:]

PREPARED STATEMENT OF HON. EVAN BAYH, U.S. SENATOR FROM INDIANA

First, I want to thank Chairman Murkowski and Senator Bingaman for holding this hearing. We have seen a lot of finger-pointing and heard a lot of buck-passing about spiking gasoline prices, but we still don't have the answers we need. Maybe that's because there is no single reason that can adequately explain what's happening with gas prices. High crude prices, low reserves, transportation and refining difficulties and market manipulation have all been named as contributors to the price increases.

It is certain, however, that before we can identify effective solutions, we need to find out how each of these factors has contributed to price spikes. It may not be as simple as naming a villain at the outset and declaring the problem solved, but it is the surest way to learn how to anticipate volatile fuel markets and insulate our economy from their effects.

Rising gasoline prices have created concern across the country, but in the Midwest the problem has been the most severe. At the end of May, the average price for regular self-serve gasoline in Indiana was $1.49. By the end of June, $2.00-a-gallon gasoline became a reality for many of the people of my state and people across the Midwest.

What makes a price spike like this so burdensome is that consumers' obligations don't shrink when prices soar. Economists describe this as "inelastic demand." What that means is that people still have to get to work, businesses need to deliver inventory, farmers have to tend their crops and families have to get around with their kids. So a price hike creates a real hardship for families and small businesses. The citizens of Indiana, and of all the Midwestern states, do not understand why they are suddenly forced to choose between gas and groceries and they are angry. They want answers and so do I.

The good news is that national and Midwest prices are starting to come down. Wholesale prices dropped between 25 and 40 cents a gallon at the end of June. We are now seeing comparable drops in retail prices. The U.S. average retail price declined for the second straight week, dropping 3.3 cents to $1.62 a gallon on July 3. (That's 50 cents higher than last year.) In Indiana, the average statewide price for regular gasoline was $1.76 as of June 27 and $1.51 on July 11.

This is a much needed downward trend, but it does not change our task here today. We need to understand the factors driving the market. We need to understand why it takes so long to see wholesale price decreases reflected at the pump when we've seen them rise there in a matter of hours. And we need to understand what forces are at work here to prepare for them in the future.

Volatile fuel costs are not good for families, businesses and can jeopardize the overall health of the economy. Increased fuel costs not only have immediate impacts on monthly budgets, these increases ripple through every sector of the economy: families will have less to spend, school budgets will be tighter because busing is more expensive, local and state government operating costs increase, and the cost of consumer goods increases along with the fuel costs that are part of the production and delivery.

That is why it is so important that we in Congress, along with Administration, fully examine all the upstream and downstream variables in gasoline prices. From OPEC to the pump at the corner gas station, we need to be clear about what is happening. The problem begins with the tight supply (and consequently higher cost) of crude oil, the majority of which comes from outside the United States. I applaud the President's efforts to place diplomatic pressure on OPEC to live up to its earlier agreement to increase supply when oil prices exceeded $28/barrel. Further, increased overall production is necessary to ease supply problems that will extend beyond the summer. If reserves don't increase, we will relive last winter's home heating oil shortages and price increases.

Although OPEC agreed to raise production at the end of June, the amount agreed was not enough to move the market price of crude oil down. Saudi Arabia recently announced its intention to increase production by another 500,000 barrels to live up to its agreement to keep the barrel price into the $25 range. The international markets are beginning to respond. Barrel prices had been hovering around $30 a barrel, but the expectation of greater supply is starting to bring them down.

In addition to the increased cost of crude oil, a number of "downstream," domestic causes have been suggested for high gasoline prices. Acute regional differences in prices and reports of substantial oil company profits have led to speculation that artificial constraints on supply or collusive pricing practices have caused, or exacerbated, high gasoline prices. The recent sharp drop in wholesale prices is also fueling speculation along these lines. I support the ongoing FTC investigation and I look

forward to hearing about the Commission's progress and the status of the interim report that has been promised.

Some are suggesting that reformulated fuel, particularly fuel blended with ethanol, as it is in some Midwest counties, is the source of the price hikes. The EPA has estimated that the cost of reformulating fuel to meet the new Clean Air requirements would add 5 to 8 cents a gallon to the cost. However, reformulated fuel prices rose by 50 cents a gallon in some Midwest cities.

The Congressional Research Service has documented that the price of all kinds of gasoline in the Midwest soared past the national average. Reformulated gasoline is only required in two counties in Northwest Indiana, but prices soared above the national average all over the state. In Michigan, where prices have been even higher, reformulated fuel is not used at all. I am very interested to hear the views of the Ms. Browner and representatives of ethanol and the refining industry on the contribution of the reformulated fuel requirements, and particularly fuel blended with ethanol, on gasoline prices.

A clearer contribution to the current gasoline market conditions comes from infrastructure deficiencies. The Explorer pipeline, which brings fuel from the Gulf of Mexico to Chicago, has been operating with 10% lower capacity in the wake of a March fire. In June, another pipeline serving Michigan from Illinois experienced difficulties. Both of these pipeline disruptions tightened supply in the Midwest and required alternative fuel transportation. I am very interested to learn when the Explorer pipeline will be operating at full capacity, how that can be expedited, and how this situation reflects on the overall condition of our fuel transportation infrastructure.

While we cannot yet gauge the precise contribution of all of these market variables to the problems in the Midwest, there is one factor that underlies them all. The immediate hardship created by gasoline price spikes, on the heels of last winter's high prices, is yet another reminder of the dangers of our dependence on imported oil—which now fills more than half of the nation's energy needs. The American Automobile Association reports that the demand for energy in the United States grew last year by 4%. Our reserves remain at an historic low. We need to increase the diversity of our energy supplies and expand existing investments in efficient technologies to respond to our growing economy's appetite for energy.

As a nation, we can move toward energy independence by promoting a more diverse and sustainable mix of domestic energy sources. We can also encourage integrating new technologies to traditional industries and reward businesses and consumers for choosing energy efficient products and equipment.

Investment in technologies that develop alternative fuels, such as biofuels, and more efficient use of traditional fuels, such as clean coal technologies, are critical to our energy future. An integrated strategy of federal research support and market incentives can take the nation a long way toward greater energy independence and long term price stability. I am a cosponsor of S. 1833, Senator Daschle's bill that will increase energy diversity by promoting alternative energy sources. The bill will also reduce demand by promoting the development and deployment of more energy efficient homes, cars and industries. There are a number of other targeted and comprehensive proposals that have been offered to enhance incentives for domestic energy production and energy efficiency. I hope we can take a reasoned look at the best of these and come up with a nonpartisan package that includes the best of all of them.

Again, I thank the Chairman for holding this hearing to identify the causes of the immediate problem. Further, I look forward to working with the Chairman and Senator Bingaman to finish the job by redoubling our efforts to move away from foreign oil dependence and toward greater energy security.

The CHAIRMAN. Thank you. Mr. Cook, we left off with you—we had a question, and I think you got the tenor of my concern here, so why don't we just go ahead and hear what you have to say.

Mr. COOK. Again, I am not aware of a study that has actually statistically compared the cost of the ethanol base for the Chicago variety of RFG with the current version in L.A., but separate studies on each suggest that the gasoline runs about 5 to 10 cents higher, just the cost, not the price, to make it compared to conventional gasoline. The answer is similar for the ethanol in Chicago. The Chicago variety may be 8 to 10 cents on a cost basis higher than conventional.

Now, on price comparisons, the two can run in both markets as little as 2 or 3 cents apart, conventional versus reformulated. I know when the market gets tight the spread between the two at wholesale can be as wide as 40 cents, so there are a lot of other things going on.

The CHAIRMAN. Clarify for the record the additives as you know them. You have got MTBE, you have got ethanol. Are they transferable within the permitting?

Mr. COOK. Well, given the mandate, if the mandate is there and you phaseout, or remove MTBE, of course, in the short term anyway it would appear that ethanol would be your only remaining short-term viable option.

Whether or not it would end up as economic and efficient depends upon the rapidity with which the infrastructure could be developed. If the oxygenate requirement is removed altogether, there are other ways refiners can reconfigure and produce reformulated gasoline without either.

The CHAIRMAN. Without either.

Mr. COOK. Without either.

The CHAIRMAN. That meets within the regional permitting?

Mr. COOK. Right.

The CHAIRMAN. Why don't they do it, then?

Mr. COOK. It would appear to be, at the moment anyway, more expensive. It is cheaper to use MTBE in particular. You get more volume of product, and it is a cheaper way to keep octane levels up and emissions down.

The CHAIRMAN. Well, you are implying, though that the reformulated gasoline as we know it with MTBE and/or ethanol, then, is not necessary. There is another alternative.

Mr. COOK. Yes.

The CHAIRMAN. And that is still a reformulated product.

Mr. COOK. Yes, sir.

The CHAIRMAN. What is it called?

Mr. COOK. I do not have that term handy.

The CHAIRMAN. What is it called, though? What is it?

Mr. COOK. It is just a—the refiners basically would maybe run different crudes. They would use some of their equipment differently. The reformers, they would run them maybe at a higher, more severe rate. A number of things can be done to produce new specification gasoline without using either of the oxygenates.

The CHAIRMAN. Well, we subsidize ethanol, and that is not included in your cost comparison. That is in addition to.

Mr. COOK. Right.

The CHAIRMAN. And you are not prepared to give any statement relative to this other alternative that you do not know what it is called, but it is a reformulation that evidently refiners have the capability of doing, but it would be at a higher price.

Mr. COOK. I think so, in the short term.

The CHAIRMAN. Excluding perhaps, say, consideration for what we subsidize ethanol for.

Mr. COOK. Correct.

The CHAIRMAN. So if you add the price of ethanol, my question to you then is, is this other alternative viable in a comparative price range, and I assume your answer is yes.

Mr. COOK. Yes.

The CHAIRMAN. And who makes this decision on whether to produce it? Is it continued subsidization of ethanol?

Mr. COOK. Well, as I said, right now we have the 2 percent Federal mandate to use one or the other of these oxygenates.

The CHAIRMAN. But in your opinion, neither of which are necessary.

Mr. COOK. Not to make the reformulated gasoline, that is correct.

The CHAIRMAN. Well, I think that—now what happens if, indeed, we phase out MTBE, which seems to be coming in the future, or we are in the process of it, or both. That is going to put more demand on an alternative reformulated product.

Mr. COOK. Correct.

The CHAIRMAN. And does that give the refiners an opportunity to come up with this other alternative of reformulated gasoline, necessarily?

Mr. COOK. I think the removal of the mandate would allow refiners to come up with other solutions.

The CHAIRMAN. You do not know what the cost of the other reformulated product would be?

Mr. COOK. I would have to submit that later.

The CHAIRMAN. Well, I would ask that you submit that for the record.

[The information referred to follows:]

There are a few publicly available studies that have done economic analysis to estimate and compare refinery gasoline production costs of RFG produced with ethanol or without oxygenates to current production costs of RFG using MTBE. Unfortunately the cases analyzed are limited in number and further limited by the study assumptions made. An MTBE-ban study was done for the California Energy Commission that assumed that very large volumes of alkylate would be available for importation to compensate for the loss of MTBE. The availability of this alkylate volume has been widely questioned. Moreover, results for the high complexity refineries of California cannot be applied to refineries in the rest of the United States. Recently, the National Petroleum Council published a study with one case in which no oxygenates were used for RFG production. However, in that case, RFG was only 27 percent of total gasoline production in the refinery, far below the high percentage of RFG produced by East Coast refineries, which is important, since RFG production cost increases as the percent of RFG production increases. Moreover, ethanol was used to produce conventional gasoline in the case, and the cost to produce the specific gasoline products could not be separated.

There simply is no public, comprehensive, high quality analysis that would provide good cost information for refinery production of RFG under an MTBE ban. Directionally, the studies agree that the world in which MTBE can be used is the least expensive situation. With an MTBE ban, producing RFG with ethanol and keeping an oxygenate requirement is the most expensive alternative. Removing the oxygenate ban so that RFG can be produced with or without ethanol is less expensive.

Furthermore, we also know that Chevron is producing gasoline without oxygenates that meets Phase II emission standards for the California market, which implies the cost to produce this product is competitive with ethanol-blended product as well as MTBE-based RFG on the West Coast. In a presentation before EPA's MTBE Blue Ribbon Panel, Chevron indicated that the company has made over 700 million gallons of non-oxygenated gasoline that would meet and exceed all CARB performance standards and exceed performance of Federal RFG (Phase I and II).

An MTBE ban with an oxygenate mandate results in the highest use of ethanol. EIA has done some analysis that indicates, if the oxygen level is not mandated, the ethanol use would be about 15% less than if the mandate remains. In both the EIA and earlier studies for the California Energy Commission, results showed that, with an MTBE ban and no oxygenate mandate, ethanol use would increase substantially over its current levels of use, assuming continuation of the subsidy. But there would be considerable variation in the use of ethanol by individual refineries. For example, Tosco, another California refiner who took a position against MTBE use and in favor

of ethanol indicated to the California Energy Commission, "* * * some of our gasoline would be produced with ethanol, some without. It would be tailored to each of the refineries' particular circumstances."

Ethanol has a higher vapor pressure effect that must be countered by reducing the vapor pressure of other blending components. But like MTBE, ethanol is a high-octane component containing no sulfur and has good emissions characteristics. It would be very difficult for many refiners making high percentage fractions of RFG to achieve current octane levels and emissions performance without the benefits of some oxygenate use.

Finally, if the oxygen mandate is lifted, companies will probably consider both refinery production costs and the cost to transport and store ethanol when determining their strategies. Ethanol is blended at the terminal, and has not been shipped through pipelines because of its affinity for water. Thus, refiners serving areas like the East Coast, which uses mainly MTBE-blended RFG today, might have to incur added transportation and storage costs when using ethanol-blended RFG. Companies serving such areas would weigh refining costs plus additional transportation and storage costs for using ethanol-blended RFG against the production costs of non-oxygenated RFG.

The CHAIRMAN. Mr. Perciasepe, we have kind of wandered around your area a little bit in generalities, so why don't you go ahead and make your presentation, and then we will proceed with some of the other witnesses and probably throw a few questions relative to our discussion.

STATEMENT OF ROBERT PERCIASEPE, ASSISTANT ADMINISTRATOR, OFFICE OF AIR AND RADIATION, U.S. ENVIRONMENTAL PROTECTION AGENCY

Mr. PERCIASEPE. I think I have some information on what Mr. Cook was talking about. First of all, thank you, Mr. Chairman, for the invitation for EPA to be here today for this important hearing, and members for your questions and attention.

I just want to make a couple of key points, because we are already into the questions, so let me just say that assuming I can have my written statement into the record. Reformulated gasoline in EPA's opinion has been a big success in the United States, and it is a program that was required by Congress in the 1990 Clean Air Act amendments, and it did, as I think we just heard, specify that on the oxygenate question, that 2 percent of the reformulated gasoline includes a 2 percent by weight of oxygen, which is slightly different than by volume, and also the law targeted the performance standards of the clean-burning RFG, and which cities should use it.

That program, after it was enacted, was put together by a team of people back in the early nineties which included the refiners, it included folks from the ethanol industry, it included folks from the MTBE methanol world, it included public health folks, it included State agencies. I guess the technical term is REG NEG, but I like to call it a team that worked together to come up with a framework for how the program should work.

Since that happened, the two phases, which again were specified in the law, started in 1995 and then the second phase started, and so there is an incremental improvement in air quality performance in the second phase which started this summer. It has made significant reductions in volatile organic compounds which are a precursor to ozone, significant reductions in carbon monoxide, significant reductions in air toxics, and significant reductions in nitrogen oxides.

So that framework was developed about 6 years ago. On the cost question for reformulated gas, at that time, and subsequent to that time, we have done a lot of analysis with our colleagues in the Department of Energy, as well as with the Oak Ridge National Lab, and a consulting firm by the name of Bonner & Moore, who does a lot of engineering and cost analysis for the oil industry, on what the cost to produce these fuels are and our estimate, which we still feel confident. Based on these studies, the cost of producing these fuels even with ethanol is 4 to 8 cents on top of the conventional gasoline.

The difference, perhaps, in what Mr. Cook just said, 8 to 10 cents versus 4 to 8 cents when you are using ethanol, could be accounted for by the marginal cost of the most expensive place, as opposed to the average cost.

I want to point out about this RFG issue and what its role is in the place of gasoline as we currently are seeing it around the country.

The CHAIRMAN. Try to comment on why we have got pipelines carrying 38 different——

Mr. PERCIASEPE. I will comment on that. At least, I will say what I know about it, and then we can talk about it.

The average price of conventional gas, I did not hear what Mr. Cook said, but at least the numbers I have are $1.57—the average price of conventional gas on Monday in the United States. The average price of RFG in the United States, everywhere but Chicago and Milwaukee, was about $1.63 on average around the whole country, so again, while price and cost to produce are two different things, the price at the retail level is reflecting what we would expect to be the price differential between conventional gas and RFG with the attendant environmental benefits that you would get for it.

The CHAIRMAN. The same is true in California?

Mr. PERCIASEPE. Yes. The Milwaukee and Chicago situation is an anomaly to this entire national program, and we have been struggling to try to figure out why the prices have gone up the way they have gone up.

I want to point out that the wholesale prices where any of these requirements would ultimately be reflected—because what happens at wholesale to retail is another sequence of activity, whether it be taxes or local distribution issues. The wholesale price of reformulated gasoline in the Chicago market has gone down 63 cents since June 15, and that was at yesterday's prices at the rack that the trucks were filling. That is an average price.

The price varies between companies supplying at those terminals, but the average price was—actually the actual average price yesterday for wholesale RFG with ethanol in Chicago was 91.21 cents. I want to point out that the average cost for conventional gasoline in Chicago yesterday morning was 92.79, more expensive than RFG with ethanol.

This was not part of my statement, but just to reference something, let's look at prices at the wholesale level between RFG with ethanol and RFG with MTBE in it, both meeting the performance specs of the national program set up in the Clean Air Act in St. Louis where both were used. At the retail level the price gets

blended together, but at the wholesale level they are sold separately.

The wholesale price of RFG with ethanol in St. Louis yesterday morning was 97.97 cents. With MTBE it was 93.29 cents, and so it was a little over, about 4½ cents difference between the MTBE RFG and the ethanol RFG in the St. Louis market, where the trucks are filling up with the gas.

Now, I want to be clear again, Mr. Chairman, that prices are not cost to produce, but, based on fairly detailed engineering analyses on refineries, we have estimates on average of 4 to 8 cents on a national level. We see that the price between RFG and conventional gasoline is about 6 cents. It has actually been lower in weeks past, but right now it is about 6 cents, and at the wholesale level in markets that have been particularly difficult to work on we see them to be virtually the same right now. So all of this helps inform us about these differentials.

So again, our view at EPA, and it probably is not completely shared by all the members of this panel, is all of these factors—and this is the important thing I want to point out. All of the factors that are brought up, the difficulty to refine with ethanol, the pipeline, the draining of tanks supply tightness, all of this obviously explains some of the problem, but none of that has changed in terms of the pipeline. The ethanol usage, Unocal pattern, none of those things have changed in the last month, yet the wholesale price has dropped 63 cents. Maybe supply has changed.

The question I would have is, if supply has changed and that has driven the price down, and if we knew about the program for 6 years, why didn't we fix that problem in May, rather than wait for the price to go up to $2 and X cents? We do not see how you can explain what happened completely at the beginning of June in the Midwest.

We are happy that corrective actions or adjustments have been made, and we want to be sure that continues to be showing up at the retail level. I am just trying to lay out some facts here, and I think, Mr. Chairman, I will stop at that, rather than go into a longer discussion, because I think you have some specific questions about multiple gasolines. What was the number you had in your opening statement, like, 30?

The CHAIRMAN. 33.

Mr. PERCIASEPE. Not counting California, the only Federal, specifically required Federal gasoline is what is in the Clean Air Act, and that is the reformulated gasoline. There is a slight differential between the north and the southern part of the country in terms of the vapor pressure, so if you want to say that there are two Federal gasolines and they are not completely fungible, but they are somewhat fungible, you then have three different grades of gasoline for each one of them, so you might say at the Federal level for environmental gasoline there are six different grades.

To my knowledge, the other ones are either California, because they do their own gasoline regulations, or other State gasolines, and I think I would lend my voice and EPA's voice to a general concern that it would be better to have more national consistency in fuels related to environmental issues, and that that would help in some of these issues as they came up.

But what we have had historically, in addition to the Federal program and the cities that have been specified in the Clean Air Act, are other areas of the country doing modifications to their fuels as well, all of which are achieving environmental benefits. We could probably find a way to create more flexibility in the system and still achieve the same environmental benefits, but those 30-something fuels are not federally required fuels.

That is my best understanding of the situation as it exists. I do not have a list of all the different ones, but I can help.

[The prepared statement of Mr. Perciasepe follows:]

PREPARED STATEMENT OF ROBERT PERCIASEPE, ASSISTANT ADMINISTRATOR, OFFICE OF AIR AND RADIATION, U.S. ENVIRONMENTAL PROTECTION AGENCY

Thank you, Mr. Chairman and Members of the Committee, for the invitation to appear here today. I appreciate having the opportunity to share what we know about the recent sharp increases in gasoline prices, particularly in the Midwestern part of the country. I also will explain the Environmental Protection Agency's efforts, in coordination with the Department of Energy and the Federal Trade Commission, to address the situation.

Mr. Chairman, first and foremost we are very concerned that consumers receive the air quality benefits of the clean burning gasoline (also called reformulated gasoline, or RFG) program at a fair and reasonable price. In the following testimony I will show that the cost of producing RFG does not account for the extremely high price differentials we have seen in the Chicago and Milwaukee areas. As EPA reviewed the various requests for waivers from the RFG program, factors such as the pipeline, tank turnover and patents were examined. We do not believe that these factors adequately explain the price differentials that we have seen in the Chicago and Milwaukee areas.

Let me begin with a history of the RFG program.

HISTORY OF RFG

When Congress passed the Clean Air Act Amendments of 1990 it put in place a number of programs to achieve cleaner motor vehicles and cleaner fuels. These programs have been highly successful in protecting public health by reducing harmful exhaust from the tailpipes of motor vehicles. In the 1990 Amendments, Congress struck a balance between vehicle and fuel emission control programs after extensive deliberation. The RFG program was designed to serve multiple national goals, including air quality improvement, enhanced energy security by extending the gasoline supply through the use of oxygenates, and encouraging the use of domestically produced, renewable energy sources.

Congress established the overall requirements of the RFG program by identifying the specific cities in which the fuel would be required, specific performance standards, and an oxygenate requirement. The oil industry, states, oxygenate producers and other stakeholders were involved in the development of the RFG regulations in 1991 through a successful regulatory negotiation. EPA published the final regulations establishing the detailed requirements of the two-phase program in early 1994. Thus, the oil companies and other fuel providers have had six years to prepare for the second phase of the program that began this year. In addition, the oil industry has been involved in an EPA RFG implementation advisory workgroup since 1997 and at no time during those discussions did the companies raise concerns about production, supply or distribution problems that might occur.

The first phase of the federal reformulated gasoline program introduced cleaner gasoline in January 1995 primarily to help reduce vehicle emissions that cause ozone (smog) and toxic pollution in our cities. Unhealthy smog levels are a significant concern in this country, with over 100 million people living in 36 areas currently violating the 1-hour ozone standard.

The federal RFG program is required by Congress in ten metropolitan areas which have the most serious air pollution levels. Although not required to participate, some areas in the Northeast, in Kentucky, Texas and Missouri have elected to join, or "opt-in" to the RFG program as a cost-effective measure to help combat their air pollution problems. At this time, approximately 30 percent of this country's gasoline consumption is cleaner-burning reformulated gasoline.

The Clean Air Act Amendments of 1990 also required that RFG contain 2.0 percent minimum oxygen content by weight. Neither the Clean Air Act nor EPA re-

quires the use of any specific oxygenate. Both ethanol and MTBE are used in the current RFG program, with fuel providers choosing to use MTBE in about 87 percent of the RFG. Ethanol, however, is used exclusively in RFG in the upper Midwest (Chicago and Milwaukee).

Ambient monitoring data from the first year of the RFG program (1995) confirm that RFG is working. RFG areas showed significant decreases in vehicle-related tailpipe emissions. One of the air toxics controlled by RFG is benzene, a known human carcinogen. The benzene level at air monitors in 1995, in RFG areas, showed the most dramatic declines, with a median reduction of 38 percent from the previous year. The emission reductions which can be attributed to the RFG program are the equivalent of taking 16 million cars off the road. About 75 million people are breathing cleaner air because of cleaner burning gasoline. Since the RFG program began five years ago, it has resulted in annual reductions of smog-forming pollutants of at least 105 thousand tons, and toxic air pollutants by at least 24,000 tons.

As required by the Clean Air Act, the first phase of the RFG program began in 1995 and the second phase began in January of this year. As an example of the benefits, in Chicago, EPA estimates that the Phase II RFG program will result in annual reductions of 8,000 tons of smog-forming pollutants and 2,000 tons of toxic vehicle emissions, benefitting almost 8 million citizens in the Chicago area facing some of the worst smog pollution in the nation. This is equivalent to eliminating the emissions from 1.2 million cars in Illinois.

ADMINISTRATION RESPONSE TO INCREASING PRICES

In early June, as gasoline prices rose, particularly in the Midwest, EPA and DOE invited Midwest oil refiners to a meeting in Washington, DC. Simultaneously, EPA, DOE and the Energy Information Agency (EIA) sent two teams of technical experts to the Midwest to investigate the situation and to talk to refiners, distributors, pipeline companies, jobbers, terminal operators and retail outlets. Following those meetings, which occurred on June 12 and 13, EPA Administrator Browner and DOE Secretary Richardson sent a joint letter on June 15 to Chairman Pitofsky requesting that the Federal Trade Commission conduct a full and expedited formal investigation into the pricing of RFG in Chicago and Milwaukee.

Since June 15, the wholesale price of reformulated gasoline has dropped by over 63 cents per gallon in Chicago and Milwaukee. The Oil Price Information Systems (OPIS) has reported that the wholesale price differential between RFG and conventional gasoline in nearby cities has dropped to less than 1 cent a gallon in Chicago and 8 cents a gallon at Milwaukee terminals.

In our discussions, representatives of oil companies listed a number of factors which they believed contributed to the price differential between RFG and conventional gasoline in the Midwest. These included: the additional cost of producing RFG phase II, temporary shutdown of the Explorer Pipeline, the difficulty with replacing winter gas with summer blends (draining tanks), and the Unocal patent. I would now like to discuss each of these factors and show why EPA believes even taken together they do not account for the high gasoline prices.

PRODUCTION COSTS FOR RFG DO NOT EXPLAIN PRICE INCREASES

As I stated earlier, we are very concerned that consumers receive the benefits of the RFG program at a fair price. Across the country hundreds of communities are benefitting from RFG II for pennies per gallon. In fact, this Monday (July 10), the average retail price of conventional gasoline across the country was $1.57 per gallon. EPA has calculated, based on EIA and OPIS surveys, that the average retail price for RFG II everywhere except in Chicago and Milwaukee was $1.63 per gallon, while the average retail price in Chicago and Milwaukee was $1.80 per gallon.

Mr. Chairman, two recent CRS reports have assessed increases in Midwestern gasoline prices. EPA disagrees with the CRS findings. CRS did not investigate RFG production costs, but rather focused on the price differential between RFG in the Midwest and other parts of the country. The CRS analysis was based on prices of gasoline in mid-June. As I mentioned, wholesale prices in Chicago and Milwaukee have dropped about 63 cents per gallon since June 15. Certainly, this dramatic change must say something about the cause for previous price differentials. Manufacturing costs have not changed. Ethanol use has not changed. The pipeline capabilities have not changed. Nor has the Unocal patent gone away. And yet the differential is now only pennies. The CRS analysis fails to provide an explanation. In addition, the updated CRS report acknowledges that "the price increases—driven by supply-demand pull—are so large and out of proportion to any likely higher manufacturing costs associated with the RFG sold there that it is unlikely that manufacturing-related 'cost push' would be a factor."

EPA strongly disagrees that the RFG program is responsible for increases in gasoline prices in the Midwest. In fact, EPA's estimates of the average cost for the production of Phase II RFG range from 4 to 8 cents more per gallon than conventional gasoline (with the use of either ethanol or other oxygenates). Several studies agree with EPA's estimates of the average costs:

"Analysis by Bonner and Moore Management Science, a nationally recognized firm that specializes in refinery cost analysis, estimated that RFG I would add 3–5 cents more per gallon to the average cost compared to conventional gasoline. Subsequent studies by Bonner and Moore and Oak Ridge National Laboratory estimated that RFG II would add 1–2 cents to the average cost of RFG I or 4–7 cents to the average cost of conventional gasoline. Oak Ridge National Laboratory estimated that the average added cost of blending ethanol into RFG II as compared to RFG I was about 1 cent more per gallon."

As I have already stated, in recent weeks, the wholesale price differential between RFG and CG has dropped dramatically in the Chicago/Milwaukee area. We do know that this differential is now in line with differentials observed in other parts of the country. EPA does not believe that the cost of complying with RFG regulations accounts for the extremely high price differentials we have seen in the Chicago-Milwaukee areas.

TEMPORARY SHUTDOWN OF EXPLORER PIPELINE

EPA investigated the situation with the Explorer pipeline to respond to the waiver requests we received and would like to share our findings. The Explorer pipeline has historically provided 10 to 15 percent of the RFG supply for the Chicago/Milwaukee area. The outage of the pipeline in mid-March meant a loss of 108,000 barrels of RFG destined for the Chicago area. Chicago consumes about 200,000 barrels of gasoline a day. Thus, the RFG lost due to the Explorer pipeline outage was less than one day's RFG needs for Chicago. Since mid-March, the Explorer pipeline from Houston to Tulsa has been running at 90 percent capacity, while the pipeline north of Tulsa to the Midwest has been capable of operating at 100 percent capacity. The supply of RFG to the Midwest has increased this year over last year and, in fact, for the month of June refiners expected to supply 650,000 more barrels of RFG this year than last year. The Explorer pipeline company has informed us that more RFG could be sent if the companies elected to do so. For example, the pipeline company has informed us that, beginning earlier this month deliveries of RFG to Chicago have increased by approximately 100,000 barrels per ten day cycle.

TANK TURNOVER

Tank turnover refers to the need to replace winter gasoline in terminal storage tanks with summer blends. Fuel providers have been doing this for over ten years to comply with summertime gasoline volatility requirements. This normally begins in April and, as required by regulation, the tanks at terminals must all meet summertime RFG requirements as of May 1st.

UNOCAL PATENT

EPA has heard comments as to the impact of the Unocal patent. While we understand that this matter may be in litigation, the refiners have told us in meetings with them that they are able to produce RFG that is not subject to the patent. In our discussions with refiners and with Unocal, no one has identified any cost or supply issues related to the patent that could in any way explain the price increases for RFG that we have seen in the Midwest over the last two months.

WAIVER ISSUES

In recent weeks there have been many calls for EPA to waive the RFG Phase II requirements in Milwaukee and Chicago. The RFG regulations provide for an administrative waiver under very limited circumstances—extreme and unusual circumstances, such as Acts of God or natural disaster, where the refiner or importer is unable to comply with the RFG requirements despite its exercise of due diligence and planning. The various criteria for an administrative waiver under the regulations have not been met in the Milwaukee or Chicago area, so EPA has treated all of the requests for a waiver as requests for enforcement discretion. Enforcement discretion is normally used in situations such as occurred in St. Louis early this spring, where the short term shut down of the Explorer pipeline led to actual and acute shortages. The pipeline supplies on average 70 percent of fuel delivered to St. Louis.

For Chicago and Milwaukee the supply of RFG continues to be adequate and prices are going down. All refiners have strongly recommended that EPA not grant

RFG waivers. It is highly uncertain what effect a waiver would have on supply and prices. Refiners would need to make adjustments and switch gears, imposing short term costs and the possibility of supply problems. No RFG Phase I is currently available, and supplies of conventional gasoline are tight as well. Waiving the RFG Phase II requirements under these kinds of circumstances could exacerbate the supply and price situation in the Midwest, for both RFG and conventional gasoline.

VOC ADJUSTMENT PROPOSAL

On June 30th, EPA proposed an adjustment to the VOC performance standard under Phase II of the Reformulated Gasoline program for blends that contain 10 volume percent ethanol. This proposal would increase refiner flexibility to reduce MTBE use by making ethanol use less costly. This regulatory change responds to a 1999 report by the National Research Council which suggested that EPA recognize the contribution of CO to ozone formulation in assessments of the effects of RFG. The proposal recognizes the CO benefits from the use of oxygenates in the RFG program by considering the offsetting CO reductions for the use of ethanol in allowing an adjustment to the VOC performance standard. There will be a sixty-day comment period on the proposal. The proposal also solicits comment on a study by the Illinois Department of the Environment that suggests a much larger adjustment based on reactivity factors.

CONCLUSION

In closing, I would like to reiterate the following points:

—Clean burning RFG II is providing public health benefits to almost 75 million citizens nationally and nearly 8 million in the Chicago area alone.

—EPA believes the cost of producing RFG II does not account for the extreme prices being paid by Midwest consumers. The pipeline disruption, the tankage issue, the Unocal patent and its implications, as well as ethanol use, have all been analyzed. EPA does not believe that these factors adequately explain the price increases we have seen in recent weeks.

—We are concerned that consumers are paying these high prices for RFG II.

This concludes my prepared statement. I would be pleased to answer any questions that you may have.

The CHAIRMAN. I am going to ask Mr. Slaughter, general counsel for the National Petrochemical & Refining Association to proceed.

STATEMENT OF BOB SLAUGHTER, GENERAL COUNSEL, NATIONAL PETROCHEMICAL & REFINERS ASSOCIATION

Mr. SLAUGHTER. Thank you, Mr. Chairman and members of the committee. Thank you for your invitation to appear. I am Bob Slaughter. I am general counsel for the National Petrochemical & Refiners Association. We represent basically all U.S. refiners, as well as petrochemical producers who have similar processes.

The CHAIRMAN. I trust you will tell us why there were no refineries built in the last 30 years.

Mr. SLAUGHTER. I would be glad to do that. Senator Burns has already mentioned one factor when he talked about NIMBY's. We are generally in accord with what has been said about the factors that have promoted the recent disruptions in the gasoline market.

We are dealing with a 300-percent increase in cost for our raw material, which is crude. We have a brand-new grade of environmental gasoline, RFG-2. We have had regional supply disruptions in the Midwest, pipeline ruptures, and we have historically low inventories of crude and refined product, as Mr. Cook has pointed out. There are several expert studies that seem to agree with that assessment—the National Petroleum Council, the Congressional Research Service, others—and we want to point out that the refining industry has really been coping with very difficult times.

The CHAIRMAN. Would you pull up your mike a little closer?

Mr. SLAUGHTER. The refining industry has really been coping with very difficult times. According to the National Petroleum Council report, the average rate of return on invested capital for the last 10 years in the industry has been 4 to 5 percent and, as you know, that compares basically with passbook savings rates. It does not make refineries a very good investment. During much of the same period, refiners were asked to invest about $20 billion in environmentally related expenditures, which was basically capital that of course could otherwise have gone to capacity increases.

Now, an early NPC study, National Petroleum Council study determined that figure exceeded the book value of the industry at the time, so we have seen a great deal of turmoil within the refining industry. Roughly one-third of the industry assets have changed ownership in the past 5 years. We had one major refinery sale announced last week. I understand another one is coming up in a week or so, and we expect to see more. Some refineries have even closed their doors, and we expect those trends to continue.

The outlook for the next 10 years is really for more of the same. The first chart I brought with me today is one we call the regulatory blizzard chart. It is a time chart of environmental initiatives which confront us in the next 10 years, and these initiatives are uncoordinated at this point, largely, and if history is any guide, nobody pays much attention to their impact on energy supply.

They are also very expensive. The gasoline sulfur reduction program which is being implemented will cost the industry $8 billion, according to the NPC. Diesel sulfur reduction, if done in uniformity with EPA's pending proposal, will cost even more, we think as much as $10 billion, and the cost of refining to MTBE related problems will take that total above $20-billion total, and that is just for three of the programs on the chart, so you can see this regulatory blizzard, if we do not do something about it, is going to create actually avalanche conditions for refiners and ultimately for consumers.

We think it is possible to enjoy reliable and affordable fuel supplies while preserving and improving upon environmental progress, but this can only be achieved if we integrate energy and environmental policy and consider the cost and benefits of the new environmental requirements in the context of their impact on energy supplies.

As this committee knows better than any other, energy supplies are the key to continued economic growth. Unfortunately, the system is stretched to the breaking point. The chairman has mentioned the 38 different specs for gasoline shipped on the one Eastern pipeline. The second chart I have shows the geographic distribution in the Eastern United States of the 10 different summer gasolines which one member company, Citgo, must produce to varying environmental requirements.

I would like to say just one thing. Several of these are directly attributable to the Clean Air Act, as Mr. Perciasepe has just mentioned. Several of them are also due to State and local restrictions, but I think you need to bear in mind that State and local programs are pursuant to other requirements that are administered by the Environmental Protection Agency.

The MAC standards drive a lot of State and local programs, so you cannot simply disassociate environmental requirements from

State and local gasoline programs either, so I think you will find the genesis of a lot of these programs, if, indeed, not all of them, lie in the Clean Air Act and, as has been pointed out, the lack of a fungible readily exchangeable product makes it difficult and more expensive to respond to supply disruptions.

It is a bad situation, but what can we expect? We really have not had a comprehensive and integrated approach, and energy policy ends up being kind of a de facto result of environmental policy. We think you kind of need to get things back in the mainstream where we balance environmental and energy concerns and pay a little bit more attention to energy supply impacts than we have in the past.

That does not mean we have to stop making environmental progress, but we have to pay more attention to the impact on supply in particularly the refining industry, which is stretched very thin. We hope that we can begin with this EPA proposal for diesel sulfur reduction, because it is fantastically expensive, and we are concerned that it could reduce supply of highway diesel fuel by up to 30 percent.

EIA has just forecast a 30-cent per gallon increase for diesel fuel next winter, but we really feel that we could look back on even that as the good old days if this proposed diesel sulfur reduction goes through as currently proposed.

And I must say, while we are here in this committee reviewing the problems that have been caused by current policies affecting gasoline production, we do have problems, because there is another committee in this body that is contemplating a drastic rewrite of energy and clean air policy which we fear will lead to additional deterioration in the gasoline market. That initiative features sweeping new and costly controls which will directly affect the supply of gasoline and diesel fuel, and it also imposes costly new mandates.

None of these major changes to core elements of U.S. energy policy have yet received the attention of this committee or of the committee of jurisdiction over energy policy in the House, and we really urge you to bring your needed expertise and caution to these proposals. We certainly cannot correct the mistakes of the past by repeating them, but left unchecked the pending diesel sulfur rule and these legislative proposals would do just that.

So I look forward to answering your questions, Mr. Chairman. I thank you again for this opportunity.

[The prepared statement of Mr. Slaughter follows:]

PREPARED STATEMENT OF BOB SLAUGHTER, GENERAL COUNSEL, NATIONAL PETROCHEMICAL & REFINERS ASSOCIATION

OVERVIEW

The National Petrochemical & Refiners Association (NPRA) represents virtually all of the refining industry, including large, independent and small refiners as well as petrochemical producers. Our members are in the business of manufacturing petrochemicals and refined petroleum products needed to transport America's goods and services. We understand your concern about the price and supply problems that are occurring in the Midwest and we will provide the Committee with the best information we have on the situation at this time.

We also will discuss the broader implications of the seemingly divergent goals of current US energy and environmental policy. There is a disturbing lack of coordination between our energy and environmental policy objectives. The pursuit of a number of individual environmental programs in a "piecemeal" fashion has stretched the

US fuel refining and distribution system to its limit—resulting in greater potential for tighter supplies and increased market volatility. The current experience in the Midwest may only be an omen for the future. As the Energy Information Administration (EIA) stated recently: "Today, the U.S. refinery system has little excess capacity, and the growth in the number of distinct gasoline types that must be delivered to different locations increases the potential for temporary supply disruptions and increased volatility." And EIA has already begun expressing concerns about supplies and cost of heating oil and natural gas for next winter.

NPRA believes it is possible to enjoy reliable and affordable fuel supplies while preserving, and improving upon, our environmental progress. However, this can only be achieved if energy and environmental policymaking is integrated and if the costs and benefits of new regulatory requirements are carefully weighed in the context of the impact on energy supplies. This is particularly important now, given the host of new fuel requirements that EPA is poised to impose in the next 5–7 years, including reductions in gasoline sulfur content, reductions in on-road diesel sulfur, potential phasing out of the use of certain oxygenates like MTBE and decisions on the role of renewables such as ethanol.

In short, the regulatory "blizzard" is in danger of creating "avalanche" conditions. Absent a comprehensive and integrated approach, energy policy will be just the de facto result of environmental policy. American consumers and our economy will suffer the consequences in terms of supply uncertainties, higher costs and lower economic growth.

CURRENT MARKET VOLATILITY IN THE MIDWEST HAS BEEN INFLUENCED BY A NUMBER OF FACTORS [1]

Americans benefit from a highly competitive refining industry that over the years has consistently met environmental requirements and other market challenges while providing high quality, affordable supplies of petroleum products. Prices are affected by many factors that influence supply and demand in the competitive fuels marketplace. Price changes, up or down, are the result of a complex interaction among these factors which often makes identification of a clear cause and effect problematic.

NPRA believes that many of the problems we are now experiencing are due to readily understandable factors: the cost of our major input, crude oil, has increased by 300% in the last 18 months; we just introduced a new grade of environmental gasoline covering one-third of U.S. gasoline supply, which is more expensive to produce and requires more oil in the refining process; we have experienced regional supply disruptions due to distributional problems; and inventories of crude and product are at very low levels.

Experts who have looked at the situation seem to agree with our assessment. For example, a recent analysis by the Congressional Research Service identified several key influences:

—higher crude oil prices;

—use of ethanol in reformulated gasoline;

—pipeline problems (reduction in capacity due to ruptures in Explorer pipeline from Gulf Coast to Chicago and Wolverine pipeline from Illinois to Michigan);

—low inventories; and

—reduced blending flexibility due to a patented RFG process (known as the Unocal patent).

And, as PIRINC's new study, "Gasoline 101: A Politically Explosive Topic" states:

"None of the individual problems contributing the national, and especially local, gasoline price run-ups were major in and of themselves. However, they came together in the context of a tight global oil market. This condition may persist for some time. * * * *The regulatory system currently in place adds significantly to national and local vulnerabilities."* [Emphasis added]

CRS reports that "it can be roughly estimated that 25 cents of the regional (Chicago, Milwaukee) price increase is due to transportation difficulties and another 25 cents, roughly estimated, could be due to the unique RFG situation in Chicago and Milwaukee. * * * The fact that RFG prices are above conventional gas suggest that the difference is due to the supply of RFG uniquely." CRS also reports that recent

[1] We invite your attention to several recent reports and studies that may be helpful to the committee's deliberations: the Cambridge Energy Research Associates report (May 2000), the Congressional Research Service Report—"Midwest Gasoline Price Increases" (June 16, 2000), Petroleum Industry Research Foundation Inc. (PIRINC report: "Gasoline 101: A Politically Explosive Topic (June 2000) and a National Petroleum Council Study, "U.S. Petroleum Refining: Assuring the Adequacy and Affordability of Cleaner Fuels" (June 20, 2000). NPRA agrees with many of the findings of these recent reports and urges this Committee to examine them closely.

court decisions in the Unocal patent case are also causing uncertainty for many refiners and blenders, especially those producing special gasoline blendstock for ethanol RFG. Unocal researchers developed a patent for several distinct blends of gasoline based on the special gasoline requirements for California. Several refiners challenged the Unocal patent and its application to reformulated gasoline; however, two courts have upheld the validity of the company's patents. The court decisions imposed infringement penalties and would permit Unocal to collect royalties from other companies using their RFG patent. This decision is causing refiners uncertainty, as they decide whether to license the patent or develop blends outside the patent.

According the PIRINC report, the uncertainty associated with this litigation may be causing U.S. fuel blenders to forgo production of between 200,000 and 300,000 barrels of RFG daily. It is expected that litigating refiners will ask the U.S. Supreme Court to review the case.

THE REFORMULATED GASOLINE PROGRAM HAS CONTRIBUTED TO MARKET VOLATILITY

The 1990 Clean Air Act Amendments required that reformulated gasoline (RFG) be sold in the nine worst non-attainment areas for ozone. Other areas have since been designated RFG areas at the request of governors. RFG represents about 30% of the gasoline sold in the United States, the remainder of which is referred to as conventional gasoline. RFG has a 2% oxygen content requirement.

The RFG program has seen its share of controversy. Some refiners entered the RFG program when it was first mandated only to have EPA change its mind about the program, leaving companies with stranded investments. On June I of this year, the industry introduced the scheduled Phase II summer RFG gasoline, which is more difficult and costly to produce. This latest phase of the program requires significant reductions in gasoline sulfur and volatility which must be achieved through additional capital investments and modified operations in existing refineries.

The new RFG requirements present a greater challenge in Chicago and Milwaukee than other areas. Because of oxygenate supply, the ethanol subsidies and oxygenate mixing limitations, ethanol is essentially the sole source of oxygenate used to satisfy the areas' minimum oxygen requirements. Since ethanol increases the volatility, and consequently the evaporative emissions of the finished gasoline, a special lower volatility blendstock is needed. This blendstock for ethanol blended RFG, called RBOB, is expensive and difficult to produce, and is typically available from a relatively limited number of refiners. It is also not widely available in areas outside the Midwest, thus limiting the ability to seek alternate supplies if there are production problems at Midwest refineries.

Concerns have repeatedly been raised about the impact of more restrictive requirements of Phase II RFG on ethanol. Several Illinois Congressmen held a public hearing in July 1999 because of worries that it would be more difficult for refiners to utilize ethanol unless refiners produce expensive, "customized" lower volatility blendstocks. Last August, EPA met with various stakeholders active in the Chicago area to discuss ideas to provide more flexibility in the RFG program. In September 1999, the Governors Ethanol Coalition sent a letter to EPA requesting a regulatory change to the summer Phase H RFG standard to alleviate problems involved with ethanol use in RFG H. The Governors Ethanol Coalition again in December 1999 wrote to the Vice President reiterating the problem asking him to delay the implementation of the Phase H RFG program until after next summer. Only after the market volatility set in this June, did EPA issue a proposed rule seeking to address some of these concerns—an action too late to impact supplies for this summer's driving season.

THE REFINING INDUSTRY APPRECIATES AND WELCOMES CONGRESSIONAL AND ADMINISTRATIVE INQUIRIES

NPRA and its members will work with the Federal Trade Commission (FTC) as it proceeds with its inquiry into gasoline prices in the Midwest. NPRA understands the concerns which have led to the FTC investigation into the gasoline price increase. It is our belief that the FTC will find that the situation in the Midwest stems from existing market forces and the "pile on" of new environmental regulations, together with shortages caused by external factors such as pipeline breakdowns, refinery outages, and litigation involving RFG patents as noted by CRS. Our industry has participated in numerous FTC reviews on previous occasions and industry has always been exonerated in the findings. We have no reason to expect a different conclusion in this instance.

NO MORE ENERGY POLICY BY DEFAULT

We strongly urge this committee to consider a more comprehensive review of US energy needs and the implications of future regulatory requirements on energy markets. The National Petroleum Council (NPC), a joint industry-government advisory body, just issued a report explaining why the same or similar situations that we have encountered recently can be expected to recur if we persist in pushing the edge of the envelope on environmental improvements while taking continued energy supplies for granted. The NPC study noted that: "The timing and size of the necessary refinery and distribution investments to reduce sulfur in gasoline and diesel, eliminate MTBE, and make other product specification changes such as reducing toxic emissions from vehicles are *unprecedented* in the petroleum industry." [Emphasis added] And, the NPC cautioned that "* * * there will be an increased likelihood of localized supply disturbances as product quality specifications are tightened, particularly during the initial implementation of new specifications."

Additionally, the refining industry has been coping with difficult times. According to the NPC report, the refining industry's return on invested capital over almost the past two decades (1981–98) averaged 5%, roughly the passbook savings rate at the local bank. During the past decade alone, refiners were called upon to invest about $20 billion in environmentally-related expenditures. An earlier NPC study determined that those expenditures were likely to exceed the book value of the entire refining industry. In short, few investors looking to make any significant returns on their money put it in refining stocks. It is no surprise that no new refinery has been built in the U.S. in almost thirty years.

Probably as a result of this situation, the refining industry has been going through a period of great change. Roughly one-third of the industry's assets have changed ownership in the past five years. Some refineries have been sold (a few more than once) others have been merged into new companies or they have become part of joint ventures, often under the operating control of a different company than before. Some refineries have closed their doors. Generally, however, refiners have invested to maintain their plants, kept up with expanding demand for products, and met new environmental specifications. The May 2000, Cambridge Energy Research Associates (CERA) study, "Gasoline and the American People," recognizes that, as a result, refiners have become more efficient and flexible in their operations because competitive pressures have forced them to identify ways to bring down costs to compensate for additional environmental expenditures. Given the experience of the past ten years, this really represents a triumph of hope over experience. Especially since, as Dr. Yergin of CERA highlights "* * * the long-term trend in gasoline prices is down." $0.30 per gallon gasoline in the 1960's would be the equivalent of $1.75 today, and $1.25 per gallon in the 1980s would be equivalent to $2.50 today.

SUBSTANTIAL NEW REGULATORY CHALLENGES FACE THE INDUSTRY

In addition to the reformulated gasoline program, the U.S. refining industry is facing a torrent of new and expanded regulatory programs. As the U.S. refining industry provides product vital to the movement of goods and services in the United States, NPRA believes that Congressional leaders and Administration policy makers must recognize that the refining industry's resources are limited, the cost of upcoming regulatory initiatives is astronomical and additional strains on supplies will result. A brief addendum describing these programs is attached.

THE REGULATORY BLIZZARD

The "regulatory blizzard" chart attached to our testimony shows 12 major regulatory actions which the refining industry will be required to comply with over the next ten years. Some, like gasoline sulfur reduction, have passed through the regulatory process and are being implemented. Others, like diesel fuel reductions, have been proposed by EPA with the intent to finalize them this year. Others, like MTBE related regulation, are high-cost and high-impact items which are still taking shape, but are certain to require substantial investment and have negative supply effects in the near future.

These initiatives are largely uncoordinated and, if history is any guide, their impact on energy supplies will be downplayed. They are also very expensive. The gasoline sulfur reduction program will cost the refining industry $8 billion according to the NPC report. Diesel sulfur reduction, if done in conformity with EPA's proposal, will cost around $10 billion. And the cost of responding to MTBE-related problems will take the combined total above $20 billion—and this is for just three of the programs on this chart. And these three programs must be implemented in roughly the same timeframe. It is important for this Committee and others to appreciate the up-

coming regulatory requirements our industry is facing, and their likely impact on future supply and pricing.

In light of these concerns, the NPC recommended that any fuel specification changes be sequenced with minimum overlap to avoid product supply imbalances and the potential for price volatility. The NPC study also reiterated that four years is the minimum time for planning, acquiring environmental permits, financing, constructing and starting up new facilities for fuel changes. Due to these timing concerns, the NPC warned that "There is a significant risk of inadequate diesel supplies if EPA's proposal for 15 ppm maximum sulfur on-highway diesel beginning April 1, 2006 is implemented."

And, it is not just refiners who face challenges. The complexities for the nation's fuel distribution system are enormous. A recent EIA report found that an eastern U.S. pipeline operator already handles 38 different grades of gasoline. CITGO Petroleum, an NPRA member, has prepared the attached chart which illustrates the 10 different grades of gasoline which a refiner must currently make in order to serve different markets for summer gasoline in the eastern and central United States. This proliferation of products adds cost to produce and distribute fuels. It reduces flexibility in the supply system and makes it difficult to cope with temporary upsets in supply. The Midwest is one area already experiencing some of the problems encountered in using a "boutique fuel product." The PIRINC study cites the "island" effect whereby areas such as California, Chicago and Milwaukee are isolated due to their dependence on boutique fuels. As PIRINC notes "* * * *the problem is that regulatory developments have made gasoline less uniform,* or fungible, and more difficult to transport, thereby reducing the ability of the supply system to respond quickly to threats of shortage." [Emphasis added]

EXTERNAL FACTORS ALSO CAN CAUSE STRESS TO THE FUEL SUPPLY AND DISTRIBUTION SYSTEMS

Since the first of the year, the American public has seen its fuel supply and distribution system under stress. There were the international political problems associated with the price of OPEC oil, the unforeseen weather problems in the Northeast this past winter, the potential surge in power outages during usually warm summer months and the recent drydock sinking in the Calcasieu Ship Channel.

The price of oil also affects the cost and availability of gasoline supplies in the U.S. Production cutbacks by OPEC have added to oil price volatility. In February 1999, a barrel of crude oil sold for only $11 (gasoline prices were near $1.00/gallon). Trading prices in June on the New York Mercantile Exchange (NYMEX) for crude oil hit a week's average of about $33 per barrel (bbl). The extreme price fluctuations in our industry's raw material through the refining, distribution and marketing system must be expected to produce fluctuations in product prices. Roughly one-third of gasoline's price reflects the price of its raw material crude oil. The CRS estimates that median crude prices are responsible for 48 cents of gasoline price increases.

We are all aware of the shortages which occurred in the Northeast. Last winter a cold snap in New England caused supply problems and unusual price swings for home heating oil and diesel fuel. NPRA worked closely with the Department of Energy on this matter. EIA is already expressing concerns about next winter's fuel supplies.

THE REFINING INDUSTRY IS COMMITTED TO PROVIDING CLEANER FUELS

The refining industry is committed to providing cleaner, more environmentally acceptable products to consumers. We have spent billions in recent years to meet environmental requirements. We will spend as much, or more, in coming years to achieve the same result. We need to do this because it is right and our customers want and need these products.

But investments of this magnitude will have impacts on the refining industry. Some facilities will close, other refineries, probably many, will change hands. Probably none will be built. Refiners have tried to keep up with demand by making investments in new capacity at existing sites. Meanwhile, EPA is trying to exact huge penalties from the entire refining industry by retroactively claiming that the industry failed to obtain permits for the extra capacity needed to keep up with consumer demand. Our members believe that EPA's claims are without merit, but this issue has diverted attention and scarce resources which could be better used to provide consumers with gasoline, diesel and other products.

Experience tells us, and the NPC study confirms, that refiners will continue to invest to provide petroleum products to consumers. The magnitude of the investments, as well as their timing, will determine which and how many refiners choose to stay in the industry. Also, the NPC study tells us that supply disruptions will

occur more frequently as we implement environmentally-driven fuel specification changes. This means that situations like the recent one in the Midwest will occur more often. The refining system is already stretched to the breaking point in producing and distributing a multitude of products, some seasonal, some not.

CONCLUSIONS

NPRA appreciates the interest of this Committee, and we want to work with you to find solutions to these problems. We believe that it is critically important that policymakers begin a review of our nation's energy policy and provide a realistic energy policy for the U.S. domestic refining industry and other stakeholders. We must recognize the fact that the refining industry and our nation's entire supply infrastructure is operating near its limit and will continue to do so for the foreseeable future. Little flexibility remains to respond to disruptions. Unfortunately, some disruptions are unavoidable and are certain to occur despite our best efforts to prevent them.

The refining industry has a strong commitment to improve the nation's environment, but we caution that environmental goals must be set in the context of our overall energy goals if we are to maintain our energy security. We believe, for example, that sulfur levels must be reduced in both gasoline and diesel. Refiners have offered reasonable and cost-effective programs to make these reductions. However, they have been totally ignored by EPA, despite our cautions about potentially severe product supply consequences. The pending EPA diesel sulfur proposal is a blueprint for reduced supplies of highway diesel and should not be made final without extensive revisions. Unfortunately, EPA seems determined to go forward with this radical and extreme proposal this year, and has ignored the unanimous concerns of the industry about its impact on supply. This indicates to us that we can expect "business as usual" with predictably adverse future impacts unless Congress or the courts intervene to balance environmental and energy supply concerns.

ADDENDUM A

1. *EPA's Gasoline Sulfur Program*—Last December, EPA released the final Tier 2 rule for gasoline sulfur. This new rule will require the refining industry to invest an estimated $8 billion in order to comply with a new 30 ppm gasoline standard between 2004 and 2006. Conservative estimates are that gasoline costs will rise 4–5 cents per gallon as a result. The refining industry suggested an alternative program to EPA that was largely ignored. The refining industry's program was phased and sustainable, and would have protected America's gasoline supplies. However, EPA's final program will result in a logjam of competition for contractors and other suppliers, and will clog the EPA regional and state agencies with permit applications. New technologies for the gasoline sulfur program are not yet proven, and EPA's new directive may cause refiners to invest in expensive and less efficient existing technologies.

2. *EPA's Diesel Sulfur Program*—On May 17th EPA released a diesel sulfur reduction plan which calls for refiners to reduce sulfur levels in diesel by 97 percent (from the current 500 ppm to a 15 ppm level) beginning in 2006. The refining industry agrees that sulfur levels must be reduced, but believes that any new program must be reasonable and sustainable. Refiners offered a plan to EPA that would lower the current limit of 500 ppm sulfur in diesel to a limit of 50 ppm—a 90% reduction. This is a very significant step and will enable diesel engines to meet the particulate matter standards sought by EPA while also achieving significant NO_X reductions. Industry's plan is still expensive; it will cost roughly $4 billion to implement but, unlike EPA's extreme and much more costly proposal, the level of sulfur reduction proposed by industry is both attainable and sustainable. Most refiners would choose to make the investments needed to meet a 50 ppm sulfur limit.

We have told EPA that with the current supply infrastructure, it will be very difficult to maintain and deliver highway diesel at the 15 ppm level to consumers. The low sulfur product will be affected by higher sulfur products carried in the same pipelines, resulting in "off spec" product with greater than 15 ppm sulfur content. EPA's rule will also be very expensive. The cost to retrofit existing plants and build new capacity has been underestimated (technology to produce ultra low sulfur diesel means more investment to retrofit existing desulfurization plants because of equipment design pressure limitations, more frequent shutdowns for maintenance and catalyst changes, and the costs associated with disposing of spent catalysts). There are also limitations in the distribution system and the high probability of fuels becoming contaminated. Permitting and engineering resources also will be severely constrained by the contemporaneous program to reduce gasoline sulfur. (There are few synergies between the process to reduce sulfur in gasoline and diesel.)

3. *EPA's New Source Review Initiative*—Congress enacted the New Source Review (NSR) program in the 1970s to ensure that sources which significantly increase their emissions also install technology to control the increase. NSR is one of the most complicated regulatory programs ever created. Under the Clean Air Act, New Source Review may be triggered by basically any change to existing equipment. Currently, EPA applies NSR to many changes that will never cause emission increases, even to changes that will reduce emissions. The refining industry believes that EPA's New Source Review Program will hinder the refining industry's ability to meet its obligations. NSR should not be retroactively interpreted and current actions by EPA's enforcement office raise concerns about industry's ability to acquire permits for capacity additions and modifications.

4. *EPA's Air Toxics Program*—In July EPA will issue new toxics standards as part of its Urban Air Toxics Strategy. Section 202(l) of the Clean Air Act requires EPA to complete a study of toxic air pollution from mobile sources, including both vehicles and fuels.

5. *EPA's Program To Phase Down MTBE*—EPA recently proposed "eliminating or substantially reducing the use of MTBE, replacing the current 2% oxygenate mandate with a renewable fuel mandate, and maintaining current air quality gains." In its announcement to the Congress, EPA did not specify timing or implementation mechanisms, but appears to suggest that a renewable fuels mandate is envisioned to increase ethanol use. If so, the costs of replacing MTBE would be much higher. If ethanol is required to replace MTBE on a barrel for barrel basis, current ethanol production would have to quadruple, requiring investment of $10 billion and costing an additional $2.5 billion in ethanol subsidies.

Considering the potential negative impacts on octane and volume loss from MTBE elimination, the scope of diesel sulfur reduction, and gasoline sulfur reduction, NPRA believes that these programs cannot and should not be implemented concurrently. We believe that the diesel sulfur reduction program should be more reasonable than EPA has proposed and we oppose any ethanol mandate. Implementing such programs in the time schedules proposed for the next 10 years will most likely result in a domestic fuels shortfall which will impact prices. This is the clear message of the NPC report.

The CHAIRMAN. Thank you, Mr. Slaughter. Let us turn to Mr. Vaughn, president and CEO of Renewable Fuels.

STATEMENT OF ERIC VAUGHN, PRESIDENT AND CEO, RENEWABLE FUELS ASSOCIATION

Mr. VAUGHN. Mr. Chairman, thank you very much. My name is Eric Vaughn. I am the president and chief executive officer of the Renewable Fuels Association. I represent the Nation's ethanol industry, 61 ethanol production facilities currently operational in the United States, about 17 in various stages of design, development, and under construction in four different States today, representing a combined capacity of about 1.8 billion gallons of ethanol production capacity.

In 1990, when the Clean Air Act amendments were debated in the U.S. Senate, two important programs were included in those amendments, one in the historic vote, the only vote, actually, that succeeded on the Senate floor establishing the oxygen content requirement in the reformulated gasoline program.

That amendment, offered by Senators Dole and Daschle at the time, was dubbed the clean octane amendment, and the objective at the time was not to replace lead with higher levels of aromatics, or replace—putting more higher levels of aromatics and toxics in gasoline, but find a way to create cleaner renewable, cleaner alternative sources of energy to produce higher value octane with lower pollution and lower emission, and that program has been highly successful, as the EPA has just testified.

There was a second program that started actually in Colorado 5 years earlier and became part of the Federal program. That was

the carbon monoxide wintertime program. Your home State of Alaska was one of the very first to experience the benefits of high oxygenated fuel. Unfortunately, your experience was MTBE. It lasted about 35 days before the Governor at the time eliminated it from the State, and since that time ethanol has been shipped from the Midwest to the State of Alaska.

I am really pleased to announce that there are some tremendous and powerful activities looking at the State of Alaska looking at using wood waste to process plants that would be turning wood waste into ethanol in the State of Alaska, but you will have to catch up to the State of Wisconsin and the State of Washington, where wood waste is already being converted to ethanol.

In fact, 24 different feedstocks, the bulk of it coming from corn and the starch in corn, are being used all across the country. Sometime early next year we believe one of the largest wheat and waste agricultural products facility will be operational in the State of Oregon, several plants, older ones in Montana, but being upgraded.

This industry is growing and developing to meet oxygenate, octane, and fuel needs all across the country, so where the domestic oil industry has been shutting down, not constructing refineries, the domestic ethanol industry has more than doubled in the last 8 years.

To the issue of reformulated gasoline with ethanol specifically in the Midwest, while much of the focus has been on the price increases in Chicago and Milwaukee, there are five metropolitan areas where ethanol reformulated blends are sold and offered for sale, and where the spikes were difficult, certainly, for the consumers to deal with, and more than difficult for many Government officials to try to explain, some of the experts in the field believe it was simply a case of many problems coming together, but supply mismanagement, just not enough supply in that market.

The oil companies, our customers, have worked aggressively to correct that problem. We now see prices of reformulated gasoline with ethanol priced below conventional gasoline in that marketplace, and marketplaces all across the upper Midwest, but we have lingering problems where Detroit, where no reformulated gasoline regulations, no ethanol being used, has probably the highest gasoline outside of Hawaii in our country.

Mr. Chairman, you have spoken eloquently about the need for an energy policy, and what we have is an energy crisis policy, and we leap from crisis to crisis. We need a thoughtful, supply-oriented plan of action. I know you and I have our differences of opinion on the role that ethanol can play, and the subsidization of ethanol, but 700,000 farmers since 1991 have invested $4½ billion of their money in ethanol production facilities, ethanol production facilities that are some of the most efficient and effective marketing operations, production operations, value agricultural operations, in our Nation's history.

They are willing to commit their resources, their time, and their energy to produce energy for our country using grain that they produce. Grain prices are hovering at their lowest levels in the decade, and agriculture is not benefiting tremendously from the robust economy that the rest of us are, but the fact of the matter is that our energy policy can have as a component to it clean, renewable

alternatives, and we pledge to work with our customers, with the oil industry, with the domestic energy industry to build a solid, strong, consistent, supply-oriented plan to eliminate crises as best as possible, eliminate these brown-out and black-outs, and to work aggressively to produce high quality, high value, clean-burning fuels at comparative prices everywhere in the country.

I appreciate the opportunity to be here, and I look forward to your questions.

[The prepared statement of Mr. Vaughn follows:]

PREPARED STATEMENT OF ERIC VAUGHN, PRESIDENT AND CHIEF EXECUTIVE OFFICER, RENEWABLE FUELS ASSOCIATION

Good morning Mr. Chairman and Members of the Committee. I want to thank you for the opportunity to present testimony regarding the recent rise in gasoline prices, particularly in the Midwest, and the role of ethanol. The causes for the unacceptably high gasoline prices in the Midwest are numerous, and ethanol can help both in the near term as the Midwest seeks access to reasonably priced gasoline and the long term as the United States develops a more responsible and proactive energy policy.

The Renewable Fuels Association is the national trade association for the domestic ethanol industry. Our membership includes ethanol producers, gasoline marketers, farm organizations and state agencies dedicated to the continued expansion and promotion of fuel ethanol. The ethanol industry produced approximately 1.5 billion gallons of ethanol last year from a variety of feedstocks, including corn, wheat, potatoes, beverage waste, wood waste, and other biomass. We are on a pace to break all previous production records in 2000 as production capacity continues to expand, particularly among farmer owned cooperatives, the fastest growing segment of our industry.

BACKGROUND

Fuel costs across the Midwest rose dramatically over the past spring, particularly in May and June when several fuel supply disruptions created product shortages in many areas. In fact, prices of conventional gasoline, reformulated gasoline (RFG) and MTBE rose steadily beginning in June 1999. Chicago conventional gasoline rose 127%, from $0.54 to $1.23 per gallon; Chicago ethanol RFG rose 106%, from $0.60 to $1.24; and MTBE rose 130%, from $0.68 to $1.56. At the same time, ethanol prices have remained relatively constant.

With a net cost of approximately $0.71 per gallon, ethanol is the most cost-effective liquid transportation fuel available in the Midwest today. Because of its high octane and emissions benefits, refiners can displace 10% petroleum at a cost of $1.24 and replace it with ethanol, saving approximately $0.053 per gallon ($0.124 minus $0.071). Thus, at least a partial solution to the gasoline price crisis experienced in the Midwest is the increased use of fuel ethanol.

MIDWEST GASOLINE PRICE CRISIS

Gasoline prices are a function of many factors: crude oil prices, manufacturing costs, supply distribution and market dynamics (i.e., bidding). In this case, the rising cost of crude oil is at the heart of the problem. Since January 1999, crude oil prices have risen more than $20, to over $32 per barrel. This, alone, has given rise to about a $0.50 increase in per gallon gasoline prices. But more importantly, it has created a significant disincentive for refiners to build inventory. European and U.S. gasoline stocks are at ten-year lows. In fact, gasoline stocks are so low that readily available gasoline in the U.S. today is the equivalent of slightly less than two days of current consumption.

While "just-in-time" inventory practices make sense for the shareholders of major international oil companies, it leaves consumers vulnerable to even minor disruptions in supply or production. For example, just last summer consumers in California were facing the highest gasoline prices in the nation because "just-in-time" inventory could not satisfy the increased demand that occurred when 7% of the state's gasoline production capacity was shut down by a refinery fire.

This past spring, refiners in the Midwest were unable to recover from three separate supply disruptions that occurred when critical pipelines supplying the region were temporarily shut down. Again, the "just-in-time" inventory practices of the refining industry left consumers vulnerable. When supplies are tight, market dynamics bid the price of gasoline higher than economic principle would dictate.

We believe this is supply mismanagement of the worst kind. Had refiners built inventory sufficient to accommodate typical disruptions, the tight supply situation that caused price bidding in the Midwest would not have occurred. Importantly, as the quarterly profit reports from the oil industry will demonstrate, the only winners in this situation are the companies that caused the problem to begin with by failing to assure adequate gasoline supplies.

What's worse, rather than simply admitting their mistake, the refining industry appears intent on assigning blame elsewhere. It's OPEC. It's EPA regulations. It's ethanol. Indeed, representatives of the major oil companies would have us believe they are innocent victims of circumstances beyond their control. Again, the soon-to-be-released quarterly corporate profit reports should shed some light on the real victims here consumers.

THE ROLE OF ETHANOL RFG

As noted, according to spokespersons for the American Petroleum Institute (API), the logistical burden and cost of ethanol RFG was primarily responsible for the price increases experienced in the Midwest. But such suggestions lack any factual basis and appear more motivated by politics than economics. Let's look at the facts.

First, refiners have known about the Phase 2 RFG requirements for more than six years and have never suggested they would lead to such significant price increases or supply shortages. Refinery modeling completed for the RFA by The Pace Consultants, Inc. of Houston, Texas, concludes the incremental cost associated with producing ethanol reformulated gasoline blendstock for oxygenate blending (RBOB) is approximately $0.007 per gallon.

Second, the cost of conventional gasoline without ethanol in the Midwest rose as steadily as reformulated gasoline. Indeed, while RFG wholesale prices rose 34% in May, conventional gasoline prices rose 30%. One area experiencing some of the highest gasoline prices today is Detroit, an area without RFG and little ethanol blending. If ethanol RFG were the cause, why were these conventional gasoline markets also seeing such inordinately high prices compared with the rest of the country?

Third, ethanol RFG is also being sold in St. Louis and Louisville at lower costs than MTBE blended RFG being sold in those areas and significantly less than the ethanol RFG being sold in Chicago and Milwaukee. St. Louis and Louisville are southern RFG cities. Chicago and Milwaukee are northern RFG cities. While the specific regulatory requirements are similar, they are not the same. The southern RFG must meet a more stringent VOC performance requirement, meaning that the ethanol RFG being sold in St. Louis is more difficult to make than the fuel being produced for Chicago. Thus, if the cost of producing ethanol RFG was the cause of the problem, why is ethanol RFG being sold in St. Louis and Louisville less costly for consumers?

The most compelling fact demonstrating that ethanol played no role in the Midwest ago Wholesale Ethanol RFG gasoline price crisis is reflected in the Prices are Failing following table. Since mid-June, without any changes to ethanol RFG formulations, without any changes to EPA's regulatory framework, without any changes in ethanol pricing, Midwest gasoline prices have come down precipitously! The only change that occurred was that additional gasoline supplies were made available. Ethanol was no more the cause of the price increases than it can be credited for the falling wholesale costs of both conventional and ethanol RFG in the Midwest. According to OPIS data from July 11, the wholesale cost of conventional gasoline (w/o ethanol) is $.97/gallon, while the wholesale cost of ethanol reformulated gasoline in Chicago is $.95/gallon.

Ethanol is not part of the problem. It is part of the solution.

ETHANOL CAN HELP

As noted by the National Petrochemical & Refiners Association, "the U.S. is gravitating toward a situation in which demand for refined products is overtaking the capability of traditional supply sources. * * * With existing refining capacity essentially full, the U.S. will have to find additional sources to cover the incremental demand." Domestic energy sources such as ethanol can provide that incremental supply. NPRA has also noted the important contribution that oxygenates, such as ethanol, already provide:

"Gasoline production increased by 903,000 b/d over the 1990–1997 period. Roughly 640,000 b/d, or 71%, of the incremental gasoline was made available via increased

refinery utilization. *Oxygenates, driven primarily by the reformulated gasoline program, contributed 185,000 b/d, or another 20%.*" [1] [Emphasis added]

Ethanol can and should be a more consistent partner with domestic oil companies to provide the incremental additional supplies that are obviously needed. This is particularly true when there are unexpected disruptions in production or distribution. After the Explorer Pipeline fire in March, which supplies approximately 70% and 15% of St. Louis and Chicago gasoline respectively, the pipeline company and the U.S. Department of Transportation agreed to reduce operating pressure by 20%.[2] This resulted in a volumetric reduction of approximately 10%. This is volume that could be partially made up with increased ethanol blending. The domestic ethanol industry has alerted oil companies selling conventional gasoline in the Midwest that we are prepared to provide increased volume in this area today.

While U.S. refiners have just two days of demand in storage, the domestic ethanol industry has been building stocks in anticipation of increased demand as MTBE use is reduced in response to the growing MTBE water contamination crisis across the country. In fact, according to EIA, there is approximately 250 million gallons of ethanol currently in storage. That is the equivalent of almost a 45-day supply at current usage.

Moreover, the domestic ethanol industry is producing at a record pace. This year we will likely shatter all previous production records, with more than 1.6 billion gallons. We are prepared to meet the challenge for Midwest fuel supplies—today. All we need are oil companies willing to supplement their tight supplies of petroleum and provide consumers with a high octane, low cost alternative fuel—ethanol.

Expanding the extent of ethanol blending in conventional gasoline would be the most timely and effective means of increasing liquid fuel supplies and lowering consumer costs across the Midwest. Again, we call on oil companies in the Midwest to consider this option today.

U.S. ENERGY POLICY

The current gasoline price crisis in the Midwest is only a symptom of a larger disease—an epidemic caused by a failed energy policy. Our foreign policy, our defense policy and our economic policy are still largely dictated by our nation's desperate need for oil. Until the U.S. gets serious about energy, and is prepared to do more than saber rattle and beg oil sheiks for increased supplies, our nation will be vulnerable to the kind of supply mismanagement that has stricken the Midwest.

While most of us can remember the lines at gasoline stations during the mid-70's, we have been lulled into a false sense of energy security by the lower gasoline prices of the past decade. Fundamentally, however, we are as hostage to the whims of OPEC today as we were during the height of the energy crisis that threw our economy into a tailspin 25 years ago. In fact, we are even more dependent now than we were then. In 1973, the United States imported just slightly more than 30% of domestic consumption. Today, we are importing almost twice that amount. As noted by the American Petroleum Institute recently on its web site: "We import some 55 percent of our crude oil, meaning that we are at the mercy of foreign oil producing companies."

Indeed, as a nation our priorities are misguided. Consider, for example, that the United States spends more money to develop, test and manufacture a single jet fighter engine than is spent annually on the development of alternative fuels. While that jet fighter may one day be used to protect the free flow of oil from the Strait of Hormuz, a more efficient use of the taxpayers' money might be to assure that jet fighter doesn't need to be there in the first place. In a recent letter to the Senate signed by General Lee Butler, USAF (Ret.), Former Commander, Strategic Air Command & Strategic Air Planner, Desert Storm; Robert McFarlane, Former National Security Advisor; R. James Woolsey, Former Director, Central Intelligence; and Admiral Thomas Moorer, USN (Ret.), Former Chairman, Joint Chiefs of Staff, said:

"Sitting on only 3% of the world's reserves while using 25% of the world's oil, nothing could be more short-sighted than for Americans to abandon the incentives for producing transportation fuels from sustainable sources. Such an abandonment would entrust the future of our energy supplies, and of key aspects of our security, to the potpourri of psychopathic predators, such as Saddam [Hussein], and vulnerable autocrats who control over three-quarters of the world's future supply of oil."

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[1] "Refined Product Demand Outrunning U.S. Capacity," National Petrochemical & Refining Association, August, 1998.

[2] "The actual reduction was more, however, because the pipeline was not being utilized to even the extent allowed by the Department of Transportation agreement.

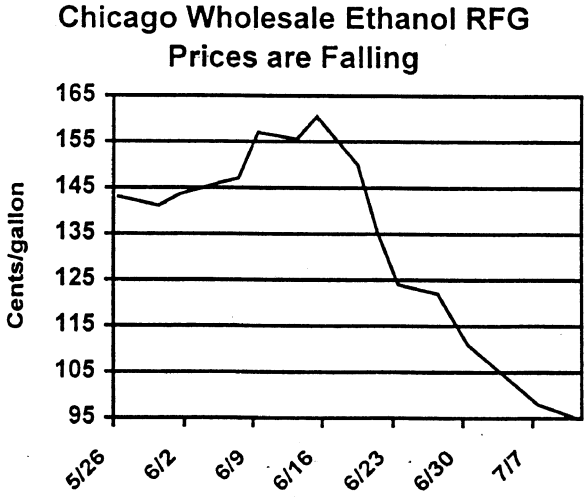
We sent our sons and daughters to fight in the Gulf War to protect the free flow of oil from the Middle East. That must never be allowed to happen again. We must develop and implement a domestic energy policy that promotes the expanded production and use of domestically produced, sustainable renewable fuels such as ethanol. Without it, we will continue to rely on rogue nations for our insatiable appetite for Middle East oil, and consumers will continue to remain vulnerable to price shocks and exaggerated energy costs.

CONCLUSION

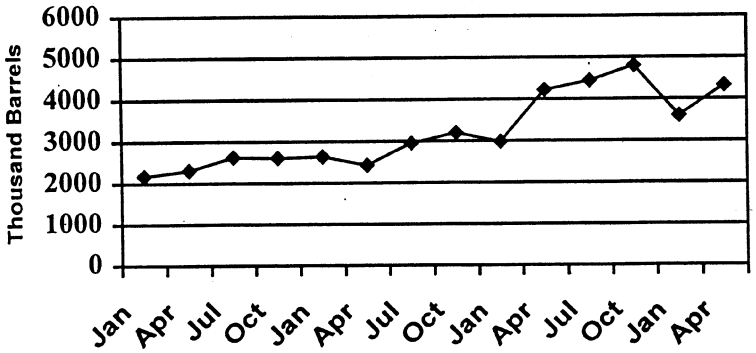
The cause of the gasoline price crisis in the Midwest is quite simple: with $32 per barrel oil, refiners gambled with "just-in-time" supply management and lost. Consumers are now paying the price. With less than two days of available gasoline stocks, there is simply not enough supply to accommodate any disruptions in logistics or production. Refiners created a tight supply situation, and are now reaping the profits.

Congress should thoroughly investigate the impacts to consumers resulting from "just-in-time" inventory practices and take steps to assure greater available supplies. In the short term, ethanol remains an option to increase liquid fuel supplies and reduce consumer gasoline costs throughout the Midwest. But ultimately, Congress should take far more aggressive steps to formulate a national energy policy that will lead us to energy and economic independence. Renewable alternative fuels such as ethanol are part of the solution, both today and in the future.

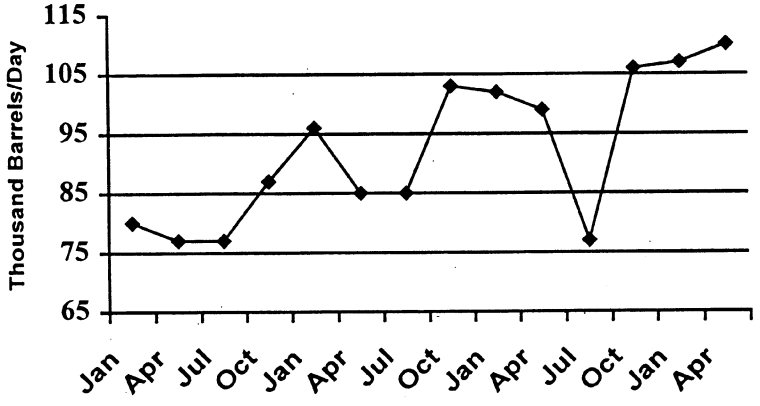
Thank you.



Ethanol Stocks, 1997-2000



Ethanol Production, 1997-2000



Source: Energy Information Administration

The CHAIRMAN. Thank you, Mr. Vaughn. We will move to Mr. Red Cavaney, president and CEO, American Petroleum Institute.

STATEMENT OF RED CAVANEY, PRESIDENT AND CEO, AMERICAN PETROLEUM INSTITUTE

Mr. CAVANEY. Thank you, Mr. Chairman and members of the committee. I appreciate the opportunity to present the views of the API member companies. Gasoline prices generally are up because of the 300-percent increase in the cost of crude oil over the past 18 months. A 35-percent increase has occurred in just the past 2 months alone, excluding taxes. The cost of crude oil, 55 percent of which must be imported, is the single largest cost component of gasoline, at 60 percent.

Recently, the industry also experienced a number of other concurrent transitional challenges that you have heard from the other speakers here today: the June 1 implementation of EPA's phase II reformulated gasoline, pipeline supply disruptions at a key time during fill, the onset of the peak driving season, the additional costs involved in using ethanol as we begin to understand how to use it, as well as the additional costs on RFG, and then finally the uncertainties created by an RFG blending patent that came to light in the last two critical weeks.

In times of tightness and supply, it is not unusual for major changes in the supply system to cause some disruptions. Such was the case last year in California when refinery outages occurred, and we saw it again most recently in the Midwest. Such disruptions are painful in the short run. However, they are always temporary.

The most efficient way to balance the system is to allow markets to work, free from the unintended consequences of unnecessary Government intervention. In fact, free market responsiveness is exactly what tempered the recent price volatility in the Midwest. A supply tightness in the Midwest was developing. Refiners worked overtime to rush new supplies into the region, in some cases from as far away as eastern Canada, while consumers reduced consumption.

By the end of the first week of RFG phase II implementation, sufficient supplies were becoming available to cause wholesale prices to begin falling. On June 7, Chicago's stock market prices began moving downward, a trend that has continued since that time.

Recent OPEC announcements have continued the earlier decline in crude oil prices, and further declines of wholesale gasoline prices in recent days. Consumers, in fact, are benefiting from these trends, and I might show you, here is the headline in yesterday's Chicago Tribune, Gas Prices Plummeting, and this refers to them at the retail level, 34 cents already, and they predict more are going to be coming.

Inventories, however, remain tight in the Midwest. To satisfy historically high demand for gasoline in the Midwest, gasoline refineries in that region and in the Northeast are operating all out. With so much capacity focused on keeping abreast of strong gasoline demand, distillate inventories—that is, diesel and home heating oil—are 8 percent below average nationally. Our figures indicate that while Nation-wide inventories of distillate are within historical ranges, inventories in New England are below levels normally recorded at this time of year.

While distillate stocks are tight, several important factors should be kept in mind. 5 months remain for these inventories to build before the beginning of the heating oil season, and more than 90 percent of home heating oil is shipped directly from refiners to consumers. It does not come out of inventory.

Moreover, it is important to note that weather-created obstacles, not inventories, were the principal reasons for last year's home heating supply concerns in the Northeast. The current situation underscores the need, as several of my colleagues on the panel have said, to revisit our national energy policy.

An effective energy policy must, at a minimum, recognize the need for oil and natural gas producers to have access to Government lands for responsible exploration and production, including areas like ANWR and the vast, promising areas of forest service and other lands in the Rockies region.

The national energy policy must also provide access to oil supplies globally by lifting unilateral sanctions against certain countries. It should include coordinated implementation of safety and environmental regulations and expedited permitting for modernizing facilities for the manufacture and delivery of various fuels.

Energy policy has not been the subject of significant national attention for several decades, a period in which the United States has enjoyed strong economic growth. However, such growth cannot continue without a national energy infrastructure capable of fueling that growth in a safe, efficient, and environmentally compatible manner.

Consumer interests are best served by industry and State and Federal Governments working together in considering the full range of impacts on consumers before setting forth needed new future policy directions and regulatory requirements. With more practical and reliable policies and regulations, still fully protective of the environment, the risk of market volatility can be reduced and economic growth continued, to the benefit of both consumers and to producers.

Thank you.

[The prepared statement of Mr. Cavaney follows:]

PREPARED STATEMENT OF RED CAVANEY, PRESIDENT AND CEO, AMERICAN PETROLEUM INSTITUTE

I am Red Cavaney, President and CEO of the American Petroleum Institute (API). Thank you for this opportunity to present the views of API member companies on U.S. oil and gasoline supply issues and their relationship to recent regional price spikes. API is a national trade association representing all sectors of the U.S. oil and natural gas industry. Our members understand their customers' concerns over the recent higher gasoline prices. Our industry works hard to ensure consumers have a readily available and affordable fuel supply—a fact borne out by history.

In my recent appearances before Congress, I have explained that gasoline prices generally were up because of the 300 percent increase in the cost of crude oil over the past 18 months, of which 35 percent had occurred in the past two months. Excluding taxes, the cost of crude oil—55 percent of which is currently imported—is the single largest cost component of gasoline at 60 percent.

I have also emphasized that we were experiencing a number of transitional, as well as unique, challenges. These included the June 1 implementation of the U.S. Environmental Protection Agency's Phase II reformulated gasoline (RFG), pipeline disruptions, the onset of the peak driving season, low inventories, the additional cost involved in using ethanol as an oxygenate in the Chicago-Milwaukee region, and the uncertainties created by an RFG-blending patent. I will address these factors in detail later in my statement.

In times of extreme tightness in supply, it is not unusual for major changes in the supply system to cause some disruptions. Such was the case last year in California, when refinery outages occurred, and we saw it again most recently in the Midwest. Such disruptions are painful in the short run—but they are almost always temporary. The most efficient way to rectify the situation is to allow the markets to work freely—without the unintended consequences of unnecessary government intervention.

In fact, free market responsiveness is exactly what has happened. As supply tightness in the Midwest was developing, refiners worked overtime to rush new supplies into the region to meet the demand—in some cases from as far away as Eastern Canada—while consumers made some efforts to reduce consumption. The result was that, by the end of the first week of RFG Phase II implementation, sufficient supplies had been moved into the region to cause wholesale prices to begin falling. On June 7, Chicago spot-market prices began moving downward. This initial break and the subsequent trend—reported daily in publicly available data through Platt's Oilgram Price Report—resulted from the market system's bringing increased supplies and reduced demand.

Let me emphasize that the Federal Trade Commission's announcement of an investigation, which occurred more than a week later, was not a factor in turning prices to begin moving downward, as some have claimed. Also, the recent OPEC announcements have led to a decline in crude oil prices and further declines in wholesale gasoline prices in recent days.

Because of the earlier pipeline outages, inventories remain tight, particularly in the Midwest. To satisfy the historically high demand for gasoline in the Midwest, as reported by the Department of Energy, gasoline refineries in the Midwest and Northeast are operating all out. With so much capacity focused on keeping abreast of gasoline demand, distillate inventories have increased less than past seasonal increases and are 10 percent below average nationally. Distillate fuel includes diesel fuel and home heating oil, the latter of which is used primarily in the Northeast. Our figures indicate that while nationwide inventories of distillate are within historical normal range, inventories in New England are below levels normally recorded at this time of year. (See additional detail in the Regional Distillate Inventories section below.)

While distillate stocks, like gasoline, are tight, several important factors should be kept in mind. Five months remain for these inventories to build before the beginning of the heating season, and more than 90 percent of the home heating oil is shipped directly from refineries to consumers—it does not come from inventories. In addition, the industry has shown it is able to produce substantial amounts of distillate when the need arises. Accordingly, summertime distillate inventories are not necessarily a significant indicator of fuel availability once the season begins.

It is important to note that weather, not inventories, was the principal reason for last year's home heating oil supply problems in the Northeast. A series of weather-related problems led to transportation challenges that prevented prompt delivery of distillates to the area. These included frozen harbors that had to be opened by the Coast Guard and severe weather that prevented barges and tankers from delivering products. Because New England is the only major population area without a refinery or a product pipeline, road and water access are vital to service that region's customers.

GASOLINE PRICES IN PERSPECTIVE

Over the past decade, gasoline has been more affordable than ever. Prices have been low because companies have competed hard to reduce their costs and because supplies have been plentiful.

The average retail price of gasoline reached $1.22 per gallon in 1999. This is the second lowest average annual pump price (in inflation-adjusted 2000$ terms) of the entire 81-year history of recorded pump prices. Average prices in 1998 were the lowest. Prices started rising in March 1999 and continued to increase into 2000, reaching $1.71 In June.

Motor gasoline prices have declined sharply since 1981 when real pump prices reached a high of $2.53 per gallon (in 2000$). So the real cost of gasoline to consumers today remains below its 1981 peak. The decline can be attributed largely to lower crude costs, but manufacturing, distribution, and marketing costs are lower as well. Only taxes have increased.

The combined costs to manufacture, distribute, and market gasoline fell from an average of $0.69 per gallon in 1981 to $0.54 per gallon in June 2000. Taxes on gasoline in June amounted to 44.2 cents, including 18.4 cents per gallon in federal taxes, 23.8 cents per gallon in weighted average state taxes, and an estimated 2.0 cents

per gallon in local taxes. For comparison, in 1981 when real pump prices reached a new high, taxes were just 31 cents per gallon. A large part of the tax increase can be attributed to federal taxes, which rose more than twice as much as state taxes.

Note, however, that state and local taxes vary widely by location. In Chicago, for example, total taxes on gasoline total 63.5 cents, including 45.1 cents in state and local taxes. These include a state motor fuel tax, a state environment tax, a basic state sales tax, a local state sales tax, a Chicago extra sales tax, a Cook County gasoline tax, and a Chicago gasoline tax.

WHY GASOLINE PRICES HAVE INCREASED

As everyone knows, gasoline prices in 2000 have increased—not to record levels but far above where they were 12 to 18 months ago. And in the Midwest, they are above the national average. There are four main reasons:

First, world crude oil prices have sharply risen, the result of a decision by OPEC and several other foreign producers to remove millions of barrels per day of crude oil off world markets while demand was increasing. Since crude oil accounts for about 60 percent of the cost of gasoline (excluding taxes), an increase in crude prices directly impacts the price at the pump. Over the past two months, the cost of crude oil has risen 35 percent.

Second, inventories have been lower than usual. With crude prices high, companies have built inventories more slowly. And prior to June 1, companies were clearing storage tanks of winter-time fuels to accommodate the new cleaner-burning gasoline, when some shortfalls were experienced in the Midwest due to a pipeline rupture and other problems. Imports into the region are critical because Midwest refineries make only about 80 percent of the gasoline consumed there.

Third, demand for gasoline has been increasing, as it usually does during the beginning of the driving season. According to the Department of Energy's Energy Information Administration (EIA), "gasoline demand in the Midwest seems to be growing more strongly in 2000 than it has for the past couple of years in this region."

Fourth, the new cleaner-burning gasoline, which was introduced at the retail level on June 1, caused special problems in the Midwest. Refiners weren't able to make quite as much special base fuel as quickly as needed, tightening supplies and pushing up prices.

Other factors have also played a role, including the Unocal patent infringement case that has created uncertainty and risk for many companies making or importing cleaner-burning reformulated gasoline. (See additional detail in the Unocal Patent Infringement Case section below.)

As the DOE Energy Information Administration says in its brochure entitled *A Primer on Gasoline Prices*: "Any event which slows or stops production of gasoline for a short time * * * can prompt bidding for available supplies. If the transportation system cannot support the flow of surplus supplies from one region to another, prices will remain comparatively high." That is what happened in the Midwest.

For all these reasons, today's gasoline supplies haven't been enough to meet demand at the record low prices that consumers enjoyed not long ago. This same conclusion was reached by two government reports issued last month: the Congressional Research Service report and the DOE Energy Information Administration's report of June 20.

The price increases have been painful, but supplies have been well allocated. Moreover, the higher prices are providing incentive to companies to get every gallon of gasoline to market they can. Refineries supplying the Midwest are running all out, and added supplies are exerting downward pressure on prices.

Gasoline is much like many other commodity products, although it differs in one important aspect. When a drought reduces the corn harvest or a freeze cuts citrus production, prices go up. When corn gets expensive, people can switch to potatoes or some other product where supplies are more plentiful and prices lower. For gasoline, substitutes aren't readily available, so consumers feel stressed. Yet, the system ultimately works to their advantage. Over the longer-term gasoline prices have been trending downward.

HIGHER CRUDE OIL PRICES AFFECT GASOLINE PRICES

One major factor affecting gasoline prices this year has been changes in the cost of crude oil. It's a simple matter of economics: when refiners have to pay more for the crude oil they use to make gasoline and other products, the price of those products tends to go up. In 1998, crude oil prices declined to $11 per barrel. Crude oil began 2000 at $25 per barrel. International oil producers took four million barrels

per day of crude oil off world oil markets, driving up prices to $34.13 per barrel on March 7.

Following the OPEC agreement to raise output on March 27, 2000, crude oil prices began to fall, reaching a low for the year of $23.85 on April 10. As of June 12, crude oil prices have risen to above $30 per barrel. This was roughly triple or 300 percent higher than what they were at their low point in late 1998.

Date	Crude price $/ BBL	Regular gasoline price $/Gal.
1/4/00	25.00	1.272
3/7/00	34.13	1.501
3/20/00	29.43	1.529
4/10/00	23.85	1.475
5/1/00	25.87	1.420
6/23/00	34.70	1.658
6/30/00	32.50	1.625

Source: DOE/EIA/NYMEX.

Gasoline price changes have followed crude price changes throughout the year. The sharp price declines of April following the March OPEC meetings were reversed because OPEC output did not address the fundamental tightness in world petroleum supply and demand conditions. World demand for petroleum products remains strong and output increases by OPEC merely met the existing, but not growing demand for products. As a result, prices returned to the over $30 per barrel level. The U.S. continues to import over 55 percent of our petroleum needs and remains at the mercy of world oil markets.

NATIONAL ENERGY INFRASTRUCTURE

For the past several decades, energy policy has not been a topic of significant national attention. During most of that period, the U.S. has enjoyed strong economic growth. However, such growth cannot continue without a national energy infrastructure capable of fueling that growth in a safe, efficient and environmentally compatible fashion.

Much of the energy generation in our country is operating at exceptionally high levels of capacity utilization. The Federal Reserve Board's data show that the average capacity utilization for all industries since 1986 is 82.4 percent. Capacity utilization in petroleum refining is 94.9 percent, which is very close to full-out production.

At full production, and with several dozen "boutique" fuels required by government for certain areas of the country for air quality reasons, the industry needs to be operating all out just to service existing demand. This, in turn, minimizes the time in which refineries can come off filling existing seasonal demand and build stocks to be utilized in a subsequent season. These are the factors that contribute to a "tight" market and minimize the historical flexibility refiners have needed to move additional supplies to various markets to respond to low inventories or production short of demand.

MAKING AND DISTRIBUTING CLEANER-BURNING GASOLINE

On June 1, the oil and gas industry introduced to the nation a new cleaner-burning, government-required gasoline, which has also been a factor in higher gasoline prices. This new fuel costs more to make everywhere, but special problems developed in the Midwest, where ethanol is the primary blending component. Refiners weren't able to make quite as much cleaner-burning gasoline as quickly as needed. That tightened supplies, pushing up prices. In some places, pipeline problems held back supplies.

The new cleaner-burning gasoline—called Phase II reformulated gasoline—must be made to extremely tight specifications. Providing a new fuel made to extremely stringent specifications presents a special challenge. Slight mixing of Phase II RFG with other gasoline blends during storage or transportation may force companies to downgrade or reblend it, slowing and complicating manufacturing and distribution with possible impacts on fuel supplies.

Growth in the number of different grades of gasoline and distillate fuels grades, which must share the same distribution and storage system, has heightened the challenge of providing Phase II RFG. It has made it more difficult to deal with unanticipated problems that can threaten the adequacy of fuel supplies.

In much of the Midwest, RFG contains ethanol, which tends to boost gasoline volatility. Refiners, therefore, must make the base Phase II RFG gasoline to even tighter specifications to ensure that volatility levels in the final product meet govern-

ment standards. Some companies have had to reblend basestock RFG supplies to be able to meet these specifications, and this has slowed down some deliveries. Also, extremely tight RVP specifications for summer grades of Phase II RFG required refiners and marketers to virtually empty their tanks of winter grades before adding low-RVP summer grades so that summer grades could continue to meet RVP specifications.

Pipeline difficulties have also had an impact. The Midwest is a net importer of gasoline. It consumes more than its refineries can produce. Most of the additional gasoline is brought into the market by pipeline, although some is brought in by barge. Finally, several weeks ago, there was more demand for pipeline shipments than there was pipeline capacity. In addition, a major pipeline suffered a leak and was shutdown for five days. When it resumed operations, it was at 80 percent of operating pressure over part of the pipeline. This reduced inventories in the market.

UNOCAL PATENT INFRINGEMENT CASE

Other factors have also played a role in the price increases, including the Unocal patent infringement case that has created uncertainty and risk for many companies making or importing cleaner-burning reformulated gasoline. Refiners, importers and blenders have publicly indicated that they may avoid possible infringement of the patents by making less RFG and RFG imports have declined.

A federal District Court upheld a Unocal fuel patent in 1997, awarding damages of 5.75 cents per gallon against six refiners in California for patent infringement. The District Court ruling was upheld by the U.S. Court of Appeals for the Federal Circuit last March. The refiners have until mid-August to ask the Supreme Court to review the Federal Circuit's decision. Unocal has four additional fuels patents that have not yet been tested in court.

If the Unocal patents stand, they could continue to impact supplies of RFG as refiners and importers individually evaluate their options. They could pay patent royalties on any infringing gasoline, reduce the amount of RFG they produce, or attempt to develop formulations that are outside the scope of the patents. Each option is likely to reduce the flexibility of refiners and increase the cost of making RFG.

REGIONAL DISTILLATE INVENTORIES

As explained above, with so much capacity focused on keeping abreast of gasoline demand, distillate inventories have increased less than past seasonal increases and are 10 percent below average nationally.

Distillate fuel oil is used primarily for heating oil and diesel fuel. For the week ended June 30, 2000, national distillates inventories were 103.3 million barrels, versus 131.4 million barrels in 1999 and a 1990–1999 average level of 115.2 million barrels. This is 18 million barrels greater than the National Petroleum Council's estimate of minimum operational inventories of 85 million barrels. The National Petroleum Council is an oil and natural gas advisory committee to the Secretary of Energy.

Regional inventories for the week ending June 30, 2000 were lower in the two primary consuming regions—the East Coast and Midwest—than year-ago and 10-year average levels. East Coast distillate inventories were 31 million barrels versus a 1999 level of 57.2 million barrels and a 1990–1999 average level of 44.4 million barrels. Inventories in New England were also lower than year-ago and 10-year average levels. New England inventories were the lowest of the East Coast sub-regions. New England distillate inventories were 3.4 million barrels for the week ending June 30, 2000 versus a year-ago level of 16.2 million barrels and a 10-year average level of 8.0 million barrels. Mid-Atlantic inventories were 16.8 million barrels versus a 1999 level of 29.6 million barrels and a 1990–1999 average level of 23.8 million barrels. Inventories in the Midwest were also below last year's total and 10-year average. Inventories in the Gulf Coast, Mountain and the West Coast were equal to or above 1999 or 10-year average levels.

	Week ended June 30, 2000	1999	Average 1990–1999
National	103.3	131.4	115.2
East Coast:	31.0	57.2	44.4
New England	3.4	16.2	8.0
Mid-Atlantic	16.8	29.6	23.8
South Atlantic	10.9	11.5	12.6
Midwest	28.3	32.2	30.0
Gulf Coast	28.4	28.4	26.4
Mountain	3.2	2.7	2.9

	Week ended June 30, 2000	1999	Average 1990–1999
West Coast	12.4	11.0	11.6

As previously noted, summertime distillate inventories are not necessarily a significant indicator of fuel availability once the season begins. Five months remain for these inventories to build before the beginning of the heating season—and more than 90 percent of home heating oil is shipped directly from refineries and does not come from inventories.

REDUCING IMPACT OF REGULATIONS

The government can help reduce the potential for market volatility by making environmental regulations more reasonable and workable.

Environmental rules are an important driving force behind our cleaner air and water. But improvements are possible that would give companies more flexibility to adjust to problems that may have temporary impacts on supply and price. For example, the nation's pipelines are absorbing a number of regulatory changes that are stressing the system. Each mandated change in gasoline or diesel fuel composition requires a pipeline to carry a separate batch and to provide separate tankage, often with the same assets. Permitting and building new pipelines and storage tanks has become so difficult and lengthy that many projects are abandoned as too costly to complete. And several safety and environmental mandates currently being considered by Congress as part of the Pipeline Safety Reauthorization will lead to further constraints on the system. Federal environmental and safety measures need to be coordinated and the mandates imposed on the nation's pipeline system timed to permit the system to adjust to the changes without unduly stressing the system's ability to provide service.

The first step in improving regulation is to eliminate unnecessary rules. For example, let's repeal the federal oxygenate requirement for reformulated gasoline, which makes that fuel harder and costlier to manufacture but is completely unnecessary to improve air quality. Importantly, EPA's Blue Ribbon Panel on oxygenates agreed that the requirement should be eliminated.

We should also ensure that new requirements produce substantial benefits with minimal threat to fuel supplies. EPA's new proposal to improve diesel fuel by reducing sulfur is right directionally, but it over-reaches which could seriously impact diesel supplies with no guarantee of added environmental improvements beyond those achieved by a more moderate approach.

Supplies could be affected because some companies now making diesel fuel may not want to make the huge investments that would be necessary to reduce sulfur as low as EPA wants. Less supply could result in market volatility. EPA assumes the sulfur reductions it is proposing will work with a new kind of vehicle emission reduction technology, but it has presented no evidence that this unproven technology will cut emissions to the desired level no matter how low sulfur content is set.

A less extreme reduction in sulfur—90 percent compared with EPA's 97 percent—would likely achieve comparable emission reductions at much lower cost, while reducing the potential for supply disruptions.

In addition, we should ensure that our laws and regulations allow oil and natural gas companies to explore and produce domestically where new petroleum supplies are most likely to be found. Many of the most promising locations in this country are now off-limits. But supplies there could be recovered with minimal environmental impact, and they would help moderate higher crude oil prices.

Today, we import some 55 percent of our crude oil, placing the U.S. at the mercy of foreign oil producing countries. The current price situation has much to do with the cutback in production by those countries. It doesn't have to be this way. U.S. oil is in plentiful supply and our companies can continue to deliver the energy needed to meet the nation's needs. However, these companies cannot draw upon our nation's vast reserves unless greater access is provided to multiple use government lands for sound exploration and development.

Since 1983, access to federal lands in the western United States—where 67 percent of our onshore oil reserves and 40 percent of our natural gas reserves are located—has declined by 60 percent. Our search for new domestic offshore oil and natural gas is limited to the Gulf of Mexico and Alaskan waters because of the congressional moratoria that have placed off limits most of the rest of our coastal waters.

Onshore, the President has used his executive powers to limit oil and gas activity on vast regions of multiple use government lands. Congress has refused to authorize exploration on the small section of the Arctic National Wildlife Refuge that was spe-

cifically set aside by law for possible exploration in 1980. More recently, the U.S. Forest Service moved to make it more difficult for our companies to explore for oil and natural gas on government lands when it announced a plan to bar road building in 43 million acres in the forest system.

Yet, technology has revolutionized how oil and natural gas are found and produced. For example, the oil and gas industry can now produce more oil with fewer wells thanks to three-dimensional seismic equipment that locates hydrocarbons with greater precision and directional drilling technology that allows a variety of productive reservoirs to be accessed from one location. Fewer wells mean less impact on the environment. Offshore wells can now safely capture oil and gas in ocean depths of thousands of feet in areas far offshore.

We need to recognize that the oil and gas industry of the 21st century has the tools to decrease our dependence of foreign oil while protecting our environment.

NATIONAL ENERGY POLICY

The current situation underscores the need to revisit our national energy policy. At a minimum, four critical areas need attention:

- As explained above, greater access should be provided to find and develop more domestic oil and natural gas resources to reduce our reliance on foreign oil.
- We also need more access to foreign oil supplies, but current government policies—specifically, unilateral economic sanctions—have placed some of these sources off limits.
- Coordinated implementation of environmental rules impacting consumers and the industry are also needed.
- Expedited permitting for building or modernizing facilities for the manufacture and delivery of gasoline, diesel fuel, natural gas and heating oil to consumers is vital.

CONCLUSION

The government can reduce the potential for market volatility by making environmental regulations more reasonable and workable and by considering the impacts on consumers of the reduced system flexibility brought about by the increasing complexity of the regulatory framework in which the industry must operate. Improved regulations would give companies more flexibility to adjust to problems that may have temporary impacts on supply and price.

U.S. oil and natural gas companies know how to make and deliver gasoline. Even with occasional price spikes, they do a good job serving their customers with readily available and affordable fuel supplies. However, with more practical and reliable regulations—still fully protective of the environment—they could do even better, and the risk of market volatility would be reduced.

The CHAIRMAN. Thank you. We will move to Mr. Richard Parker, Director of the Bureau of Competition, Federal Trade Commission.

STATEMENT OF RICHARD G. PARKER, DIRECTOR, BUREAU OF COMPETITION, FEDERAL TRADE COMMISSION

Mr. PARKER. Thank you very much, Mr. Chairman, for inviting the FTC to participate in this very important hearing. I understand my statement is part of the record, or will be, and therefore I would just like to make a few points that I hope will be helpful to the committee.

The first is that the FTC most certainly recognizes the impact of high fuel prices on the American consumer, particularly those of moderate or low income, and most certainly recognizes the threat that high fuel prices can present to the economy as a whole as a central product.

So it is that as a result of some preliminary investigations we did in the early part of June, in which we concluded that we could not explain the price spikes in the Midwest adequately by factors that we could discern on the public record, or from publicly available information, that we opened an investigation, and we are investigating, and we have served subpoenas on numerous firms in the oil

industry. These are large subpoenas which will call for literally the production of hundreds of boxes of documents, and we have people working day and night reviewing those documents. They are starting to come in, but they most certainly are not all there.

What are we looking for? This is a law enforcement investigation with one objective, and one objective only, to determine whether the antitrust laws have been violated. The antitrust laws have been with us for 110 years, and proceed on the premise that consumers are best protected in an environment in which companies are slugging it out with each other, are competing to provide good products, good services, at low prices.

What we are looking for is any attempt, or effort, or ability of these companies to opt out of that system by agreeing rather than competing. In short, we are looking for collusion. At some point in time, a human being, a man or a woman at a variety of these companies made a decision to increase prices. What we need to do is look at that decision, look at the e-mails, look at the internal documents, look at what influenced that determination, that decision, and decide whether there was any contact or there was any expectation, understanding, or agreement as to how rivals would react.

I want to emphasize now that that is what we are looking at, that our investigation is in an early stage. We are getting the documents, and I do not have any evidence that there has been collusion. We do not know one way or the other. I am simply making the point that that is what we are looking for because that is what is relevant under the antitrust laws.

At the risk of saying something that will be disappointing to those of you who have constituents who are justifiably outraged and concerned about these prices, antitrust law is not a quick fix. It never will be. We do not have anybody at the FTC who is empowered to roll back prices.

What we have is the ability to investigate to determine whether there is evidence of collusion, and to put together a case and present a case to a judge. That requires proof. That requires a painstaking analysis of documents and sworn testimony and witnesses. That is not going to be done overnight.

Anything short of a case that can be proven in court, assuming there was collusion, is an absolute waste of time. We have to do it right. That is what we are trying to do. Chairman Pitofsky and I in other testimony have promised an interim report before the end of this month, and we will do that, but I want to emphasize it is an interim report.

Let me close with one final point, and that is that the FTC has been looking at energy issues, at oil industry issues for a lot of years. We have people at the agency who are experienced in this industry, who have experience in the way oil and gas is distributed, and we are bringing those resources to bear.

I am confident that in the event that there was collusion, in the event that somebody did cross the antitrust line, the commission is more than capable of discovering that and bringing a case and seeking an appropriate remedy.

Thank you very much.

[The prepared statement of Mr. Parker follows:]

PREPARED STATEMENT OF RICHARD G. PARKER,[1] DIRECTOR, BUREAU OF COMPETITION, FEDERAL TRADE COMMISSION

I. INTRODUCTION

Mr. Chairman and members of the Committee, I am Richard G. Parker, Director of the Federal Trade Commission's Bureau of Competition. I am pleased to appear before you today to present the Commission's testimony concerning the important topic of high gasoline prices in certain Midwest markets. Competition in the energy sector—particularly in the petroleum industry—is vital to the health of the economy of the United States. Antitrust enforcement has an important role to play in ensuring that the industry is, and remains, competitive.

Consumers in some Midwest markets, such as Chicago and Milwaukee, have experienced considerable price increases in gasoline since early spring, and prices continued to spike up in June before easing slightly this month. The national average retail price of reformulated gasoline ("RFG") increased from $1.29 to $1.67 per gallon from November, 1999 to June 12, 2000, before declining by a penny to $1.66 on July 3, 2000.[2] In Chicago, the average RFG price rose from $1.85 per gallon on May 30 to $2.13 on June 20, before falling to $1.82 on July 10, 2000.[3] From May 30 to June 20 in Milwaukee the average RFG price increased from $1.74 to $2.02, but by July 10 had fallen to $1.70.[4] During the week of June 19, RFG prices at some Chicago gas stations apparently rose as high as $2.50, although they have since receded.[5]

Conventional gasoline prices in the Midwest have also risen substantially from late 1999 levels, although they have receded slightly in recent months. National average retail prices increased from $1.25 to $1.61 per gallon for conventional gasoline between November, 1999 and June 12, 2000, and then eased to $1.60 on July 3, 2000.[6] Average conventional gasoline retail prices in the Midwest rose from $1.55 to $1.85 per gallon from May 29 to June 19, 2000, but had decreased to $1.67 by July 3, 2000.[7] Increases as dramatic as those seen in recent weeks, without any obvious complete explanation, call for scrutiny by antitrust enforcement authorities to determine whether they result from collusion or other unlawful anticompetitive conduct.

The FTC is a law enforcement agency with two related missions: to preserve competition in the marketplace for the ultimate benefit of consumers and to protect consumers from deceptive or unfair practices that may injure them more directly. Unlike agencies that focus on particular industries, the Commission's statutory authority covers a broad spectrum of sectors in the American economy, including the energy industry and its various components. The Commission's Bureau of Competition shares responsibility for antitrust enforcement with the Antitrust Division of the Department of Justice. The Commission also shares its expertise in both competition and consumer protection matters by providing advice to the States and to other federal regulatory agencies.[8]

Consumer welfare is the goal of antitrust enforcement across all industries. Its importance is particularly clear in the energy industry, where even small price in-

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[1] This written statement represents the views of the Federal Trade Commission. My oral presentation and response to questions are my own, and do not necessarily represent the views of the Commission or any individual Commissioner.

[2] Energy Information Administration, Office of Oil and Gas Daily Price Report (June 12, 2000, July 3, 2000). In comparing average RFG prices at different times and at different places, it should be noted that RFG requirements may differ between summer and winter and also between localities.

[3] EPA Data, RFG–CG Price Information, based on Oil Price Information Service data (June 14, 2000, June 23, 2000). July 10 price from OPIS Energy Group, Daily Fuel Gauge Report (July 10, 2000).

[4] *Id.*

[5] See R. Kemper & K. Mellen, "As Pressure Builds, Price of Gas Falls," *Chicago Tribune* (June 23, 2000).

[6] EPA Data, RFG–CG Price Information (June 14, 2000, July 10, 2000).

[7] Energy Information Administration, Motor Gasoline Watch (June 21, 2000, July 10, 2000) at 2.

[8] For example, the Commission in recent years has been active in supporting the deregulation of the electric power industry. See Commission Letter to the Honorable Thomas E. Bliley, Chairman, Committee on Commerce, United States House of Representatives, Concerning H.R. 2944, The Electric Competition and Reliability Act (Jan. 14, 2000); Comment of the Staff of the Bureau of Economics, Federal Trade Commission, "Inquiry Concerning Commission's Merger Policy Under the Federal Power Act," Dkt. Nos. RM95–8–000 and RM94–7–001 (May 7, 1996); "Revised Filing Requirements," Dkt. No. RM98–4–000 (Sept. 11, 1998); Comment of the Staff of the Bureau of Economics of the Federal Trade Commission Before the Alabama Public Service Commission, Dkt. No. 26427, Restructuring in the Electricity Utility Industry (Jan. 8, 1999).

creases can strain the. budgets of many consumers, particularly those with low and fixed incomes, and of small business, and, as a result, can have a direct and lasting impact on the entire economy. In fiscal years 1999 and 2000 to date, the Bureau of Competition spent almost one-third of its total enforcement budget on investigations in energy industries.

Today, we provide an overview of our investigation into whether illegal conduct has led to gasoline price increases in Chicago, Milwaukee, and elsewhere in the Midwest.

II. POTENTIAL CAUSES OF THE CURRENT PRICE SPIKES

Publicly available information suggests that several factors may have contributed to the recent spikes in prices. The first factor is the reduced global supply of crude oil. In the second half of 1999, OPEC countries, joined by several non-OPEC oil exporting countries, curtailed the global supply of crude oil. During the same time period, a number of Asian economies began to recover from a regional recession, causing increased demand for petroleum products. Moreover, in recent months, many foreign economies have experienced impressive growth, while the U.S. economy has continued its record expansion. The result is that worldwide consumption of crude oil has exceeded production, and world and U.S. inventories have been drawn down. Refiners responded to the crude price increases caused by this crude shortage by cutting gasoline production and using inventories of gasoline to meet demand, in the expectation that inventories could be replenished once crude oil prices dropped, with the result that the spread between crude oil and conventional gasoline increased. All of these factors have led to tight supply situations in many countries.

In the Spring of this year, the OPEC countries agreed to increase production in an attempt to moderate the price of crude petroleum, which had increased from a low of about $12 a barrel in February 1999 to over $32 a barrel in March 2000.[9] The announcement of the Spring supply increase caused crude prices to dip temporarily, but they have since recovered, reaching $33 a barrel in June, in the face of continued world-wide economic expansion and summer increases in demand for gasoline. In the last month, two further production increases have been announced: on June 21, OPEC announced a further production increase of 708,000 barrels per day,[10] and in early July Saudi Arabia announced an increase in production of 500,000 barrels per day of crude.[11] It remains to be seen whether, when and to what extent OPEC's and Saudi Arabia's announcements of crude supply increases will reduce prices.

Chicago, Milwaukee, and other places, principally in the Midwest, have suffered particularly severe recent price increases that cannot be explained solely by the OPEC actions and other world market factors, which would have an impact on all regions of the United States. One factor specific to the Midwest markets that may have contributed to the price increases was the introduction of EPA Phase II regulations for summer-blend reformulated gasoline that went into effect on May 1, 2000 at the wholesale level in both Chicago and Milwaukee. The new, more-stringent regulations require that winter-blend gas be drained from storage tanks before the summer-blend supply could be added. These regulations may have led to abnormally low inventories. According to some reports, summer-blend Phase II RFG is proving more difficult to refine than anticipated, causing refinery yields to be less than expected. The ethanol-based RFG used in Chicago and Milwaukee is reportedly proving to be the most difficult of all to make. Further, St. Louis has now entered the RFG program for the first time, thus adding additional demand to an already tight Midwest RFG supply situation.[12] Moreover, the recent appeals court decision upholding Unocal's patent for some formulations of RFG may have caused some refineries to change RFG blends in an effort to avoid infringement, leading to production delays and decreased refinery throughput.[13] As with the OPEC factor, RFG-related issues seem unlikely, however, to provide a complete explanation for recent Mid-

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[9] Energy Information Administration, Update: A Year of Volatility—Oil Markets and Gasoline, June 21, 2000 (West Texas Intermediate crude oil spot prices).

[10] "OPEC Agrees to Increase Oil Production," *Wall Street Journal* (June 22, 2000) at A3.

[11] "Saudi Plan to Raise Oil Output Stirs Up Debate," *Wall Street Journal* (July 5, 2000) at A2.

[12] St. Louis received EPA waivers to delay implementation of Phase II RFG until early June, because of a break in the Explorer pipeline which serves the region. St. Louis uses primarily MTBE-based RFG, which many observers believe to be less costly than ethanol-based RFG. St. Louis has not so far experienced price increases as great as those in Chicago and Milwaukee.

[13] *Union Oil Co.* v. *Atlantic Richfield Co.*, 208 F.3d 989 (Fed. Cir. March 29, 2000).

western gas price increases, given that in the Midwest as a whole, conventional gasoline prices have risen more dramatically than RFG prices since the end of May.[14]

Another possible factor underlying the price increases could be the break in the Explorer pipeline last March. This pipeline moves refined petroleum products from the Gulf of Mexico through St. Louis to Chicago and other parts of the Midwest.[15] Explorer is still not operating at full capacity.[16]

These supply and demand factors could explain the Midwest price increases in whole or in part. However, these price spikes are particularly large. None of these factors precludes the possibility that collusion may have occurred at some point that further contributed to higher gas prices for consumers. If non-collusive marketplace events do not explain the price spikes, that may provide circumstantial evidence that illegal activity has taken place. In addition, we may find more direct evidence. As we undertake this inquiry, we do not know what we will find.

III. THE FTC'S INVESTIGATION

The Commission protects competition by enforcing the antitrust laws. We do not regulate or attempt to determine the reasonableness of energy prices. Instead, we investigate whether or not specific anticompetitive and unlawful conduct has occurred that interferes with the operation of the free market. Thus, our investigation will not determine whether prices are too high or too low, but only whether there is reason to believe that the antitrust laws have been broken.

For analytical purposes, it is best to think of the Commission's antitrust enforcement authority as divided into merger and nonmerger sectors. Enforcing the law against anticompetitive mergers prevents the accumulation of unlawful market power, that is, the ability profitably to raise prices above competitive levels. The matter we are discussing today involves enforcing the nonmerger provisions of the antitrust laws. There are two principal types of nonmerger conduct that may have unlawful anticompetitive effects: (1) the illegal acquisition or maintenance of monopoly power, which typically consists of a single firm's exclusionary conduct to prevent or impede competition; and (2) collusion among two or more independent firms to increase prices, curtail output or divide markets. Our investigation will focus on whether any industry participants have engaged in collusion because it does not appear, at the outset, that any single oil company has sufficient market power to raise prices unilaterally.

The Commission has initiated a formal investigation into the causes of the recent gas price increases in the Midwest. This will be a civil investigation conducted pursuant to our authority under the Federal Trade Commission Act.[17] The investigation is being spearheaded by our Midwest Regional Office, located in Chicago. We are working closely with the Attorneys General of the affected States to coordinate our combined efforts.

The Commission's investigative process in a nonmerger collusive practices case involves a thorough search for evidence that the industry participants are engaging, or have engaged, in collusive behavior prohibited by the antitrust laws. Once a formal investigation is opened, staff typically requests from the Commission the authority to use compulsory process. The Commission has approved the use of compulsory process in this investigation, permitting the issuance of both subpoenas and Civil Investigative Demands, and the taking of depositions under oath.[18] Process will be used to take testimony and gather evidence from the various entities that refine, transport and distribute gasoline in the Midwest, as well as suppliers and

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[14] According to Energy Information Administration figures, average retail prices throughout PADD H (the Midwestern Petroleum Administration for Defense District) rose 18.9 cents for RFG and 29.4 cents for conventional gasoline from May 29 to June 19. See Energy Information Administration, Motor Gasoline Watch (June 21, 2000) at 2.

[15] Environment News Service, "Gasoline Spill Threatens Dallas Water Supply" (March 13, 2000).

[16] EPA/DOE briefing of results of field interviews to FTC staff, 6/14/2000 and to Midwest/Northeast Congressional Caucus, 6/16/2000.

[17] 15 U.S.C. § 41 et seq. The Commission does not have criminal enforcement authority. The Antitrust Division of the Department of Justice has exclusive responsibility for criminal enforcement of the antitrust laws, pursuant to authority granted under the Sherman Act. 15 U.S.C. § 1 et seq. If we uncover evidence of criminal activity, however, such as hard-core price fixing, we can forward the matter to the Antitrust Division.

[18] Subpoenas and CIDs are two methods of requiring the submission of certain information needed for an investigation. The Commission has authority to issue both. There are certain administrative and procedural advantages to each type of compulsory authority. Subpoenas are generally preferable for document discovery or in-person testimony, while CIDs may be superior for obtaining interrogatory responses or information and for service on foreign entities. Naturally, the Commission seeks evidence from witnesses on a voluntary basis where appropriate or feasible.

customers, and other knowledgeable or affected persons. The Commission already has begun issuing subpoenas to the entities involved in the chain of gas supply to the affected region. These entities include refiners, pipeline owners and operators, terminal owners and operators, and blend plant owners and operators. Our staff also has begun conducting interviews with market participants, consumers, corporate users of gasoline, and others with potential knowledge of relevant facts. The objective is to determine who raised prices, and whether there was any illegal contact, communication or signaling among competitors before or during the time of the price increases.

The Commission must show more than parallel behavior among market participants to prove collusion. The fact that all companies raise prices at the same time is not sufficient evidence of collusion. The courts have held that some "plus factor" must be present to demonstrate that an agreement was reached. Behavior that would be unprofitable "but for" collusion may be evidence that such an agreement exists.

Beyond this general description of what the Commission is undertaking, we can make no further comment about the particulars of this on-going, non-public investigation. We must emphasize that an FTC antitrust investigation is not a quick fix. The Commission will provide an interim status report by the end of this month, but it may take significantly longer than that to complete the thorough investigation that this matter deserves. Our objective is to determine whether here has been any illegal conduct, and, if there has, to determine who was responsible and either bring the matter to court or initiate our own administrative proceeding. We need to develop solid documentary and testimonial evidence in order to be able to bring a case. Based on the FTC's extensive experience in conducting these kinds of investigations, we know this can be done only through a careful and fact-intensive analysis. We cannot say at this time when the investigation will be concluded.

We assure you that our investigation will be thorough, objective and as expeditious as possible. The FTC has an excellent staff of lawyers and economists with considerable experience in the oil industry who are working on this investigation, and we will pursue this matter vigorously.

The CHAIRMAN. How long might this take?

Mr. PARKER. I wish I could tell you. I would think there is no way this will take any less than 6 months, and it may take longer than that. I do not know until I get into the documents.

The CHAIRMAN. You said in no way would it take longer than 6 months? It may take longer than that?

Mr. PARKER. I misspoke. I cannot predict that this would take any less than 6 months, and it could certainly take longer than that. I do not know what we have yet, other than an awful lot of documents that people are going through page by page by page.

The CHAIRMAN. Well, we will leave the record open for a more definitive answer after you have had an opportunity to discuss it with your colleagues. The obvious purpose is at some point in time it should end, but I will leave that up to the process.

Our last witness is Mr. Lawrence Kumins, who is Specialist in Energy Policy for the Congressional Research Service, Library of Congress.

STATEMENT OF LAWRENCE KUMINS, SPECIALIST IN ENERGY POLICY, CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS

Mr. KUMINS. Thank you, Mr. Chairman, members of the committee, for the opportunity to testify on the gasoline price situation in Chicago and Milwaukee. My testimony is based on the June 28 CRS report on Midwest gasoline.

The CHAIRMAN. Can you pull the mike a little closer, please?

Mr. KUMINS. To update, the Chicago Milwaukee price spike for RFG appears to have abated. Chicago RFG is now below RFG elsewhere, having declined steadily since mid-June. As of Monday of

this week, wholesale RFG traded in the region was 3 or 4 cents less than the national benchmark price. Conventional gasoline also traded down a few cents.

The CRS report took a snapshot of developments in the Chicago-Milwaukee gasoline market as of the first 3 weeks of June. The picture is taken against a backdrop of the Nation's oil supply and demand situation, and the backdrop does become part of the picture.

The backdrop features 1999 petroleum demand at a record 19½ million barrels a day, 10 percent higher than 1995. This year's consumption is the same as last year's. Despite higher prices and tight supplies, OPEC has effectively capped world crude supply.

The CHAIRMAN. I did not hear that. Would you repeat that?

Mr. KUMINS. OPEC has effectively capped the world crude supply. A refiner wanting to purchase additional crude from this finite pool must out-bid another refiner, running up prices but not increasing total short-run supply. Nation-wide inventories of crude oil and gasoline are extremely low. Stocks were only a day-and-a-half of refinery inputs. Gasoline is about 2 days' worth of consumption above the point where spot shortages and local price spikes occur.

Cold weather, a pipeline transport slow-down, or difficulty at a key refinery can cause supply problems. This winter's heating oil supply crunch in New England and the recent Chicago-Milwaukee RFG situation are examples.

Turning to the Chicago-Milwaukee snapshot, wholesale RFG prices during the first 3 weeks of June were much higher than elsewhere. Conventional gas prices, though lower than that market's RFG, were well above national levels. The fact that regional prices were so high strongly suggests a supply-demand imbalance, and raises the question of what might be different and unique about Chicago-Milwaukee.

The first factor standing out as different and unique was the ethanol blend, the ethanol-based RFG blend used exclusively in the area. Most RFG markets use MTBE to provide required oxygen. RFG volatility is limited by regulation. Volatility limits became stricter on June 1 to deal with warmer summer weather.

For ethanol-blend RFG to fall within the volatility limits, the volatility of the gasoline blend stock, often called RBOB, to be used in ethanol blending must be extra low. Low volatility RBOB poses special manufacturing challenges. The required material is either transported from refineries elsewhere, or made in the six Illinois refineries that supply local needs. It may well be that local refineries had initial difficulty in achieving the required RBOB specs as they turned from making more volatile winter fuels to a lower volatility RBOB for the June 1 deadline.

When demand exceeds local refiners' ability to manufacture low volatility RBOB supplies can be brought in from refineries elsewhere by pipeline. The unique nature of this material requires it to be segregated within the pipeline. Added transport difficulty stems from the fact that it is usually shipped in small quantities.

Pipeline transport between gulf refineries and the regional market was disrupted by a pipeline break on March 9. The important supply line, the Explorer pipeline, had a spill in Texas. The damage was repaired and service was resumed 6 days later, but 6 days

of suspended operations resulted in depleted inventories at terminals along the way, with some tanks in St. Louis actually running dry.

Given the national tight supply situation, those stocks have been slowly replaced. Pending a survey of the pipeline's integrity, the pipeline and DOT agreed to reduce operating pressure by 20 percent. That translates into a 10-percent cut in volumetric throughput.

The pipeline has indicated that the reduction has been allocated proportionately to their shippers, and suggests that gasoline deliveries were somewhat less than normal. In June, Explorer produced a better flow improver and gained half of its lost capability.

Taken together, the transition to summer gasoline and pipeline problems superimposed on already tight supplies Nation-wide resulted in extremely tight gasoline supplies. Gasoline prices responded to reduced supplies and summer demand. RFG prices in Chicago rose 50 to 58 cents above those prevailing elsewhere, and gasoline prices, conventional gasoline was up by 25 to 34 cents above the national benchmark. Both RFG and conventional gas prices were affected by the pipeline difficulties.

Conventional gas was up 25 to 34 cents. Subtracting the conventional increment from the RFG increment, it can be imputed that about 25 cents was attributable to the unique RBOB challenges in the region, and the remaining was attributable to transportation difficulties and a fundamental supply shortfall.

I should point out that this analysis looks strictly at market forces to explain the price differentials. In other words, it is assumed that the price spikes were caused by market forces. Should the FTC find other causative factors, our conclusions would have to be revisited.

By any measure, price increases of this size are very large. The basic economics suggest that the market would adjust as additional supply was attracted by Milwaukee and Chicago high prices. This seems to have happened, since prices began declining starting the week of June 19 and have now overcorrected. Extra supplies likely came from local refineries' improved RBOB yield, supplies to Milwaukee from the Koch refinery in Minnesota via Koch pipeline, and improved throughput on the Explorer line.

That is the sum of my comments. Thank you very much.

[The prepared statement of Mr. Kumins follows:]

PREPARED STATEMENT OF LAWRENCE KUMINS, SPECIALIST IN ENERGY POLICY, CONGRESSIONAL RESEARCH SERVICE

Thank you, Mr. Chairman. I would like to begin by thanking the Committee for the opportunity to testify on the gasoline price situation in Chicago and Milwaukee. My testimony is based on a summarization of the June 28, 2000, CRS Report entitled *Midwest Gasoline Prices: A Review of Recent Market Developments*, which I prepared. That report was an update of a June 16 CRS general distribution memo on the same subject.[1]

To update further, the Chicago-Milwaukee price spike for reformulated gasoline, or RFG, appears to have abated: Chicago RFG now costs less than RFG elsewhere, having declined since mid-June. As of last Monday (July 10), wholesale RFG in the region traded in the range of 93 to 101 cents per gallon, 3 to 4 cents less than the benchmark price. Conventional gasoline in Chicago traded in the 92-to-98 cent range, 1 to 3 cents less than RFG.

[1] The report has been retained in committee files.

The CRS reports took a snapshot of developments in the Chicago-Milwaukee gasoline market. That picture was taken against the backdrop of the nation's oil supply and demand situation, and the backdrop becomes part of the picture.

The backdrop features total petroleum demand during 1999 at a record 19.5 million barrels per day, 10% higher than 1995 consumption. This year's consumption to date is at the same rate as 1999's, despite higher prices and tight supplies. OPEC has effectively capped world crude supply. A refiner wanting to purchase additional crude from this finite pool must outbid another refiner, running up prices but not increasing total short-run supply. Understandably, with demand at record levels, U.S. crude stocks will not build unless more crude is put on world oil markets or domestic refiners outbid foreign refiners.

Inventories of crude oil and gasoline are extremely low. Current crude stocks of 294 million barrels are only 1.5 days of refinery inputs above minimum operating levels; gasoline stocks are about 2 days above minimum levels. Minimum levels are the point at which spot shortages and price spikes occur. Even at current stock levels, there is little flexibility in the petroleum product supply system. Cold weather, a pipeline transport difficulty, or a refinery outage can cause shortages; this winter's heating oil supply crunch in the Northeast and the Chicago-Milwaukee RFG situation are examples.

Turning to the snapshot of Chicago-Milwaukee markets, wholesale RFG prices during the first three weeks of June as reported in *Platt's Oilgram Price Report* were much higher than nationwide prices. And Chicago conventional gas prices—though lower than that market's RFG—were also substantially above national levels. The fact that regional prices were so high strongly suggested a supply-demand imbalance, and raised the question of what might be different about Chicago-Milwaukee to have destabilized the market to such an extent. In the short run, prices are determined by the interaction of supply and demand; the manufacturing cost of supply has no short-term impact.

Two factors attracted immediate attention. The first was the special RFG situation in the Midwest. Essentially, it is used only in Chicago, Milwaukee, and St. Louis; the rest of the region uses conventional fuel. Under the Clean Air Act, RFG is required to contain 2% oxygen, as a means of promoting cleaner combustion. Most RFG markets use an additive called MTBE to provide the required oxygen. As a result of concerns about other effects of MTBE and a desire to stimulate markets for ethanol (generally made from corn), refiners serving the Chicago and Milwaukee markets have used ethanol rather than MTBE in reformulated gasoline. Blending with ethanol requires a separate gasoline base stock (called RBOB[2]) that became a factor in the region's recent price spike.

The difficulty stems from the fact that RFG volatility (speed of evaporation) is limited by regulation. Ethanol is much more volatile than the major alternative oxygenate, MTBE. In order for the ethanol-blend RFG to fall under the overall volatility limit, the volatility of the RBOB to be used in ethanol blending must be low. This is a matter of blending volatile ethanol—a physical fact that cannot be changed—with special reduced-volatility RBOB. The difficulty arises because low-volatility RBOB poses special manufacturing challenges, and there is very little demand for this material outside the Chicago-Milwaukee gasoline market. Most of the required material is made in the six refineries in Illinois (whose capacity totals nearly 1 million barrels per day) and the large Koch refinery in Minnesota. When demand exceeds local refiners' ability to manufacture low-volatility RBOB, supplies are brought in from Gulf Coast refiners by pipeline. In recent weeks, supplies from Koch reportedly have been shipped to Milwaukee via a company-owned pipeline.

Low volatility RBOB is a specialty product; not all refiners can or will manufacture gasoline to such specifications. It may well be that local refiners had initial difficulty, as they turned from making winter fuels to low-volatility RBOB, in achieving the required specifications. And shipping presents difficulties stemming from the unique nature of the product, the need to segregate within the pipeline and the fact that it is usually shipped in relatively small quantities. Additionally, transportation bottlenecks can adversely affect the price and availability of this material in this consuming region.

Another likely causal factor that stood out was operational difficulties on the Explorer Pipeline. When the pipeline system has capacity problems, it can be supplemented by truck, and/or waterway transport in some cases. But pipelines' low costs and ability to move large amounts of fuel are difficult to replicate by supplementary transport. The Explorer Pipeline transports fuel from the Gulf Coast to Chicago, traveling south to north and passing through Tulsa, at which point it changes from 28 inches in diameter to 24 inches, and capacity falls accordingly. On March 9, Ex-

[2] Reformulated Gasoline Blendstock for Oxygenate Blending.

plorer had a spill in Texas. The damage was repaired and service resumed on March 15. Pending the results of a survey of the pipe's integrity, the pipeline company and the Department of Transportation agreed to reduce operating pressure by 20%. This translates into a volumetric reduction (measured in barrels per day) of 10%. This has reduced the pipeline's throughput on the 28 inch southern section from 545,000 barrels per day to 490,000 barrels per day. The pipeline has indicated that the reduction has been allocated proportionately to its shippers into Chicago (and elsewhere along the 24 inch section), suggesting that gasoline deliveries were 10% less than normal. In June, Explorer introduced a better flow improver, regaining half the lost throughput capability.

Taken together, the transition to summer gasoline and pipeline problems—superimposed on already tight supplies nationwide—resulted in an extremely tight supply situation. Gasoline prices responded to reduced supplies and summer demand; RFG prices rose to 50–58 cents above those prevailing elsewhere, and conventional gas was 25 to 34 cents above the national benchmark. Basic supply and demand interaction suggests that difficulties in meeting summer RFG specs could have accounted for 24 to 25 cents of the RFG increase, and basic supply problems could have accounted for another 25 to 34 cents of the price increase. Chicago RFG, at 50–58 cents above the national benchmark, was affected by two supply factors: the RBOB manufacturing difficulty and pipeline problems. Conventional gasoline prices in Chicago were affected only by the pipeline difficulties, and rose 25–34 cents. Subtracting the conventional increment from the RFG increment, it can be imputed that about 25 cents was attributable to the unique RBOB challenges in the region.

I should point out that this analysis looks strictly to market factors to explain the prices differentials—in other words, it is assumed that the price spikes were caused by market factors. Should the Federal Trade Commission find other causative factors, our conclusions would need to be revisited.

By any measure, price increases of this size are very large. Basic economics suggests that the market would adjust as additional supply is attracted by Chicago-Milwaukee prices. This seems to have happened, since prices began declining during the week of June 19 and have now overcorrected. Extra supplies likely came from local refineries' improved RBOB yield, supplies to Milwaukee from the Koch refinery in Minnesota via a Koch pipeline, and improved throughput on the Explorer pipeline.

The CHAIRMAN. Thank you very much. We will limit questions to 5 minutes. members may use their 5 minutes for opening statements or questions, whichever they prefer.

Mr. Perciasepe, can you tell us roughly how many blends that EPA demands in its reformulation?

Mr. PERCIASEPE. EPA has a performance standard for two basic kinds of RFG, one for the southern part of the country, where it is warmer, and one for the northern part of the country. Within that, what kind of oxygenate is used is up to the refiners, and then, of course, there are the three blends that you get at most gas stations, so if you want to just look at oxygenates as a generic requirement in the law, there are only two different RFG requirements and then those three blends would be six blends.

The CHAIRMAN. So you mandate six blends Nation-wide?

Mr. PERCIASEPE. Congress has mandated that, and we do the implementation of that.

The CHAIRMAN. So six specific blends.

Mr. PERCIASEPE. That is correct.

The CHAIRMAN. And those are blends and additives of MTBE and/or ethanol?

Mr. PERCIASEPE. If you want to multiply that by two, because some of them are ethanol and some of them are MTBE, you could double it to 12, and I suspect that that is in some people's numbers, but I do not believe any ethanol is used in the southern area of the RFG. I think it is only used in the northern area, so you would only add three more, so you could essentially say, if you

wanted to look at the difference, say, another three blends comes out of the Federal reformulated gasoline program.

The CHAIRMAN. And now you are phasing out MTBE?

Mr. PERCIASEPE. We do not have the authority to do that, because that 2 percent oxygenate requirement is in the law.

The CHAIRMAN. You have acknowledged that it gets in the water table.

Mr. PERCIASEPE. We have asked Congress to revisit that part of the Clean Air Act and to remove that. We suggested——

The CHAIRMAN. You are still enforcing it now?

Mr. PERCIASEPE. Yes.

The CHAIRMAN. Even though—why would you not recommend to Congress an emergency action to eliminate it?

Mr. PERCIASEPE. We have sent specific principles on what should be in legislation to move that out to the Congress. We are working with several different committees in an on going fashion. We have produced the administration cost analysis of the different scenarios.

The CHAIRMAN. Have you proposed legislation?

Mr. PERCIASEPE. Striking something—I mean, we have not proposed specific legislation.

The CHAIRMAN. Why don't you propose it if, indeed, it is in the interest of eliminating more MTBE in the water tables so that we can take an emergency action? It seems it is going to have to be picked up by, obviously, the ethanol industry.

Mr. PERCIASEPE. If you remove MTBE without doing something to how you make reformulated gasoline, you are correct, you would have to use ethanol in those areas.

The CHAIRMAN. Or what Mr. Cook suggested, which is refineries have this capability, but the price structure does not associate itself with the return.

Mr. PERCIASEPE. In fact, we have recommended that. We just stick to the performance standards for RFG and not—in other words, the actual environmental performance standards, and let the refiners have flexibility on how they would do it, which would allow refiners to come up with these other approaches.

The CHAIRMAN. But while Congress made the mandate, you have come up with the scientific evidence that this is not in the public health interest to continue MTBE, so it would seem to me that you should terminate it and the suggestion is that you probably do less harm by eliminating it, recognizing you do not have enough ethanol currently to met the demand, but just simply going back to as an interim the lesser of the two evils, which would be unreformulated gasoline, until you could gear up for it.

Mr. PERCIASEPE. We would love to do that, but there is no legal authority for us to do that.

The CHAIRMAN. You have legal authority when the public health is at risk. Well, anyway, I am not going to pursue this. I think I have set the stage for the legitimate question. Indeed, this is something that is contrary to public health. It should be terminated. EPA seems to have an awful lot of authority in a lot of areas to move when it is in the interest of the public.

Mr. PERCIASEPE. If we have the authority, we would do it. If we did it without the authority, we would be sued.

The CHAIRMAN. Why don't you ask Congress for the authority?

Mr. PERCIASEPE. We have asked Congress.

The CHAIRMAN. If you submit the legislation——

Mr. PERCIASEPE. We have submitted a detailed list of principles that should be included in the legislation. It is not that complicated. You have the authority to ban MTBE. I mean, we can write that five different ways, but if Congress requires the administration to do that, we would do it, but we are working with the specific committees of jurisdiction on proposals that they are working on.

The CHAIRMAN. Well, maybe we can get some other comments on this as well, but it would seem to me that we have somewhat of a crisis concern here.

My next and last question, because my time is almost up, is to Mr. Parker. You indicated your concern over collusion and the investigation that you are undertaking. I wonder if this includes allegations that were reported in the *Washington Post* on April 30 that reads as follows: there is persuasive circumstantial evidence that the administration played an important role in encouraging the OPEC cartel to reduce production and thus raise prices last year.

That encouragement was motivated in part by an urgent need to gain Russian support for or at least acquiescence in the war over Kosovo and in part by the desire to expand oil for food exports from Iraq in the face of increasing international criticism of the sanctions, and I quote, "compared with prices in effect early last year, this new price of $25 a barrel represents the equivalent of $100 billion tax for Americans, and all those consumers adjust, and as those consumers adjust, they should reflect on the role played by an administration that talks free markets but apparently walks with cartels."

Are you aware of this allegation, and are you reviewing or investigating this as well in your evaluation of collusion?

Mr. PARKER. Senator, the OPEC cartel is most certainly a factor in high fuel prices in the United States. There is no question about that. But what we are looking at are factors unique to the Midwest that might explain those particular price spikes.

To the extent the OPEC cartel has caused increased prices in the United States, and it most certainly has, if there is one thing of agreement among the whole panel it would be that, it would apply equally in the Midwest, and we are looking at Midwest unique factors to try to explain what happened there.

The CHAIRMAN. Well, you did not answer my question.

Senator BAYH. Mr. Chairman, can you tell us who the author of those remarks in the Post were?

The CHAIRMAN. Mr. Arthur Hamill. It is quoted how the White House helped pump up the price. The *Washington Post*, Sunday, April 30.

Senator BAYH. Was that an Op Ed piece?

The CHAIRMAN. I do not know, but that is the source.

Mr. PARKER. The answer to your question is no, we are not looking at that, because to the extent OPEC has had an influence it would be entirely across the United States, and I apologize for being so indirect in my answer.

The CHAIRMAN. Senator Wyden.

Senator WYDEN. Thank you, Mr. Chairman.

Mr. Cavaney, you said that free markets are working in the energy field, and I certainly believe in free markets, but I think the evidence is certainly pointing the other way with respect to energy.

For example, wholesale prices are going up a lot faster than retail, which is why the news media reported today the major oil companies are expected to post average earnings growth of 121 percent for the 3 months that ended in June, and what we have got is a situation where the small gas stations across this country are on the ropes while the big oil producers are making these very large profits.

In effect the bottom line, as reported today, is that the price that these small gas stations have to pay is a lot higher than what they are able to pass on to their customers and stay in business. How is that a case for markets working?

Mr. CAVANEY. Well, first of all, Congressman, the profit increases—I am sorry, Senator Wyden. The increases you are talking about come off of two of the most historically distressed years the industry has ever had, which was 1998 and 1999, so as a percent, the increases appear large, but I have here in front of me from the *Business Week* May 15 edition a run-down of all the major corporations in America by industry in terms of their net profit that they made, and our industry happens to be in the lower quartile of those, anywhere not near the average, and less than half of most of the industries, like electronics, computers, banks, nonfinancial and the like, so we are a highly cyclical industry, and you at times then are very low and at other times it is very high. You have to look at the average over time to be able to make observations.

The refineries' return on their investment over the last 5 years or over the last 10 years, as Mr. Slaughter has mentioned, is less than 4 percent, so the refineries are having a difficult time themselves. This is a very, very competitive gasoline market in the United States, whether you are a jobber, a refinery, or a mom and pop operator. There are 108,000 individual outlets that sell gasoline, and that by its own definition makes that very, very competitive.

Senator WYDEN. Well, it certainly seems to me that if it was as competitive as you are talking about we would not see wholesale prices going up a lot faster than retail. I mean, the bottom line is 121 percent profit growth for the months ending in June does not suggest to the people that I represent that markets are working.

Let me give you an example of one that clearly, clearly proves that markets are not working very well, and that is just a matter of zone pricing. That is this practice where one oil company charges two of its stations different prices for the same gas. They are located very close to each other. The cost to the company to make the gas is exactly the same thing, and in many cases the cost of delivering the gas to the stations is exactly the same.

We had Mike Bolen, the chief executive officer of ARCO come before this committee and say that ARCO engages in this practice, and it looks to me like this violates a U.S. Supreme Court case.

How is that an example of markets working, when two gas stations are practically on top of each other, not located miles and miles away. They are on top of each other. All the factors relating

to your business are the same in terms of cost. One gets priced much higher than the other, and the one gets stuck at a higher price, eventually goes out of business, and then you have got everybody to yourself and you can stick it to them.

Mr. CAVANEY. Senator, first of all zone pricing is a marketing approach that is practiced by many, many industries, fast foods, hotels, restaurants, so it is not unique to the oil and gas industry. With Mr. Parker here, he can certainly comment. Those are individual marketing strategies employed by the 100 and some-odd people that are there, and as a trade association we would be in violation of the law were we to be privy to those individual strategies, so while a company may comment on that, as an association, we cannot. But it is not unique to the oil and gas industry. It is a strategy employed by many, many industries.

Senator WYDEN. I hope you will supply to the committee the case law that justifies what you have described as a practice that your industry engages in, and the U.S. Supreme Court has said it is illegal.

The U.S. Supreme Court has specifically ruled that it is illegal under the Robinson-Patman Act to sell the same grade and quality of gas at different prices to different buyers. That is on the books. There is no such case on the books as it relates to food or the practices that you describe, and that suggests to me that markets are not working.

So I will tell you that I have been one, and we knew each other in your previous life in forestry, who has consistently supported efforts, and right now I join with Senator Bayh in the effort to eliminate the estate tax. I do not take a back seat to anybody in terms of supporting free markets, but we do not have them in the energy field.

We have given documentation to the Federal Trade Commission. I sure hope that you all will look at the zone pricing matter once again and make an effort to root it out in your industry, because the U.S. Supreme Court has declared it to be illegal, and yet you have said, well, we are going to do it, because people in the food business or some other field do it, and they are not allowed to.

My time has expired. Mr. Chairman, I appreciate it.

Mr. CAVANEY. We would be glad to meet with your staff afterwards.

Senator WYDEN. Send us the case law that justifies other industries doing it. There is no case like Hasbrook in other industries.

The CHAIRMAN. Senator Thomas.

Senator THOMAS. Thank you, Mr. Chairman.

Mr. Slaughter, I guess one of the questions that comes to mind is, we talk about the regulatory burden, and I did not hear all of your comments, and there undoubtedly is—those regulations are not all new. How do you then account, if that is a major factor that the price changed so quickly—we have had regulations for quite a long time.

Mr. SLAUGHTER. Senator Thomas, it is true we have had regulations for a long time. We are still in the process, really, of implementing some of the end stage programs mandated by the Clean Air Act amendments of 1990.

For instance, the RFG-II program this year is a new program, but one thing that I would like to mention just in terms of the Chicago situation is, essentially we are dealing with a situation where there was not enough product, and when there is a supply shortage, if you cannot get additional product to that market in a reasonable period of time, or a very quick period of time, price essentially acts, and you essentially then allocate the market on the basis of price, is what happens in the marketplace.

So the prices go up really without much relationship to cost factors, so everyone is trying to put together, well, how much increment of cost is involved, and what happened in Chicago. The fact of the matter is that there was a supply disruption, not enough product could get there, and the market then allocates supply on the basis of price.

Senator THOMAS. So the supply disruption did not have anything particularly to do with the cost of regulatory burden?

Mr. SLAUGHTER. Well, it did, because actually the supply problems themselves are a function of the regulatory burden.

Senator THOMAS. Yet they are not new. That is my point.

Mr. SLAUGHTER. On RFG-II, Senator Thomas, they really are new, because the use of ethanol in the Midwest really presents special problems with that RFG-II blend, and that has been acknowledged by a number of folks.

Senator THOMAS. So that within a month it raised the price from $1.20 to $2.20.

Mr. SLAUGHTER. Well, Senator, there are a number of things that had to happen. Basically there was a 100-percent turnover of all the gasoline in everyone's tanks. A very unique situation existed there, and ethanol is part of that unique situation.

Senator THOMAS. Is there a way that refiners can do it without reformulating, without ethanol, without MTBE, and meet the rule?

Mr. SLAUGHTER. Yes, Senator, there is. A number of people, including the National Research Council, had looked at the oxygenation requirement for gasoline and found that at least in this particular point in time it does not add anything environmentally and could be eliminated.

As Mr. Cook pointed out, there are other products—ethanol will continue to be a very important player in the gasoline market, but there are other products like isooctanes which can be made by refiners and others that would supply both octane and volume to gasoline without the oxygenation requirement and with no penalty in environmental quality.

Senator THOMAS. I guess I am a little surprised on the MTBE thing you said you cannot do anything about it. I happen to know a producer who is not doing it any more, so it has had the impact of not using it, is that not correct?

Mr. PERCIASEPE. We want to do something about it, but we want to do something that will withstand legal challenge and everything else, and that is the struggle. I mean, we want to try and solve the problem, and we do have to be cognizant of how you would transition.

We do not want to create a transition of the Nation's gasoline in a way that precipitously causes other kinds of supply problems, so notwithstanding the fact, as the chairman has pointed out, that

there is a concern about contamination of groundwater, we also have to be cognizant that we cannot just abruptly turn the ship. We have to do it in a way that is cognizant of all the things we have heard of.

Senator THOMAS. Are you evaluating the total as you move towards new diesel fuel standards?

Mr. PERCIASEPE. Yes, and we are very cognizant of these issues. We work very closely with both of these organizations that represent the refiners, as well as the individual companies on doing the gasoline program, with particularly attention to the smaller refiners, where some of these costs do have more profound impact.

Senator THOMAS. I am talking about diesel.

Mr. PERCIASEPE. My point is that we plan to work the same way with them on diesel. It does present more challenge, but our pledge to them is to do that.

Senator THOMAS. You have been working quite a while, and I happen to be on the Committee on Environment and Public Works. You have been doing this with small refiners and have not got very satisfactory response from EPA. We are going to do it, by God.

Mr. PERCIASEPE. I think we did a good job on the gasoline sulfur. I think we have specific provisions for the small refiners.

Senator THOMAS. I am talking about diesel fuel.

Mr. PERCIASEPE. Well, that is why we are still working on that one. That is not a completed process yet.

Senator THOMAS. You know, we talk about not having any more refineries. What is the refining capacity now compared to 5 years ago?

Mr. CAVANEY. Essentially where we are right now, if you look at capacity based on demand, we are operating, for example, in pad 2, which is the Midwest, we are operating at 99 percent of capacity—in other words, we are essentially in balance—in pad 1, which is the East Coast, 95 percent.

The concern that we have, and I think it was also expressed by Mr. Slaughter here, is although some have said otherwise the production of energy is still closely tied to economic growth. We are very, very concerned that unless the current path is changed we will not grow the capacity sufficient enough to have the kind of economic growth we have had in the last 2 decades.

Senator THOMAS. I guess that is my question. We talked about not having any more refineries, but then really the question is capacity. How much has it grown in the last 5 years, as consumption has grown by 45 percent?

Mr. CAVANEY. We have gradually grown less capacity than increasing demand. If you will look at the last 20 years, you will see—and I actually have the date I can submit, which is capacity utilization, which is the precursor, and you will see that about 20 years ago it was 80 to 83 percent, I believe.

Right now it is up almost 96 percent Nation-wide, which shows erosion of about 3/4 percent of loss of capacity based on needed demand to be served. We can give that information to you, Senator, to put in the record, or we could meet with your staff.

Senator THOMAS. Thank you, sir.

The CHAIRMAN. Before I call on Senator Bayh, who is next, I would hope, Senator Thomas, that being a member of the Environ-

ment and Public Works Committee you could act as a liaison in addressing just how we are going to ensure that the EPA has the authority to remove MTBE if they indeed feel it is contrary to the public health and interest so we can get on with this.

Mr. PERCIASEPE. We have been working with the chairman and some of the other members.

The CHAIRMAN. I mean, we do emergencies all the time here.

Senator THOMAS. I would be happy to do that. We have spent most of our time exploring why EPA was doing something we thought was beyond their authority, as a matter of fact, on TMDL's and a few other things.

Mr. PERCIASEPE. I would be more than happy to work with the Senator.

The CHAIRMAN. Let us get rid of it and move on to either more ethanol or whatever.

Senator Bayh.

Senator BAYH. Thank you, Mr. Chairman. I would like to once again thank you and Senator Bingaman for having this hearing today. This is an important topic, largely because the demand for gasoline is inelastic, which in layman's terms means people have to buy it.

I think Mr. Kumins mentioned that although the price has risen substantially from last year, the demand has not fallen off very much at all. People have to go to work. They have to go about their business. They have to buy this product even if the prices prove to be very volatile. That is why it is an important issue for us, and it seems to me the question we have to answer for ourselves today is whether, as Mr. Perciasepe—I hope I am pronouncing that correctly.

Mr. PERCIASEPE. That is fine.

Senator BAYH [continuing]. Mentioned, is this simply an anomalous confluence of unrelated events, or are we entering a period in which there will be greater volatility of pricing on a more or less regular basis and, if so, are there things that we can do to reduce that volatility? Or is it just going to persist, in which case we at least need to inform the public that they should plan and prepare for these types of price spikes from time to time, because it does have significant impact on the lives of ordinary people across my State and around the Nation.

Mr. Kumins, let me begin with you. You gave us a very scholarly analysis of what goes into reformulated gasoline in general and the role of ethanol in particular, and in the Chicago area to be precise. Can I ask you to put that in layman's terms? In your opinion, just how big a percentage did the role of ethanol and reformulated gas play in the price spike in the Chicago and Milwaukee areas?

Mr. KUMINS. Well, in my own terms and in the context of the study you referred to we did not identify ethanol per se as a factor. What we did identify was that there was kind of like the roll-out of California Air Resources Board improved gasoline, carb 2 gasoline.

There was a challenge in making the fundamental petroleum product that is the blend, the blending mate to ethanol, and it was a refining operations issue as we saw it, not an ethanol issue, and the refining operations issue resolved itself, reflecting the fact that

ethanol blend gasoline today is less than—ethanol blend RFG today in Chicago-Milwaukee is less than regular.

Senator BAYH. Mr. Perciasepe, let me ask you; what do you think of Mr. Kumins' analysis? I paid attention to your analysis that it was just a few cents. What is your take on that? Maybe this defies speaking in layman's terms, but let us try.

Mr. PERCIASEPE. Looking at the cost to make the gasoline is sort of the business we are in at EPA. When we propose something or try to implement the requirements that Congress asks us to implement we look at the cost of doing it, and we still stand by those cost estimates we made.

We accept the fact that RFG, with or without ethanol, is going to be more expensive than conventional gasoline, and you get those environmental benefits for that cost. Everyone pretty much agrees the cost projections are reasonable, and we do not see any factors that say that that cost should be any different, and it is not, in this area versus any other area.

I think you get into all these other things that have been brought up. I think the most recent report even from Mr. Kumins points out that the cost of producing RFG cannot explain these issues.

That is what we sort of look at.

Senator BAYH. So from a cost standpoint, it should not have been that big a percentage. There might have been supply problems.

Mr. PERCIASEPE. The price people pay, whether it be wholesale or retail, is influenced by many other factors.

Senator BAYH. In the long term, what you are saying is, assuming that the supply and demand imbalances and regional imbalances can be worked out from a cost standpoint, it should not be that big a contributing factor?

Mr. PERCIASEPE. That is the point I am trying to make. On the national level, if you do not look at Chicago-Milwaukee, the cost even at the retail level of RFG versus conventional gas is right in line with what we would estimate the cost of producing it would be, and we would expect that that would happen. Eventually even the first phase of RFG, which started in 1995—which I might add used ethanol in this market, so it is not a mystical thing, using ethanol—the price actually ended up being a little less than we thought the cost was.

Now, we see that is also the case in the Midwest, that the cost and the price are in line with what we would expect those to be. There is not perfect symmetry there because other factors affect price—demand, supply and everything else—but there is not symmetry.

We still are very disappointed about why we had to deal with those high prices earlier, and I will just leave it at that.

Senator BAYH. Thank you. Red, it looked like you wanted to add something.

Mr. CAVANEY. If you think of this as a production process like you were building cars and doing everything, we do not produce very much RVP, the low vapor gasoline, in the Midwest so this was an entirely new process as they swung from wintertime to summer, so it took longer. It was more complex. They were not as efficient as they would be at the very beginning.

But like any other production process, as you go along and you get the efficiencies down—and we do not disagree with the numbers that EPA has said over time for the cost of RFG. It is just all of the convergence of factors, but the startup itself was going to make your cost more.

Senator BAYH. Do you agree with Mr. Perciasepe's comments in his opening remarks that this confluence of events was anomalous? Or is it your opinion, and the industry's opinion, that we are going to be entering a period of greater volatility for other reasons that are longer lasting?

Mr. CAVANEY. This specific one, this range of the five, six, or seven, was a bit anomalous, but the trend is clearly there, and we saw it in heating oil earlier this year. We saw it here in California last year. As you get your supply and demand almost identical, any little bump in the road, any disruption causes the problem that Mr. Cook referred to, which is, you get a lot of pressure on going after a smaller amount of supply, and they basically at wholesale bid up the price, and unfortunately the consumer has to pay for that.

I might comment that over time this volatility does not work to the benefit of industry or consumers.

Senator BAYH. Can I follow up on that for just a moment? We had some pipelines that were down here. Does the pipeline capacity exacerbate this problem, because any time you have even a minor disruption, it causes a supply imbalance.

Mr. CAVANEY. Absolutely. 70 percent of product that is Nationwide travels by pipeline. In other words, that is the principal way. Much of the other goes by barge, so when you have a pipeline problem it can be very critical.

The Chicago situation was doubly critical because it was at a time where we were starting with zero inventory and we were trying to build to start the season, so it really crippled us in the beginning. It would have been a factor, but it would have been less so, say, had it come through 4 or 5 months later.

Senator BAYH. Red, let me ask you one other thing. This is a popular perception. You must have heard this. I hear it through my constituents all the time, so let me just throw it out there and let you address it.

They always ask me, they say, it seems as if when the wholesale price of gasoline goes up, boy, that is reflected immediately at the price at the pump, but when wholesale prices begin to go down there is a lag of several weeks there. Would you care to explain that?

Mr. CAVANEY. In the exact case of Chicago, which we have been talking much about, in fact the retail prices lagged the increase in wholesale prices all the way up, and that is with our own data as well as EIA's, and so it does vary over time, and in that case, as was mentioned earlier, the people who were purchasing it wholesale, the gasoline, actually did get in a squeeze because the market was so competitive they were not able to pass those costs along at retail on the way up.

Senator BAYH. That is Senator Wyden's point that he was trying to address.

Mr. CAVANEY. That is for a short period, but it is not a trend always one way or another. It is different by market, different by

time, different by conditions. There is always some lag, and part of the lag goes to the fact that it is sort of the inventory deal. If you buy some gasoline you put in your tank, it is at a lesser price, and then you buy some at a higher price. It is how you work it out.

Senator BAYH. Mr. Parker, just very briefly for you, and this gets to the chairman's questions about the time—and I understand you cannot talk about your investigation. You are just getting into the start of it in any event. I have been informed by staff or read somewhere that it had been your intention, or the FTC's intention to issue an interim report, perhaps at the end of this month. Is that still your timetable?

Mr. PARKER. We will report by the end of the month, before the end of the month on where we are. I do not want to hold out too much expectation as to any conclusion or view or anything, but we will most certainly provide a status report at that time, yes.

Senator BAYH. And just in general, does the Department, or do you personally, have any opinion about the consolidation that has taken place in the industry in recent years, and what, if any, impact that has had on competition and the possible effect on pricing?

Mr. PARKER. I have spent a lot of time during my tour in Government on oil company mergers, Exxon-Mobil, BP-ARCO and the like, and we would not have settled those cases had we not thought that we had obtained sufficient relief, divestitures to ensure that competition was not affected, so I think at this point in time I do not believe the mergers are a factor here.

Obviously, we have a trend towards concentration and who knows what the future will hold, but I believe, and I will say I am interested because I was part of recommending the settlements, that the agency has taken care of those problems. But further mergers, we will have to see what the facts will be.

Senator BAYH. Thank you, Mr. Chairman, and my last question goes to Mr. Perciasepe again. I see that the agency intends to ease some of the requirements for, I think it is the VOC standards. Is that accurate, and do you anticipate any impact on the price of reformulated gas?

Mr. PERCIASEPE. Very minimal, but it will make it somewhat operationally easier to use ethanol. We want to encourage the use of ethanol, and we also want to encourage the switch from MTBE to ethanol, and so we are trying to account for the additional air quality benefit. I know it has been said here several times there are no air quality benefits of ethanol and oxygenate. That is not true. That is not what the National Academy of Sciences said.

But putting that aside and not getting into a long debate about it, we want to capitalize on the air quality advantages of ethanol when it comes to carbon monoxide. We are trying to affect ozone, and because carbon monoxide and volatile organic compounds both affect ozone you can make a slight adjustment to the use standard making sure that you can account for the additional carbon monoxide reductions you get from ethanol, and that is what we put out as a proposal, and we are taking comment on it.

But again, I want to be clear, we think the additional average costs of using ethanol in RFG compared to MTBE is about a penny.

Senator BAYH. Say that again.

Mr. PERCIASEPE. About a penny. 4 to 8 cents for RFG. If ethanol is not part of that it would be 3 to 7 cents, and that is our estimate of the production cost side of it, so if you want to stay on the production cost side of it, any adjustment in the requirement, can only affect something around a penny.

Senator BAYH. Thank you. Gentlemen, thank you, and Mr. Chairman, thank you for having the hearing today.

The CHAIRMAN. Thank you very much, Senator Bayh.

Let me follow up, Mr. Perciasepe relative to a study that the National Research Council did in 1999 report which was done at the request of the Environmental Protection Agency, and it is my understanding that EPA asked the National Research Council to independently study the underpinnings of a Federal reformulated gasoline program under the Clean Air Act of 1990.

Now, did not find that, and I quote, the use of commonly available oxygenates in RFG has little impact on improving ozone air quality, and has some disadvantages?

Mr. PERCIASEPE. That is what they found. That is correct.

The CHAIRMAN. Do you agree with that?

Mr. PERCIASEPE. I would say that the use of oxygenates has an effect on ozone formation, but it is small compared to the overall effect of RFG, but you have to remember RFG as envisioned by Congress has many objectives, not just ozone reduction. It has important reductions in carbon monoxide, also reductions in toxics from cars.

One of the important roles that oxygenates play in the reformulated gasoline recipe is the dilution of more toxic components of gasoline like aromatics, and thus helping the toxics profile. They also help reduce carbon monoxide.

So the problem with the NRC statement is that there are many measures that we implement to control ozone, which as you know is a secondary effect of the emissions of other pollutants. Nobody emits ozone. It is formed, and so you have to control the precursors to that chemical reaction in the atmosphere. So if you look at any individual control program by itself, its effect on the ozone is always going to be small.

The way you attack ozone is the cumulative effect of a lot of efforts. So for any control measure that is part of a cumulative plan and that has a small individual emissions reduction, it will always be said to have a small effect on ozone by itself.

The CHAIRMAN. Well, it goes on further. In addition to the statement that the use of commonly available oxygenates has little impact on improving ozone air quality and some disadvantages it says, further, the addition of commonly available oxygenates to RFG is likely to have little air quality impact in terms, again, of ozone reduction.

Now, you are going beyond that. This was a study that you requested, and it is one of the most respected agencies we have, and they did not do the review of the issue of reformulated gasoline, and if the results of the study are ignored, then who are you going to look to as a better source?

Mr. PERCIASEPE. I am not disagreeing with that statement. One of the reasons we asked the council to look at this issue was some of the differences between oxygenates. One of the things they

looked at was the overall effect of just the oxygenate part of RFG on ozone. Remember, RFG is a formulation of gasoline to meet performance standards that Congress had envisioned.

You do many things to the gasoline to meet that overall performance standard, so if you look at each part of what you do, including oxygenates, its effect on that secondary thing of ozone formation is always going to be small. There are challenges to using some of the oxygenates to meet the performance standards. We're talking about some of the trade-offs for carbon monoxide.

One of the things they did recommend, which is what we base the proposal that Senator Bayh was just talking about, is the fact that there is improved carbon monoxide reductions from the use of ethanol, and that we should take that into account in the RFG program. That is a separate recommendation.

I am going to read from the study right here on the toxics issue also. The most significant advantage of oxygenates in RFG appears to be a displacement of toxics—for example, benzene—from the RFG blend, and that is also in the same study that you are talking about. And then there is an advantage of oxygenates on the carbon monoxide. So RFG is designed to do a lot of things, and there are a lot of components that do different parts of it.

But I am not disputing the fact that you cannot meet the performance standards without oxygenates, either. I mean, we do not know the cost.

The CHAIRMAN. You point out something, and I have noted in your statement from time to time, Congress dictated this. Congress is not all-wise, and just because Congress does something that does not work, you folks should take the initiative to say, hey—like MTBE did not work, and you came out and acknowledged, finally, that it did not work, and now I think you have the obligation of addressing immediate relief from Congress so you have the authority to do it.

I cannot believe you are going to be sued if you suggest the dropping of MTBE, because you are doing it in the interest of public health and safety, but nevertheless, I am not going to go down that rabbit trail too far. If you have a problem, request emergency relief.

Mr. PERCIASEPE. I will follow up.

The CHAIRMAN. Let me get to ethanol. Ethanol is exempt from the Federal motor fuels tax, which amounts to about 54 cents a gallon. Is that right, Mr. Vaughn?

Mr. VAUGHN. The ethanol is exempt from 5.4 cents of the Federal motor fuel tax, that is correct. It is blended at 10 percent blend, so the oil companies that buy it get to pay, or get an incentive to do so, and therefore have their Federal taxes reduced.

The CHAIRMAN. What is the subsidy for ethanol?

Mr. VAUGHN. At a taxable rate of 5.4 cents on the blend, 54 cents on a gallon of ethanol. That is then taxable by the Federal Government, but it is the incentive to the oil companies to encourage them to use the product.

The CHAIRMAN. What does the farmer get out of it?

Mr. VAUGHN. The farmer today is taking about $1.65, $1.95 a bushel of corn, processing it into ethanol, and getting 2½ gallons plus the value of the grains, the feedstocks, the food, feed, and fiber products, which is again in my opening comments why almost

700,000 farmers have invested in these plants to create added value to their crop.

According to the Department of Agriculture it raises the value on a bushel basis across the entire corn crop somewhere between 5 and 10 cents, or several hundred million dollars. I think USDA currently says about $720 million of increased income.

The CHAIRMAN. You are giving me too many figures to follow.

Mr. VAUGHN. I am sorry. About $700 million of annual income yield.

The CHAIRMAN. What I am getting at here is, the price of ethanol has gone up.

Mr. VAUGHN. Over what period of time?

The CHAIRMAN. Well, you tell me.

Mr. VAUGHN. Actually, since 1990 it has actually come down considerably.

The CHAIRMAN. I am going back for the last year.

Mr. VAUGHN. In the last year, the data that is in the records, for example, from the first of the year ethanol prices were flat. In the Chicago and Milwaukee area, which has gotten so much attention, it has all been sold under contract at about $1.24. It has not moved up a penny.

In some parts of the country, depending on the size of the plant, the type of feedstock, it has gone up I think—Mr. Sensenbrenner last week said it has gone up 6 cents in the last year, and I think that is probably close to being accurate, on a per-gallon basis.

The CHAIRMAN. It is around $1.24, so it has gone up 6 cents in the last year.

Mr. VAUGHN. That is approximately correct, yes.

The CHAIRMAN. Yet, demand is increasing dramatically, and the prospects for increased demand if MTBE is done away with, I assume, are substantial.

Mr. VAUGHN. Well, the industry fully anticipated an awful lot more demand than we are seeing today in the Federal reformulated gasoline program. In fact, some of the newer markets for RFG with ethanol, Louisville, Kentucky, and St. Louis, have seen some of the most interesting and positive growth in the use of ethanol and none of the unique production difficulties experienced in those markets, and ethanol is sold in just about every State in the United States today, so we have about 250 million gallons of excess capacity right now, today.

But yes, we are expecting growth, increase in demand, and we are seeing that from Rocky Mountain States all the way back to the East Coast, in a very impressive fashion, yes, sir.

The CHAIRMAN. Now, Mr. Cook, you indicated the industry had the capability of making reformulated product that would meet EPA's requirements that would not contain ethanol. I assume it would not require a subsidy, is that correct?

Mr. COOK. Sure.

The CHAIRMAN. Sure? Well, I am not so sure. Then why haven't you done it?

Mr. COOK. I think that is a separate issue.

The CHAIRMAN. It is an issue of replacing MTBE with something else that is not subsidized. I do not have any particular deference

to ethanol, other than we subsidize it, and I guess we subsidize it because we have to. It cannot carry its own price.

Mr. VAUGHN. It is also scheduled to expire in a precise time frame, and every time that the Congress has looked at this, one of the critical components of the debate is, will this ethanol industry ever be able to be standing on its own without the need of incentive.

The CHAIRMAN. Yes, and the question is—we do not know yet.

Mr. VAUGHN. It has been reduced—the last time out it was reduced by 6 cents. It is scheduled to be reduced over the next several years.

The CHAIRMAN. To what?

Mr. VAUGHN. I think it is 3, 2, and 1 cents respectively over the next several years.

The reality, Mr. Chairman, is that we are making better investments in a range of alternative feedstocks. The Department of Energy has a plan of using waste agricultural, or waste wood like we are finding in Alaska.

The CHAIRMAN. We do not have any wood being cut in Alaska, so that is not an alternative, believe me.

Mr. VAUGHN. There are two or three old-growth forest processing operations in Alaska that would like to use it.

The CHAIRMAN. Would you like to invest?

Mr. VAUGHN. In fact, it is being invested in in the State of Washington with Georgia-Pacific, and working out very handsomely.

The CHAIRMAN. Georgia-Pacific has private timber. There is no private timber in Alaska.

Mr. VAUGHN. But the point is, as the feedstocks change, as the market value changes, the need for the incentive has adjusted. But one thing is being missed in all of this. Can the oil companies produce a nonoxygenated reformulated gasoline product?

I think the answer to that question is yes, but you have heard expert testimony of 99 percent capacity, 96 percent capacity. Where is all this excess capacity going to be to produce isooctane, but the point is that we do need to move out of MTBE and get into alternatives, and I think part of that mix will be ethanol.

The CHAIRMAN. I agree with you.

Mr. COOK. That is partly why I thought it would be slightly higher, because there is an excess capacity issue, and presumably some of that would be eaten up without the oxygenates.

The CHAIRMAN. Well, let me wander into this. Your refineries are at capacity now for all practical purposes, and you know, if you wander into this reformulated procedure, it is going to take some of that capacity out. Now, who has got the responsibility to produce reformulated gasoline? Is it the refining industry, the oil industry, or a combination of both?

I mean, EPA says you cannot sell your product in certain areas unless you have it. Now, if you can go over and get ethanol, you do not have to worry about putting more pressure on your refineries to produce a reformulated product, right, so it seems like there is little incentive to do it. The ethanol is subsidized. It is going to be available, and you just pass on the price to the consumer.

Mr. COOK. Well, certainly there is a trade-off there. My testimony is only that physically you can make reformulated gasoline without either of the oxygenates.

The CHAIRMAN. Well, Mr. Cavaney, why isn't the industry moving into this area independently, because MTBE is a product, a petroleum product, and you are going to drop that, and that was a fair segment of capacity.

Mr. CAVANEY. Mr. Chairman, first of all we are required to have an oxygenate in there. The only oxygenates currently used are MTBE and ethanol. We support the blue ribbon panel's findings at EPA which indicate that we should phase down the use of MTBE over time, and I put the emphasis on over time, because of the tightness of capacity, because we want to make sure there are alternative supplies available.

We certainly anticipate using a lot of ethanol going forward, but we would also like to have the opportunity, without having the oxygenate mandate in there per se, to pursue some of the things that Mr. Cook has referenced here.

There may well be cases, by looking to the petrochemical side of our business and others, that we can produce some efficiencies there, so time is very, very critical. If anything is done very quickly I think there will be a volatility back in the market here, because everything is extremely tight.

The CHAIRMAN. Does anybody have any plans to build any more refining capacity that you are aware of within the industry?

Mr. CAVANEY. No, sir. The principal concerns are permitting upfront, and then returns, and a number of other issues.

The CHAIRMAN. Mr. Perciasepe, the permitting relative to the role of EPA, I understand that it is just not a feasible investment to put in a new refinery because of the cost of permitting and the time, and so we have got old refineries that are at their maximum capacity. What do we do when we have that kind of a—do we put the Government in the business?

I hope not. That would be the worst possible relief we could do, but it seems that we have got a constriction here, either legitimate excuses or—but ordinarily if you can make some money somebody in this country will go in and invest, but clearly they are staying away, and clearly there is the Superfund exposure, everything under the sun, and you folks have an enforcement responsibility given to you by Congress, but you also have a responsibility to make things work. What do we do?

Mr. PERCIASEPE. I would agree with that, that we do have a responsibility to make things work, and certainly if any company came forward to us and said they want to start looking at building a refinery we will sit down and start to work through how, and what the obstacles are.

I think when Mr. Cavaney talks about permitting, I do not think it is just the EPA. You have got to start with the local zoning and State siting regulations, and a whole bunch of other things that would be very difficult for us to have any particular control over, but in terms of the air or water or other programs there have been complex manufacturing facilities permitted in the United States in the last several years. It is not a null set. It can be done.

I am not saying it is not without challenges for a whole spectrum of reasons, but we are also looking at a permit program to look for ways to create some streamlining, and we put out some proposals for public notice, and we continue to evaluate them.

We have experimented with some approaches through a program called Project Excel, where we have looked at things called plant-wide applicability limits, where you give a certain facility more certainty over the long haul of what its air quality environmental performance is supposed to be, and then give them the flexibility on how they maintain that level.

So there are things that can be done, and there are things that we are working on, but I would say that the challenges of permitting are very broad, and would require a concerted multi-governmental effort, I think, to get into more details on.

The CHAIRMAN. Mr. Cavaney.

Mr. CAVANEY. Mr. Chairman, for these very reasons one of the things we think that could be concentrated on is existing refineries and working with various Government entities to try and get expedited permitting and various kinds of things, look at flexibility and increase the capacity in those refineries that are already operating and meeting EPA requirements.

Those are becoming increasingly difficult to do, and that is why we wanted to raise this issue as something that the Government could work on here, in the near future, and begin to grow that capacity.

The CHAIRMAN. Why have many of the majors in the last decade spun off their refineries?

Mr. CAVANEY. I think they obviously each have their own individual reasons, and I cannot speak for them all, but it has been commented in the trade press that the returns on that part of the business are not that attractive. It has been cited around here, and companies are in the business of getting returns for their shareholders, and maybe they have other areas where they can invest and increase those returns.

The CHAIRMAN. Where is the volume going to come from if, indeed, MTBE is eliminated?

Mr. CAVANEY. That is going to be the big challenge, clearly.

The CHAIRMAN. It is going to create a greater shortage.

Mr. CAVANEY. If it is phased in and coordinated, and all the stakeholders work at it, it can be done successfully. Our concern is that we have a rush to judgment here, and if that is the case I think you will have more shortages and very tight inventories, and so getting all the stakeholders to work together, considering the impacts on consumers and not just the environmental aspects of that I think is the pathway to having it done well.

Mr. VAUGHN. Mr. Chairman, the ethanol industry is committed to this and, obviously, working in partnership with our customers, and I would agree completely with what Red just said, there does need to be time, and I think that is what—many of the Governors are taking action to phase out or abandon the use of MTBE with the idea that the Congress can look at this and come up with a responsible plan. I think the Environment and Public Works Committee is attempting to do that right now.

But our industry is committed to growth and expansion, with the notion that it takes about half as much ethanol to do the same job as MTBE does, so we have got the capacity today to meet much of that demand, but we do need to grow and expand in a responsible, cost-efficient, cost-effective fashion in partnership with the oil industry because we do not market a single gallon of ethanol. We can only market it through the oil industry and our oil partners.

So we are committed to that path, and we think the EPW committee, certainly many of the members of your committee, are committed to that exact same kind of growth and development plan and agenda, minus MTBE in our environment.

Mr. SLAUGHTER. Mr. Chairman, could I just mention for one second, there has been a lot of discussion of post MTBE policy here, and there is some suggestion that what EPA, that there is some consensus of opinion here, and there really is not, because what the EPA has suggested is replacing one mandate with another.

They essentially are promoting a national ethanol mandate in the guise of a renewables mandate which would cover even that two-thirds of the gasoline pool today which is conventional and not reformulated, so they are replacing what they call an inflexible mandate with a flexible mandate.

I do not know that you can have a flexible mandate, and it is one of the things, why Mr. Cavaney has made the point that we need all stakeholders involved, and we need a deliberative process where we do not add another inflexibility and another mandate problem down the line for us.

So if we can get enough flexibility in the approach, Mr. Cavaney certainly is right, we can move on to the next generation of gasoline if that is what Congress and the EPA want us to do, but we do not need another mandate.

The CHAIRMAN. Mr. Parker, you indicate that you were not looking into collusion on the allegation that the administration played a role in encouraging the OPEC cartel to reduce production and raise prices last year. Is there a reason you are not?

Mr. PARKER. We are not looking at anything having to do with OPEC because we believe that that would have affected the Midwest equally with everywhere else.

The CHAIRMAN. Your business is collusion and imports, and OPEC plays a role in it. Why is that not within your purview of oversight?

Mr. PARKER. Taking on OPEC is something that would involve serious issues. There is no question that under the antitrust laws collusion of the type OPEC is doing, if done by private entities, is, per se, illegal and indeed results in jail time. There is also no question that the fact that they do it abroad does not make any difference. The antitrust laws apply.

The problem is, is that they are sovereign States and there are doctrines interpreted by the Supreme Court called the Act of State doctrine and the Foreign Sovereign Immunities Act, which was passed in 1976, that makes it very difficult to sue a foreign Nation where the validity of a sovereign act is an issue.

The CHAIRMAN. When you narrow this a little bit, and the implication is that the administration played a role in encouraging OPEC, then does it not come back and point to potentially the ad-

ministration's role and whether it was appropriate or inappropriate, if, indeed, it was true?

Mr. PARKER. The antitrust issue would be whether a private competitor engaged in any activity with OPEC and not a Government agency. I have no information concerning the administration. I am not offering any views whatsoever.

The CHAIRMAN. Relative to your authority in this area, and you are talking about collusion within the industry, but you are exempting OPEC because you suggest that they are not nationals, but yet the law does apply, but I am narrowing it down to if, indeed, the administration played a role in encouraging OPEC to reduce production, then do you not have a responsibility in this area, because it ties in with the administration and OPEC?

Mr. PARKER. No, I do not, because the issue would be, under the antitrust laws, whether a private company was involved in OPEC. What States do is not something I can get at under the antitrust laws at all, because——

The CHAIRMAN. Who has the authority in this area, the Department of Justice?

Mr. PARKER. We have the authority under the oil—we deal with things in the oil industry. As to a criminal issue, it would be the Department of Justice, yes, but the issue is really not the antitrust laws at all, it is the fact that OPEC is comprised of foreign entities which creates the obstacle here, and there is a case of about 15 years ago——

The CHAIRMAN. There is no way to reach them is what you are saying?

Mr. PARKER. If a private party were to do it, it is against the law. We could reach them. If States do it, it is difficult to reach.

The CHAIRMAN. Does anybody else want to comment on this delicate area? You will not touch it with a 10-foot pole, will you?

Mr. PERCIASEPE. This is not the EPA's area of expertise, but as a member of the administration, just to enter into the record, I was at a hearing with Secretary Richardson 2 weeks ago where he categorically denied that the U.S. Government had any involvement in that. I have no other basis, except to enter that statement by the Secretary into the record.

The CHAIRMAN. Okay. I want to thank you for your contribution here. It is clear that we have a crisis. It is not getting better, it is getting worse. You may have, as indicated, provided some acknowledged relief that the price has gone down, but in comparison to where we were 18 months ago there is no relief that suggests that we are going to go back to that time.

It is not just gasoline, as you know. It goes much further than that. The impact that we are going to see shortly as a consequence of the increased price of natural gas. The American public is not aware. They have not awakened. They do not realize what is coming, but gas was, what, 2 months ago $2.40, and now we are looking at $4.30, $4.20 next year.

That is going to be reflected in not only your electric bills, as the electricity industry moves more and more to natural gas, but home heating as well, and we have seen the shock associated with gasoline prices. We have not seen anything yet.

I do not know when the American public is going to wake up to the reality that it is a supply and demand to a large degree. We are using our gas reserves faster than we are finding new ones. We are increasing our dependence on imports in oil. Our transportation is totally dependent on oil.

We would like to have better utilization of alternative renewables, but the technology is not there to the degree that would replace substantially our dependence on oil, and we have got an administration that just has not been realistic in realizing that this problem is a problem, and it is going to get worse, and we have got to seek realistic relief. Relief comes from opening up maybe the overthrust belt, 64 percent of our public land in the continental United States is off-limits to oil and gas exploration. The relief seems to be more dependence on imports, which as has been pointed out here simply provides more leverage by those that we become dependent upon.

Now, I am surprised that the public is not just absolutely indignant that the fastest-growing source is Iraq, Saddam Hussein. We fought a war in 1991-92. Last year, we were importing 300,000 barrels, 750,000 barrels this year. What are we doing?

He is taking funds from the sale of oil that he is smuggling out, we know this, and developing a missile capability, developing a biological capability, a tremendous threat to Israel, we sit here and watch it and be a party to it, and it is absolutely beyond me, but it is a fact.

So this thing, this train wreck is coming. You have given us an explanation on gasoline prices, but gasoline prices may have stabilized at a level, but we have got problems with meeting our EPA requirements, we have got problems with replacing MTBE, and we have got a growth coming because of general prosperity in the United States, but just not the United States, it is all over the world.

Asia—somebody says, well, the Secretary of Energy got another 500,000 barrels a day, and the assumption is that is going to the United States. We get 16 percent. That is all. That is not relief. That does not even equate to what we use in Washington, D.C. every day, yet the public is unaware, and will not be until we have something like the Arab oil embargo that we had in 1973 or 1974, where we had lines around the block in front of your gas station. The public was indignant. They blamed Government, they blamed everybody, but it is coming, and it is coming not only in gasoline, but it is going to come in natural gas.

So I think the key elements is having a Government that basically understands the actions and the consequences. Unfortunately, we do not have that now, because what is happening in this process in both creating and affecting tight markets, we see new fuel standards, access to domestic energy supplies, regulations of all kinds, and they all have consequences and they all have costs, and they are all being passed on to the consumer. That is just the way this structure works.

So as Government piles on more regulations and more restrictions on the energy system, consumers can expect more delivery problems, more price shocks, and more shortages, and it is a mat-

ter of supply and demand, as has been evidenced, I think, throughout this hearing.

We have got a shortage. We have got a substantial demand. We do not have a policy that suggests how we are going to get out of this dilemma, but at least maybe the value of this hearing is maybe identifying that we do not have a policy to get out of this dilemma, and until we do it is going to get worse.

How do you get out of it? You open up the public land for exploration in the United States, as one relief. You pursue ethanol as a domestic product and try and make it more competitive and reduce the price support that it is given, and the natural gas dilemma is something that we are going to have another hearing on, because it is kind of interesting, you know.

What the industry did is, they said, well, we got, what is it, 160 trillion cubic feet of reserve. That made everybody feel pretty good, until we start realizing that we are pulling our reserves down faster than we are replacing. The reserves are not 160 any more, they are about 150, and now, you know, the industry is beginning to question just what its reserves really are.

You know, they go out in the gulf and the first thing you do is lose 40 percent of volume in the first year and when you tap an off-shore well, a pretty big reduction, and that is just the percentage associated with that. On land it is less. It is about 20 percent, so what are our true reserves?

And when we look towards Canada, how much is coming from Canada, more and more each year, and the Canadian reserves are starting to be looked at now. We do not have a major port in this country of any consequence for LNG. We have got a small one up on the East Coast.

But if you look realistically it is a bleak picture. Demand is up, reserves are down. That is the wrong way to go.

Okay. Well, enough of prognostication. Thanks for being with us, and I appreciate your contribution.

[Whereupon, at 12:35 p.m., the hearing was adjourned.]

[Subsequent to the hearing, the following statement was received for the record:]

STATEMENT OF HON. J. BENNETT JOHNSTON, FORMER U.S. SENATOR, JOHNSTON AND ASSOCIATES

Mr. Chairman, members of the Committee. Every evening on television we are regaled by charges of "price gouging" by big oil companies. Numerous members of Congress echo the charge, and Chairman Henry Hyde has procured an FTC investigation on the issue.

Well, the price of gasoline has doubled in many areas in the last few months while oil companies profits are at their highest levels in years. Ergo, gouging has been proved. Case closed.

As H.L. Mencken said that for every complicated problem there is a simple solution and, "it is always wrong." Few subjects have received as much distortion, misrepresentation and hypocrisy as has fuel pricing. The current FTC investigation is, by my account, the 17th investigation since 1973. (See attached list) Not one of these investigations has found evidence of price gouging and so it will be with the current investigation.

There have been two investigations undertaken by federal authorities on the subject of current energy price escalations: one by the Energy Information Administration of the Department of Energy on the subject of "Rising Crude Oil in Gasoline Prices" and the other by the Congressional Research Service on the subject of "Midwest Gasoline Price Increases." Neither found evidence of oil company gouging.

On June 29 the Director of the petroleum division of the EIA testified (regarding their report) before the Senate Government Affairs Committee that the crude oil price rise was "the result of a shift in the, global balance between production and demand," and that "* * * in 1999 crude oil prices rose faster than product prices, squeezing refinery margins."

If this is so, how do we account for higher oil companies profits? Very simple. It is because these profits were made in the "upstream" part of the business. Crude oil was produced (for the most part abroad) and sold into the world market at higher world market prices. At Chevron, for example, we had the best first quarter profits in years, but made virtually nothing on the sale of motor gasoline.

Historically, oil companies profits have not been up to standard. From 1994 to 1998 oil company profits have averaged 7.2 percent, about ½ of the 14.2 percent overall average for the S&P Industries and in 1999 fuel producers averaged 11.1 percent versus 17.1 percent for the S&P Industrial average. And even with higher crude oil prices of late, the price/earnings ratios of major oil companies have lagged behind—compare Chevron and Texaco at price earnings ratios of less than 20 to Microsoft (with all its problems) at 49.

The Congressional Research Service report of June 16, 2000 focused in detail on the Midwest gasoline price increases. "These higher prices can be attributed to five factors, the report said, as follows:

1. Higher Crude Oil Prices.
2. Use of Ethanol in reformulated Gasoline (it is the base material needed for ethanol blending (RBOB) rather than the cost of ethanol that "has become the primary factor in regional high prices.")
3. Pipeline problems.
4. Low inventories.
5. Patented RFG Process.

PROBLEMS IN ENERGY

The gasoline problem in America is easing—the retail price of gasoline dropped for the second straight week to $1.625 per gallon as of July 3rd, according to EIA.

But real problems remain: supply, price and volatility. These problems are related and relative.

On supply, the bad news is that America's oil imports are increasing—from about 50 percent when I retired from the Senate four years ago to 56 percent today, And according to EIA, imports will be 70 percent by 2020. The good news is that there appear to be adequate reserves of crude oil worldwide for the foreseeable future.

On price, the bad news is that crude oil prices have tripled—from $11 in late 1998 peaking at $34.13 on March 7 and is still about $30. Natural gas prices have doubled in the same time frame. We can take some solace, though perhaps not much politically, from the fact that crude oil is less than one-half the $70 inflation-adjusted price of 1981, and natural gas is less than 15 percent of the inflation—adjusted peak spot price of the 1970's.

OPEC can, and is, effectively controlling the price of crude oil by limiting supply. The artificially high OPEC prices of the 1970's produced massive worldwide conservation and production and drove the price of crude oil down by more than two-thirds. And it will happen again. But it takes time.

The problem that is perhaps the most difficult of all is volatility. Doubling the price of gasoline to $2 dollars per gallon is a real problem for the tight-budget owner of a 12 mpg SUV. Changes to more fuel efficient cars cannot be made rapidly—or cheerfully.

In my opinion, energy is likely to again emerge as a front-burner issue, as it was in the 1970's. Currently, the problem is gasoline prices. Tomorrow, or sometime soon, it will be blackouts and brownouts from electricity shortages and disruptions. Next winter escalating natural gas prices may be a real problem for the consumer. Indeed, natural gas price rises way plague us for years to come as its constrained supply is assaulted by increasing demand for clean-burning fuel for electricity generation. The question is, how will the Congress react to these problems?

COMPETITIVE MARKETS ARE THE SOLUTION

When I came to the Senate in 1973, virtually every form of energy was highly regulated. Natural gas in the interstate markets was controlled from the well head to the burner tip. Crude oil was similarly regulated, and electricity was thought to be a natural monopoly. Other regulations that would make Rube Goldberg blush were enacted, such as the Fuel Use Act to prevent the burning of natural gas under boilers, the Small Refinery Bias, The Windfall Profits Tax, and the Synfuels Corporation.

These regulations produced a real energy crisis. Hundreds of thousands of American workers were laid off because of natural gas shortages, gasoline rationing was seriously proposed and so-called experts were predicting that natural gas and crude oil would be depleted shortly after the turn-of-the-century.

Undoing these laws and regulations and installing free market rules in their place required a series of legislative fights that were the most controversial of any that I was involved in, in 24 years in the Senate. And in each instance, the regulators predicted disaster, and in each instance they were wrong—totally, completely, demonstrably, wrong. Today, many of those who say we don't have an energy policy seem to suggest that we should in fact install a policy that eliminates price volatility—a policy that controls prices and supplies. To those, I say we have tried that, and the results were disastrous.

Today's energy policy—market competition—should be retained and protected. Indeed, it should be expanded to include competition in retail electricity.

The temptation to "do something" is politically tempting. As long as it is only another investigation of the oil companies, it probably does no real harm although the results are predictable.

What does do harm is assaulting the free market. A good example of such a proposal is the "Northeast Heating Oil Reserve."

The high heating oil prices in the Northeast last winter were caused by a temporary shortage in supply. Those higher prices in a free market will elicit more supply and, in time, lower prices.

Some members of Congress and the Administration propose a 2 million barrel heating oil reserve. This sounds good, as most regulations do, but it will have exactly the opposite effect. It is an expensive proposition to purchase and store heating oil. Suppliers will, therefore, be induced to lower their own supplies and its expense in anticipation of the government supply. Who would get the government supply and at what price? Such a challenge recalls the crude oil regulations of the 1970's.

Moreover, heating oil supplies must be "turned"—withdrawn and refilled—to prevent deterioration. Suppliers typically turn their supplies five times a season. The government would do so less often. So the result would be that the government would buy up to 2 million barrels of reserve capacity from existing suppliers who are presently turning that supply five times over each season. In effect the government would be taking out of the suppliers hands 10 million barrels of capacity, but the government would be supplying only 2 million barrels of capacity, in its place.

The resulting shortage and price increases would produce calls for tighter regulation and bigger government reserves. One can't help but recall the demands for the nationalization of the oil companies during the shortage of the 1970's.

Other anti-free market proposals such as using the Strategic Petroleum Reserve to control prices are always either too late to help or counterproductive. The Reserve should be used only for its intended purpose: to alleviate a serious supply disruption.

WHAT CAN CONGRESS DO?

There are sensible things that the Congress can and should do to maximize domestic energy supplies, such as:

1. Drilling in the Arctic National Wildlife Refuge, the Destin Dome off Florida Gulf Coast and other promising areas;
2. Extending the Deep Water Royalties Relief Act which has been a huge success in eliciting drilling in the deep water OCS;
3. Restructuring the electricity industry in order to bring competition to retail markets;
4. Streamlining citing requirements and addressing right-of-way problems for gas pipelines and electricity generation and transmission facilities; and
5. Removing artificial barriers which prevent nuclear energy from competing in the market.

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