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OVERSIGHT OF RISING OIL PRICES AND THE EFFICIENCY AND EFFECTIVENESS OF EXECUTIVE BRANCH RESPONSE—PART II

HEARING

BEFORE THE

COMMITTEE ON
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

ONE HUNDRED SIXTH CONGRESS

SECOND SESSION

JUNE 29, 2000

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OVERSIGHT OF RISING OIL PRICES AND THE EFFICIENCY AND EFFECTIVENESS OF EXECUTIVE BRANCH RESPONSE—PART II

THURSDAY, JUNE 29, 2000

U.S. SENATE,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC.

The Committee met, pursuant to notice, at 1 p.m., in room SD–342, Dirksen Senate Office Building, Hon. George Voinovich presiding.

Present: Senators Voinovich, Domenici, Lieberman, Levin, Akaka, Durbin, and Cleland.

OPENING STATEMENT OF SENATOR VOINOVICH

Senator VOINOVICH. The Committee will please come to order. I want to welcome all of you this afternoon.

Two weeks ago, I asked the Committee Chairman, Senator Thompson and Ranking Member Senator Lieberman, to conduct a hearing on the subject of the high price of gasoline. I am pleased that they responded positively, and I appreciate Senator Thompson's willingness to allow me to Chair this hearing of the Committee on Governmental Affairs.

Today's hearing is the second that this Committee has held to look into the high cost of gasoline in our Nation. This Committee held its first gas price hearing on March 24, and we were assured that things would get better. Unfortunately, they have not.

Ladies and gentlemen, today you cannot pick up a newspaper or turn on a television without reading or hearing about the high price of gasoline. People are mad, and I don't blame them. They are angry because the increase is affecting them where it hurts: Right in their pocketbook.

Last year at this time, the prices we are experiencing today would have been considered inconceivable by most Americans. One year ago, the national average for a gallon of regular unleaded gas was about $1.15, according to the American Automobile Association. The last time I filled up in Ohio it was $1.94. Today the national average for gasoline in the country is $1.65, which is 50 cents more than a year ago.

But nowhere has the price increase been so dramatic than in the Midwest where gas prices have skyrocketed in the last 4 weeks. Earlier this month, prices in Ohio and other parts of the Midwest increased by as much as 30 or 40 cents in a matter of hours. Prices in many cities and States went over the $2 mark for a gallon of

gas, setting all-time high price records. In my county, Cuyahoga, just 10 days ago we were hovering at the $2 a gallon mark with prices averaging $1.98 a gallon.

Although there are signs that prices are dropping, this is of little consolation to families, particularly in the Midwest, where the prices are so high. Prices in most major cities in the Midwest are well above the national average of $1.65, and $2 a gallon and higher are still prevalent in many areas.

The kind of gas price increase we have seen lately does more than just raise eyebrows. Do you know what it does? It raises questions, significant questions. Politicians, analysts, business owners are busy pointing to a whole host of reasons for the recent hikes: Alleged collusion among oil companies who have sent crude oil prices through the roof, lack of domestic production, reformulated gasoline, alleged price gouging and collusion by the oil companies, economics and the law of supply and demand, pipeline and other transportation problems. You name it.

Frankly, most people I talk to don't care what the reason is, and they are getting tired of the finger-pointing. What most people want to know, including this Senator, is: When are we going to see the prices go down? And what are we going to do as a Nation to make sure that we don't end up in the same predicament we find ourselves 5 years from now?

Most people that have been around as long as I have remember the Arab oil embargo in 1973, and when costs went up, gas shortages were everywhere, and people sat in long lines. At that time the United States only relied on 35 percent foreign oil to meet our domestic needs. Today our reliance on foreign oil averages 56 percent, and in some months out of the year, it reaches 62 percent reliance.

The American people want to know why hasn't something been done in the last 27 years to reduce our dependence on foreign oil.

All too often in government when a problem comes up, we have a tendency to treat it like a barking dog. You know, give it a bone, a little attention to make it stop barking, and when it stops barking, ignore it until it starts barking again. And that is what we have done in terms of the price of gasoline in our energy policy in this Nation.

Such neglectful treatment of such a vital component of our Nation's economy is unconscionable, and the major part of the problem that I see in this regard is the lack of an energy policy by this administration. And I am not even going to point the finger at this administration because that has been happening. It can be pointed at administrations since 1973 who have not developed an energy policy. And, quite frankly, and I don't want to make my colleagues feel uncomfortable, but I think the Congress has also not done the job that we are supposed to be doing in terms of developing an energy policy.

One of the things that I am hopeful for is that on a bipartisan basis, we can develop some kind of an energy policy between now and the end of the year. There are a lot of good ideas. I have been on the Leader of the Senate, Senator Trent Lott, and Senator Frank Murkowski, to get a bill that they put together on the floor to be debated and discussed. And if we lose this opportunity and

let it go and wait until next year, I think that we may find ourselves back in the same position we are in today, and that is, no energy policy.

I recall at our hearing in March, we had David Goldwyn, who is the Assistant Secretary of Energy, and I asked him what this Nation's dependence on foreign oil should be. I asked him: Should it be 45 percent? Should it be 50 percent? He couldn't give me an answer.

We need answers. I am an old governor, and I am glad that my successor, Governor Taft, is here today. But if we had a problem like this in Ohio, what we would do is sit down and say we have got to figure out how much we should be dependent on foreign oil, set a number. We would then develop a strategy identifying all the things that we would want to do in order to make sure that we reached the number, and then we would start the plan and monitor it and, of course, set a date when we expected to reach the goal. I mean, that is the logical thing to do, and I think that is what we need to do here in the Congress, and I think that we need to do that with the administration.

I have a lot of other comments I would like to make, but we have a wonderful group of witnesses here today. I guess the last thing I will say is that I bet you that the witnesses here today that we have—if they got in a room and we locked them up for a couple of weeks, they could come back with a darn good energy policy for the United States of America. And so often we have witnesses that come before us, and they depend on us to do the job. And I have found that if you get the people who really know what it is about in a room and get them in the mood where they are willing to compromise with each other, they can do a whole lot better job of coming up with a solution than those of us sitting behind this table.

So, without further words, I would like to hear from Senator Lieberman.

OPENING STATEMENT OF SENATOR LIEBERMAN

Senator LIEBERMAN. Thanks, Mr. Chairman, and I would like to second your motion that we lock the witnesses up in a room. [Laughter.]

I think that probably would have a good result on the problem.

Senator LEVIN. Both parts of the motion or just the first part?

Senator LIEBERMAN. Both parts.

Senator LEVIN. We can let them out afterwards.

Senator LIEBERMAN. We will let them out.

Mr. Chairman, thanks so much for your initiative which has resulted in the convening of this very timely hearing. I am glad to join you today in trying to get to the bottom of this problem of skyrocketing oil prices that is so palpably frustrating and angering consumers in our country today as it has every now and then for years. As you said, every now and then the dog barks.

I remember that oversight hearing in March that you talked about. At that time one of the witnesses told us that low inventories being kept by the oil companies might drive the cost of gasoline over $2 a gallon at the pump this summer, and I think we were incredulous about that prediction. But here we are 3 months later, and as you indicated, people in Chicago have been paying a

whopping $2.13 a gallon to fill their tanks. In Milwaukee, the price has reached $2.02 a gallon. And even outside the particularly hard-hit areas, the price has reached $1.87 a gallon in my own State of Connecticut, and all these prices are for regular self-service unleaded.

The American people clearly want to know why is this happening, who is to blame, and what can we do to make it better and have it not happen again? And we are holding this hearing because we on this Committee have exactly those same questions.

I would like to just offer a few comments of my reaction to the problem, and then I look forward to hearing the witnesses. It seems to me to begin with that OPEC manipulates the price and production of oil with no consideration for the consumer. And then American oil companies and international oil companies keep their inventories low, apparently hoping that the price of crude oil will drop before they have to buy more to refine. As you know, there have been questions raised, Mr. Chairman, about price gouging along this line.

And then, finally, as you said in your very strong and independent statement, as a Nation we are still too dependent on a source of energy—oil, fossil fuel—that we don't control. For me, the most infuriating factor is the behavior of OPEC. The member countries proudly call themselves a cartel. They collude and act anticompetitively. Their action in holding supply down has brought the price of crude oil per barrel up over $30 and kept it there, even though the consensus that I hear and read from experts is that that price should be fairly set, not only in the interest of the consumer but of the producer nations, in the vicinity of $20, perhaps $22 a barrel.

The practices of OPEC should be illegal under the Sherman Antitrust Act. The fact is that if businesses in the United States acted in this way, it would be illegal. But because OPEC members have the protection of the Foreign Sovereign Immunity Act, they do not face a price-fixing case in the United States, although they are obviously very active here and are deriving billions of dollars of income from American consumers and businesses.

I think it is worth reaching a bit here to try to test this proposition, and maybe this is one of the expressions of globalization. We are a global economy, and what happens elsewhere in the world affects us just as what we do here affects people elsewhere in the world. And I have been taken by the arguments of our colleagues Senators DeWine and Kohl who are sponsoring a bill that would subject OPEC to American antitrust laws and remove from them this shield of sovereign immunity when they are acting as they are with extraordinary impact on our economy as a business selling a precious commodity to the United States. It is called the "No Oil-Producing and Exporting Cartels Act,"—NOPEC—and I have joined as a cosponsor on that bill.

I also want to express my concern that there are some in the oil business who are taking advantage of the current situation to exact an even higher price at the pump than the increasing crude oil price that OPEC is charging and market forces support. Obviously we all want to know whether part of the reason the gas price increased results from the oil companies' padding their profits while

hoping that inflated pump price will be blamed either on OPEC or on market conditions generally.

As you know, Mr. Chairman, the Federal Trade Commission is investigating whether the oil companies have colluded to keep prices high in the Midwest. A group of us Senators from the Northeast have asked the commission now to extend its investigation to cover the rest of the country and to look at the reasons for the price increases, which might include price gouging.

We have also called on the administration to better utilize the Strategic Petroleum Reserve in cases of what we consider to be unnatural, artificial reductions of supply and to put some of that almost 600 million barrels of crude that we own, that we have in our possession in the Strategic Petroleum Reserve, out into the market to begin to increase supply, reduce prices, and at least show OPEC that we are not helpless.

Finally—and this goes to what you said, Mr. Chairman—I think we come back to part of this problem being us and our ever-increasing demand for energy without regard to the concerns that we have had at different times of our history since the early 1970's and the oil boycott for, one, more efficient use of fuel and energy and, two, a very aggressive partnership between the Federal Government, State governments, and the private sector to develop alternative sources of energy that are more within our control and that are renewable.

At that hearing that I referred too, and that you did, too, in March, the Chairman of the President's Committee of Advisers on Science and Technology, Dr. John Holdren, gave what to me was some very impressive testimony about the promise of simple energy conservation, about doing what we used to do in this country, which is to conserve, to be a bit thrifty in the use of our resources. And he noted that if we in the United States increased our energy consumption efficiency by just 2.2 percent per year, it would reduce our dependence on oil by more than 50 percent, which is worth about 5.5 million barrels of oil a day.

It seems to me that this is a goal that is within our reach. It is not unrealistic. The United States actually decreased our energy consumption by 1.7 percent between 1972 and 1979, which were the years surrounding the Arab oil boycott, and by 3.2 percent, believe it or not, between 1979 and 1982. So we can do it.

I join you, Mr. Chairman, in seeing this moment of artificially reduced oil supply and outrageously but real rising prices as the time at which we should hear the bell tolling or, to use your reference, the dog barking, to think aggressively about the future health and security of our Nation and, as a result, to enact a progressive, new, comprehensive energy policy for our country.

I think you have assembled a wonderful group of witnesses. I thank you for, on the second panel, calling the attorney general of my home State, Dick Blumenthal, who has been active in this area, and I look forward to the witnesses' testimony.

Thank you very much.

Senator VOINOVICH. Thank you. Senator Levin.

OPENING STATEMENT OF SENATOR LEVIN

Senator LEVIN. Mr. Chairman, thank you, and thank you for your initiative and your commitment to this issue. I have been trying to get answers to the cause or causes of skyrocketing prices in my home State of Michigan for many, many weeks.

Many explanations have been offered for the incredible spike in gasoline prices, everything from the effect of reformulated gas to rising demand, to short supply, to the fact that the hurricane season makes the petroleum companies nervous because many of the refineries are located on the coast.

But none of those explanations explain the 70- to 80-cents-per-gallon increase that we have experienced in Michigan over a 7-week period. Gas prices went to $2.07 statewide. On June 19, that was a statewide average increase of 70 cents per gallon. In Detroit, prices went up to $2.14 cents in the same 7-week period. That is an 80-cents-per-gallon increase in price. Those increases in prices are double the price hike experienced in other parts of the country, as can be seen on that chart.[1]

The United States and Michigan prices generally stayed together until that point in May, and all of a sudden, Michigan, like other Midwestern States, was given that dose of price increase that is reflected on that chart. So we have got to fight back on behalf of our constituents to roll back these extreme gas price increases, and the fight has got to be waged both short term and long term.

The Chairman has gone through some of the justifications which have been given which just don't hold water or don't hold gas. One excuse given for the gas price increase was reformulated gas, but Michigan doesn't have the reformulated gas requirement. We have heard about low inventories, but the Midwest's low inventories are not much different from low inventories elsewhere.

High crude oil prices have been cited, but those increases have been nowhere near as steep as retail price increases in the Midwest.

Two pipelines and their operational difficulties have been cited, but that doesn't wash either. The rupture of one had minimal effect on supply. The rupture of the other came after the big increase began, and in any event, the increase after the pipeline break in the second case remained about the same as in those Midwest States that were not dependent on that pipeline.

So you have got to look at other factors, including price gouging and the possibility that oil companies are engaging in anticompetitive conduct, for instance, by refusing to deliver supply to certain independent gas dealers.

The issue is the issue that our Chairman has indicated. What will it take to get these prices down? I think it would help to release more oil from the Strategic Petroleum Reserve, which the President has authority to use, to assist in relieving economic problems, and here I am quoting from the legislative history of the most recent reauthorization, where economic problems "are directly related to a significant increase in the price of petroleum products." Well, we are seeing major economic impacts from these price hikes.

[1] The chart referred to appears in the Appendix on page 289.

The investigation of the Federal Trade Commission that is now underway has been helpful already. Just the announcement of the investigation was followed by a significant wholesale price drop. I don't think that is a coincidence.

In the long term, we need to reduce our dependence on oil. We should enact greater tax incentives to encourage consumers to purchase cars, homes, and consumer products which run on alternative energies. We should increase Federal investments in renewable energy and natural gas programs. And, by the way, our Chairman is absolutely right. Congress here is also carrying some responsibility. This is not just something where we can point fingers to others. We have responsibility in this area.

Over the past 7 years, Congress has supported only 12 percent of the administration's proposed increases for energy programs, such as Federal investment in efficient technologies for our factories and homes, weatherization of low-income households, technologies to produce biofuels and power from biomass, and in the case of the Partnership for a New Generation of Vehicles, which is a partnership between government and the automobile manufacturers, in order to produce energy-efficient automobiles, a new class of vehicles with up to 80 miles per gallon without sacrificing affordability or utility or safety or comfort.

Just 2 weeks ago, the House cut the Department of Energy's budget for the PNGV so drastically that it would gut that partnership. So we do have responsibilities as a Congress, and we can't just point our fingers at others, although it is important that we hold others accountable as well.

But the constituents are really being hit hard. Our citizens, our consumers, are going to have to pay $160 to $170 more for gas this season—the small gas station owner has to get family members to work because he can't afford to pay employees, the motel owner who has got to put the vacancy sign out because people don't want to travel and pay high gas prices, the trucking companies struggling to cover fuel costs, recreational vehicle dealers and users who are losing sales and unable to use their vehicles, farmers whose income may be reduced by a third because of high gas prices.

So I want to commend our Chairman for his leadership in this area. It is a critically important area to find out not only why, but to force action to reduce these prices.

Senator VOINOVICH. Thank you, Senator Levin.

I also remind the Senator that one thing Congress did do is give the opportunity for more oil exploration to this administration, and that legislation was vetoed. And I think that is one of the things that needs to be talked about in terms of our overall energy policy. We are concentrating on some of these other things, but I think that to ignore that aspect of it that we should be more reliant on our own domestic supply is something that needs to be dealt with straightforward during this discussion of an energy policy.

I am pleased to welcome my good friend, the distinguished Governor of Ohio Bob Taft, here today with us, who is going to give us the Midwest perspective on the very serious effects of rising gasoline prices. Governor Taft is a man of great courage. He was pushed by his legislature to eliminate the gas tax in the State of Ohio, and he did not do so, understanding that that money is nec-

essary to maintain our roads in the State of Ohio and to do the new construction work that is necessary. I think that was a courageous action on your part, Governor.

We also have with us the Hon. Ernest J. Moniz, Under Secretary of Energy, Science, and Environment in the U.S. Department of Energy; Dr. John Cook, Director of the Petroleum Division of the Energy Information Administration; and Denise A. Bode, Oklahoma Corporation Commissioner.

We would like to welcome all of you here today, and, Governor Taft, we are going to call on you first. I understand that you have got to make a plane, and so we are going to let you go forward. And, Senator Levin, if you would like to ask Governor Taft a question or two after his testimony, you will be welcome to do that.

Governor Taft.

TESTIMONY OF HON. ROBERT TAFT,[1] GOVERNOR, STATE OF OHIO

Governor TAFT. Thank you, Mr. Chairman, and good afternoon. I am very grateful for this chance to testify today on a subject that has the attention of motorists and consumers in Ohio and throughout the Nation. We are here today because gasoline prices affect everybody, not just the motorists at the pump, and I commend you for holding today's hearing.

Recent severe increases in gasoline prices in my State are, to say the least, baffling. In Ohio, the price of regular gasoline is up approximately 16 percent, from $1.55 last month to $1.80 today, and, more troubling, up over 50 percent from a year ago, when a gallon of regular gasoline was selling at $1.15.

The price of gasoline in Ohio is currently 5 percent above the national average. Our citizens are demanding, if not complete answers, at least some rational justification for this dramatic price increase. Every day I hear from people throughout Ohio about the burdens of this price increase. I hear from senior citizens on fixed incomes, like Robert York of Centerville, Ohio, who wrote to me that because gas is so expensive, he is forced to choose between going to the doctor, traveling to the grocery store, or attending church on Sunday. I have also heard from Cheryl Dolin in Carroll County, a single mom making $6.50 per hour. For Cheryl, a 50 percent increase in gasoline prices has placed a tremendous burden on an already stretched household budget.

The impact of increased fuel prices on our transportation and business sector is equally dramatic. Just last week, I heard from Kevin Burch, the president of Jet Express Trucking in Dayton. His company uses about 4 million gallons of diesel fuel a year. If diesel prices stay at current levels, Jet Express Trucking will pay about $1.8 million in higher fuel costs this year. These are real dollars to a small business that already operates at close margins.

Ohio roadways carry the fourth largest volume of freight traffic of any State in the Nation. We provide critical transportation links east to west, north to south. Interstate 75, which runs from Toledo to Cincinnati, carries $25 billion worth of goods each year by itself. So these unexplained price increases are not only penalizing Ohio-

[1] The prepared statement of Governor Taft appears in the Appendix on page 60.

ans, they are also negatively affecting the Nation's ability to move goods from one destination to another.

I recognize that motor fuel production and distribution are very complex processes influenced by a host of factors, and the most fundamental fact is that ours is a Nation increasingly dependent on petroleum-based energy. Crude oil prices have almost tripled since January 1999, and for a Nation that imports 55 to 60 percent of its crude oil and even imports some refined products, the impact of foreign price hikes has been significant.

The Congressional Research Service reports a number of other factors affecting price increases to some extent, and I salute your efforts to examine the factors that have contributed to higher gasoline prices at the pump. I think it is equally important, however, to recognize that the underlying realities that affect our gas prices also pose a threat to our Nation's future prosperity. The most fundamental reality is this: For a Nation with an economy that is so heavily dependent on oil, we have no coherent energy policy to reduce our dependence on foreign oil or to lessen our vulnerability to rapidly escalating price spikes like this one.

This fundamental failing exposes the fragility of our Nation's economic and national security, and it is compounded by the lack of a sensible, coordinated approach to environmental policy at the Federal level.

I commend the Congress for rededicating itself to the task of devising a comprehensive energy policy for the United States, and I hope that the President and the administration will join you in that effort. I commend Majority Leader Lott, Chairman Murkowski, and others for introducing S. 2557, which provides a useful framework to begin work on a truly comprehensive national energy policy.

We must also develop a sensible national environmental policy in a manner that complements our energy policy. You, Mr. Chairman, and also Senator Breaux and others deserve enormous credit for introducing the Air Quality Standard Improvement Act, which will provide a common-sense approach to new regulations under the Clean Air Act, while at the same time increasing public health, safety, and environmental protection.

This bill comes in response to the current administration's disturbing history of issuing environmental regulations without adequately identifying risks to health and with no consideration of costs and benefits.

Mr. Chairman, as I said earlier, governors across the Midwest are concerned about high gasoline prices. A number of citizens have suggested adjusting Federal and State fuel taxes to ease the pinch of rising pump prices.

As you point out, I have opposed the suspension or elimination of the Federal gas tax because it is a dedicated user fee that generates needed revenues for highway safety, construction, and maintenance. Ohio maintains the fifth largest system of roadways, the fourth largest in freight volume, the fourth largest in traffic volume, and the second largest inventory of bridges in the Nation, and we need to maintain that system.

Our strategy also relies on revenues from the dedicated fuel tax which Congress devoted solely to transportation purposes under TEA–21.

I want to briefly, in conclusion, advise the Committee of our very serious concerns related to ethanol consumption that I have discussed on several occasions with the Chairman. We support the environmental contributions made by ethanol, and we support the continued use of this fuel. But we have become aware, as you have as well, that the funding formula adopted under TEA–21 is determined in large part by our contributions to the Highway Trust Fund. And because we utilize ethanol-blended gasoline, we suffer significantly because of the 5.4-cent-per-gallon Federal tax break on each gallon of ethanol-blended gasoline sold and the fact that 3.1 cents of the tax is credited to the general revenue funds and not the Highway Trust Fund. That means that we are losing 8.5 cents for each gallon of ethanol-blended fuel sold in Ohio, a total decrease to our State's trust fund contributions of $185 million annually. So this is a problem which we are very pleased that the Chairman is addressing, and we hope your colleagues will join you in that effort.

Mr. Chairman, thank you for the opportunity to appear today, and I would be glad to answer any questions you or the Committee may have.

Senator VOINOVICH. Thank you, Governor Taft. I am glad that you raised the issue of the loss of revenue to States like Ohio because of our significant consumption of ethanol. And one of the things that I think needs to be looked at when we are putting an energy policy together is a method to take care of that situation, perhaps taking the taxes that are generated, instead of them going into the general fund, have them go into the Highway Trust Fund.

Governor TAFT. That would be excellent.

Senator VOINOVICH. I think the other thing that is important that you mentioned today, and so often people forget about it, is that Governor Taft just recently announced that our last area of the State of Ohio achieved the ambient air standards. Frankly, governor, they had achieved that status before I left the governor's office, but it has taken the EPA that long to give them the status.

Governor TAFT. Right.

Senator VOINOVICH. And so the entire State today is reaching ambient air standards, and one of the reasons why is because we have emission testing in Ohio. We didn't go for reformulated gasoline. And most Ohioans are not aware that if the Supreme Court does not agree with the lower court's decision in the issue of new ambient air standards for ozone and particulate matter, then all of the major 26 areas in Ohio are going to go into nonattainment, which means that we may have to go to reformulated gasoline and many other things in terms of businesses adding great expense in order to meet those new standards.

Again, it was recently announced that the oil companies are going to have to remove sulfur from gasoline, and everyone applauded that as a great environmental effort. But no one has paid attention to the fact—and we will have some witnesses later—that I think it is going to add 6 or 7 cents to the cost of gasoline. So, too often, what we do is we pass these things and don't really pay

attention to the fact that ultimately somebody has to pay for it, and there is a balance between our environmental concerns and our costs and our economy. So I think those are things that too often get lost here in Washington.

I would just be interested—I know you are concerned about the State, and you have heard it all, the pipelines and so forth. Governor, do you have any ideas on what you would do to take care of this problem immediately, to get the cost down?

Governor TAFT. I appreciate that question, Mr. Chairman. As you pointed out, we do not use reformulated gasoline in Ohio, which makes it even more difficult to understand the causes and the reasons. But certainly I would say we need to develop a policy that reduces our dependence on imported oil from the OPEC countries. We are concerned for our economy in the State of Ohio. We are very dependent on oil, obviously, our consumers as well as our business economy, and we believe that the Congress needs to take the lead with the administration in developing a comprehensive energy policy that is also consistent with the environmental policy that focuses on increasing our domestic energy supplies. And there are a number of opportunities to do so, and some of those are contained in S. 2557, which Senator Lott has introduced.

But in addition to that, obviously greater energy efficiency—and we are working on that in Ohio. In fact, we are experimenting with soy diesel in our Ohio Department of Transportation vehicles to see if that is a good alternative to reducing our dependence on imported oil in the State of Ohio.

We also need to seek, obviously, alternatives to petroleum as well. And I would support any efforts on the part of the administration to press the OPEC countries to put more oil on the market. That is certainly the most immediate solution that would help us in Ohio. But I believe we also need to address the long-term viewpoint as well. That is just as important.

Senator VOINOVICH. I would like to make a suggestion to you. Governors of this country are very, very concerned about this issue. People forget about that the economic engines of America are in our States, and your policies have a lot to do with how competitive your State will be.

It would be interesting if you might ask the National Governors' Association to put a little group together to look at this issue and come back to us with some of their recommendations on how they think that we can do a better job.

Governor TAFT. That is an excellent idea, and we will be meeting in a couple weeks at the National Governors' Association, and I will take that idea forward.

Senator VOINOVICH. Perhaps maybe a special task force that might work with Congress on this issue, because we are going to need support for this. Too often, these things come to the floor of Congress, and we don't get the kind of support that we need from our brothers and sisters out in the State and local government. That might be a real positive thing that you can do for us.

Governor TAFT. That is an excellent idea, Mr. Chairman.

Senator VOINOVICH. Thanks very much. I know you have to leave, and we really appreciate your coming from Ohio to be with us today.

Governor TAFT. Thank you very much. Thank you.

Senator VOINOVICH. I would now like to call on the Hon. Ernest Moniz, Under Secretary, U.S. Department of Energy. Mr. Moniz, we are very happy for you to be here. I am sure that all of you at the Department of Energy are getting tired of going to all these hearings, and we are grateful for your input, and hopefully after this is all over with we will have enough information where we can start to do some things that are going to make a difference.

TESTIMONY OF HON. ERNEST J. MONIZ,[1] UNDER SECRETARY FOR ENERGY, SCIENCE AND ENVIRONMENT, U.S. DEPARTMENT OF ENERGY

Mr. MONIZ. Mr. Chairman, we certainly have had a number of hearings, but this is a very important issue and we certainly are willing and happy to support you and other Members as often as you need to help us solve this problem together.

We do appreciate the opportunity, in fact, to come and discuss once again our energy policy and, of course, also to hear your suggestion for incarceration. I hope you have a nice location in mind for our being locked into a room for the policy development.

The fundamental importance of energy to the Nation's economic and environmental health has warranted investments by the administration in a set of policies and a portfolio of technologies to produce more energy, to use energy more efficiently, to reduce impacts on the environment, to develop alternative sources of supplies, and to provide incentives for private sector advancement towards these goals.

The administration's core principles in energy policy really are two: First, market forces are the best means of informing supply and demand and getting the most for the American consumer; and, second, environmental stewardship and abundant, affordable energy are quite compatible.

Our commitment to these principles has contributed, in fact, to the longest period of sustained economic growth in modern times, while leading to significant progress in a number of environmental indicators. The reliance on free markets as the cornerstone of our energy and oil policy is a bipartisan view. It has been expressed over and over again in the last 20 years as the Congress and the Executive Branch have systematically removed the Federal Government's authorities to control oil prices or allocate supply.

Generally with the exception of emergency authorities, the Congress has taken the government out of the equation and committed us to the free market principles of supply and demand. It is in this context that I would like to discuss briefly the current problems in the gasoline market and the major features of the Clinton-Gore energy policy.

For the third quarter of this year, there will be 3.5 million more barrels of oil per day on the market than in March. Production, however, is still being outpaced by near historic demand levels and the need to rebuild stocks for the winter heating season. Oil prices remain high and refinery inventories are low. These are the fundamental reasons for high gasoline prices.

[1] The prepared statement of Mr. Moniz appears in the Appendix on page 67.

It is in this context that we have been reviewing the gasoline supply situation, particularly in the Midwest, where you and other Members have clearly stated what is obviously a major problem. I would note that DOE performs gasoline supply assessments to inform the EPA's waiver process for cleaner gasoline as opposed to performing any specific price analysis.

The situation, particularly in the Milwaukee-Chicago area, where gasoline prices are the highest in the Nation, is affected by the overall high price of crude, but also by other factors: Higher regional demand than the national average, low inventories in the region, distribution problems with pipelines and refineries, high regional refinery utilization rates, and an RFG formulation specific to the area that is more difficult to produce.

These supply issues will affect the price of RFG Phase II and conventional gasoline, but the degree to which they contribute to price spikes is not yet known.

Because the supplies in the area are tight but adequate, because the differential between RFG Phase II and conventional gasoline was so large—up to 48 cents at one point—and because DOE was not convinced that the factors I just listed were sufficient to explain this differential, DOE and EPA referred this matter to the FTC, the appropriate agency to review specific pricing issues. And it is my understanding that the FTC will issue an interim report on this matter in July.

Let me now summarize some elements of the administration's energy policy. Through policy choices and investments, the administration seeks to address in particular four major challenges: Maintaining America's energy security in global markets, harnessing the forces of competition in restructured energy markets, mitigating the environmental impacts of energy use, and ensuring a diverse, reliable, and affordable set of energy sources for the future.

While I discuss each of these challenges in detail in my written testimony, I will focus here only on the first: Maintaining our energy security. To address this challenge and reduce net imports, the administration has supported or proposed measures to spur domestic oil and gas production, address the generally high U.S. oil production costs relative to other regions of the world through advanced technologies, ensure that we are not overly reliant on imports from a single region of the world, encourage the world to develop its oil resources and increase world productive capacity, increase the size of the SPRO, provide tax incentives for the expensing of geological and geophysical costs and delay rental payments, provide deep-water royalty relief, simplify royalty collection on public lands, and promote the creation of a guaranteed loan program for small domestic oil and gas producers.

Very importantly, we can also reduce net imports by focusing on the demand side of the oil equation. Two-thirds of our oil is used in transportation, so in the spirit of Willie Sutton's dictum, that is where we should look for demand-side relief.

Increasing the average fuel efficiency of America's automobiles by just 3 miles per gallon would save us over 1 million barrels a day. This is why we have invested, for example, heavily in R&D on more fuel-efficient cars. Our PNGV program, Partnership for a

New Generation of Vehicles, has a goal of developing an 80-mile-per-gallon prototype automobile by 2004. This focus is even sharper when we look ahead to world oil demand in this sector.

For example, take China alone. Projected economic growth in China has led to the prediction that they will add about 150 to 180 million vehicles on the road in the next 20 years, an enormous, again, additional demand-side draw.

In addition to technology development, therefore, the administration is also proposing tax credits to spur introduction of such advanced clean and efficient vehicles. These actions are good for the environment, good for energy security, and good for helping position American industry for a major export market.

The administration is proud of its record on energy policy and the demonstrable results in contributing to economic growth and environmental stewardship. Nevertheless, the volatility in prices is clearly leading to significant problems for Americans, certainly in the Midwest, and we remain very concerned about high gas prices and are doing all that we can to address this issue within the authorities given to us by Congress.

The Secretary has called on the Congress to work with us in a bipartisan fashion to pass legislation to enhance our national energy security, including extension of EPCA, which expired on March 31, establishment of a regional home heating oil reserve, additional tax incentives for domestic oil and gas production, renewable energy and increased efficiency, comprehensive electricity restructuring, replenishment of emergency LIHEAP funds, and funding of energy R&D to reduce demand, increase domestic supply, produce cleaner energy, and develop alternative sources.

In fact, I would note, as Senator Levin did, that the House voted to cut $126 million from the PNGV and $45 million from the Department's Fossil Energy Program. As noted in my testimony, these programs support essential energy security goals on both the demand and supply sides. We appreciate the Senate's support of these R&D programs. They, together with our efficiency and renewable programs, have never been more important than they are today for meeting energy and environmental goals simultaneously.

We urge the Congress to pass these proposals, and if we are going to meet the Nation's energy needs in the 21st Century, as you well know, we have neither the time nor the energy to waste.

Thank you, Mr. Chairman.

Senator VOINOVICH. Thank you.

I am really glad to hear what you had to say today, but I can't help but thinking back to February 16, when gas prices were in the midst of their march upward, that the secretary of your agency said, "The Federal Government was not prepared; we were caught napping; we got complacent." And in all due respect, I think some of the things you have talked about today are very, very worthwhile and we should study them and incorporate them into an energy policy for our Nation.

The question you have to ask is: Why didn't we do this 6 or 7 years ago? And I think it just underscores the administration's responsibility to try and work with Congress between now and the end of the year to participate in a bipartisan way of putting some policy together that we can be supportive of.

You mentioned the issue of exploration—there has been one initiative after another that has been shot down because of pressure on the administration not to do these things. And, again, ANWR, for example, we have been up in Prudhoe Bay, the technology has increased, but these become symbols of, well, we are not going to do that, this is going to hurt the environment. But we never talk about the other side of it, that right now it is hurting the people at the gas pump. It could have been done 5 years ago, 6 years ago, and that oil could be flowing today in this country.

We never talk about the fact that when we talk about some of these environmental things about the defense of our Nation and the vulnerability that we are. The man that was here before you mentioned 65 percent reliance on foreign oil by the year 2020.

We have a serious problem here, and I think we need to talk about it, and we need to balance out the environmental concerns that we have in this country with the economic and with the national security interests.

Mr. MONIZ. Shall I respond later on?

Senator VOINOVICH. Pardon me. Senator Akaka is here. Senator, would you like to make a statement or would you rather hear the witnesses and then ask questions?

Senator AKAKA. Well, I would like to make a statement.

OPENING STATEMENT OF SENATOR AKAKA

Senator AKAKA. Mr. Chairman, I want to thank you very much for holding this hearing. It is not only important to us but important to the Nation, and what we have been experiencing has been something that is extraordinary, I would say.

I want you to know about how we feel in Hawaii. Let me tell you that for most of the 1990's, the average Honolulu price based on a weekly survey hovered roughly 25 cents to 50 cents above the national average. And in June 1999, only 1 year ago, Hawaii's $1.51 per gallon was ranked above Oregon's $1.44 and the national average of $1.14.

As late as last month, according to Automobile Association of America, Hawaii topped the Nation with an average per gallon of $1.85 compared to the next highest State, Nevada, at $1.67 and the U.S. average of $1.51.

Now, this month, according to AAA, Hawaii ranked fourth highest, with an average price for regular unleaded of $1.86. That fell below Illinois with an average of $1.98, Michigan at $1.96, and Wisconsin at $1.91.

Still, Hawaii's average price is well above the U.S. average of $1.63, and it is no pleasure for me to say that Hawaii has lost its dubious distinction as the State with the Nation's highest gasoline prices. The pocketbooks of Americans are hurting all over the country, and that is what we are addressing at this time.

Mr. Chairman, I am pleased that you called this hearing, as I said, and we must know why a region of the country was hit with such high price spikes in such a dramatic manner. We must not let this happen again to the Midwest or any other region of the country. The rise in gasoline prices hits Americans in an extremely uneven manner. Those who can afford it the least are affected the most. Our import dependence has been rising for the past two dec-

ades. The combination of lower domestic production and increased demand has led to imports making up a larger share of total oil consumed in the United States.

We all understand that there is no overnight solution to America's energy problems. We can't turn this trend around overnight. Tax repeals and other such short-term actions may appear appealing given the political climate and may even help American pocketbooks in the short run. But they do not provide a solution for our energy problem.

For me, the only way to reverse our energy problem is to have a multifaceted energy strategy and remain committed to that strategy. In my judgment, Mr. Chairman, you need both of these in equal portions, and this, I think, would send a clear message to OPEC and their partners about America's resolve.

I am so happy you are having this hearing, Mr. Chairman, and I thank you for it, and I want to hear the witnesses. Thank you.

Senator VOINOVICH. Thank you, Senator Akaka.

Our next witness is Dr. John Cook, Director of the Petroleum Division of the Energy Information Administration. Dr. Cook, I want to say that the work that your organization has done has just been terrific, and it has been very helpful to me and, I know, other Members of the Congress. We thank you very much and thank you for being here today.

TESTIMONY OF JOHN COOK,[1] PH.D., DIRECTOR, PETROLEUM DIVISION, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY

Dr. COOK. Thank you, Mr. Chairman. I have a lot of good staff to thank for that.

I would like to begin today by thanking the Committee for the opportunity to testify on behalf of Mark Mazur of the Energy Information Administration.

With gasoline prices currently averaging about $1.66 nationwide, compared to just $1.11 last June, indeed, consumers do want an explanation. It is our view that this summer's run-up, like other recent oil price spikes, stems from a number of factors, including tight crude markets, resulting in low crude and product stocks and high crude prices, from pipeline and refinery problems, relatively strong demand, and a difficult transition to summer-grade Phase II reformulated gasoline, or RFG.

Crude oil continues to be a significant factor in explaining these increases. As you know, crude oil prices have risen from about $10 a barrel in December 1998 to about $34 recently. While $34 is far from the inflation-adjusted $70 historical high seen in the early 1980's, for many the pace of these increases may be as disruptive as the higher absolute levels. Regardless, crude increases have contributed about 33 cents to the increase in gasoline.

In turn, these crude oil prices are up as a result of the shift in the global balance between supply and demand. Crude markets tightened in 1999 as OPEC and several other exporting countries reduced supply, while at the same time economic recovery in Asia stimulated demand growth. As a result, crude oil and product in-

[1] The prepared statement of Mr. Cook with attachments appears in the Appendix on page 89.

ventories fell, and by the end of 1999, global inventories were at very low levels, especially here in the United States, as shown in Figure 1 on the right-hand side.[1]

Last year, as markets tightened, crude oil prices rose faster than product prices, squeezing refinery margins, discouraging refinery production, and thereby adding to downward pressure on inventories. Figure 2 shows that in June of last year,[1] the difference between wholesale gasoline prices and crude prices averaged less than 6 cents a gallon. This is compared to the more typical 10 to 12 cents a gallon seen typically in June. This year, however, by the spring, low crude and product stocks generated much higher product prices relative to crude oil. Where these margins were low last year, they are now high at about 20 cents a gallon, or 14 cents more than last year. To put it another way, low gasoline inventories are probably adding about 10 cents a gallon to the price of gasoline over what we would normally expect for this time of year. Yet some regions have experienced much higher prices than the 47-cent calculation I just implied.

EIA has pointed out on numerous occasions that very low gasoline stocks combined with a market short on crude oil generates an environment ripe for price volatility, both during the spring and the peak summer periods. The West Coast experienced such volatility in February, and the Midwest erupted in May. Several pipeline and refinery problems caused already low stocks in the Midwest to fall 13 percent below their 5-year average, while at the same time U.S. gasoline inventories were only 5 percent below average in May.

With inventories in the Midwest at extremely low levels, prices were bid up rapidly, as marketers scrambled for limited supplies of both conventional and reformulated gasoline. As we know, reformulated gasoline in the Chicago and Milwaukee areas drew most of the attention initially, as these prices increased more than 30 cents over conventional.

As shown in our last figure, the jump in Midwest reformulated prices appeared similar to surges we saw earlier this year in California and have seen frequently since the start of that State's reformulated program.

There are several reasons for this strong price response.

First, the Midwest reformulated market is very small, only about 13 percent of all Midwest sales. This very limited size limits nearby supply options.

Second, this was the first year of the Phase II of the reformulated program, and it is very clear from our research, our field work, that some refiners had added difficulty in making this transition to the summer grade. It is a more difficult product to make, and it does cost more to do that.

In the Midwest, as you know, ethanol is used to make reformulated gasoline, which requires a unique blend of gasoline components with very low vapor pressure.

Finally, as I said, with few alternative sources of readily available supply, it simply takes time for any added supply-demand imbalances to be resolved. The reformulated markets in the Midwest

[1] Figures 1 and 2 appears in the Appendix on page 94.

and California are alike in that they are isolated and use unique gasoline blends. As such, supply problems cannot be resolved quickly.

Today the U.S. refinery system has little excess capacity, and the growth in the number of distinct gasoline types increases the potential for extended supply disruptions.

Fortunately, wholesale prices in the Midwest began declining more than a week ago, reflecting increasing supplies. Midwest stocks have increased 13 percent over the last 4 weeks, and in response, reformulated retail prices have fallen over 12 cents a gallon while conventional is now down about 7 cents. Much lower wholesale prices indicate we could see further declines barring any more pipeline or refinery problems, and since retail prices normally lag wholesale prices, both when prices are rising and when they are declining, we can expect Midwest retail prices to fall further, barring any more supply problems.

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. As we enter the peak season, refiners will be pushing production to the limit to meet demand. With low stocks and refineries operating at high utilization rates, any more supply disruptions can trigger yet another price run-up.

That concludes my testimony. I would be happy to answer any questions.

Senator VOINOVICH. Thank you, Dr. Cook.

Ms. Denise Bode, thank you for being here today.

TESTIMONY OF DENISE A. BODE,[1] VICE CHAIRMAN, OKLAHOMA CORPORATION COMMISSION

Ms. BODE. Thank you. I appreciate the opportunity, Mr. Chairman. I am Denise Bode, and I am Vice Chairman of the Oklahoma Corporation Commission.

Mr. Chairman, having worked in energy policy my whole career, I am here to try to tell you as much of the facts as I know it, having worked through these processes and with these policymakers, many of whom I know back here in the audience, on energy policy to try to prevent us from being in the situation that we are right now. And so I am going to try to give you as clear a picture as I can as to how we got to where we got. And since you are focused on this administration, I will focus on this administration. But let me tell you, as you stated, the blame can go beyond this administration and the blame also lies with this Congress. And I think we have got to go through the historical perspective, and then I will give you some ideas as to what I think we can do short term and long term to try to solve the problems.

Senator VOINOVICH. Great.

Ms. BODE. OK. To understand how and why America is at risk, first understand that there is not a free market in the traditional sense when it comes to oil. There never has been. My friend Dan Yergin's book on oil, "The Prize," articulates convincing rationale that all markets have always been manipulated, first by the Standard Oil Trust, then through our government through pro-rationing

[1] The prepared statement of Ms. Bode appears in the Appendix on page 96.

and price controls, and finally by OPEC through the producing-nation quotas. Oil-producing countries manipulate oil inventories for politics as well as for their own economic gain. Our reliance on foreign oil has gone from 34 percent during the 1974 Arab oil embargo to 44 percent at the beginning of this administration, to close to 60 percent today. In fact, the dependence on oil imports has grown twice as much in this administration than during the previous 20 years.

The problem is that each time the OPEC cartel manipulates oil supply to create shortages or to flood the market, it causes price shocks, making the domestic oil industry a less stable business, driving away investment, terminating qualified employees, destroying valuable infrastructure, both exploration and refining. And it forces more of U.S. production, 40 percent of which is marginally economic to be plugged, to be lost forever. It is so serious now that even with the latest OPEC price increases, domestic producers are not drilling new wells. Of approximately 800 rigs drilling, less than a third of them are drilling for oil, and these price shocks, as you all well know, impact consumers as well, making it impossible for a family or a business to budget without knowing whether their gasoline is going to be 70 cents a gallon or $2 a gallon.

Let me run through a chronology of events and responses by this Executive Branch since 1992 that have brought us to the dire straits we find ourselves in today.

In 1993, at the beginning of this administration, the OPEC cartel had increased production. Oil prices in the United States fell below $13 a barrel and imports had risen to 44 percent. The IPAA, which I was president of at that time, petitioned in March 1994, under Section 232 of the Trade Expansion Act, for an investigation into increasing oil imports and asked for action by the President. Since the Eisenhower Administration, this Trade Expansion Act has been used to affect American energy policy relations with the world. A bipartisan group of members of Congress, Democrats and Republicans alike, met with the President personally in the White House and asked him to enact, to propose, to support an energy plan that would maintain a strong domestic production and refining option.

In fact, that bill that they proposed looks very much like S. 2557. It said to the American industry, yes, we need your investment here in the United States so that we can have a domestic oil option.

But no action was taken on their plan. A year later a Presidential finding of a national security threat was finally issued. No new action there. But the Presidential finding did warn us of what we would be facing without action. Specifically, it said, "The United States and its allies may find themselves constrained from pursuing . . . foreign policy actions for fear of provoking producer countries into actions that could result in the manipulation of oil prices and increased prices for consumer countries."

Even after that Presidential finding, no action was taken.

During that time, domestic oil production dropped by over 500,000 barrels a day, imports accelerated, and 75,000 Americans lost their jobs.

Congress did take the initiative to enact one item in their plan, a royalty holiday on Gulf of Mexico deep-water drilling. This new

production, let me tell you, stopped the decline in domestic production by 1997, clearly demonstrating that we do have the ability to spur domestic production.

But the most significant energy policy initiated by the administration during that time was initially a Btu tax, which ended up being a 4.3-cent increase in the gasoline tax.

The OPEC cartel clearly understood that American energy policy in this administration was based on instant gratification, seeking low gasoline prices from foreign sources and ignoring future consequences with a foreign cartel in charge of our transportation fuel and our prices. In 1997, members of OPEC acted to consolidate their control of the American market by increasing production and reducing world oil prices to historic low prices. Of course, everybody liked the low prices. Of course, there are other economic factors they hadn't adequately predicted that drove the price down even beyond their control. But the United States took no action. Thirty thousand Americans lost their jobs. Domestic oil production went from holding steady to a 5 percent decline, an incredible drop of another 600,000 barrels today. Today we only have 153 refineries, down from 198 in 1990. Members of Congress clamored for another investigation of the threat to our national security of oil imports. The second Presidential finding in this administration was released at the end of March, again finding an increased national security threat. No action has been taken.

There has been a recommendation now to take some action, but, again, no action has been taken. But 28 States have taken the initiative, including my State, with incentive programs for production. Ohio has taken action with encouragement for domestic producers.

The Clinton Administration says they were "caught napping" when fuel prices jumped. I would suggest otherwise. With two Presidential findings of national security risk in hand—and let me tell you, DOE has been clamoring trying to get the attention of the administration. But they are not listening. They knowingly put American consumers at risk for these high prices with the foreign policy of looking to OPEC for more oil imports and gasoline instead of acting to stabilize domestic production and refining capacity.

Senator VOINOVICH. Ms. Bode, would you please summerize——

Ms. BODE. Yes, absolutely. And I have a much longer statement that I would like to be included in the record.

A lot of folks have talked here about what has been happening in the Midwest. Oklahoma is part of that PADD2 distribution region, so our prices were spiking, too. We looked into it. There is a tremendous amount of complicated infrastructure issues that are being resolved right now. Gasoline prices are continuing to fall. Hopefully we have learned lessons in regulatory policy from this government-caused disruption.

But that is a smaller, more temporary matter. The much more important fundamental issue is whether we as a Nation have learned the importance to our national security and economy of maximizing domestic refining and production options. If we have not learned the fundamental lesson, this episode will be replayed in the future with even more costly effect.

Senator VOINOVICH. Thank you very much.

I think, Ms. Bode, one of the things that you mentioned that is interesting that is hard for Americans to understand because we are used to thinking of things one way, and when we are asked to think of them another way, it is sometimes hard for us to understand, particularly when it may cost us more money. When the oil prices went way down, they dramatically impacted upon many of the U.S. domestic producers of oil, and that if we are going to maintain our domestic producers, the marginal producers, "the strippers" that some people refer to out there, you need to maintain a certain level per barrel in order for them to stay in business.

One of the things that we perhaps ought to look at is working it out so that when that price does fall way down there, that there is some kind of incentive for them to stay in the business and not just disappear.

I would like you to comment on that so that people can maybe understand that concept, because I think what you said was that when the price goes so far down, hooray, but what you are doing is you are making yourself a lot more vulnerable so that later on somebody could take advantage of you because you, in effect, have eliminated part of the supply.

Ms. BODE. Absolutely. And I think most Americans understand that, the concept. They are not saying that they have to have absolutely 25-cent gasoline. They are just saying don't whipsaw us like this so that we can't even plan—from 70 cents to $1.80 all in the period of a year. I think people understand you have to be able to at least break even or make a little profit on producing oil and gas, and that is all I think folks have been talking about.

But one of the things that I think is fundamentally important that you mentioned is that there be some stability. And, in fact, one of the things we did and many other States did in putting incentive packages together was to drop the gross production tax, which is the State tax on oil and gas production, dropped it almost to zero whenever oil prices fall below $14 a barrel. And that provides a stabilizing effect so people know that there is going to be encouragement to continue to invest and stay in business. It is not the government saying, well, our policy is basically we are going to get all our oil from overseas, because that is a strong message to stop doing business here in this country, and, in fact, that has been the result.

Senator VOINOVICH. Well, if you noticed, I suggested to Governor Taft that he might go back to the National Governors' Association. As a former Governor of Ohio, I don't know whether it happened during my administration. If it did, wonderful. If it happened under another, God bless. But the fact is that you are pointing out that even States can get into the act in terms of making more production available.

Ms. BODE. And they have.

Senator VOINOVICH. There is the issue of refineries, and I think you said that at one time we had 198 refineries, and now we have 153, and I understand there hasn't been a refinery built in this country in the last 25 years.

I would like some comment from the witnesses on why that is, and do you believe that if we are going to have an energy policy that issue should be addressed? And should we build more refin-

eries in the United States? You might even comment, if we haven't, why have they closed and why aren't people building more of them if they are needed?

Ms. BODE. I would be glad to respond. I think obviously we have much stricter government regulation of refineries, environmental regulations and other things that—we have the most strict environmental regulations in the world on our domestic industry. And that is because we care about the environment, we care about health and safety, and that is good. But the problem is we need to evaluate how to balance that and the cost of those regulations with the needs of the country in building infrastructure, because, let me tell you, it is pseudo-environmentalism to say that it is better not to have domestic production and refining in this country than to ship it in on tankers. At 60 percent oil dependence, we are talking about 10,000 tankers coming into American ports, and anybody will tell you, particularly the Coast Guard, that that is a much greater threat to the environmental health of this country than drilling for oil and gas under our very strict environmental standards and refining oil under our standards. So those are some of the—and the loss of domestic production of oil, I think, has caused refineries to say, well, heck, we are not really needed to do business in here, and refined products coming in is another reason, I think, that fundamentally people have said, well, we will refine offshore because it is cheaper to refine offshore. Imported products coming in is another factor.

But I think we should have an area at the Department of Energy, frankly, that focuses on refineries and that looks at our infrastructure on a regular basis and that we should focus on these issues and come up with a list of what we can do to encourage refinery upgrading and standards as opposed to putting new rules in place that basically run them offshore. Because if you have refineries close to your markets, you are going to be able to provide the product whenever you have these short-term problems. Otherwise, the problem in the upper Midwest and Chicago is that because they only can provide about 75 percent of the capacity for gasoline they need, it has to be piped up from the gulf. That product has to be piped up. If there is any disruption along the way and if anybody else needs all these different flavors of gasoline, then you are not going to be able to get it to the marketplace. So localized refineries are fundamentally important to the distribution system.

Senator VOINOVICH. What is interesting is that I think, again, when we think about the environment and we are saying, gee, we don't want to have the oil exported—or we don't want to have the refineries here because we are concerned about the environment, I doubt seriously that anyone gives any consideration that it has got to be refined someplace, and if it is coming over here in large boats—there is a jeopardy to the environment in terms of spillage, what we have seen over the years.

Ms. BODE. The greatest threat.

Mr. MONIZ. May I just add to the refinery question?

Senator VOINOVICH. Yes.

Mr. MONIZ. Thank you, Mr. Chairman.

First, of course, we certainly agree that we would like to see additional refining capacity in the United States, but I do want to

note that although it is certainly true that the number of refineries has reduced, we should emphasize as well that there has been a significant increase in capacity of the remaining refineries, largely driven by new technology developments. There has been a consolidation in the industry.

Clearly, there has been a problem in terms of the profit margin, which is one of the reasons we don't see more refinery development, and that, again, adds to something that Ms. Bode—and I think you have also said—that one of the real problems right now, in addition to the too high level of cost in terms of oil, gasoline, etc., is the volatility. The volatility—the ups and downs, the rapid changes—makes life difficult for everyone from consumers to people in the refining business, etc.

Finally, Ms. Bode suggested that the Department of Energy deal more with the refining industry, and I just would note that we do. We have several programs, for example, a couple of new programs.

First, we have before the Congress this year a proposal called ultraclean fuels. It is precisely to work with the refining industry in developing the technologies to meet the increasing environmental needs and developing new petroleum-based fuels. The Congress I think is looking well on that proposal, and we appreciate it.

Second, we have an important program in the Industries of the Future Program, working with refineries to reduce their internal energy costs, therefore improve their posture.

Senator VOINOVICH. Can I ask, do we need more refineries?

Mr. MONIZ. Yes. Right now our refining capacity is really being pushed to the limit. We are about 96 percent utilization today across the country.

Senator VOINOVICH. If you are not able to answer this, I would be interested in finding out the answer. If you looked at where we are today and you had to calculate based on the refinery technology that is available today and the average refinery, whatever it would be, is one, two, five, or ten refineries?

Mr. MONIZ. I am sorry?

Senator VOINOVICH. In terms of the additional refineries, if we need more, approximately how many more would we need in order to be competitive?

Mr. MONIZ. Well, the issue is that—and maybe John Cook could actually expand on this—clearly we anticipate demand growing at somewhere between 1 and 2 percent per year in terms of domestic use.

Senator VOINOVICH. It is interesting, I read that several years ago China was exporting oil. Today they have become a major importer of oil.

Mr. MONIZ. Yes.

Senator VOINOVICH. In other words, we in the United States are kind of provincial in our thinking, and what is happening is that the market is growing by leaps and bounds around the world, and as a result of that, we may have to reevaluate the traditional way we have approached some of these things, for example, saying, we are going to have to do more of our refining here because of what is happening.

Dr. Cook, would you like to comment on that? I am about out of time.

Dr. COOK. Sure. I think they have covered it pretty well. When we hit peak demand in July or August, utilization rates may hit 98 percent. Some areas, the Chicago area is already at 99 percent, pretty close to flat out. The Gulf Coast and West Coast refineries often run at peak, at pretty much flat out. So, as was stated, if demand is going to rise 1 or 2 percent a year, just to maintain this volatile, very little excess capacity situation, it has to grow by that amount. And we need a cushion, another 4 or 5 percent or so.

Senator VOINOVICH. What I would be interested in is if the experts looking at it say, objectively, this is what we ought to have in order to deal with it, because what I understand, in the Midwest we had this lack of refining capacity, then we had the reformulated gasoline, which, Mr. Perciasepe, I think it was mandated in those towns by the EPA. They had to have reformulated gasoline. Was it mandated——

Mr. PERCIASEPE. It was mandated by Congress in 1990 that the cities with those specific classifications are required——

Senator VOINOVICH. Had to have—OK. So, right, Congress, you are implementing it.

Mr. PERCIASEPE. You had the option in Ohio when you were there to——

Senator VOINOVICH. We took the option. We did emission testing and didn't go for reformulated gasoline. But a lot of them were mandated.

Ms. BODE. The date of implementation was set by EPA.

Senator VOINOVICH. But the fact is that also was a problem, that this was coming on. You had the refinery capacity, and as a result of that, that interfered with the flow of oil coming into the area. Is that right?

Dr. COOK. In my view, that is exactly right.

Senator VOINOVICH. I have had a chance. Senator Lieberman.

Senator LIEBERMAN. Thanks, Mr. Chairman. I thank the witnesses. I apologize that I had to be out for a while to go back for a meeting in my office, but I followed your prepared testimony. I do have some questions.

Dr. Cook, you put up a chart, which I have as Figure 2,[1] components of gasoline prices. And I was interested in looking at it, and this is a comparison of June 1999 to June 2000—$1.11 in June 1999, and $1.63 in June 2000. But what interested me is that the biggest percentage increase, almost quadrupling, was in the refiners' contribution to the cost per gallon of gasoline, the refiners' share of that, because most of the rest resulted from the jump in the price of crude oil. Distribution and marketing is a little bit larger but not that much; tax is about the same.

So why did the refiners' share of the cost of a gallon of gasoline quadruple in a year?

Dr. COOK. Well, again, to keep it short, the very low gasoline stocks, strong gasoline demand, it is not unusual when these rare circumstances occur that this will put extra pressure at that refining level on wholesale prices. Typically in the spring, refiners are

[1] Figure 2 appears in the Appendix on page 94.

doing maintenance. Their gasoline production is not at maximum levels. Gasoline demand will start to rise as we move into the driving season. And that tighter balance will reduce stocks a little bit and raise gasoline prices relative to crude maybe a nickel or so. But with these extremely low stocks, especially in the Midwest, and with very strong demand, that tightening process was just much more severe and raised the margins more than they normally would go up.

Senator LIEBERMAN. Do you have a basis for making a judgment yourself—or I don't know whether you, Secretary Moniz, wanted to say anything—for whether this is fair? This looks like an awful large percentage increase for refiners compared to other contributions to the cost of a gallon of gasoline. Does it look fair to you?

Dr. COOK. Well, it is extremely high, but it is important to remember that throughout the 1990's these refining margins were very poor, and especially in 1999. In 1999, with crude oil prices rising much faster than product prices, you had those almost nonexistent margins, and that is largely the reason that production failed to keep up with demand and we got these low stocks. They do have to make a healthy margin to encourage the extra production.

I will let someone else comment on what is fair. They are very high.

Senator LIEBERMAN. They are high. I suppose it would be fair to say that the Federal Trade Commission may be commenting on whether these increases at the refiner level are fair or whether they do amount to price gouging or something else.

I have been hearing about what was described as just-in-time inventory practices of the oil companies and the refineries, and I guess it is taking the concept that is quite fashionable and productive in industry where you have just-in-time inventory so that you are not carrying large inventories unnecessarily for long periods of time, but you use computers and sensible management to bring in the parts that you need as you need them.

But when you apply this—and this has been a change, I gather—in the oil industry, it becomes a "heads I win, tails you lose" deal because if they are right in their projection of the inventory they are keeping, which presumably will be modest or more modest than it would otherwise be, then it is OK, they make what they would make. If for some reason there is an increase in demand, then, of course, they benefit again because supply is low as a result of that practice.

That is my personal layperson's reaction to this. There is nothing illegal, as far as I can tell, about just-in-time inventory, but they are stacking the deck, to mix my metaphors here, against the consumer by this policy. And I just wonder from your review of the data whether there is any causal link between just-in-time inventory practices and increased price volatility of gasoline and, during the winter season, home heating oil.

Dr. COOK. This concept was very popular in 1996. People attributed the low stocks, even within the industry, to this practice. I think we saw that debunked in 1997 and 1998 when we had very low crude stimulating a very favorable economic environment for

refining, and cheap crude turned into cheap product. We had tons of stocks.

Senator LIEBERMAN. In other words, the refiners did buy more based on the lower world price.

Dr. COOK. Yes.

Senator LIEBERMAN. And, therefore, the inventories were up.

Dr. COOK. Yes.

Senator LIEBERMAN. OK.

Dr. COOK. Cheap crude eventually filters down into cheap products. It is complicated, but, that is a fair statement.

So now we have high crude and the reverse situation. It just basically discourages, with weak margins and what is called backwardation, excessive product production.

The just-in-time inventory concept you might think of as just the normal business practice that anyone has of wanting to hold down their inventory costs or any other business costs as much as they can.

Senator LIEBERMAN. Yes.

Dr. COOK. But I view it as an exacerbating factor. It is mainly the refinery economics.

Senator LIEBERMAN. Yes, I hear you. What I am concerned about is—and I understand that there would be a natural economic incentive as the world price of oil goes higher to buy less, hoping it will go down. But my question is—we have been following your numbers on home heating oil stocks now because we have an obvious concern that the crisis in the Northeast is going to be repeated again next winter. And your numbers show that the home heating oil stocks now are lower than they have been in the past than I would say they should be, so we are rapidly heading toward, are methodically, unfortunately, heading toward another winter in which if the weather is colder than we expect, the prices are going to shoot sky high.

Of course, I wonder about the same thing as we approach the gasoline driving season. I understand that the price of world crude is up, but can't you really predict or can't they predict driving—gasoline demand is going to go up as we get to June, and that their stocks have been lower than predictable demand would be. This is probably even more predictable—it is more predictable than whether the winter is going to be cold or not.

So my concern is here—and from your data, I wonder if you can either shed some light or tell me I am wrong or right—that they are keeping the inventory lower than in the best of circumstances we would want it to be. And I understand they are in a business, but you would hope for a certain amount of sensitivity to consumer cost along the way.

Dr. COOK. Again, I think that limited excess refining capacity is part of the problem. When stocks fell over the winter for gasoline now to extremely low levels, even when the conditions improved, personally I believe refiners made every effort they could to crank up as high as they could and as quickly as they could, but they ran into a lot of refining problems, which occurs when you try to run at high rates.

I don't think there is enough capacity to catch up. That is the problem here. When you get behind and you have to meet gasoline

demand and you have to meet diesel and heating oil demand and restock from low levels, there is just not enough capacity to do that. I don't think they are holding back. I think the economics now are wildly favorable to maximum production, and anybody that can produce the product will do it.

Senator LIEBERMAN. Will do it; they are catching up. Thank you, Dr. Cook.

I wonder, Mr. Chairman, if I could ask Mr. Perciasepe to come to the microphone. I just want to ask him in the time I have this one question, if he would come to the table.

Senator VOINOVICH. I have no objection; it is on his time.

Senator LIEBERMAN. Yes, sir. Thank you. The question is the broad one, which is, there are clearly those who would place much of the blame for high gas prices on environmental regulation, specifically the reformulated gasoline requirement. In fact, I think the representative from the American Petroleum Institute, who is testifying on the next panel, is going to call—at least he called in his written testimony for the repeal of the RFG oxygenate requirement.

I wonder, Mr. Perciasepe, if you think the reformulated gas requirement is responsible for some or most of the price increase. And given your review of the situation, has EPA been able to account for the entire increase in the Midwest, or is there some portion of it still that you can't attribute to the factors suggested by others, including the oil companies?

Senator VOINOVICH. Would the witness state his name and the organization that he represents for the record?

TESTIMONY OF ROBERT PERCIASEPE,[1] ASSISTANT ADMINISTRATOR FOR AIR AND RADIATION, ENVIRONMENTAL PROTECTION AGENCY

Mr. PERCIASEPE. Yes, sir, and I am sorry I didn't do that when you asked me when I was in the seat before. My name is Bob Perciasepe. I am the Assistant Administrator for Air and Radiation at the Environmental Protection Agency. Again, I appreciate the question. I will try to give a general answer. I am sure it will generate more questions.

Our analysis continues to be that when you add up the additional cost of Phase II RFG on top of Phase I, which took effect in 1995—and which had a mere cost of around 3 to 4 cents per gallon. When you add both of them up together, it is about 4 to 8 cents impact on the cost of producing gasoline. And we have not seen any evidence that that cost should be any different. That cost range includes the cost of making the reformulated gasoline with ethanol, and so there has never been, back to 1993 when these regulations were enacted, a sense that it would be a free program. And I want to be clear about that, and I think everybody recognizes the balancing act that everyone has talked about here.

Senator VOINOVICH. Mr. Perciasepe, I can tell you that we did in Ohio. It was a question of whether we were going one direction, emission testing, or in another direction, reformulated gas. I fig-

[1] The prepared statement of Mr. Perciasepe appears in the Appendix on page 101.

ured it was going to cost my people in Ohio more money and that the estimate of what it would be would be probably more.

Mr. PERCIASEPE. Right. The actual cost of producing Phase I RFG turned out to be less than the estimates in the 5 years that it was implemented, and that is a tribute to the American refining industry who was able to do that.

The current situation in the United States, looking at today's retail prices, if you take out Chicago and Milwaukee, the average cost of RFG in the United States is roughly equivalent to, on average, the cost of conventional gas in the United States. Remember, conventional gas is about 70 percent of the gas in the United States; RFG is about 30 percent. The Chicago and Milwaukee market is about 3.4 percent.

Now, if you look at Chicago and Milwaukee, what has happened over the last 14 days is the wholesale price for RFG with ethanol in it has dropped 47 cents. That has not been reflected at the retail level. If half of that or a third of it or some of it is reflected at the retail level, the prices in these cities would be very similar to what it is in the rest of the country. And the differential between conventional gasoline and RFG at the wholesale level, off the rack where the trucks fill up, is less than a penny in Chicago and 7 cents in Milwaukee. And those are pretty much what we would expect—those are within the range that I mentioned earlier. Obviously one is lower.

Now, cost to produce is not price, and I want to be clear about that. My point is that there are other things going on that are affecting the price, not the cost of producing. And we see that stabilization in the entire country now that these wholesale prices are stabilized. We now need that pricing reality to move onto the retail level so the consumers can be relieved of whatever happened in early June to cause prices to reverse.

Senator VOINOVICH. I think the time is up.

Senator LIEBERMAN. My time is up. I thank you, Mr. Chairman. Thanks, Mr. Perciasepe.

Senator VOINOVICH. Thank you.

We have some other Senators here. I am going to follow the early-bird rule, and I think, Senator Levin, you were here.

Senator LEVIN. Mr. Chairman, thank you.

While Mr. Perciasepe is there, if you could just stay there for a minute, you have analyzed some of the reasons—EPA has analyzed some of the reasons which have been given for the huge increases in prices in Michigan, Illinois, and Wisconsin, five factors: Higher crude oil prices, use of ethanol in reformulated gasoline, pipeline problems, low inventories, and the patented RFG process.

Have you found that any of those factors or all of them put together can explain the 80-cent increase over 7 weeks in the price of gasoline in Michigan, Illinois, and Wisconsin?

Mr. PERCIASEPE. We have been asked by many to grant a waiver for the reformulated gasoline program, particularly in the Chicago and Milwaukee area. So pursuant to our analysis to see whether there indeed is a supply problem, that there was not the clean-burning gasoline available to be sold, whether it be at the retail or at the wholesale level, we worked together with DOE to look to see what the supply situation was. And I think you have already heard

reported here by Dr. Cook that the supply in the entire Midwest PADD was tight, and in particular, when we looked at the Milwaukee and Chicago area with field teams, we found that it was tight but adequate to meet the demand that was available. Nobody ran out of gasoline.

And so when we looked back to see what the issues were, and we met with the oil industry, they brought up some of these issues. We have pursued every one of them vigorously. And, again, there are inadequate explanations in terms of equating that large of a price increase with whatever effect might result from savings, a 5-day outage of a pipeline or the cost of producing RFG.

Senator LEVIN. Or all of them put together.

Mr. PERCIASEPE. Or all of them put together.

Senator LEVIN. Now, you have given us an analysis of——

Senator VOINOVICH. I think in fairness to the other witnesses that are here, Mr. Perciasepe was not on the witness list. He is now here and answering the questions. We have three people that have waited, and I think they ought to have an opportunity also to respond to the question.

Senator LEVIN. Sure, I would be happy to.

Mr. MONIZ. I was going to add, Mr. Chairman, a footnote, a piece of good news. Today AAA announced that in Michigan there was almost a 10-cent price drop in the last week. It is only a datum. It isn't a trend yet, but hopefully it will become one.

Senator LEVIN. That was announced some days ago, as a matter of fact.

Mr. MONIZ. I see. OK.

Senator LEVIN. The EPA analysis is, relating to the wholesale price drop, a very significant price drop since June 15 when there was a Federal Trade Commission investigation that was announced. And as I understand it—either one of you from EPA can perhaps comment on this—while wholesale prices of gasoline have dropped significantly since June 15, none of the factors that I have just rattled off that have been given for the rise in prices have changed. Is that correct? I am reading an EPA memo here. I don't know which one of you gentlemen——

Mr. PERCIASEPE. Yes——

Senator LEVIN. So, in other words, of those five factors—higher crude, use of ethanol in reformulated gas, pipeline problems, low inventories, and the RFG process—we have had a significant drop——

Mr. PERCIASEPE. None of those has changed in the last 2 weeks.

Senator LEVIN. All right. So they don't explain the increase, and they haven't changed, as far as you know, to explain the drop. What, in your judgment—well, I will let it go at that.

Now, on reformulated gasoline, Michigan does not use reformulated gasoline. Is that correct? I am just asking either of the EPA folks here. Is that correct?

Mr. PERCIASEPE. Correct.

Mr. MONIZ. Correct, yes.

Senator LEVIN. And yet the price in Michigan, is this not also correct, the retail price has been about equivalent, if not more, than the price in Chicago and Milwaukee? Do you know whether that is true or not?

Mr. MONIZ. That is approximately correct, yes.

Senator LEVIN. As far as you know.

Mr. MONIZ. Yes.

Senator LEVIN. There has been——

Senator VOINOVICH. I would just like to mention that we have got two back-to-back votes coming up. We have 10 minutes, and I think that what we probably should do is go for another 5 minutes and then go over and do our votes and recess this until we come back.

Senator LEVIN. Do you want to recess now?

Senator VOINOVICH. Well, we have 4 or 5 minutes. But the other thing I have to say is that these witnesses, are you able to stay until we come back? We are imposing on you and we have a bunch of other folks here that have been sitting around waiting to testify.

So why don't we go on for another 5 minutes, and then we will recess and go down and vote and come back.

Senator LEVIN. Let me ask the EPA folks this question. I believe that, according to one press report, *New York Times,* June 26, the American Petroleum Institute, "pleaded with the EPA not to lift the rule" relating to, I think, reformulated gas, if I am correct. Have they made that plea to the EPA?

Mr. PERCIASEPE. Yes, they have. When we were asked to review a waiver request—we obviously take those very seriously—we instituted all the examinations that I just mentioned. We also asked the refiners who are supplying the area what their views were and how that would affect them, and all of them, I think, without exception, including their association, recommended no granting of a waiver.

Senator LEVIN. Well, if I read the testimony today of the Petroleum Institute, however, they are urging that that requirement be lifted. Am I reading that correctly?

Mr. PERCIASEPE. They haven't communicated to us.

Senator LEVIN. One of you testified, I believe Dr. Cook, that the refining capacity is at 98 or 99 percent right now. Is that correct?

Dr. COOK. In the Chicago area.

Senator LEVIN. In the Chicago area. If this is generally true that we are refining at almost full capacity, what would be the benefit of greater oil supplies coming in from either OPEC or from the Strategic Petroleum Reserve? Could it be refined if we were able to get that release from the Strategic Petroleum Reserve or get OPEC to give us 2 million more barrels a day instead of 750,000 barrels?

Dr. COOK. Well, that is a good point. It would have a limited effect. For one thing, a large release would reduce the crude price. It is a global market. That would undercut the crude component of the gasoline price.

The expectation of that to happen, these markets are very important in pricing run forward, on expectations, so there could be some decrease from that.

Not all regions are at 99 percent capacity. The Gulf Coast is not at capacity yet, and likewise, the East Coast. There could be some additional production there.

More importantly, Europe and Asia are nowhere near capacity, so that to the extent that cheaper crude stimulates them to produce more, we could certainly see more conventional gasoline

imported. And in your area, in your State, conventional is the problem.

Senator LEVIN. Thank you. Thank you, Mr. Chairman.

Senator VOINOVICH. I think we are going to recess the hearing, and we will try to be back as soon as possible. Thank you.

[Recess.]

Senator VOINOVICH. We will reconvene the meeting, while I wait until for my colleagues to return, I will ask a few questions before they get here.

The issue of the refineries, I would like to go back to that again. There was a question asked about if we could get more supply in, could we handle it in terms of the refineries? And I think I heard you say, Dr. Cook, that we do have refinery capacity out in the West Coast. It is not at its capacity. Could you explain that? What I am trying to get at is do we need more refineries. And if we do, what have we got to do in order to get them?

Dr. COOK. Well, we either need more refineries, or we need more refining capacity at the existing ones. They can upgrade, they can add units, and they have been doing that. So I think I would phrase it the latter.

I would also like to say there isn't very much excess capacity left anywhere in this country. It is a very small amount, on the West Coast, Gulf Coast, East Coast, and virtually flat out in the Chicago area.

Now, I think the potential for more product production of conventional and distillates, anyway, if not RFG, is globally, in Europe and Asia. To the extent that could be imported and help the distillate stocking for next winter, which is a concern of ours, that would be a plus.

Senator VOINOVICH. So what you are saying is you either need more refineries or you need to have the ones that are there expand their capacity. And the reason why we have lost the refineries that we have is what? Why are they out of business? It is not economical or what is the reason?

Dr. COOK. Well, most of the losses were very small refineries spawned from the regulation period that, once competition occurred, were inefficient and noneconomic to operate, so they dropped by the wayside. And some of that capacity was picked up by the remaining refineries.

Senator VOINOVICH. Again, how do we get more refineries?

Dr. COOK. Well, profit margins have to improve. No one is going to invest in it, especially with stringent environmental regulations, unless one can at least make the average of other large industrial rates of return.

Senator VOINOVICH. Mr. Moniz.

Mr. MONIZ. The rates of return, as John just alluded to, in that business have been rather low compared to alternative ways of investing capital.

I would just add one other thing, however, in terms of the refining equation, and that is also, again, the demand side. I think we need to keep working on the demand side, finding environmentally and economically attractive ways of reducing demand, like with the advanced automobiles.

Senator VOINOVICH. It has to be more economical. How do you do that? Does that have to do with the price of oil has to stay up? What is it that is going to make it—what profit—is it more incentives from the Federal Government? What is it that is going to get them to get in there and build more refineries?

Ms. BODE. Well, I will tell you what I think.

Senator VOINOVICH. Fine.

Ms. BODE. I think we need to have a comprehensive look at U.S. refinery policy in this country. As you suggested, what we need to make ourselves independent in terms of at least these short-term problems, which is probably close to 50 percent, we have, I think, an opportunity to get back to 50 percent domestic production, and refining capacity is very much a part of that. We need to have a look at comprehensive refinery policy.

I would suggest incentives may be something to look at, but also we need to look at regulatory policy regarding refineries to make sure, to ensure that refinery policy and regulation is cost-effective. One of the newest things that is going to affect it coming up very shortly is new environmental standards for diesel fuel, and that is going to, again, cause some refineries that now may be in business to look seriously at whether the margins are sufficient for them to stay in business. So you may see a fall-off in new refineries or existing refineries as a result of new rules going into effect.

So I just think we need to take a comprehensive look at our infrastructure, both refining, exploration, and production, and really see what we are doing right now to encourage having a strong domestic option so that consumers aren't hurt in these times of short supply, and particularly refining options, not just on the Gulf Coast, because refining capacity has increased, but it has all increased away from where we need the product. We need to be thoughtful about making sure the capacity is there close enough and supplied by pipelines, sufficient pipelines so that it can get the product to market in a timely fashion.

Senator VOINOVICH. So what about if we opened up exploration and we had more oil produced here? Would that generate more refineries?

Ms. BODE. Well, it is a two-part equation. Exploration, production, more domestic production obviously is something that you need in order to have domestic refineries. But you are not going to impact margin of domestic refineries by having more produced here at home. You are going to have to have policy that focuses on refineries and their margins as well in order to encourage more refining capacity and more refineries to be built in areas where you really need that capacity.

Senator VOINOVICH. Well, I would be very interested in any suggestions from you or anybody in the audience about what is it that we would have to do in order to get our refining capacity increased.

Mr. MONIZ. Mr. Chairman, thank you. Ms. Bode addressed the issue of looking at the infrastructure requirements in the refining business and other parts of the business. I would just note that, in fact, we did ask the National Petroleum Council, and they just, in fact, produced a report looking forward on the refinery business, particularly as one looks at what she referred to as some of the coming requirements in terms of low-sulfur gasoline, diesel fuel

issues, MTBE. We have a report. They basically emphasized very strongly the importance of sort of sequencing and phasing of these programs, and this is something that we intend to work closely with EPA and others in the administration to address. So that is very directly addressing this question of the refinery business in the next years.

Senator VOINOVICH. Senator Lieberman, I just wonder, this panel has been here now for quite some time. I think that we ought to excuse them and let the other witnesses that have been waiting come forward.

Senator LIEBERMAN. Absolutely, Mr. Chairman. I agree. I thank the panel.

Mr. MONIZ. May I add one more comment, please, Mr. Chairman? I would appreciate it. I will be very brief, and I apologize. But I did want to go back to Mr. Lieberman's earlier question on heating oil and just add one fact.

Dr. Cook emphasized how tight we are right now in the refining business and we are at capacity, and with regard to moving forward on a home heating oil reserve that we share with the Congress a desire to do so, we want to emphasize because of that fact, the urgency that we need to be moving forward very soon, because, frankly, in the situation he has described, the last thing we want to do is late in the fall begin to stock up a home heating oil——

Senator LIEBERMAN. Start acquiring oil for the reserve, you mean.

Mr. MONIZ. Exactly. So we need to really be moving quickly and hope to work with the Congress in accomplishing that.

Senator LIEBERMAN. Thanks very much. We appreciate the department's support of the idea of a regional home heating oil reserve and look forward to working with you in the very near future to get this implemented. Thank you.

Dr. COOK. Could I add one last comment also? As I testified, I would like to clarify that we do see the situation in the Midwest improving some. Inventories have been building, refinery production has been growing for the last 4 weeks out there, and that is behind the big wholesale price decrease.

Senator VOINOVICH. OK. One other thing. I went to a meeting that Speaker Hastert had for the Midwest region. The EPA director had a chart that showed the prices going up, and then when it announced that we were going to have the FTC investigate, it looked like the prices went down. And the allegation is because of the threat of the FTC hearings, which everybody supports, including me, that all of a sudden the prices went down.

Would either one of you want to comment on that?

Dr. COOK. Well, I don't want to comment on that specifically. I just want to emphasize that supplies were increasing over this period of time.

Ms. BODE. And I have talked to the refineries as well in our areas, because, obviously, that is something that we regulate, and we were also part of that PADD2 distribution reach, Oklahoma was, along with Ohio and Illinois and the upper Midwest. And what we found basically was that we had a tight, very tight situation coming in. We are part of the region, again, that only has 75 percent capacity in our region, and as they determined up the pipe-

line in Chicago that they were having difficulties blending the ethanol into the gasoline, and supplies became really tight and prices went up, the gasoline for Oklahoma—and we don't use reformulated gasoline—the gasoline in Oklahoma went up the pipeline to where the supplies were short. And so as soon as the batches of gasoline started getting to the marketplace up there and we started resupplying the marketplace, in Oklahoma our prices started coming down. And it was, steadying—long before any of the hearings or the investigation was announced—because I was talking to the marketers every single day. So I knew when the price fell and it was really before any investigations were announced.

Senator VOINOVICH. So your feeling is that was more coincidence than it was any kind of——

Ms. BODE. That is my understanding as a regulator as to what——

Mr. MONIZ. I personally believe we need to wait to see what the FTC says. Certainly the numbers don't all add up at the moment, but I would just add as well that the most recent data indicates a drop in demand, presumably as part of a price signal in the region.

Senator VOINOVICH. It is so complicated. Thank you so much.

Our next panel of witnesses, and, again, I apologize to you for the long delay: Hon. Richard Blumenthal, the Attorney General of the State of Connecticut; Phyllis Apelbaum, owner of Arrow Messenger Service; J.L. Frank, President of Marathon Ashland Petroleum Company; and Red Cavaney, President and Chief Executive Officer, American Petroleum Institute.

I understand, Ms. Apelbaum, from your Senator that you have a plane to catch? Or have you missed it?

Ms. APELBAUM. I have missed that one, but I am going to get the next one no matter what.

Senator VOINOVICH. OK. Well, how would it be, then, if we would start with you, Ms. Apelbaum, and your Senator thinks the world of you, and he will be here to introduce you or say some nice things about you, as you have come all the way here. And we would start with you, and we will move then to Mr. Blumenthal, Mr. Frank, and then clean-up will be Mr. Cavaney.

TESTIMONY OF PHYLLIS APELBAUM,[1] OWNER, ARROW MESSENGER SERVICE

Ms. APELBAUM. Thank you very much. Mr. Chairman, Members of the Committee, my home State of Illinois Senator, Senator Durbin, thank you for allowing me to testify here today. My name is Phyllis Apelbaum, and I am the owner of Arrow Messenger Service in Chicago, Illinois. I am a member of the Chicagoland Chamber of Commerce, and I am also the president of the Messenger Courier Association of the Americas. The MCAA represents approximately 500 courier companies in the United States and abroad. Most of these companies are small businesses and many are multigenerational family owned. In my brief remarks today, I hope to tell you a little about the effects of high gas prices on small business owners in the Chicago area and throughout the courier industry.

[1] The prepared statement of Ms. Apelbaum appears in the Appendix on page 110.

Courier companies are not glamorous businesses, but we perform a vital role. As the agents for the same-day delivery business, we deliver the Nation's time critical shipments. We know full well that someone can pay 33 cents to mail a letter across town or pay FedEx or UPS to deliver it in 3 days or overnight. We deliver critical documents, medical supplies, blood, machine parts, and even organs for transplant. We even facilitate same-day cross-country shipping.

The courier industry in Chicago and most major cities utilizes, contrary to the view you might get walking the streets of Washington, DC, mostly cars, vans, and light trucks to undertake deliveries. One of our major costs has always been fuel to keep our fleets in operation. We have always been conscious of gasoline prices and fuel efficiency.

As the Committee knows, the rise in gas prices has been the highest and most destructive in the Chicago area. This rise in prices is not an abstract concern or a minor annoyance. We feel it every day as we refuel these fleets. This is a problem that not only inconveniences vacationers who have many travel options; it is affecting our businesses in a very real and negative manner.

In mid-May, my drivers fueled the Arrow Messenger fleet of 110 vehicles for an average of $1.77 a gallon, up from $1.47 in January. Now we are paying $2.24 or more a gallon in the Chicago area for regular grade gasoline. This increase is costing my business thousands of dollars a month and over $35,000 since January. These figures are duplicated with other businesses throughout the greater Chicago area. We already employ complex dispatching software that allows us to do multiple pick-up and deliveries on all single runs. If there is a way to cut down on fuel costs and miles traveled, we are already using it. Short of refusing to make deliveries, there is little that we can do to mitigate the fuel usage.

But it is not just couriers; the whole transportation sector in my area of the country has been especially hard hit, as we have heard today over and over. For example, in Chicago, we have 6,300 taxicabs and 15,000 drivers who are paying 30 percent more for fuel and working an additional 2 to 4 hours per day to cover these increases. Multiply what the courier industry is going through by the entire transportation industry, and you can see that millions, if not billions, of dollars is being drained out of the economy of the Midwest. Crain's Chicago Business estimates that the gasoline price shock will cost the local economy 36,000 jobs over this coming year.

Gasoline is one of the largest costs for any courier business. As president of the Messenger Courier Association, I have spoken with members from throughout the greater Chicago area. They echo what I know to be a fact: That the increase in gasoline prices is hurting and even disrupting their businesses. Until the gas price shock, one of our toughest challenges was finding enough qualified drivers to make the deliveries that our fast-paced economy requires. After 40 years of working in this industry, I can tell you that there has never been a more difficult time to hire and retain drivers, and we are struggling to keep these vehicles on the road. On top of that, companies are having drivers quit on a daily basis rather than pay the exorbitant fuel costs.

There has been a variety of responses to this crisis. Many of our companies have added fuel surcharges. This is done on either a percentage basis or a flat fee. Others are simply having to raise their basic rates. Most of the members report that the surcharges don't even begin to cover the lost revenue due to the gas price increases. So we have the dilemma of losing money to keep a client in the hopes that the gas prices will fall or letting the client go and jeopardizing future business.

I have heard the theories put forth to us as to why this has happened: OPEN, environmental regulations, price gouging, SUVs. I will leave that up to the economists among us to decide. But I can tell you that the increases have hurt my family-owned business and many small and emerging companies in the Chicago area and throughout the country. I urge the Committee to continue its investigation into this matter, and I strongly support the FTC investigation into price gouging.

The courier industry has faced many challenges over the past 20 years. First, the fax machine was going to wipe us out, but we survived in spite of it. Then came E-mail, and we just grew. Now, with the passage of the Electronic Signatures Act, once again we will have to adapt. The industry as a whole will survive this challenge over higher gas prices as well. What I fear is that many individual, good, hard-working family-run courier companies will be put out of business or greatly disrupted by the gasoline price shocks. And eventually higher costs get passed along to the customers. This is the strongest economy that I have witnessed in my lifetime. Anything that jeopardizes this should be of the very highest concern to the Members of Congress and this administration.

I thank the Committee for the opportunity to testify before you today. I would be happy to answer your questions.

Senator VOINOVICH. Thank you, Ms. Apelbaum. It is nice to have a witness like you to remind us again of what impact this is having on small business in our country.

Senator Durbin is here. Would you like to say a few words?

OPENING STATEMENT OF SENATOR DURBIN

Senator DURBIN. I will say very briefly, because I know Ms. Apelbaum has some time problems running out to the airport soon, but thank you for being here and thanks for making the sacrifice to come out and tell us your story. It makes a real difference. And to the Committee, let me tell you, Ms. Apelbaum is known as not only a great business leader but a great civic leader. Chicago and Illinois are very proud of her.

I think you have made a very good statement to put in perspective the concern we have that this gas price problem is going to create a ripple effect across the economy—an economy that we are proud of, but one that is fragile when it faces this type of energy cost increase.

I also want to add there is some frustration, I am sure, on your part and everyone who testifies that we have not been able to get our hands on this and turn it around more quickly. I am glad prices are coming down, and I hope they keep coming down more.

Ms. Apelbaum, thank you for being here.

Ms. APELBAUM. I hope so, too, Senator. One of the issues that people do ask me about all the time, in reference to the deliveries, is: When you are short of drivers and fuel is an issue and you have to choose between delivering blood or live organs and doing corporate work for people that really need to get that moving for the economy, there is no call. You have to make the call for life-saving measures. And so you turn business down every day in order to do that, and that has really become a major problem for all of us.

Senator DURBIN. Thank you.

Senator VOINOVICH. Thank you very much.

Senator Lieberman, would you like to introduce Attorney General Blumenthal?

Senator LIEBERMAN. Thanks, Mr. Chairman. It would be an honor to introduce the attorney general, who has a distinguished record in public service, served as a clerk to a Supreme Court Justice, as U.S. Attorney for Connecticut, a member of the State legislature, and now since 1990 is the attorney general. Am I right about that? Right, 1990, attorney general of the State of Connecticut.

If I may impose on Richard for probably the 30th time in forcing him to hear this small story, when I was elected to the Senate, he succeeded me as State attorney general, and we have a mutual friend—or he is supposed to be a friend of mine in New Haven. I will now immortalize him by mentioning his name in the record here. He is our probate judge, Jack Keasan.

In what I thought was a tribute to me after my election, commenting on the new offices, he said that now Connecticut not only has a better U.S. Senator, we have a better attorney general. [Laughter.]

This is the tribute I pay.

Attorney General Blumenthal has been a great attorney general, a great leader in a lot of the multistate attorney general actions, and very strong locally as a legal advisor to the governor in the State agencies, but also has an enforcer particularly of our environmental and consumer protection laws. So I am honored to welcome him, and thank you for calling him as a witness.

Senator VOINOVICH. Mr. Blumenthal.

TESTIMONY OF HON. RICHARD BLUMENTHAL,[1] ATTORNEY GENERAL, STATE OF CONNECTICUT

Mr. BLUMENTHAL. Thank you. Senator Lieberman, I never tire of that story for some reason that probably most people can understand, and I want to thank the Chairman for having me today and the Members of the Committee for being here.

I was listening earlier to the invitation—I think it was an invitation—to be locked in a room together, and I can safely say, one, I wouldn't volunteer; but, two, I probably would be the least expert and qualified of all the people locked in that room. But I would volunteer to help enforce the NOPEC prohibitions that Senator Lieberman and others have sponsored because I do think and agree wholeheartedly, Mr. Chairman, that a great share of the blame and responsibility for the skyrocketing prices that we have seen at the

[1] The prepared statement of Mr. Blumenthal appears in the Appendix on page 113.

pump belongs to OPEC, and we need to take more effective action to assure that we are not at the mercy of that cartel or of foreign oil.

I am going to briefly, very briefly, summarize my testimony in the interest of time rather than reading it and come first and most directly to the question that Senator Lieberman asked earlier, because I do think it is probably the central question that we confront today, looking at the margins at the refining level and seeing the increase from 6 cents to 20 cents in the contribution, if I may use that word, toward the increasing prices that we have seen made at the refining level.

Is that increase fair? And my answer is unequivocally no, it is not fair. It is too high. It is excessive. And we have seen low inventories on the part of oil companies, and we have seen low inventories on the part of all of them together. We have seen increasing prices, again, together. We have seen profit margins increasing together. So it is not only skyrocketing prices that have precipitated an investigation focusing on potential collusion, price gouging, and antitrust violations; it is the fact of those trends happening together.

And we have urged for some time that the FTC take the action that it has with respect to the Midwest price phenomenon, and I am delighted that Senator Lieberman and others have urged that the FTC investigation be extended to the Nation as a whole, which we hope it will be. A number of us as attorneys general have begun our own investigations, and we hope that the expertise and resources of the FTC and other Federal agencies will be focused on this trend because none of the excuses, none of the reasons given by the oil industry, even taken together, can explain the trends that we have seen. And that fact, I think, came across very clearly in the testimony yesterday before the House Judiciary Committee from the head of the Bureau of Competition for the FTC, Richard Parker, who cited, for example, the reformulated gasoline cost, the pipeline disruptions, the other kinds of temporary phenomena that the industry has blamed for these trends, and, again, they cannot account for the astonishing price spikes that we have seen.

In any other industry, if there were product shortages, whether as a result of tremendous mistakes, unanticipated shortages of supply, or concerted activity, we would not see what we have witnessed in this industry, which are also record-high profits. And so what I have proposed in my testimony is that we take measures to increase the stocks and inventories by releasing product from our Strategic Reserve and creating regional reserves, such as Senator Lieberman and others have advocated, regional reserves for home heating oil and for gasoline, that we require perhaps minimum inventory levels, much as we do for banks and insurance companies with the same idea that we need to protect consumers against unanticipated shortages that threaten literally their lives if we lack the product that we need, that we adopt new merger standards to prevent the kind of consolidation that we have seen in the oil industry, a presumption against approval unless there are clear benefits for consumers, eliminating zone pricing and other abuses, and taking action now to deal with the crisis that we see on the horizon with home heating oil, because just as surely as we

have a crisis now in gasoline, we face another crisis in home heating oil if we don't take action now to increase those stocks and inventories.

Thank you very much, Mr. Chairman.

Senator VOINOVICH. Thank you.

Our next witness will be J.L. Frank, who is President of Marathon Ashland Petroleum. Mr. Frank, we are very happy to hear you have spent a lot of time here in Washington the last couple of weeks. I imagine you are getting a little tired of it, but we really appreciate the fact that you are here, and not only a spokesman for your company but for the industry.

TESTIMONY OF J. LOUIS FRANK,[1] PRESIDENT, MARATHON ASHLAND PETROLEUM, LLC

Mr. FRANK. Thank you. I should be wearing one of these buttons, but I am probably the least popular guy in town. I am J. Louis Frank, of Marathon Ashland Petroleum, and my company makes and markets most of our products in the Midwest. We are a buyer of crude oil and a seller of products.

I welcome this opportunity to discuss the gasoline market conditions we have experienced recently in our part of the country, and I look forward to answering your questions or those of other Members of the Committee.

Let me start by saying that a very competitive gasoline market ultimately determines the price of gasoline.

When there is a supply shortage in a competitive market, prices tend to rise to whatever level is necessary to balance demand with supply. And when supplies return to more normal levels, prices tend to return to lower levels. Adam Smith, in his writings, had portrayed these as the customary market. Just such an imbalance of supply and demand occurred in the Midwest over the past few weeks, and that is the reason that prices in the area surged. And I would like to explain that.[2]

First, worldwide crude oil prices have risen rapidly, as you heard, substantially going from $10 a barrel at a low to $35 a barrel at a high. Second, Midwest refineries can supply only about 75 percent of the region's demand. The balance is about 42 million gallons a day that must be transported to this region. That is a million barrels a day.

The vast majority of this product comes in from the Gulf Coast by barge or two major pipeline systems. Recent events illustrate how fragile the Midwest refining and distribution system is and how any disruption can create a supply shortfall that will ripple through the system for weeks or maybe even months as refiners and pipeliners struggle to catch up.

In March, one of these critical pipeline systems, the Explorer pipeline system—we have an exhibit that shows where the Explorer pipeline is[3]—experienced a line failure north of Dallas, followed by a 6-day outage, which resulted in a shortfall of about 336

[1] The prepared statement of Mr. Frank with attachments appears in the Appendix on page 120.

[2] The chart entitled "Chicago Market Wholesale Gasoline Prices" appears in the Appendix on page 129.

[3] The chart entitled "Regional Fuels Programs" appears in the Appendix on page 130.

million gallons of product deliveries to the Midwest—that is about 8 million barrels—markets from Tulsa to St. Louis and on to Chicago and Milwaukee. It quickly became apparent that there was no short-term make-up capacity to replace the 23 million gallons per day that Explorer was not moving out of the Gulf Coast market to PADD2.

More recently, the Wolverine pipeline, which carries almost 40 percent of Michigan's petroleum needs from Chicago, also experienced a release that resulted in a 9-day interruption of supply to that area. With only limited alternatives available, gasoline supplies in Michigan reached dangerously low levels, which are only beginning to recover now.

Another factor that contributed to this supply and demand imbalance in the Midwest was the new Phase II reformulated gasoline requirements which became effective on June 1, and you can see on this map by the colored areas where different types of special gasolines, boutique gasolines, are required in the Midwest market. This gasoline is more difficult to blend to meet U.S. EPA regulations. We had to virtually drain our tanks of winter-grade gasoline at the same time as the supply disruptions with Explorer were unfolding.

If these supply issues were not enough, EPA's decision to grant three waivers from the RFG requirements for the St. Louis area without any sort of penalty became the straw that broke the camel's back.

Conventional gasoline that was originally destined for the upper Midwest conventional markets was immediately diverted to St. Louis. This contributed to the conventional gasoline shortages that in turn led to severe price increases for those products in the upper Midwest. And the price response that should have been seen in St. Louis was transferred up to Chicago because St. Louis went to consuming conventional gasoline while building their supplies of reformulated gasoline, so essentially in a supply-short market, they were taking two volumes of gasoline to St. Louis. The conventional they were burning and the replenishing of the reformulated stock.

My company responded aggressively to the gasoline supply and demand imbalances in the Midwest. We took immediate and extraordinary steps to try to bring additional supplies into the Midwest. We have been running our refineries at capacity and pipelines are at full capacity, and we utilize trucks and barges to bring products in from nontraditional sources, as far away as Newfoundland, Canada, into the Michigan market. We brought truck drivers in from Texas, Florida, and Louisiana. Our comments to the EPA and DOE on what could be done to improve the Midwest supply situation in the short run were submitted in a letter dated June 13, 2000, and were discussed prior to that, and they have been attached to my testimony.[1]

Our nine recommendations focused on relief from numerous regulatory restrictions that hampered our ability to move products into the areas that needed it most. My company is working on several long-term infrastructure problems that would help eliminate supply shortages like the one we just experienced. These include a

[1] The letter referred to appears in the Appendix on page 131.

new pipeline to serve the growing central Ohio market and a joint venture pipeline to convert an abandoned or low utilization natural gas pipeline into products, and that line is going through the approval process with FERC. And we are trying to expedite that to get it pulled forward. It won't be in operation even on the regular track until January 2002.

In our view, these recent difficulties in the gasoline market are mere symptoms of the much deeper problem that the United States does not have a cohesive energy policy, a policy that would recognize the importance of ample, affordable, and clean energy for the Nation, a policy that would encourage a viable and vital domestic petroleum industry.

Any national energy policy must recognize the need for strengthening the downstream infrastructure of the domestic petroleum industry, the sector that includes refining, pipelining, and terminaling. Investor confidence in this critical sector must be restored if we are to stem the decade-long retreat in refining capacity and maintain our self-sufficiency in motor fuels.

In closing, I am very proud of the way that my company has responded to the petroleum shortfall situation. And as I said in my opening remarks, the gasoline market is highly competitive, and market forces ultimately determine the price of gasoline. However, the supply system remains fragile, and any disruption in a refinery or a pipeline distribution system could result in another supply-demand imbalance in the Midwest. And I have to say, Senator, that when I first heard of the calls of investigation on collusion and price fixing, I was sort of outraged and indignant about it. I was embarrassed for the 28,000 people that work at my company and come to work every day and wonder, "is my company guilty of price gouging and collusion," and I say unequivocally "no." And I now welcome this investigation to help clear the air for the accusations that have been validated by the President, the Vice President, and that inflames the consumer base, and everybody is concerned about price gouging and price fixing that the industry is being charged of.

That concludes my remarks, and I will respond to any questions that anybody might have.

Senator VOINOVICH. I appreciate that last comment because I know that there were those that said you were reluctant to answer questions, and I can understand your initial feelings about it. I am very pleased that you are here to say that you welcome questions, because I do think that in the next couple of months we should clear the air just about exactly what happened and we are starting to piece this together.

But I will say this to you, that I think too much importance is placed on the cause of prices are high, and I would hope that in this further testimony through the questions that we get at the issue of what do we do now in order to systematically bring the price down and keep it down, and it is starting to fall. We know that. And, second, and more important, as I mentioned in my earlier remarks, we talk about what is it that we need to do to have a comprehensive energy policy to make sure that 5 years from now we are not in the same position that we are today.

Mr. FRANK. Senator, can I have one more minute to show you what I think is an explanation of the statement that is floating around that prices came down when the FTC said we are going to have an investigation? If you look at this chart, that shows what the inventory level in PADD2 did, where that inventory level actually fell to a minimum on June 2. And following June 2, the inventory started to build——

Senator VOINOVICH. I am sorry. Could somebody point that out? I am not following the chart.

Mr. FRANK. The minimum inventory level was on June 2. Since that date, inventories have risen in response to a decreased driving habit of the consumer, and the inventory levels have risen to a new level. And then on the next chart, John, if you would put that up, it shows that the prices were at their height on June 7 and were falling from that date. And then there was an announced fire at the Blue Island refinery in the Chicago area. The prices spiked overnight, 10 cents up on the spot market. The next day they were down 10 cents as the company said they were back in operation. And since that time, the prices have fallen.

Now, we were facing charges or allegations of price fixing and colluding back in mid-May, but the market continued to work after that and the prices rose. And, finally, price stifled demand and the inventory started to build, and the price fell. And that is the normal response you would see in a supply-constrained market.

Senator VOINOVICH. Thank you.

Senator DOMENICI. Mr. Chairman.

Senator VOINOVICH. Yes, Senator Domenici.

Senator DOMENICI. I wonder if you would yield me 5 minutes. Or do you want a witness to go first? I have to go to the floor.

Senator VOINOVICH. Senator Domenici, you were here before, and you mentioned that you did, and I apologize. I think that Senator Lieberman and I would more than honor your request to make a statement here today.

Senator LIEBERMAN. Absolutely. Besides, we note that you are still the Chairman of the Budget Committee. [Laughter.]

OPENING STATEMENT OF SENATOR DOMENICI

Senator DOMENICI. I might say to both of my friends, I am not at all proud of what we have done today with reference to the budget.

Senator LIEBERMAN. Understood.

Senator DOMENICI. And I am about to form a pact with my own heart that I will never let anybody by unanimous consent waive the Budget Act. We, today, made some horrible mistakes in terms of taking things off budget that we just don't understand, and there was no way to get in front of the steamroller. But it will not happen without getting slowed down in the future.

And I might find five other Senators to agree with me, and we will understand what we are doing rather than vote because we think people want us to vote in a certain way.

Now, having said that, I want to thank you, Mr. Chairman, and this Committee. I have heard enough today to know that you are on track to getting the facts. And, frankly, I want to thank you, Mr. Frank, and I haven't read your testimony, Mr. Cavaney, but let me

say we need to know what really happened. And my friend, Senator Lieberman, will not like me to focus this on the last 7½ years, but I will for a couple of minutes.

Let me just ask a question that needs no answer. How could crude oil prices, since January 1999, go up 300 percent and there not be a dramatic increase in a derivative of crude oil called automobile gasoline? It is impossible to go from $11 a barrel to $33 a barrel and to blame you for the increase in gasoline prices when something is amiss in American policy, unless that is the way we want to do business. To have crude oil go to $10 and then go up to $30 and then come down to $20 and then go up to $40, I am just projecting, but that is the roller coaster we have been on.

Now, I think the policies of our National Government are somewhat responsible, and I predict for you today the next crisis will be brownouts. And I am crossing my fingers while I predict there will be brownouts. And then there will be another series, Senator Lieberman, of "we blame you." And the truth of the matter is we are not building enough power plant capacity to meet electrical generating needs, and we are going to get stuck with that just like we did by OPEC when they found we needed more crude oil and they weren't giving it to us. Instead, they decided we will not give it to you until the price gets up where we want it.

And nobody really is going to be to blame for the brownouts, because it is the fault of an American policy of trying to get every ounce of energy out of the utility companies without producing any new sources. Because new sources create environmental hazards, we better squeeze every ounce out of the existing electric generating system and swapping around rather than just build new ones. And the only thing we are using to build new ones is very risky. The last five, Mr. Chairman, are all natural gas—natural gas which comes into your citizens' households, and they are delighted to be able to afford it.

Build the next generation of plants that furnish us with electricity on natural gas, Senators, and the price in your households will begin to rise. Folks will begin to say, "Who is responsible for that?"—for the enormous increase that is going to occur. And it is a lack of a policy, that forces us to recognize that we need power plant capacity. I am going to say from the standpoint of one Senator, and maybe Senator Lieberman has said a little bit that might permit me to say he concurs, but another problem is an American policy that says no activity in the nuclear power area, no nuclear waste disposal even on a temporary basis. Even though this is done by every European country like you get up in the morning. Eighty percent of France's electricity comes from nuclear power. They put it away temporarily, and they don't lose a wink of sleep. And we are fussing around trying to find a place to put the temporary storage of that which comes from nuclear power plants.

Frankly, the President made a horrible mistake when he refused to let a facility be built. And if you had nothing else to blame on him, you can blame him for stifling the future because we are frightened to death of the cycle on nuclear power.

Now, I want to talk one final moment on how you can send a message to the OPEC countries. How could we have less oil production in America and take more American land out of production,

and send any signal to them other than we are more at your mercy every single day? And that is what happened.

Sixty percent of the land that in 1983 was available for independents to try to produce oil is off limits now. The idea of a multiple use of the public domain is a concept that is fleeting away because it really isn't of concern to certain people who advise this administration that national lands be used for energy production. It is that they should be preserved, and the principal function of government is conservation and preservation, not utilization of what God put under the ground, which is energy sources.

ANWR is off limits. Offshore drilling, which is an abundant source of natural gas, that moratorium is preserved as if we relaxed it a little, we would imbalance the environment of America. None of that is true.

So I have been heard to say that the chickens are coming home to roost, and, frankly, they are going to come back in more numbers. The roost is going to get heavier, and there is going to be another roost for another source of energy, and that is going to be the one I just told you about. And then we are going to say, as we frequently do, it is your fault, Mr. Frank, it is your fault, and it is your fault, Exxon.

In wrapping it up, let me say we now have—did anybody quote how few refineries we have now?

Senator VOINOVICH. Yes.

Senator DOMENICI. You already did that?

Senator VOINOVICH. We have gone into that.

Senator DOMENICI. Thank goodness that these refinery owners have put in new equipment and new technology, because fewer are producing more per unit, but you haven't built one since, what 1976, Mr. Chairman?

Mr. FRANK. Nineteen seventy-six.

Senator VOINOVICH. Haven't built one for 25 years.

Senator DOMENICI. Now, what does that say for a country? That means we must have some policy that says it is far more important not to build them, for some reason, than it is to build them and have capacity of our own. And I assume it is in some part because of the 23 environmental protection rules and regulations that apply to the oil and gas industry, or maybe it is even beyond those 23.

But, essentially you just can't do all of these other things and expect to do anything but grow more dependent and grow more vulnerable. And I think you are proving that today, and thank you for the time.

Senator VOINOVICH. Thank you, Senator Domenici.

I will say this, that from everything I have heard, natural gas and home heating oil are going to skyrocket before this winter comes up, and I don't know what we can do about it, but that is what everyone is saying. And not only, Senator, I want to say, is it in terms of nuclear power and not having a policy in regard to that and the biggest stumbling block is not having a place to deal with nuclear waste, but this administration also wants to eliminate fossil fuel in this country, which is a very, very important source of fuel in my State. That is the way it is.

Mr. FRANK. That is one answer to Senator Domenici's question. Why hasn't there been a refinery built? It is because the adminis-

tration and Vice President Gore in his book "Earth in the Balance" has said he wants to eliminate fossil fuels and doesn't want any more refineries. Who is going to build one under those circumstances?

Senator VOINOVICH. We are getting into the finger pointing, which I didn't want—but it does get frustrating. I lived 8 years as Governor of Ohio, and we have 15,000 less miners in our State and costs are up.

We will hear from you now, Mr. Cavaney.

TESTIMONY OF RED CAVANEY,[1] PRESIDENT AND CHIEF EXECUTIVE OFFICER, AMERICAN PETROLEUM INSTITUTE

Mr. CAVANEY. Thank you, Mr. Chairman and Members of the Committee. I appreciate the opportunity to present the views of API's members on rising oil prices and the efficiency and effectiveness of the Executive Branch's response. Our members understand their customers concerns over the recent higher gasoline prices. They work hard to ensure consumers have a readily available and affordable fuel supply, and the historical record attests to their success in that regard.

Over the past decade, gasoline has been more affordable than ever. Adjusted for inflation, 1998 prices were the lowest in history; in 1999, they were the second lowest. Prices have been low because companies have competed hard to reduce their costs and because supplies have been plentiful.

Gasoline prices in 2000, however, have increased—not to record levels but far above where they were 12 to 18 months ago. And in the Midwest, they are above even the higher national average. There are four main reasons why.

First, world crude oil prices have risen sharply, the result of decisions by OPEC and several other foreign producers. Since crude oil accounts for 60 percent of the cost of gasoline, excluding taxes, an increase in crude prices directly impacts the price at the pump. Over the past 2 months, the cost of crude oil has risen 35 percent.

Second, inventories have been lower than usual, and prior to June 1, as Corky Frank testified, companies were clearing their storage tanks of the wintertime fuel in order to accommodate the new cleaner-burning gasoline when we experienced some shortfalls in the Midwest due to the pipeline and to several other problems that I will cite. Imports into the region are absolutely critical because the Midwest refineries only make a little less than 80 percent of the gasoline that is consumed in that region.

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, "gasoline demand in the Midwest seems to be growing more strongly in 2000 than it has for the past couple of years in the region."

Fourth, the new cleaner-burning gasoline which was introduced at retail on June 1 causes special problems in the Midwest, a fact EPA was aware of for over a year. Refiners weren't able to make quite as much of the special base fuel as quickly as needed, tightening supplies and ultimately pushing up prices.

[1] The prepared statement of Mr. Cavaney appears in the Appendix on page 270.

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.

As DOE Energy Information Administration says in its brochure entitled "A Primer on Gasoline Prices," and I quote, "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. But, frankly, we are very pleased to see that the actions of the industry in bringing more supply to bear has made significant reductions in wholesale prices, and retail prices are moving accordingly.

For all these reasons, today's gasoline supplies haven't been enough to meet the demand at the record low prices that consumers enjoyed not too long ago during this transition period involving RFG Phase II. This same conclusion was reached by two government reports issued just last week: The Congressional Research Service report and the DOE's EIA latest report of June 20.

Price increases have surely been painful, and companies are rushing to get every gallon into the marketplace that they can. Refineries supplying the Midwest are running all out, and added supplies are exerting downward pressure on prices as we speak.

In fact, spot prices for the Chicago market started falling, as Mr. Frank cited, back on June 7, less than a week after the new gasoline was introduced at the retail level, and they have fallen well over 30 percent since that time. Prices at the consumer level typically follow such reductions at varying intervals, depending on how much higher-priced products is still in the system and other factors. Already, as we have talked about, pump prices are falling.

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 are lower. For gasoline, substitutes are not readily available, so consumers feel stressed.

Yet the system ultimately works to their advantage because over the longer term gasoline prices for decades have been trending downward.

The current situation underscores the need to revisit our national energy policy, and we would like to suggest at least four areas be considered in that regard. Greater access to government lands is needed to find and develop more domestic oil and natural gas resources and to cut our reliance on foreign oil, which now fulfills 55 percent of U.S. needs. We also need more access to foreign oil supplies, but government policies—specifically, unilateral sanctions—have placed some of these sources off limits. Coordinated implementation of the environmental rules impacting consumers and the industry are also needed. And, finally, expedited permitting for the building or modernization of facilities for the manufacture and delivery of gasoline, diesel oil, natural gas, and heating oil is also vital.

U.S. oil and natural gas companies know how to make and deliver gasoline, and all strive to be an efficient provider. With a more effective national energy policy, still fully protective of the environment, our members could even better serve the consumer, and the risk of market volatility would be reduced as well.

Thank you.

Senator VOINOVICH. Thank you, Mr. Cavaney. What was the third reason that you had? You had access to government land——

Mr. CAVANEY. Coordinated implementation of the environmental rules impacting both the consumer and the industry. Oftentimes, we and the Environmental Protection Agency get in disagreements over impacts, and there isn't enough time spent on looking at those things beyond just the environmental impacts, looking at the cost impacts, and, more importantly, in our case, the supply impacts. Is there going to be enough supply to go around? Because that is really what is at the heart of much of what has gone on these last 4 or 5 weeks.

Senator VOINOVICH. As I said earlier in my opening statement, we have heard a lot about the high cost and everyone has got a different reason for it, and I am pleased to have heard the explanation here. Mr. Blumenthal, you have a theory, and we have heard these gentlemen. But the guy at the pump that I am going to run into this weekend—I am going to get over there—wants to know—prices are coming down: Senator, are they going to stay down? And, Senator, 5 years from now if I bump into you here at this Marathon station, are we going to have the same situation that we have today?

I would like to know what things could we do—now, I heard from Mr. Frank, you testified before Speaker Hastert at a meeting we had last week or the week before, and you were talking about some things that you thought could help the situation. And I would like to hear about them, and I am sure my colleagues would today. What things do you think right now could help the situation so that we stabilize this price? And then what are your thoughts about the long run?

Mr. FRANK. Senator, our country has come to expect low energy prices, and yet we are becoming more and more dependent on imported crude oil, and that is because of the fact that we are locked out. The oil companies are locked out from exploring on whatever lands are available and what kind of crude oil reserves might be found there. Our infrastructure in this country, for all energy sources, is tired and worn-out, and it has low profitability.

In the segment that I know about, for the last 20 years in the refining business, the rate of return on capital employed has been 5 percent.

Senator VOINOVICH. Mr. Frank, we always use this word "infrastructure." What do you mean by infrastructure?

Mr. FRANK. Pipelines, terminals, service stations, refineries and the pipelines that serve them. I am talking about the refining industry and transportation industry now. But the electrical industry—on the panel I was with yesterday were four people testifying on the electrical industry, and it amazed me that our problems are very similar, that low profitability is not encouraging investments. You are seeing major large, integrated oil companies walk away

from the refining business because they are saying the returns aren't adequate for us to have an interest in that anymore.

The refinery closures in the Midwest, 12 since 1990, they are just closing down. And there are several marginal refineries that remain through the rest of the United States, including the Midwest. And if they are uneconomic, something has got to happen to let that capacity be picked up because the refining system is running at 100 percent of capacity, the pipelines to the Midwest are at 100 percent of capacity.

What do you do when you are up against those kind of constraints? You have got to have more capacity. Who is going to build it? How do you attract the capital to invest in building a refinery if you are uncertain what the economic return is going to be? That is what faces our country today.

And then there is a concept that nobody believes that you could even build a refinery in the United States anymore, that the permitting process is so difficult, nobody wants a refinery in their area of the country. And the time to get a permit is exceptionally long, even for doing new capital projects. It is a very involved process.

So I think that, in short, the situation has got to find some way to allow a return that attracts investment so that people find that an attractive place to be in business.

Mr. BLUMENTHAL. Mr. Chairman, if I may add a word, I certainly support the idea that infrastructure needs to be improved, that we should offer incentives for that kind of enhancement. At the same time, fundamentally, when you deal with customers at the pump or the man who is charging you who owns that gas station, what we are dealing with short term is a lack of inventory, a shortage in supply, insufficient stocks. And, in fact, in terms of infrastructure, I am told—and I believe reliably—that the industry has excess storage capacity. I believe it may be on the order of one-fifth overall nationally. We have storage capacity that is not being used now because inventories have been so low and that the shortage of stocks has made the system susceptible to the kind of short-run, short-term disruptions that you have heard mentioned today and have increased the margins that Senator Lieberman cited earlier and have been responsible for those historic price hikes that we have seen.

And so I think the immediate question is: What do we do about inventory so as to avoid the looming crisis that you, I think, cite, quite rightly, that we face on heating oil this very winter?

This week, in New York, the spot price for heating oil was 79 cents as compared to 46 cents per gallon last year. That gives you some idea of where we are heading on heating oil. And I think, quite rightly, you are focusing on long-term energy policy and so forth, but right away, for the sake of those people who are going to be without heating oil this winter or having to pay $2.25 per gallon, as we did in Connecticut last year, we need to increase the supply, and I think looking to the strategic reserves that this country has.

Senator VOINOVICH. Well, I am very interested in the shorter term, and I may be from the Midwest, but I am concerned about the rest of the country also, and everything I have read says it is going to skyrocket and that we are going to be hearing people

scream about this, as they are in the Midwest. In terms of heating oil, it is even more severe because this is how you heat your home. I am concerned about it, and I am interested. Are there short-term things that we can do to avoid the crisis?

Mr. BLUMENTHAL. And I might add, Senator, that in terms of short-term measures, the focus of this Committee—and I really commend and salute this Committee for focusing as it is in a very thoughtful and insightful way on this problem—does have a beneficial effect. Investigations do work. And whether it is the FTC or the antitrust department or this Committee—as Senator Levin remarked earlier—the light and heat of public scrutiny have a beneficial effect for consumers. And so I think the attention this Committee is giving to this problem so thoughtfully will have an effect in and of itself.

Senator VOINOVICH. Mr. Caveney.

Mr. CAVANEY. Yes, Senator, I would like to comment on what we can do. I think the most important thing we can do right today is let the market work and not interfere. As the chart shows here, the industry's traditional response over decades is to rush supplies from wherever you can find them into areas that are getting tight. That is what you have seen in the Midwest.

Our longer-term problem, though, which is part of this, is that when you have the capacity pretty well matched up with demand, when we are in the middle of a major effort to supply the needs of the consumer—think of earlier in the year when we were asked to go in to speak with Secretary Richardson, when we were talking to a lot of other people, they said maximize your production of distillates so we can get home heating oil and diesel fuel. We were told to go full up. Well, when you are going full up on that, you don't have the extra capacity to start to make a product to begin to full up inventory for the next change, which was the summertime fuel. And that is going to be the challenge we are going to face ahead of us: How do we keep producing at record levels the kind of production we need for summertime gasoline and at the same time make sure that there is enough extra capacity that can be worked into the system that you can get the build on home heating oil and the distillate fuel that we know we need for the other? So it goes to both the short term—don't confuse or discourage the kind of behavior that is producing good results, but long term focus on this idea that we are expected to change fuels by season and by regs. But when these two match up very, very closely, there is little give in the system.

Senator VOINOVICH. Mr. Frank, when you testified before Speaker Hastert, you mentioned there were four or five things that you had given the administration, and one of them, I think, dealt with this Explorer pipeline and Wolverine that is going to take 8 months for you to test it so that it can be at full capacity. Right now it is at 80 percent of capacity, which means that you are only getting 90 percent of the gasoline throughput.

Mr. FRANK. Yes. Both Explorer and Wolverine are restricted to operating at 80 percent of the pressure at the point of the break, which translates to about 10 percent reduction in volume. And the Explorer pipeline has been down since early March, either completely out of production or at this restricted rate. The ongoing

shortage in the PADD2 is 50,000 barrels a day of gasoline. That is significant. I have heard it described yesterday in the House hearing that the normal amount of gasoline was going to Chicago that normally goes there, but Chicago was almost in a critical state of supply, depleted inventories back in about the third week of May, and there is no make-up capacity. It is sending the normal volume in there, but that is all that can be sent by this pipeline with the restriction it is on.

Wolverine is—and the company is trying to expedite, the Explorer pipeline company, the process of having run a smart pig, which is a flaw detector device, electronic flaw detector, and get the results analyzed. But they think that from the information I have heard that that takes about 3 or 4 more months. There have been some companies that have given up their space, other pipeline companies, to let Explorer company move to the front.

The Wolverine situation is a little bit different in that the failure was related with a fitting, and from what I understand, they should be back to capacity in 3 or 4 more weeks.

Senator VOINOVICH. I am very interested in any short-term things, an administrative agency or whatever it is, to try and jack them up and get them to do it, any way that we can tighten up a screw here and push this here to make it——

Mr. FRANK. In the items that I listed to the Department of Energy and to the EPA, including expedite an increase in Explorer pipeline operating pressure, restoring it, grant a relief on DOT driver restrictions for transport, for drivers to be able to drive their transports longer hours. We got all the trucks we could, and we were moving gasoline from Illinois, Indiana, and Ohio into Michigan. First, it started off we were moving it into Chicago to help satisfy that problem, and then we moved it into Michigan, and longer hours would have helped. Approve the larger tank truck for use in other States, like is used in Michigan. It is about a 70 percent larger tank truck for transporting gasoline.

Senator VOINOVICH. Mr. Frank, I am out of my time, and I am on my colleagues' time, but I would like to have you submit those letters for the record.[1] I would certainly like to see them. And if there is something that I can do to help expedite it, I am sure some of my colleagues might be willing to do the same thing. We would be more than happy to do it.

Senator VOINOVICH. Senator Lieberman.

Senator LIEBERMAN. Thanks, Mr. Chairman.

Attorney General Blumenthal, I know you have a plane to catch. Do you have a moment for some questions?

Mr. BLUMENTHAL. Sure.

Senator LIEBERMAN. Incidentally, Mr. Chairman, in my recitation of Mr. Blumenthal's background, I failed to mention one high point in his career. He was the administrative assistant to former Senator Abraham Ribicoff of Connecticut, who, in fact, was the Chairman of the Governmental Affairs Committee. So there is a nice piece of history.

[1] The information referred to in a letter dated June 13, 2000, sent to the EPA and the Department of Energy from Mr. Frank appears in the Appendix on page 131.

Mr. BLUMENTHAL. The staff has improved considerably since then. [Laughter.]

Senator LIEBERMAN. We have been talking about the reserves here, and some of us have tried to convince the administration to open up the Strategic Petroleum Reserve, and we are talking about a regional home heating oil reserve. I was very interested that you have raised the question of the possibility of requiring the oil companies to maintain some minimum reserve of their own, and I wanted to know first—I don't know whether you have had a chance to go into that very much, but whether you feel we would be or the States would be on a strong legal foundation in considering such a requirement, and, second, whether you have thought at all about how we would try to determine what the minimum level of reserve required would be?

Mr. BLUMENTHAL. First, Senator, let me say that my preference would be to use the strategic reserve concept as you and others have suggested we do, and many of us as attorneys general have advocated as well, not to manipulate prices or have the government intervene in a heavy-handed way in the free market, but try to deal with extraordinary situations such as we now have confronting us in all parts of the country, and I agree with the Chairman that it is really all parts of the country that share in this problem.

As an alternative, the idea that some kind of reserve or minimum balance be maintained I think in principle would operate much the same way as we now do with banks or insurance companies and other kinds of industries where the product is not a luxury or a common, everyday consumer product where there is competition and where there is an absence of government regulation, but in this industry where we are dealing with an essential commodity that people need at affordable prices and, at the very least, need to have at certain points of the year, for example, in the winter where consumers throughout the Northeast last year went without the product and suffered as a result.

And so how to set what that reserve would be I can't state with precision at this point, but it would be based presumably on historical levels of supply and demand, and could well be enabled through tax credits and other kinds of incentives offered, as well as conceivably some kind of minimum requirements.

Senator LIEBERMAN. Well, I appreciate your venturing forth into this area, and I look forward to hearing, as you and your staff develop this thought, more about it. I don't know how—maybe I should ask Mr. Cavaney or Mr. Frank how you respond to that proposal.

Mr. CAVANEY. Well, one of the things, when you look particularly at the Northeast where we had the heating oil experience, the problem in the Northeast was not one of inventories. The problem was one of transportation. There were inventories in PADD1, but if you will recall, the problem was that most of the harbors that we typically moved the product up the coast and into were iced over and we had trouble getting barges in to make deliveries. The roads, for a long period of time we couldn't move the trucks on them, and, finally, thanks to Secretary Richardson, he and the

States up there mobilized and cleared the ice away, and we were able to move the inventory in.

So just looking at inventories is not going to solve all of the problems that we happen to see. And then you also have to consider that the hand of government into the business of selecting inventories, because what you wouldn't want to do is create a law of unintended consequences that we haven't been able to think through. So a lot of consideration has to be given to the issue before people go jumping off in that direction given our experience.

Senator LIEBERMAN. OK. Did you want to add anything, Mr. Frank?

Mr. FRANK. I would say my company doesn't market heating oil, we are not a Northeast supplier. The things about strategic inventories, are they in the right place? How do you distribute them if they are needed? And then what is market interference or unreasonably prices, and when does it come in? How do you set those rules?

One of the things that intrigues me—and this is sort of going to the SPR concept that we talked about, the last panel talked about—as a policy, why did the SPR not fill at a more rapid rate with these low prices last year, $10 a barrel, fill the Strategic Petroleum Reserve? It looked like an opportune time, and it could help stabilize the crude oil price from this volatility. But it wasn't done. In fact, I think we decreased what the fill rate was.

Senator LIEBERMAN. So you think that we made a mistake there in not purchasing while prices were low?

Mr. FRANK. Well, as a businessman, sir, I always like to buy low and sell high.

Senator LIEBERMAN. Sell high, exactly. I have heard that before. [Laughter.]

I don't know what the explanation of that is. It is too bad the folks from the Energy Department left. Maybe we will have another chance to come back and ask them.

General Blumenthal, I thought another—this is an area in which we tend to hear the same ideas and remedies mentions. I thought you had a couple of really fresh thoughts in your testimony, and another one was the question you raised, as I heard it, of the impact that mergers in the energy industry may be having on this problem that we are dealing with today. So I wanted to ask you to speak at a little more length about what your thoughts are on that one and about the extent—I think you suggested that we may want to have new standards for mergers to consider this impact.

Mr. BLUMENTHAL. Well, thank you, Senator. Again, I can't claim any overwhelming expertise or wisdom, but we have among us as attorneys general a lot of experience with antitrust law and its enforcement, and I opposed the most recent major merger in the country, Exxon-Mobil, and was disappointed to see it approved, even with some of the divestiture that was ordered by the FTC as a condition.

I think that part of the reason for the diminished competition—indeed, for the absence of real competition in many parts of the country at the retail level and other levels in the industry is that we have seen a wave of mergers and consolidations. And I very simply propose that the presumption be against approval unless

there is clear and convincing evidence that there will be a tangible benefit for consumers.

A lot of times we hear the companies in this industry and in a great many others say rhetorically, somewhat vaguely, with uncertain data and predictions, that there will be benefits for consumers. But what I am suggesting is that we should put the burden of proof on the companies that are merging, that the presumption be against approval, and that there be clear and convincing evidence of real benefits, tangible ones, for consumers.

Senator LIEBERMAN. Let me ask one more question as my time is running out. You made mention of several State attorneys general being involved in review of this matter. Is that focused on the question of whether there is price gouging going on? And how broad is the multistate investigation in this case? Or is it individual States that are doing it individually?

Mr. BLUMENTHAL. There are individual States coordinating our efforts, some of them in the Midwest, obviously, that are working with the FTC, but others of us from other parts of the country, some of the major States that have a stake in this problem. And we have a real tradition, as you well know, of working together in these multistate task forces involving antitrust matters, and there is no economic problem that is of higher priority to us than this one.

Senator LIEBERMAN. Thank you very much for taking the time to come down and contributing to the discussion. I am proud to have you as my attorney general.

Thanks, Mr. Chairman.

Senator VOINOVICH. Thank you. Senator Durbin.

Senator DURBIN. Thank you very much, Mr. Chairman. Are we on a roll call vote? I don't know how much time is remaining. Well, if they could check, I may not be able to come back after the vote.

I would like to make one comment for the record. If I am not mistaken, during Senator Domenici's testimony it was noted that it has been 25 years since we have built a refinery in this country, and someone—it may have been Senator Domenici, but someone said it is because of this war on fossil fuel, and someone said, yes—Vice President Gore.

I had my staff check. He has only been Vice President for 7½ years, and if there hasn't been a refinery built in 25 years, I think perhaps that is overstating the politics of this issue.

Now, there was, if I am not mistaken, a Republican President for 12 years in that period of time, and if there was a war on fossil fuels under Ronald Reagan and George Bush, I can't speak to it. But to assign political blame to Al Gore, the Democratic candidate for President, for the failure to build a refinery for 25 years is a leap that I hope we won't take in this Committee.

Mr. FRANK. Let me elaborate on that a little bit, Senator. For the period from 1976, which was when the last refinery was built in the United States—and my company built it—there hasn't been another one built. At that time there was an oversupply of refining capacity by about 25 percent, so there wasn't a need for a refinery to be built.

In Al Gore's book, Vice President Gore's book, he says that he is opposed to this.

Senator DURBIN. Opposed to?

Mr. FRANK. Fossil fuel; the internal combustion engine he wants to obsolete.

Senator DURBIN. Well, we have had this debate on the Senate floor, and I think if you read the book more closely, you will see that he is suggesting—and a lot of people are joining him—that we should be looking at energy alternatives. I support that, and I don't believe it is going to happen overnight.

Mr. FRANK. I am not opposed to that, either.

Senator DURBIN. I hope your industry supports it.

Mr. FRANK. I am not——

Senator DURBIN. Let me raise three questions because we have very limited time here. One is, if the price of wholesale gasoline has gone down 47 cents in 14 days, when will the price at the pump go down 47 cents?

Mr. FRANK. I think my partner, who has just left here from the table, would tell me that I can't predict that for you. But if you look historically, prices at the street lag going up——

Senator DURBIN. Lag by how much?

Mr. CAVANEY. I can make a comment on the last increase that you see over there, we tracked it and it lagged by 2 weeks.

Senator DURBIN. So you would say in 2 weeks the full 47 cents ought to be felt in the upper Midwest?

Mr. FRANK. No, sir. It did not occur all in 1 day.

Senator DURBIN. Well, why not?

Mr. CAVANEY. Let me explain why. First of all, broadly, there are 180,000 retail outlets in the United States that sell gasoline. Ten percent of them are owned and operated by the oil companies; the other 90 percent are owned by independent businessmen and independent businesswomen who have their own marketing and sales strategies and determine the price of the product, how much inventory to hold, and the like. They all make these. Legally, we can't be privy to any information there, and even if you had the capability to do so, I don't think it would be easy to get your hands on it.

But if you look at it historically, you can talk about trends, and the lag can't be as precise as by 1 day, but it is going to happen.

Senator DURBIN. I don't expect it to be precise, but you can understand the cynicism of the consumer when you see a 47-cent decrease in wholesale prices and you can't tell me when they are going to benefit from it. Let us hope that they do.

Mr. CAVANEY. They will.

Senator DURBIN. Let me ask you the second question. Some States like Indiana and Illinois are talking about reducing their gasoline taxes. What assurance can you give consumers, families, and businesses across America if we reduce any tax on a gallon of gasoline that they will be able to measure that impact in reduced cost at the pump?

Mr. FRANK. Let me respond to that, Mr. Cavaney.

Governor O'Bannon in Indiana reduced the gasoline tax effective July 1, and there is a roll-in period because it is taxed as what goes into inventory. I can tell you what my company did. We made a press announcement on Tuesday of this week that we reduced the

price of gasoline in the whole State of Indiana by the amount of the sales tax decrease before July 1.

Senator DURBIN. I am glad you did that. I wish we could have a similar impact in Illinois. It is going to be tough to measure how much of that is an impact of the wholesale price going down, which you are not sure when we are going to see the impact on.

Mr. FRANK. They are different situations, sir.

Senator DURBIN. I understand. For the consumer, it is the same situation.

Mr. Cavaney, one of the things that you said here, I wrote down several of your comments, and sometimes it is hard for me as a liberal arts major to follow some of this deep, dark economics. But you said at one point, how can you invest if you are uncertain about economic return? I thought that was kind of what capitalism is all about. You deal with the market.

Then you went on to say, let the market work. We have some numbers here that suggest that the members of the American Petroleum Institute have done very, very well in terms of the profitability of their operations. Let me give you a couple examples: First-quarter profits for the major private oil companies in the United States over the year 2000, up 500 percent; BP-Amoco, profits up 296 percent; Exxon-Mobil, 108 percent; Phillips, 257 percent; Texaco, 473 percent. That is the year 2000 first-quarter profits compared to the year 1999.

Now, it is interesting to me that those first-quarter profits would be there, you would have such a good turnout for your members, and then the consumers get nailed in the upper Midwest with 40-, 50-, and 60-cent-a-gallon increases.

Mr. CAVANEY. Senator, that is very explainable. In 1999, the industry was in a depression. It was operating and selling gasoline as historically low prices, lower than they sold during the depression.

What I have here that I would like to submit for the record, *Business Week,* May 15 edition, this is the Corporate Scoreboard[1] that lists all corporations and their earnings over the first quarter, the exact period you cite.

Let me just give you some examples of what we think is not any evidence at all of getting excessive profits. These are the returns, which is the net income as a function of sales on ongoing operations: The telecommunications industry, 10.3 percent; non-bank financial, 10.8; banks, 14.6; computer software, 17.4; electronics, 11.7; media, 11.9; all-industry, 7.3; and oil and gas industry, 5.9 percent.

So the amounts that you cite are from a low historical base. If you compare them against all other corporations, you can certainly not argue that there had been any excessive profits in the industry.

Senator DURBIN. I will make a matter of record here of the increases between 1998 and 1999: ARCO, up 165 percent; BP-Amoco, 35 percent. The list goes on and on. It is certainly a lot more than 5 percent.

Mr. CAVANEY. It is not.

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[1] The Corporate Scoreboard appears in the Appendix on page 290.

Senator DURBIN. The bottom line I want to get to is this: When it comes to the government's involvement here, there are environmental concerns which many of us in this country share. No, we don't want you to drill everywhere. We don't want you drilling offshore in vulnerable areas. Some of us were up in Prince William Sound and saw what happened with the Exxon Valdez. We don't want you—some of us don't want you to go in the Arctic National Wildlife Refuge when you are diverting oil that is being drilled out of Alaska to Japan instead of the United States. And some of us believe that, yes, we can produce energy and clean air for America. We don't think they are inconsistent.

Mr. CAVANEY. We believe the same thing, Senator, and we would look forward to sitting down and having a dialogue and trying to be constructive in that regard. We are not asking to be able to drill everywhere, but we certainly need more domestic energy sources if we are going to have any hope of——

Senator VOINOVICH. And the public ought to understand that because we haven't done the exploration and we haven't gone into the areas that that is part of the reason why they are paying increased taxes——

Senator DURBIN. Well, let me say, Mr. Chairman——

Senator VOINOVICH [continuing]. Or increased costs for gasoline in this country, and the fact of the matter is it is time that the environmentalists and the oil industry sat down and started to look at balancing up the options, that there is a possibility that you can have more domestic supply and at the same time protect the environment, and they are not separated. But for the last several years, the attitude is that if you do any exploration, you are polluting the environment——

Senator DURBIN. No, Mr. Chairman, on my time here—and I have a minute and 25 seconds, and I have waited patiently all afternoon for a chance to ask any questions. And let me just say on my time, I don't disagree with your premise here. There should be this conversation. But many of us are concerned when the major oil companies want to go on public lands and drill and not pay the taxpayers fair compensation for the oil that they are deriving from our land, America's land.

And, second, it troubles me that during the course of this conversation this afternoon, there have been, I think, precious few opportunities for us to mention words like conservation and fuel efficiency. It is as if this isn't part of the equation. I think it is a big part. And when we talk about CAFE standards and talk about SUVs being held to standards so that they have some fuel economy—accountability, I don't think that is unreasonable. I would like to make that part of the same conversation.

Mr. CAVANEY. Senator, we support conservation efforts. We support efficiency efforts. And we also would like to, hopefully, through your good offices and some of the others, to begin the dialogue to talk about how can we have both, because most of the clean air gains have come from the mobile sources, which is the autos and ourselves. So we have the capacity to do it. We would like to.

Senator DURBIN. I yield back my time.

Senator VOINOVICH. Thank you, Senator Durbin.

I would like to just finish and adjourn this hearing with one last word, and that is, shame on all of us if we don't get together between now and the end of this year to come up with some kind of an energy policy, and I would be very interested in hearing the industry's point of view or anybody else that is viewing this hearing on S. 2557, that is, the Lott-Murkowski bill—I happen to be a cosponsor of that bill, but it would be wonderful if we would be able to perhaps refer that to a committee, get people, had testimony on it, and did it on a kind of bipartisan basis and work on that between now and the end of the year. There are some that want to bring it to the floor for a vote. I am not sure that would work out because I think it would get very partisan. But perhaps it should be referred to a committee and let's start the dialogue. I will talk to the Leader about it today, get it to a committee and start, get the administration in, get the EPA in, get the environmentalists in, get the oil companies in, and start to see if we can't hammer out something so that maybe before the end of the year we can pass a piece of legislation, or maybe at least do enough work to get it up the flagpole high enough that in the next administration we can tackle it immediately so that, again, we don't find ourselves where we are today with all of this going on and nothing to show for us.

Thank you very much.

Mr. FRANK. Congratulations on taking the initiative to get that ball rolling, Senator, because it is something that the United States, our country, has been sorely lacking, and there needs to be a balancing of interests, and issues, to arrive at a workable plan that describes what our energy policy is.

Senator VOINOVICH. Thanks very much for your patience.

The record will remain open for 1 week for additional submissions.[1]

[Whereupon, at 4:50 p.m., the Committee was adjourned.]

[1] The prepared statement of Senator Bayh appears in the Appendix on page 283.

APPENDIX

PREPARED STATEMENT OF SENATOR CLELAND

Mr. Chairman, thank you for the opportunity to come here again today to speak on the very important topic of rising oil prices. Since this Committee's last hearing on this issue on March 24, oil prices have steadily increased across the country resulting in sharply higher gasoline prices, including in my own State. Only in the last week or two have I heard reports that oil prices may have declined in certain parts of the country. However, prices have not declined enough to offer substantial relief to a vast majority of Americans.

I am especially concerned about the devastating effect that the high gasoline prices may have on people with fixed incomes who lack the means to absorb the increase in the face of other essential household and personal expenses. Additionally, our farmers in the Southeast are currently facing one of the worst droughts in recent memory. The projections for this year's crops do not look good. We must realize that high fuel prices have a tremendous effect on the agriculture community. Those who are just getting by now have to contend with the exorbitant cost of diesel and gas.

Though oil prices in Georgia are higher than they were last summer, gasoline prices have not yet reached the levels currently experienced in the Midwest. Since future increases remain a distinct possibility, I am closely following the situation in the Midwest. This hearing provides us with the opportunity to learn more about the impact that rising oil prices have had across the country and the various reasons for the higher fuel costs associated with the increase in oil prices. The exorbitant price of gasoline in the Midwest has reached approximately $2.30 per gallon in some cities and hopefully, today's experts and officials will provide solutions that will significantly reduce the cost of oil across the country.

Over the last several weeks, I have been contacted by many of my constituents who have expressed their serious concerns about the impact of the recent dramatic increase in petroleum prices. I must note that I have heard a great deal of concern regarding the use of reformulated gasoline or RFGs. In the Commerce Committee, we recently reported a pipeline authorization and reform bill. It is the first time in many years that pipelines have been the focus of discussion. It is seldom noted that pipelines are an important form of transportation. In Georgia, we have an excellent network of pipelines which distributes fuel oil throughout the State. I recognize the importance of this system to supply our pumps, and I realize that our pipelines are one reason Georgians enjoy lower gas prices at the pump. Pipelines are an interstate mode of transportation. As such, it is a national concern that the challenges of transporting RFGs might increase the costs of fuel to consumers.

Another aspect of this hearing is to examine the response from the Executive Branch to rising gasoline prices. Last January, I wrote to the President in order to express my concern over rising prices and to ask that the Administration consider any and all policy options in order to counteract this situation. The Administration has had some success in encouraging OPEC ministers to increase oil output. However, I feel that there is more that could be done. I look forward to hearing the Administration's summary of actions to date, and I would be pleased to know what we can expect in the near future. This is a desperate situation, and we must act immediately.

And, of course, I hope we can get into the issue of the role of the pricing policies of the oil companies in contributing to the current program. As we all know, the Federal Trade Commission launched its investigation along these lines yesterday, but I think some of today's witnesses could shed light on this matter as well. Our constituents want to know what we're doing in Washington to address the high price of oil. As in most things, there is likely to be no single, simple explanation but we need to do what we can to get to the bottom of this serious situation. In an election year, there will be a great temptation for demagoguery and partisanship. I hope we can resist that temptation and develop a bipartisan consensus and course of action. I look forward to hearing from our distinguished witnesses.

Statement

by

Bob Taft
Governor of Ohio

before the

United States Senate
Committee on Governmental Affairs

June 29, 2000

Good afternoon, Mr. Chairman and members of the Committee. I am Ohio Governor Bob Taft. I am grateful for the opportunity to testify today on a subject that has the attention of motorists and consumers in Ohio and throughout the nation. We are here today because gasoline prices affect everybody – not just the motorist at the pump. I commend you for holding today's hearing.

Recent, severe increases in gasoline prices in my state are, to say the least, baffling. In Ohio, the price of regular gasoline is up approximately 13%, from $1.549 to $1.731 since last month and more troubling, up over 50% from a year ago when a gallon of regular gasoline was selling for $1.151 *(current prices are as of Friday, June 23rd)*. The price of gasoline in Ohio is currently five percent above the national average.

Our citizens are demanding, if not complete answers, at least some rational justification for this dramatic price increase. Every day, I hear from people throughout our state about

the burdens of this price increase. I hear from senior citizens on fixed incomes. Robert York of Centerville, Ohio wrote to tell of the choices he is making between going to the doctor, traveling to the grocery store or attending church on Sunday. I've heard from Cheryl Dolin in Carroll County, a single mom making $6.50 per hour. For Cheryl, a 50% increase in gasoline prices has placed a tremendous burden on an already stretched budget.

The impact on increased fuel prices on our transportation and business sector is equally dramatic. Just last week I heard from Kevin Burch, the president of Jet Express trucking in Dayton. Mr. Burch's company uses about 4,000,000 gallons of diesel fuel a year. If diesel prices stay at current levels, Jet Express trucking will pay about $1.8 million more in fuel costs this year. These are real dollars to a small business that already operates at close margins. Ohio roadways carry the fourth largest volume of freight traffic of any state in the nation. We provide critical transportation linkages from the east to the west, from the north to the south. Interstate 75, which runs through Toledo and Cincinnati, carries $25 billion worth of goods each year by itself. These unexplained price increases are not only penalizing Ohioans, they also impact the nation's ability to move goods from one destination to another.

Mr. Chairman, I recognize that motor fuel production and distribution are very complex processes that are influenced by a host of factors. And the most fundamental fact is that ours is a nation heavily dependent on petroleum-based energy. A fact likely to remain true for the foreseeable future.

Crude oil prices have almost tripled since January of 1999, and for a nation that imports 55 to 60 percent of its crude oil, and even imports some refined product; the impact of foreign price hikes has been significant.

The Congressional Research Service (CRS) reports a number of other factors including pipeline problems, low domestic inventories of crude oil and gasoline, and Unocal's RFG patent as affecting price increases. The report also cites U.S. EPA's new Phase II clean air requirements for Reformulated Gasoline, which refiners serving parts of the Midwest are attempting to meet with ethanol, also have impacted prices. However, since Ohio chose to meet its Clean Air obligations through other types of air pollution control measures, such as automobile testing, and not through the use of alternative fuels, we can not understand why prices are so high in our state.

I salute the efforts of this Committee to examine the factors that have contributed to higher gasoline prices at the pump. I support inquiries into the variety of market forces, and any illegal activities that may be exacerbating the situation.

While it's natural to feel that gas price increases are unwarranted, I think it is more accurate and constructive to recognize that the underlying realities that impact our gas prices threaten our nation's future prosperity. The most fundamental reality is this – for a nation with an economy that is so heavily dependent on oil, we have no coherent energy policy to reduce our dependence on foreign oil or our vulnerability to rapidly escalating

price spikes like this one. This fundamental failing exposes the fragility of U.S. economic and national security. And it is compounded by the lack of a sensible, coordinated approach to environmental policy at the federal level.

I commend this Congress for rededicating itself to the task of devising a comprehensive energy policy for the United States. The President should work with the Congress to establish a proactive stance on energy research, exploration, production and conservation. Unfortunately, the Administration up to now has not devoted adequate attention to a visionary energy policy.

I commend Majority Leader Lott, Chairman Murkowski and others for introducing S. 2557, which provides a useful framework to begin work on a truly comprehensive national energy policy. I don't believe this legislation alone can be the last word on addressing this problem, but it's a serious wake-up call to begin a national dialogue on one of the greatest challenges confronting us.

We also must develop a sensible national environmental policy in a manner that would complement an effective national energy policy. Senators Voinovich and Breaux and others deserve enormous credit for introducing the Air Quality Standard Improvement Act, a bill to provide a common sense approach to promulgating regulations under the Clean Air Act while increasing public health, safety and environmental protection. This legislation comes in response to the Administration's disturbing history of issuing environmental regulations without adequately identifying risks to health, and with no

consideration of costs and benefits. In 1997, U.S. EPA issued new air quality standards – which are now under a court challenge – without conducting risk assessments or cost-benefit analysis. The Administration also ignored the concerns of the White House Council of Economic Advisors about the economic burdens of the new rules, which amounted to a costly regulatory shot in the dark.

Mr. Chairman, as I said earlier, Governors throughout the Midwest and across the nation are concerned about high gasoline prices. The situation has prompted some people, governors and non-governors alike, to suggest adjusting federal and state fuel taxes to ease the pinch of rising pump prices.

I have opposed the suspension or elimination of the federal gas tax because the tax is a dedicated user fee that generates needed revenues for highway safety, construction and maintenance. Ohio maintains the fifth largest roadway system, the fourth largest in freight volume, the fourth largest in traffic volume and the second largest inventory of bridges in the nation. We are confronting congestion and replacing our aging bridges. For these reasons, we cannot afford to contemplate the reduction of our state gas tax. My administration is committed to maintaining a safe, efficient transportation system in Ohio with a strategy incorporating adequate highway capacity and transit alternatives. We know that rough, poorly-maintained, congested roads are unsafe roads that harm vehicle performance, result in reduced mileage per gallon of gasoline, and endanger the traveling public.

Ohio's transportation strategy relies on revenues from the dedicated fuel tax, which Congress devoted solely to transportation purposes under TEA-21. I am not certain Congress or the Ohio General Assembly could find adequate alternative sources of funding for transportation safety and construction if either the federal or state gas taxes were suspended. Nor am I confident that reductions to either tax would result in any significant lasting price reductions for consumers at the pump.

I also want to advise the Committee of our very serious concerns related to ethanol consumption that I have discussed on several occasions with Senator Voinovich. First, let me be clear that we are proud of the environmental contribution made by ethanol and I continue to support the use of this renewable, domestically produced fuel. Nevertheless, the Senator and I have become aware of a worrisome consequence of Ohio's own recent increase in ethanol consumption. Under the funding formula adopted under TEA-21, Ohio's federal highway appropriation is determined in large part by our contribution to the Highway Trust Fund. At the time of enactment, this was a welcome policy change for Ohio. But, because ethanol-blended federal gasoline fuel taxes are credited to Ohio's highway trust fund differently from other gasoline taxes, the increase in ethanol use in Ohio has significantly decreased the amount of revenue we receive from the Trust Fund.

There is a 5.4-cent per gallon federal tax break on each gallon of ethanol-blended gasoline sold. In addition, 3.1 cents of the tax that is collected on ethanol is credited to general revenue funds and not to the Highway Trust Fund. In other words, Ohio's

contribution to the Highway Trust Fund is reduced by 8.5 cents for each gallon of ethanol-blended fuel sold in Ohio.

For Ohio, these reduced Highway Trust Fund contributions are substantial, as they decrease the State's trust fund contributions by $185 million annually. The problem, which now appears to impact Ohio uniquely because we are a historic donor state and large ethanol consumer, may become more widespread if ethanol consumption increases throughout the Midwest or nationally.

Senator Voinovich has pledged to work with me on a suitable solution to this problem. I also wanted to alert the Committee to our concerns in the event Ohio's experience with ethanol becomes more widespread. I believe we can address this problem, and fix our highway funding anomaly, while still encouraging further development of an important domestic energy source.

With our nation's recent experience with MTBE fresh in mind, I would encourage Congress to conduct vigorous oversight of this vitally important issue. We need to ensure that we understand the present condition as fully as possible as we contemplate policy remedies that will impact the nation's quality of life and economic health far into the 21st century.

Mr. Chairman, thank you for the opportunity to appear today. I would be glad to answer any questions the Committee may have.

STATEMENT

OF

ERNEST J. MONIZ

UNDER SECRETARY FOR ENERGY, SCIENCE AND ENVIRONMENT

U.S. DEPARTMENT OF ENERGY

BEFORE THE

COMMITTEE ON GOVERNMENTAL AFFAIRS

UNITED STATES SENATE

JUNE 29, 2000

Mr. Chairman and members of the Committee, I am pleased to be here today to discuss the Administration's energy policy, particularly in relation to oil and gasoline. The Clinton Administration is very concerned about the high gasoline prices Americans are facing, particularly in the Midwest.

As you know, the Department of Energy compiles and analyzes data with respect to crude oil and gasoline supplies and also tracks prices. I must emphasize, however, that the Department does not analyze or investigate whether or not the market price for crude oil or gasoline is reasonable. The Administration has requested an investigation by the Federal Trade Commission of the unexplained recent behavior of regional gasoline prices.

I would like to begin my testimony by summarizing two key principles behind the Administration's national energy policy, followed by a summary of the key challenges and policy and regulatory actions the Administration has taken in support of that policy.

The Administration's "First Principle": Reliance on Market Forces

The "first principle" of the Administration's energy policy has been a reliance on free markets as the best means of informing supply and demand, and getting the most for the American consumer. Our commitment to this principle has contributed to the longest period of sustained economic growth in modern times.

The unprecedented economic expansion under this Administration has pushed the overall unemployment rates to 30-year lows, led to increased labor productivity, generated extraordinary gains in the nation's stock markets, given us the first federal budget surpluses in several decades, and helped to significantly reduce poverty rates, all while maintaining low levels of inflation.

This does not mean market failures will not occur. When markets are insufficiently flexible to address critical national challenges . . . market transformations require market pushes and pulls. . . or groups of individuals or businesses are threatened by market disruptions or dislocations. . . this Administration has not hesitated to take appropriate action. Examples of interventions in the energy arena include: the release of emergency LIHEAP funds during last winter's home heating oil crisis; support for a home heating oil reserve in the Northeastern United States, and; support for tax incentives for renewable energy or to increase domestic oil and gas production.

I would also note that the extreme volatility in oil markets we have witnessed in the last year and half – where oil prices have gone from $10 per barrel to $34 – are testament to the folly of artificial production quotas. Markets, not cartels, should set the price of oil. This bipartisan view has been expressed again and again over the last twenty years, as the Congress systematically removed or severely limited the federal government's authorities to set oil prices or allocate supply. Generally, with the exception of emergency authorities, the Congress has taken the government out of the oil equation and committed us to the free market principles of supply and demand.

Economic Growth, Energy Use and Environmental Protection are Not Mutually Exclusive

At the same time that the economy has been steadily growing, many of the environmental consequences of energy use have been reduced. Let me illustrate.

- Since 1990, at the same time the US economy has grown by 35 percent, sulfur dioxide emissions have declined by around 20 percent;
- The energy intensity of our economy -- the amount of energy used per unit of economic output -- has declined by 40 percent since the mid-seventies;
- In 1974, we consumed 15 barrels of oil for every $10,000 of gross domestic product -- today we consume only eight barrels for every $10,000.

Energy use, while increasing, has been out-paced by the economic growth achieved by the Clinton/Gore Administration. Also, increased energy efficiency – in homes, businesses and manufacturing – has helped insulate the economy from short-term market fluctuations in energy prices. Through wise policy choices and informed, targeted investments of public dollars, we can have an extremely robust economy fueled by relatively inexpensive energy, and protect the environment and the health of our citizens.

♦ ***Challenge #1: Maintaining America's Energy Security in Global Markets***

The United States remains heavily dependent on crude oil. Since 1985, domestic crude oil production has declined by 34 percent, while domestic oil consumption has increased by more than 22 percent. In 1974, net imports of crude oil and products supplied about 35 percent of U.S. consumption. In 1999, net imports supplied about 50 percent of U.S. consumption.

The Administration's response to the important role of oil in our economy and the increase in net imports recognizes the following:

- Consumption of oil continues to grow;
- The cost of oil production in the U.S. is high relative to other producing nations;
- The price of oil is a *world* price. High or low prices of oil worldwide will mean high or low prices domestically;
- Reducing volatility in oil prices will spur investment and match supply to demand;
- Global capacity must be increased if we are to meet domestic and international demand for oil;
- Increasing net imports are not only an indicator of flat or declining domestic production, but also a reflection of increased domestic *consumption*;
- Almost two-thirds of our oil is used for transportation.

To spur domestic production and lower the costs of doing business – without imposing quotas on imported oil, which would raise costs to consumers – the President has proposed tax incentives for 100 percent expensing of geological and geophysical costs (G&G), and allowing the

expensing of delay rental payments. G&G expensing will encourage exploration and production. Delayed rental expensing will lower the cost of doing business on federal lands

The Administration has also supported and promoted virtually all significant energy legislation enacted by the Congress over the last seven years. This includes legislation for: Deepwater Royalty Relief; lifting the ban on the export of Alaska North Slope Oil; Royalty Simplification; privatization of the Elk Hills Naval Petroleum Reserve; the transfer and lease of Naval Oil Shale Reserves One and Three for production; and creation of a guaranteed loan program for small domestic oil and gas producers. The Administration has also proposed legislation to transfer Naval Oil Shale Reserve Two to the Ute Indian Tribe for production; USGS estimates that there may be as much as 0.6 tcf of gas on this property.

To address higher US exploration and production costs compared to other countries, we have invested in a portfolio of technologies designed to lower the costs of exploration and production, and to produce hard-to-find oil in more mature fields. In large part because of the joint R&D efforts of government and industry, the U.S. petroleum business has transformed itself into a high-technology industry.

The United States is a mature oil-producing region. While an estimated two-thirds of all U.S. oil remains in the ground, much of it is located in deep, complex reservoirs or environmentally-sensitive areas. Development of advanced oil and gas technologies is essential to efficiently maximize the production of domestic resources while preserving the environment.

A single project in DOE's five-year, $118 million government/industry Oil Reservoir Class Program has already added 2.4 million barrels of oil from one field and produced an additional $12.7 million in taxes and royalties. The final outcome of this project is expected to produce an additional 31 million barrels of oil and $160 million in federal revenues.

The Department of Energy conducted the initial design of the polycrystalline drill bit, now used in about 40 percent of drilling worldwide, with annual industry sales in excess of $200 million. Innovations such as horizontal drilling have revitalized oil production from the Austin Chalk region of Texas to the Dundee formation of Michigan. New imaging technologies developed by DOE labs are revealing large hydrocarbon supplies beneath the ocean floor salt formations in the Gulf of Mexico and 3D seismic is now standard in the industry. Secondary gas recovery technologies have led to new gas production from south Texas and the mid-continent. In Alaska, oil is now being produced from wellpads that are one tenth the size of those 30 years ago.

Industry and the Department of Interior estimate that new discoveries in the Gulf of Mexico may yield as much as 18 billion barrels of oil — more than Prudhoe Bay. Technological innovations in subsalt imaging, reservoir characterization, and drilling technologies will enhance our ability to economically produce these reserves.

To ensure that we are not overly reliant on imports from a single region of the world, we have

diversified our sources of supply. Although our oil imports have increased, our *sources* of these imports have changed significantly over the last two decades. Last year, we imported 4.85 million barrels of oil per day from OPEC nations, down 22 percent from the 6.19 million barrels of oil per day in 1977. Our imports now come from over 40 countries.

During this same period, OPEC's share of the world market has dropped from 49 to around 41 percent. In 1970, the top six producing countries in the world controlled 68 percent of the world's production; this figure is now down to 45 percent.

I note that just recently, a significant oil find was made in the Caspian Basin which is thought to have potential reserves equaling or surpassing the North Sea. The Administration has invested in a significant diplomatic effort to encourage oil development in this region, as well as to encourage the investment of U.S. energy firms in the Caspian.

To help the world develop its oil resources and increase world capacity, Secretary Richardson has actively promoted investment and development of the world's energy resources. Most notably, Secretary Richardson has held two international energy summits — the Western Hemisphere Energy Ministers Summit in New Orleans and the African Energy Ministers Summit in Tucson, to discuss energy issues and plot a course for global energy development. In addition, the Secretary has traveled to virtually all the major energy producing regions of the world — the Caspian, Russia, the Middle East, Nigeria, Norway, Mexico, and Venezuela — to encourage energy production and business for U.S. energy companies.

To increase the coverage provided by our "national energy insurance policy," the Strategic Petroleum Reserve, we are adding 28 million barrels of oil to fill the Reserve back to the 590 million barrel level, its approximate size prior to the revenue-raising sales directed by the Congress in 1996 and 1997. The replacement of this oil in the Reserve was also done through a unique royalty-in-kind payment, with no outlays for the government. In addition, we have completed upgrades for the Reserve -- to make it safer and to extend the useful life of the facility. This seven-year project was completed ahead of schedule and under budget.

To address volatility in world oil markets, we have strengthened our ties with the world's oil producing nations, worked closely with oil consuming nations through organizations such as the International Energy Agency, and launched a campaign to improve the collection, dissemination and understanding of world oil supply and demand data. Last January, prominent industry analysts and data experts met at a DOE-sponsored forum in Houston to discuss how the quality, timeliness and availability of oil data might be affecting volatility in oil prices.

DOE will be co-hosting an international conference in Spain this summer as a follow-on to the earlier meeting. There is significant international interest in this issue and growing consensus that the world needs better data for producers and consumers to more accurately gauge oil supply, demand and inventories.

We are also investing in reducing net oil imports by focusing on demand side technologies and policies. More than 60 percent of our oil consumption is for transportation, making vehicle fuel efficiency a ripe target for reducing the consumption side of the net import equation.

Specifically, the Department's transportation program is:

- developing an 80 mile-per-gallon (mpg) prototype sedan by 2004 through our Partnership for Next Generation Vehicles Program;
- improving light truck fuel efficiency by 35 percent while meeting newly issued EPA Tier 2 emission standards by 2004;
- developing technologies to increase fuel economy of the largest heavy trucks from 7 to 10 mpg (nearly 50 percent) by 2004;
- increasing domestic ethanol production to 2.2 billion gallons per year by 2010;
- develop production prototype vehicles that will double the fuel-efficiency of tractor trailer truck and triple the efficiency of heavy-duty pick-ups; and
- supporting tax credits for hybrid vehicles.

Let me illustrate just how important these investments are. Increasing the average fuel economy for cars and light duty vehicles by just three miles per gallon would save almost *a million barrels of oil per day*. This represents about 10 percent of current U.S. daily imports. Investing in fuels and more fuel-efficient vehicles could substantially reduce our reliance on imported oil at the same time it contributes to a cleaner, healthier environment. Without minimizing the importance of increased oil production, it is clear that even a small commitment to greater vehicle efficiency will net significant gains in reducing net oil imports, without compromising pristine onshore or offshore environmental ecosystems. Those demand side technologies will be crucial for meeting world oil requirements; for example, China alone is projected to add more than 150 million vehicles over the next two decades.

The Reformulated Gasoline Program

Before I outline other features of the Administration's energy policy, I would like to turn briefly to gasoline supply, an issue which is foremost in the public's mind these days.

Retail prices for both gasoline and diesel fuel are much higher this year than last, driven mostly by the rise in world crude oil prices. While there is significantly more oil on the market (2.1 million barrels) since OPEC met in March, demand is also increasing. This is true worldwide, as well as in the United States, where summer demand is about 4 percent higher than last year. To meet this demand, U.S. refineries are running full out, at around 96 percent utilization rates on a national average.

It is in this context that we have been reviewing the gasoline supply situation, particularly in the Midwest. I would note that the Department of Energy performs gasoline supply assessments for specific areas as part of the EPA's waiver process for cleaner gasoline. DOE does not perform any specific price analysis.

To promote cleaner motor vehicles and cleaner fuels, the 1990 Clean Air Act Amendments established the RFG program. In 1995, this program introduced to the market new, cleaner fuels that had to meet more stringent emissions performance requirements. The Act required that RFG contain at least 2 percent oxygen by weight. The addition of oxygenates causes gasoline to burn cleaner and more efficiently, thereby reducing toxic air pollutants. The two oxygenates used by the refining industry to produce RFG are methyl tertiary butyl ether (MTBE) and ethanol.
The RFG program has produced substantial environmental benefits. Phase I of the RFG program (1995-1999) reduced overall toxics by an average of 27 percent. Phase II, beginning this year, has more stringent standards that will reduce smog pollutants by 41 ,000 tons per year in RFG areas, including volatile organic compounds (VOCs) by 27 percent, and nitrogen oxide emissions (NOx) by seven percent.

The Phase 1 RFG *price* differential over conventional gasoline was on average two to four cents per gallon. Lunberg survey data conducted after the RFG implementation began confirms that the cost for phase 1 RFG was approximately three cents. Estimates for the additional cost of Phase II RFG (RFG II) compared to Phase 1 RFG would be one to three cents a gallon. The difference in cost between conventional gasoline and RFG II gasoline could be expected to be in the range of five to at most eight cents a gallon. Cost, however, is not necessarily an indication of price.

Administration Actions on Reformulated Gasoline Supply

There has been significant attention focused on gasoline prices and supplies and the impact of EPA regulations requiring the use of RFG, particularly the St. Louis, Milwaukee and Chicago regions. The Department of Energy continues to closely monitor conventional and reformulated gasoline supplies in these regions. In addition, the Department is aggressively pursuing policies and regulatory actions when appropriate to avert gasoline supply shortages and maintain adequate supply levels. Let me highlight some of the actions the Department has taken in recent months, followed by a more detailed description of the supply assessments the Department has completed.

- Federal Trade Commission (FTC) Investigation -- At the request of Vice President Gore, Secretary Richardson and Administrator Browner have requested that the FTC investigate the reasons for the significant price differential between RFG and conventional gasoline, a differential that cannot be attributed solely to the cost of RFG.

- St. Louis RFG Supply Assessment -- The Department conducted an assessment of RFG supply in St. Louis, providing information to the Environmental Protection Agency (EPA) that led to a temporary waiver of RFG requirements.

- Milwaukee/Chicago RFG Supply Assessment -- At the request of Vice President Gore, the Department completed an assessment of the RFG supplies in Milwaukee, Wisconsin. This assessment concluded that RFG supplies in Milwaukee are tight, but adequate.

- Meetings with Oil Industry Representatives -- The Department and the EPA have conducted in-depth meetings and interviews with oil industry representatives serving the Milwaukee/Chicago region to gather information on RFG gasoline supplies.

- Field Team Analysis -- The Department and the EPA recently sent field teams to both Milwaukee and Chicago to study the RFG supply situation. The field teams met privately with refiners, distributors, pipelines, terminal operators, jobbers and retail outlets.

- Strategic Petroleum Reserve (SPR) Oil Exchange -- The Department recently approved two agreements to exchange oil from the SPR with the Citgo and Conoco refineries in Louisiana. The agreements were approved to avert a possible shortfall in gasoline and diesel fuel due to the collapse of a commercial dry dock that is blocking shipments of crude oil through the Intra coastal Waterway near Lake Charles. Gasoline and diesel fuel from these refineries are sent into the Colonial Interstate Pipeline that serves the Mid-Atlantic and New England regions.

St. Louis Reformulated Gasoline Supply Report

The Department conducted an assessment of the impacts on RFG supplies in the St. Louis metropolitan area resulting from Explorer Pipeline break in the shipment arriving May 18, 2000. This assessment was conducted at the request of the EPA which had received a request from the State of Missouri for regulatory relief.

The RFG supply problem in St. Louis originated from a break in the Explorer Pipeline coming from the Dallas, Texas area in early March. The Explorer pipeline provides about 50 percent of supply capability to the St. Louis metropolitan area RFG market. The pipeline break, along with strong RFG demand, prohibited distributors from building adequate RFG inventories.

The Department worked closely with EPA, the State of Missouri and other sources to access supply information. The Department found that gasoline supply in the St. Louis area was tight, but noted that gasoline supplies were tight nationwide. Retail shortages would be certain for a period of days if the EPA did not offer a waiver that permits noncomplying product in or near St. Louis to be used in the St. Louis market.

Milwaukee/Chicago Reformulated Gasoline Supply Report

The Department performed an assessment of Milwaukee RFG2 gasoline supply for EPA on May 25, and determined that there was tight but adequate supply. EPA did not grant a waiver at that

time since the impact of the Explorer pipeline break on Milwaukee/Chicago was less than a days supply At the request of Vice President Gore, the Department conducted a reassessment of the Milwaukee/Chicago RFG supply situation. The Department submitted this report to the Vice President on June 5, 2000.

Based on data from the Energy Information Administration, and other information gathered from refiners, terminals and marketers serving the Milwaukee/Chicago area, the Department of Energy (DOE) concluded that reformulated gasoline (RFG) supplies for the region are very tight, but that sufficient supply was available to meet overall demand at that time. This did not mean that supply was available to all marketers at all locations. Also, supply is still sufficiently tight that any disruption in the distribution system could contribute to Phase II RFG shortages. This is likely to remain the case in the near term and over the summer.

The Milwaukee/Chicago RFG situation should be viewed in the context of an overall U.S. gasoline market, in which high consumer demand and low inventories have caused higher prices for all gasoline types, relative to crude oil prices. The Milwaukee (and Chicago area) supply situation is further affected by:

- an RFG formulation specific to the area;
- higher regional demand;
- high regional refinery utilization rates;
- limited alternative supply sources;
- limited transportation links, and;
- lower gasoline inventories relative to the rest of the country.

These supply issues will affect price but the degree to which they contribute to price spikes is unknown. Also, the latter four conditions affect the supply of conventional gasoline as well.

The first opportunity for any significant relief from this tight supply situation will most likely be due to reduced seasonal demand in the fall. The lack of any significant inventory cushion in the Milwaukee/Chicago area is reason to continue to closely monitor the situation throughout the summer and we will do so.

Current Situation: Based on contacts with all the refiners and major terminals serving the Milwaukee/Chicago area, RFG supplies appear to be tight but adequate to serve immediate supply needs. Terminals received significant shipments of RFG off the West Shore Pipeline, prior to the pipeline's closure. Larger than usual volumes of RFG arrived from the Koch (Pine Bend, Minn.) refinery via a different pipeline at regular intervals.

This does not mean that all marketers will be able to get all grades of product, in the desired amounts, at all times. Regular customers --branded or unbranded –may be put on allocation but are still first in the queue. Spot market buyers, including many independent marketers and

convenience store operators, may not find product available at their regular terminals before new product arrives. Spot market buyers, on the other hand, are the most vulnerable in these situations because they have no long-term contract commitments and could be forced to incur- and forced to pass on -higher costs, as they move from terminal to terminal looking for product.

Longer Term Situation: Aside from possible problems in the pipeline links to Milwaukee, the key longer-term consideration is refinery capability for producing summer ethanol-blended Phase II RFG and significant uncertainties remain (As noted above, the prices in the Midwest are affected by several supply-related factors, not all of which are specific to RFG). While there has been referrals to the Unocal patent, no one has identified any cost or supply issues related to the patent that could in any way explain the price increase and decrease for wholesale RFG that we have seen in the Midwest over the last few weeks.

Some refineries serving the Chicago/Milwaukee area may increase their output by a small amount through increasing crude runs, shifting production from conventional gasoline to RFG, or making limited equipment modifications. All of these opportunities are very limited and depend on crude oil and gasoline market conditions. The higher returns now available with RFG provide a strong incentive to increase refinery production and are, to a significant degree, responsible for the current re-balancing of the Milwaukee RFG market. The typical reduction in driving and gasoline demand that occurs after Labor day offer the prospect for relief.

As noted earlier, Midwest refinery utilization rates are at 99 percent and average rates nationwide are at 96 percent. There is little margin for error, given these utilization rates. Unexpected refinery outages, which occur more often at high utilization rates, are the greatest risk to maintaining supply/demand balance. However, such an event, would affect the availability of all petroleum products.

Given the nature of the RFG specification in the Milwaukee/Chicago area, the limited number of alternative sources of supply, and the tightness in national, PADD II, and Milwaukee/Chicago inventories, it is appropriate to closely monitor this situation throughout the summer.

I have addressed the Administration's overall support for oil production and would like to turn briefly to other elements of our energy policy. I outlined our principles and our energy security challenge, and would like to now outline three remaining challenges we are addressing through policy, regulatory, and research and development actions and investments.

- **Challenge #2: Harnessing the Force of Competition in Restructured Energy Markets**

As I have noted, the Clinton/Gore approach to energy policy is built around the principle of market-oriented approaches to energy supply and use. A reliance on markets is not unique to our Administration – it spans both Republican and Democratic Administrations.

Natural gas is a clear area of success for market-driven energy policies for recent Administrations. With deregulation, natural gas has emerged as a plentiful, national energy resource. In the mid-1970's, a labyrinth of outdated and counterproductive pricing regulations had handcuffed America's natural gas industry, stifling exploration and production and conveying the false impression that America's natural gas supplies were on the wane.

Today, the onerous natural gas regulations which started in the 1950s, have been replaced by a restructured and highly competitive gas market, and natural gas is now one of the most plentiful energy resources available to meet the Nation's future energy and environmental needs. The decontrol of natural gas prices, the advent of competition in interstate gas transportation, and the ability of industrial customers (and increasingly residential consumers) to contract directly for their own gas supplies has clearly provided major benefits to both producers and consumers.

Electricity restructuring is the biggest prize of all. Over 40 percent of the nation's energy bill goes for electricity. With over $200 billion in annual sales, electricity is the lifeblood of our economy, and the reliable supply of electricity is vital to our economy and to the health and safety of all Americans. The Clinton/Gore Administration is seeking, with Congress, to extend the role of markets and competition into the electricity sector.

At one time, the debate surrounding electricity restructuring focused on the pros and cons of doing away with the vertically-integrated monopoly utility that generated, transmitted and distributed the power consumed in a state-designated monopoly service territory. That debate is over. As a result of the Energy Policy Act of 1992 and the efforts of the Federal Energy Regulatory Commission (FERC), utilities are now buying power from competing generators and marketers at competitive rates rather than building plants on their own, and independent power producers are gaining an increasing share of the generation market.

Restructuring and competition are not, of course, limited to the wholesale markets. Twenty-five states have now adopted electricity restructuring proposals that allow for competition at the retail level. Almost every other state has the matter under active consideration.

These are positive developments -- competition, if structured properly, will be good for consumers, good for the economy and good for the environment. Companies that had no incentive to offer lower prices, better service, or new products are now being required to compete for customers. Consumers will save money on their electric bills. Lower electric rates will also make businesses more competitive by lowering their costs of production. By promoting the use

of cleaner and more efficient technologies, competition will lead to reduced emissions of greenhouse gases and conventional air pollutants.

Securing a Competitive Future Requires Both State and Federal Action. We believe that the full benefits promised by electricity competition can be realized only within an appropriate Federal statutory framework. What we do at the Federal level, and when we do it, will have a profound impact on the success of wholesale competitive markets, as well as on state and local retail markets. Federal action is necessary for state restructuring programs to achieve their maximum potential. Electrons do not respect state borders. Electricity markets are becoming increasingly regional and multi-regional. Actions in one state can and do affect consumers in other states.

States and the Federal government must work together. States alone can't ensure that regional power and transmission markets are efficient and competitive. They can't provide for the continued reliability of the interstate bulk power grid. And states can't remove the Federal statutory impediments to competition and enable competition to thrive in the regions served by Federal utilities. Clearly, some states are considering retail competition proposals at a less rapid pace than others. Nevertheless, Federal action is equally important to all states. If wholesale markets, which transcend state boundaries, are not working efficiently, the impediments to the flow of power between states will cause rates to go up and reliability to be endangered.

The Clinton/Gore Administration encourages Congress to pass comprehensive electricity restructuring legislation. In 1998 and again in 1999, the Administration presented the Congress with a comprehensive legislative blueprint of changes needed for updating the federal statutory framework to support the advent of competition in electricity markets. Indeed, this bill was a featured element of the Comprehensive National Energy Strategy the Administration sent to Congress in April, 1998.

A well-structured electricity bill is a centerpiece of the Administration's energy policy, and we look forward to working in a bipartisan manner with both the House and Senate to pass this or similar legislation. We urge this Congress to replicate the earlier bipartisan successes with natural gas and oil deregulation and pass a comprehensive restructuring bill this summer.

Ensuring the reliability of the energy grid is a growing focus of the Administration's R&D efforts. While the electricity system powers other infrastructures, it will also be increasingly dependent on natural gas as a fuel source for both central power stations and small, distributed generation. EIA's *Annual Energy Outlook, 2000*, projects the annual growth of 4.3 percent for the use of natural gas for electricity generation through 2020.

In addition, our energy delivery systems are becoming increasingly reliant on telecommunications and computing systems for fast, efficient operation. These trends will likely result in increased efficiencies and a range of new consumer products, but can also potentially increase physical and cyber threats to our energy infrastructure.

To ensure the reliability and security of the electricity and natural gas infrastructures, the Administration has proposed a new Energy Infrastructure Reliability initiative with three components:

- electric reliability which will focus on regional grid control, distributed resources and microgrids, information system analysis, possible offsetting of peak summertime electric load with distributed generation and natural gas cooling technologies for example, and high capacity transmission;
- natural gas infrastructure reliability to include storage, pipeline and distribution R&D, and;
- secure energy infrastructures, vulnerability assessments, interdependency analysis, risk analysis, and the development of protection and mitigation technologies.

We urge the Congress to support this initiative fully so as to address the urgent challenge of grid reliability.

♦ **Challenge #3: Mitigating the Environmental Impacts of Energy Use**

The production, transport and conversion of energy is fundamental to our way of life and continued economic prosperity, but energy has more significant effects on the environment than any other economic activity. To reduce these adverse effects, the federal and state governments have imposed environmental restrictions on energy, from production to end-use.

These restrictions have, as noted earlier, resulted in reductions in energy-related pollution and environmental damage, and have been achieved without substantial increases in energy prices, disruptions in energy supplies or other adverse economic impacts. This achievement is due, in part, to the constructive role that the Department of Energy has played in the development of environment-friendly energy technologies and the adoption of regulatory policies that have enabled the energy industry to minimize costs and avoid supply disruptions.

We cannot, however, stop with the successes achieved to date. Domestically, one of the leading challenges facing us now is further reducing the environmental impacts of energy use in the transportation and power generation sectors. We want to minimize the negative effects of fossil fuel combustion in ways that do not increase prices or price volatility, or decrease reliability. Other domestic environmental challenges that will require careful monitoring include: assuring the continued access of the energy industry to new resource areas, in a manner that protects our natural heritage; and ensuring that any further regulation of the energy sector is based on good science and is cost-effective.

Internationally, responding to the threat of climate change is the greatest challenge facing the energy sector. To provide the technologies that reduce greenhouse gas emissions, and to preserve U.S. competitiveness and economic growth, President Clinton has proposed an aggressive $4.1 billion FY 2001 climate change package.

The package includes: the International Clean Energy Initiative, Clean Air Partnerships, Climate Technology Initiative and other programs that preserve jobs and the climate. This includes R&D and deployment initiatives for a broad range of technologies including those using fossil fuel. For example, the President's plan contains a significant request for coal and power systems technology and for carbon sequestration to offset the carbon emissions from fossil fuels.

We have a historic opportunity to complete the elaboration of an internationally unprecedented market-based approach to climate protection that will lower costs and spur U.S. technology exports. The anticipated use of these mechanisms will also provide the economic incentive for developing countries to make meaningful commitments to greenhouse gas emissions reductions. ***Sound science is the cornerstone of DOE's work on energy-related environmental issues***. The Department has been a partner with EPA and other regulatory agencies in developing science-based regulations. This was seen recently in DOE's work with EPA on coal ash; and last year in our work with EPA on coal combusters of fossil fuels containing cobalt or vanadium. These are two examples where it was demonstrated, through science and interagency cooperation, that regulations of the energy industry were *not* needed.

Our work on climate change is part of the substantial body of scientific evidence that demonstrates the impacts of carbon emissions on the global environment, supports the Administration's commitment to mitigating the impacts of greenhouse gas emissions on the atmosphere and human health, and strongly suggests that significant and timely action to mitigate climate change *is* both prudent and needed.

Cost is a key consideration. The costs and benefits of alternative approaches must be weighed. To the extent feasible, the costs of reducing adverse environmental impacts should be shared fairly among all of the contributors to an environmental problem, not borne primarily by a small subset of industries or, in the case of global climate change, a small subset of countries.

Most recently, the Department of Energy helped develop the economic analysis for treating small refiners as a separate class of businesses under the recently released Tier II gasoline sulfur rule. This treatment for small refiners will give them additional time and flexibility in meeting the requirements of the rule.

An important element of the Administration's energy policy is support for the development of energy technologies to reduce environmental impacts of energy use by:

- promoting technologies to produce cleaner conventional fuels;
- increasing the efficiency in the use of conventional energy sources, primarily fossil fuels, and;
- developing alternative sources of energy.

<u>*Cleaner Fuels*</u>. On the transportation side of fuel use, vehicles currently account for a large

portion of urban pollution, including 77 percent of carbon monoxide, 49 percent of nitrogen oxides, and 37 percent of volatile organic compounds. The transportation sector also generates one third of U.S. carbon emissions. In coming decades, increasing public health and environmental concerns will likely lead to new environmental regulations that may be difficult or impossible to meet with current fuels.

The President's *Bioenergy and Biobased Products Initiative* is intended to address this growing need. Recent scientific advances in bioenergy and biobased products have created enormous potential to enhance U.S. energy security, help manage carbon emissions, protect the environment, and develop new economic opportunities for rural America.

This nation has abundant biomass resources (grasses, trees, agricultural wastes) that have the potential to provide power, fuels, chemicals and other biobased products. The President has set a goal of tripling U.S. use of biobased products and bioenergy by 2010, which would generate as much as $20 billion a year in new income for farmers and rural communities, while reducing greenhouse gas emissions by as much as 100 million tons a year – the equivalent of taking more than 70 million cars off the road.

DOE has also launched a new initiative this year, the *Ultra-Clean Fuels Initiative*, to address the need for cleaner fuels within the context of the current refining infrastructure. The Ultra-Clean Fuels Initiative will mobilize industry and DOE's national laboratories to develop and demonstrate new technologies for making large volumes of clean fuels from our diverse fossil energy resource base. In the nearer term, ultra-clean transportation fuels can be produced by upgrading refinery technology, and using new bio-fuel blends. In the mid-to-longer term, ultra-clean transportation fuels can be developed through biotechnology, or from natural gas and coal, which enjoy high levels of compatibility with the existing infrastructures and could provide environmental benefits due to their suitability for use in advanced, high-efficiency vehicles.

On the power side, fossil fuel-fired power plants emit about one third of the nation's carbon dioxide and significant amounts of NOX, SOX and particulates. These plants also account for 70 percent of all U.S. electricity generation and are projected to dominate power generation for the foreseeable future.

Technologies for coal-fired power plants, developed by DOE, have resulted in improved performance at a fraction of the original cost. Coal is used to generate almost 52 percent of the nation's electricity and scrubbers are now deployed on one-third of U.S. coal plants. Our partnerships with industry have resulted in rapid development of low cost NOx technologies to address both near term needs and future environmental challenges. The near term challenge has been met by the addition of low-NOx burner technology to virtually all coal-fired boilers, and even cleaner technologies will be installed on a substantial portion of coal units. These technologies are 50-90 percent cheaper than options available just 10 years ago.

To address pollution from coal and natural gas power systems, DOE has a program — *Vision 21*

— with a goal of near-zero emissions from power generation and 60 to 70 percent generation efficiencies. The fleet of large, high-efficiency power systems envisioned by this program would produce emissions well below New Source Performance Standards for SOX, NOX, and particulates, with most advanced systems achieving near-zero emissions for regulated pollutants.

DOE's *Carbon Sequestration Program* is designed to develop technologies and practices to sequester carbon that: are effective and cost-competitive; provide stable, long-term storage; and are environmentally benign. Increased carbon emissions are expected unless energy systems reduce the carbon load to the atmosphere. Accordingly, carbon sequestration — carbon capture, separation and storage or reuse — must play a major role if we are to continue to enjoy the economic and energy security benefits which fossil fuels bring to the nation's energy mix.

Increasing Efficiency in the Use of Conventional Energy Sources. It is particularly important to develop and deploy higher efficiency technology for fossil energy power generation since 85 percent of America's energy currently derives from oil, gas and coal. In electricity generation alone, energy efficiency potentially could be doubled through cogeneration and the application of advanced technologies.

DOE's advanced turbines — fueled by natural gas or biomass, and capable of reducing NOX emissions and producing steam together with low-cost electricity — are already approaching efficiencies of 60 percent. High efficiency electric power systems, where fuel cells are joined with combined cycle plants, could improve efficiency to as much as 70 percent. Industrial resource recovery could be dramatically improved with the development of technologies such as an integrated gasification combined power technology, which would convert coal, biomass and municipal solid wastes into power and products.

The U.S. uses 94 quads of primary energy a year. The nation's 100 million households and 4.6 million commercial buildings consume 36 percent of the total. Buildings also use two thirds of all electricity generated nationally. Energy consumption in buildings is a major cause of acid rain, smog and greenhouse gases, representing 35% of carbon dioxide emissions, 47 percent of sulfur dioxide emissions and 22 percent of nitrogen oxide emissions. Clearly, more efficient buildings will pay big dividends in reduced energy use and a cleaner environment.

Research and development areas for buildings include: heating, ventilation, and air conditioning; building materials and envelope; building design and operation; lighting; appliances, and; on-site generation. To use energy more efficiently, we are working to develop "intelligent building" control systems, more efficient appliances, and fuel cells to power commercial buildings. Standards to improve the energy efficiency of flourescent lighting in commercial and industrial applications, proposed this March, are expected to save between 1.2 and 2.3 quadrillion BTUs of energy over 30 years, enough energy to supply up to 400,000 homes per year over the same time period. We have recently proposed an update to the efficiency standards for water heaters, and expect to issue proposals for clothes washers and central air conditioners in the near future -- each of which are likely to produce even greater energy and environmental benefits.

The industrial sector consumed almost 35 quads of primary energy in 1997 – about 38 percent of all energy used in the United States. The industrial sector contains extraction industries, as well as materials processing and product manufacturing industries. Over 80 percent of the energy consumed in manufacturing (including feedstocks) occurs in only seven process industries: aluminum; steel, metal casting, forest products, glass, chemicals, and petroleum. These major process industries are becoming more capital-intensive. Markets are continuing to become more competitive globally.

Reducing energy costs and waste, and reducing or eliminating environmental emissions upstream (closely related to energy use) are recognized, controllable costs that can increase productivity and competitiveness of U.S. businesses and decrease costs.

The Department's primary program for industrial efficiency is *Industries of the Future*, which focuses on these seven most energy-intensive and supports collaborative research, development, and demonstration efforts to accelerate efficiency in U.S. industries.

If the Department's energy efficiency programs were fully funded, we could:

- reduce industry energy consumption per dollar of output;
- increase the average fuel efficiency of new cars and light trucks by 20 percent by 2010;
- reduce the annual energy consumed by buildings; and
- by 2010, reduce energy consumption in federal facilities by 35 percent relative to the 1985 consumption level, saving taxpayers $12 billion from 2000-2010.

These reductions in energy demand will result in comparable reductions in greenhouse gas emissions, as well as reductions of other environmental impacts associated with energy use. Of course, none of this can be achieved without the active support of other agencies, industry and consumers. DOE looks forward to working with the Congress to develop and fund programs to increase the efficiency of our transportation, commercial, manufacturing and building sectors in order to save energy, increase the competitiveness of U.S. industry, and reduce our reliance on imported oil.

Investing in Renewable Power Sources. Renewable resources such as wind, solar, photovoltaics, geothermal, biomass, hydrogen, and hydroelectric, are abundant. These alternatives are used for power generation and their primary advantage is that they produce virtually no emissions or solid wastes. Their primary disadvantages are the cost of producing power (except some biomass, geothermal, hydro and wind) compared to coal and natural gas, and in some cases the need to create an infrastructure required to deliver this power to market.

To take advantage of the environmental benefits of renewable power, the Department has focused on further decreasing its costs and tackling infrastructure issues. A particularly high-value approach to lowering cost and delivering renewable power appears to be through

distributed generation — alternatives to central power stations, where power is generated locally or on-site. Among other benefits, this can reduce the investment needed in transmission and distribution systems and the losses in transmitting power. Distributed generation technologies are a major R&D focus at DOE.

In addition, *the Department is working on improving the performance of specific kinds of renewable energy*. The growth for wind power, for example, is the highest of all sources of energy in the world. Dramatic improvements in wind turbine technology has helped spur a 25 percent increase in wind-generating capacity over the last decade. Costs of wind generated power have dropped dramatically to between four and six cents per kilowatt hour. Photovolatic costs are down from one dollar in 1980 to between twenty and thirty cents today. Geothermal costs are almost competitive with conventional power generation costs, coming down from fifteen cents to between five and eight cents today.

Last year, the President issued an *executive order directing agencies to expand their use of renewable energy*. Meeting the goals of this order will reduce greenhouse gas emissions by 2. 4 million tons and save taxpayers over $750 million a year. It will also expand markets for renewable technologies, reduce air pollution, and serve as a powerful example to businesses and consumers who can reap substantial benefits from environmentally-friendly energy sources.

- **Challenge #4: The Government's Commitment: Ensuring a Diverse, Reliable and Affordable Set of Energy Sources for the Future**

The energy options within our portfolio are oil, gas, coal, energy efficiency, renewables, hydropower, fission, and fusion. We must strategically manage energy R&D with this understanding about the energy world as we know it: there is no single silver bullet which will solve all our energy needs, making science and technology -- and a broad-based energy R&D portfolio -- is key to meeting our long term energy needs..

Without energy technologies, a ton of coal, a barrel of oil, a cubic foot of natural gas, a ton of uranium ore, a stiff breeze, or the sun's warmth cannot directly contribute to the prosperity of modern society. With the very best technologies, however, society can use energy resources efficiently and responsibly and with great economic and environmental gain. While economic and security challenges continue to demand investment in a robust energy research and development (R&D) program, environmental challenges provide additional impetus for increased focus on energy-related science and technology during the coming years.

Technology development plays a strong supporting role in the Department's pursuit of all of its energy policy objectives. It supports improvement in the competitiveness of the energy system; the development of more efficient transportation, industrial and buildings technologies as a key objective; our goal of reducing the environmental impacts of the energy sector, and; the further development of technologies that reduce the environmental impacts of energy production.

The requirements for near term returns on investment, limited resources and the risk averse nature of many industries warrant a special role for government in the support of technology development, especially when new technology can help address national concerns not fully reflected in the marketplace. Consequently, the development of new energy technologies has been a central mission of the Department of Energy's since the late 1970's. At DOE , we focus on maintaining a strong national knowledge base as the foundation for informed energy decisions, new energy systems, and enabling technologies of the future, and developing technologies that expand long-term energy options.

Ensuring the success of the Department's research and development efforts has been a constant challenge, especially during periods of stable or declining energy prices, when market incentives for technology development and adoption are at their lowest. In addition, the unpredictability of technology development process and the continual changes in scientific knowledge, social priorities and market demands pose additional challenges to government efforts to effectively spur technology development.

I have already discussed many of DOE's energy technologies and technology investments and successes. I would now like to discuss our energy portfolio more broadly, and then focus specifically on natural gas as a transition fuel.

DOE's energy resources R&D portfolio is organized in three broad strategic areas: reliable and diverse energy supply ($170 million, FY01 request); clean and affordable power ($542 million, FY01 request), and; efficient and productive energy use ($437 million FY01 request). In addition, the Department has a basic science portfolio ($1.2 billion FY 01 request) which supplies the foundation for much of the applied R&D in the energy areas.

A number of reviews and studies have been conducted that provide valuable information on the adequacy and focus of this portfolio. Overall, these studies have confirmed that our energy portfolio is generally well-focused on the nation's strategic energy goals. However, the studies also have identified a number of deficiencies in how fully these goals are addressed by the portfolio and made a number of recommendations for important portfolio changes or additions, including:

- Significantly enhanced R&D funding
- Renewed emphasis on electric power systems reliability
- A Nuclear Energy Research Initiative
- Carbon management R&D
- Increased bioenergy R&D
- Methane hydrate R&D
- Hydrogen R&D
- Clean fuels R&D
- Integration of fuel cell R&D efforts
- An international RDD&D effort

Continued support for certain nuclear energy technologies is one way in which the Department is seeking to ensure diverse energy options for the future. The *Nuclear Energy Research Initiative* is focused on obstacles to long-term use of nuclear energy. It promotes investigator-initiated, peer reviewed research, enabling us to consider a broad range of innovative ideas brought forth from universities, industry, and our national laboratories to address issues such as plant economics, waste, and proliferation. Last year, 46 research projects were launched under NERI, involving 21 universities, eight national laboratories, 16 private sector organizations, and one federal agency. Just last week, the Department announced 10 new awards, involving 56 research projects, many with multiple organizations participating. A major area of focus for the NERI program this year are Generation IV nuclear power systems, which are next generation advanced technologies that are expected to be economically competitive and deployable over the next 20 years.

The Administration strongly supports the increased use of natural gas. Several of these recommended changes or additions to our portfolio relate directly or indirectly to natural gas — power systems reliability, carbon management, methane hydrates, clean fuels, and fuels cells all involve the development of technologies to increase the supply, improve the delivery of, or improve the environmental performance of natural gas.

Also, as I mentioned earlier, because it is abundant and relatively clean, natural gas will be the fuel of choice to meet the nation's future power generation needs. Of the 1000 new powerplants the Energy Information Agency (EIA) projects the U.S. will need by 2020, 900 will probably be natural gas power plants. Once this gas is produced, we will need the means to distribute it safely and efficiently. Right now, there are 85 proposed pipeline projects *just* for the years 2000 through 2002, and the Administration is working with the gas industry and other stakeholders to streamline the regulatory process.

Investments in natural gas R&D are critical to meet future energy needs. The Clinton/Gore Administration has invested roughly $1.5 billion in natural gas R&D. DOE's joint efforts with industry have helped produce the fuel cells, microturbines, reciprocating engines, and other enabling technologies to power the gas industry of the future. DOE's request for natural gas R&D funding in FY 2001 is around $215 million and, as I mentioned earlier, includes an initiative for energy infrastructure reliability. The natural gas portion of this initiative specifically focuses on methane leakage, aging and corroding pipelines, and natural gas storage, to improve the safety and reliability of the natural gas distribution network.

Last December, Secretary Richardson established *DOE's newest national laboratory — the National Energy Technology Laboratory,* co-located at Morgantown, WV, and Pittsburgh, PA. This laboratory is dedicated to providing the nation with clean and affordable fossil energy and will house a new *Center for Natural Gas Studies*, in order to give added focus and emphasis to

natural gas policy and "bore hole to burner tip" research and development.

Presidential Decision Directive 63 — *Critical Infrastructure Protection — establishes safety and security of the natural gas infrastructure as a national security priority*. In addition, the Administration also envisions a substantial role for natural gas as the transition fuel for a cleaner environment, and in reducing greenhouse gases. The President's *Executive Order on the Greening of the Government* promotes efficiency in federal buildings, acknowledging that there are substantial efficiency gains to be made by measuring energy from the source, not just at the site. Natural gas is a winner in this scenario.

The Administration's *Comprehensive Electricity Restructuring bill* will benefit natural gas as well by providing for more rapid market penetration of innovative technologies on both sides of the customer's meter. End-use distributed generation technologies, for example, have a critical role to play in a restructured energy future. Along with new uses for natural gas, these technologies promise relatively high efficiencies, low emissions, increased flexibility and reliability, and cost-effective alternatives to the traditional utility grid infrastructure.

To further develop natural gas power systems for the 21st century, DOE will be focusing on advanced combustion science and technology; interconnect devices and parameters for standard interconnect designs to enable distributed generation; low temperature catalysts for emissions control; inexpensive sensors for emissions monitoring, and; carbon dioxide separation and sequestration technology. For natural gas storage, we will be investing in developing non-damaging fluids for drilling, and methods for controlling reservoir damage caused by drilling and perforating fluids.

We need to encourage increased natural gas supply. The National Petroleum Council's recent study on natural gas projects increased consumption for natural gas of 29 trillion cubic feet (TCF) in 2010 and 31 trillion cubic feet (TCF) by 2015. At the same time, EIA estimates that in 1998, reserve additions of natural gas were only 83 percent of production. To meet this demand, we will need to ensure that we have an adequate supply of natural gas.

Several pieces of legislation I described earlier — specifically the deep water royalty relief and the guaranteed loan program for small oil and gas producers — will benefit natural gas production, as will the G&G and delayed rental tax credits supported by the President. In addition, our energy supply R&D programs, designed to lower the costs of oil and gas production, will help add to the nation's supplies of natural gas. These include:

- a *Diagnostics and Imaging Program* to cost-effectively locate and produce oil and gas reserves;
- the *Advanced Drilling, Completion and Stimulation Systems Program* which focuses on the development of sophisticated drilling technologies and methodologies;
- the *Gas Hydrates Program*, a long term R&D effort to help turn potential methane

hydrates into gas reserves, and;

- the *Low Quality Gas Upgrading Program* to purify gas reserves containing high levels of contaminants.

Clearly, much remains to be done if we are to meet significant increases in demand for natural gas over the next two decades. We look forward to working with Congress in a bipartisan effort to increase the nation's supplies of natural gas.

Balanced, Forward-looking Energy Policy

The Clinton/Gore Administration is proud of its record on energy policy and on our progress in achieving the nation's energy goals. We are very concerned about the high gasoline prices American consumers are facing. We are committed to a responsible approach that will infuse our energy sector with both efficiency and competition; that values clean air and clean water; and that seeks to cushion America against emergencies in the energy market.

Secretary Richardson has called on the Congress to work with us in a bipartisan fashion to pass legislation for those energy incentives and programs which require Congressional action including:

- extension of the Energy Policy and Conservation Act;
- establishment of a northeast home heating oil reserve;
- added tax incentives for domestic oil and gas production, renewable energy, increased energy efficiency and the introduction of alternative fuels;
- electric industry restructuring legislation;
- replenishment of emergency LIHEAP funds, and;
- increased funding for R&D to reduce demand and increase domestic supply, as requested in the Department's FY2001 budget proposal.

I note that the House voted to cut $126 million from the Partnership for Next Generation Vehicles and $45 million from the Department's Fossil Energy program. As noted in my testimony, these programs support essential energy security goals on both the demand and supply sides. We appreciate the Senate's support of these R&D programs. They, together with our efficiency and renewable programs, have never been more important than they are today for meeting energy and environmental goals simultaneously.

We urge Congress to expeditiously enact the Administration's proposals. If we are going to meet the nation's energy needs of the 21st century, we have neither time–nor energy–to waste.

STATEMENT OF

JOHN COOK

DIRECTOR PETROLEUM DIVISION

ENERGY INFORMATION ADMINISTRATION

BEFORE THE

COMMITTEE ON GOVERNMENTAL AFFAIRS

U.S. SENATE

JUNE 29, 2000

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.

With gasoline prices at $1.66 this week, compared to $1.11 on average last June, consumers have become very concerned over why this increase has occurred. A number of factors have combined to create this situation: tight crude oil markets, which resulted in low crude oil and product stocks and high crude oil prices, some pipeline and refinery supply problems, and a difficult transition to summer-grade Phase II RFG.

Crude oil continues to be a large factor in explaining the price increases over year-ago levels. West Texas Intermediate crude oil price has 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 high seen in 1981, the change has been rapid. Rapid changes can impact consumers more initially than absolute levels since individuals and organizations generally budget and plan for small changes from recent history. From a year-ago June, crude price increases have contributed about 33 cents per gallon to the increase in the price of gasoline.

The crude oil price rise is the result of a shift in the global balance between production and demand. Crude oil 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 700 thousand barrels per day, reducing world inventories by nearly 270 million barrels.

Crude oil inventories as well as product inventories fell, and by the end of 1999, inventories were at very low levels – especially in the United States as shown in Figure 1.

OPEC has been increasing supply, and early data indicate we may be seeing a more typical seasonal stock-building pattern. But stock levels are still very low, and a normal stock build will not help the gasoline market much this summer.

In 1999, crude oil prices rose faster than product prices, squeezing refinery margins. Figure 2 shows that in June 1999, the difference between wholesale gasoline prices and West Texas Intermediate crude oil price averaged less than 6 cents per gallon, compared to the more typical 10-12 cents per gallon seen at this time of year. But low crude oil and product stocks in 2000 have now increased product prices relative to crude oil. Where the differences between gasoline wholesale prices and crude oil prices were low last year, they are high now 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. But some regions have experienced much higher price increases over year-ago June than the 47 cent-increase stemming from crude oil and low stocks.

EIA has been pointing out that with low stocks and a market short on crude oil, the gasoline market is likely to see increased volatility this summer. The Midwest was our first incident. Several pipeline and refinery problems caused stocks to fall to 13 percent below their 5-year average at the end of May. Prices in the Midwest were bid up rapidly as concern over supply adequacy grew for both conventional gasoline and reformulated gasoline. But reformulated gasoline 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. As shown in Figure 3, The Midwest RFG price increases appeared to be similar to price surges we are used to seeing in California since the start of their RFG program.

There are several reasons why the Midwest RFG prices responded so strongly to the supply problems:

- 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 other components in the gasoline 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;
- Finally, different refineries in the Midwest produced different amounts of RFG than in prior years, causing distribution system adjustments.

In isolated markets like the RFG market in the Midwest or the California gasoline market with its geographic isolation and unique gasoline, supply problems cannot be resolved as quickly as in broader markets. 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.

Fortunately, wholesale prices in the Midwest began to decline more than a week ago, indicating that supplies have been increasing relative to demand. RFG retail prices

fell over 12 cents per gallon and conventional gasoline fell over 7 cents last week. Wholesale prices indicate that we could see further declines, if no more pipeline or refinery problems occur. Retail prices normally lag wholesale prices both when wholesale prices increase as well as when they decline, so, without further supply problems, we can expect retail prices to fall further.

While the first hurdle of the transition from Winter to Summer-grade gasoline is behind us, we may experience more volatility before the summer is over. Consumers are not expected to cut back much on their consumption. As we enter the high gasoline demand season, refiners will be pushed to just meet demand. With low stocks and refineries operating at high utilizations, any supply disruptions could trigger another price runup.

Although consumers are now focusing on gasoline, EIA is concerned about winter distillate and natural gas supplies as well. Distillate stocks are currently well below normal. Even with a normal inventory build during the summer and early fall, we will enter the Winter with lower-than-normal stocks. Natural gas is showing signs of not building adequate inventories this summer for consumption next winter, and prices have been high. Not only does this mean industry and utility customers might want to use more distillate this winter than last, it indicates utilities might use more distillate this summer to meet peak cooling needs if natural gas prices are high through the summer. This could reduce the distillate stock build, resulting in very low distillate inventories before winter begins.

This concludes my testimony. I would be glad to answer any questions that you might have.

Figure 1

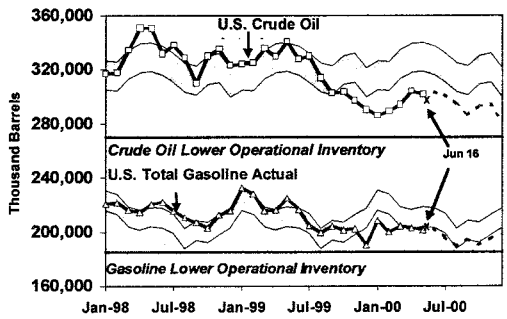


Figure 2

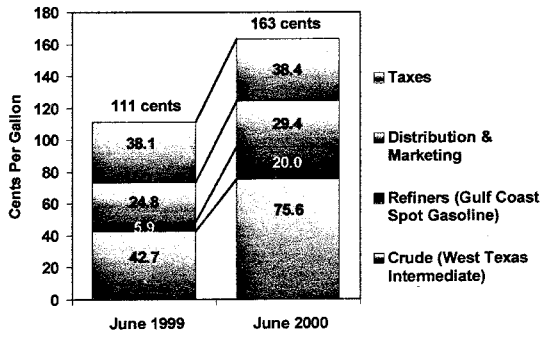
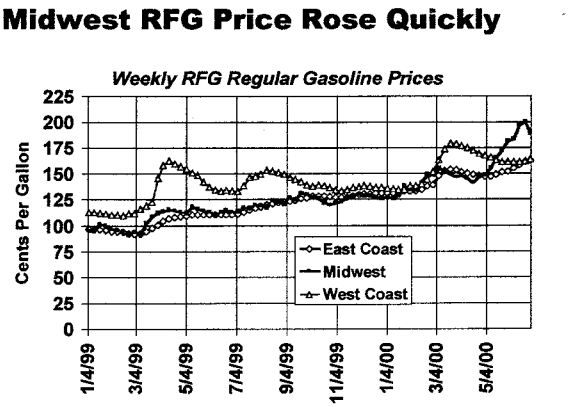


Figure 3


Midwest RFG Price Rose Quickly
Weekly RFG Regular Gasoline Prices
Cents Per Gallon
225
200
175
150
125
100
75
50
25
0
1/4/99
3/4/99
5/4/99
7/4/99
9/4/99
11/4/99
1/4/00
3/4/00
5/4/00
East Coast
Midwest
West Coast

AMERICA AT RISK

The Honorable Denise A. Bode
Oklahoma Corporation Commissioner

Testimony before
U.S. Senate Governmental Relations Committee
June 29, 2000

Good afternoon, I am Denise Bode, Vice Chairman of the Oklahoma Corporation Commission. The Oklahoma Corporation Commission is a constitutional body composed of three state-wide elected officials responsible for the prudent management of our natural resources as well as regulating gasoline, electric, natural gas, telecommunications and water utilities, transportation. I greatly appreciate the opportunity to share my concerns regarding the efficiency and effectiveness of the Executive Branch's response to rising oil prices.

How have we allowed the OPEC cartel to gain control of fuel prices in America? Why has our dependence on foreign oil increased three times faster during the eight years of this Administration than in the previous twenty years? And why have we allowed domestic production which is our best insurance against supply disruptions to drop by almost 20% Are we at risk? Those were the questions posed last month in an unusual joint session of the U.S. Senate Foreign Relations and Energy and Natural Resources Committee, to a panel including former National Security Advisor Richard Perle and me. I was there on behalf of Oklahoma as the trustee of the resource base as well as in my prior capacity as President of the Independent Petroleum Association of America (IPAA) to discuss the successful 1994 petition that I filed for them. That trade petition resulted in a presidential finding of a national security threat posed by rising oil imports, as well as the new finding issued as recently as March of this year.

To understand how and why America is at risk, first understand that there is not a "free market" in the traditional sense when it comes to oil. There never has been. My friend, Dan Yergin's Pulitzer Prize-winning book on oil, The Prize, articulates convincing rationale that oil markets have always been manipulated, first by the Standard Oil Trust, then by our government through pro-rationing and price controls, and finally by OPEC through producing nation quotas. While the development of commodity contracts through NYMEX complicated the ability of oil producing nations to manage the market, the education of those playing that market about the importance of OPEC has now been complete and they are back in the drivers seat. And we have watched oil producing countries manipulate their oil inventories for politics as well as their own economic gain. Our reliance on foreign oil has gone from 34% during the 1974 Arab oil embargo, to 44% in 1992, to close to 60% today.

The problem is that each time the OPEC cartel manipulates oil supply to create shortages or to flood the market, it causes price shocks making the domestic oil production industry a less stable business, which in turn drives away investment, terminates qualified employees, and destroys valuable infrastructure both exploration and

refining. And it forces more of U.S. production, 40 % of which is marginally economic, to be plugged and lost forever. It is so serious now, that even with the latest OPEC price increases, domestic producers are not drilling new domestic oil wells. Out of 800 some rigs drilling, less than a third of those are drilling for oil. And these price shocks impact consumers as well by making it impossible to make a family budget without knowing whether gasoline will cost $0.70 or $2.00 a gallon.

In 1993, at the beginning of this Administration, OPEC cartel production and thus imports to the U.S. was up. Oil prices in the U.S. fell below $13 a barrel and imports had risen to 44 percent. Domestic refineries had dropped to around 190 and domestic refining capacity was still close to meeting U.S. consumption. IPAA petitioned in March of 1994 under 232 of the Trade Expansion Act for an investigation into increasing oil imports and action by the President. Since the days of Eisenhower, this trade act has been used to affect American energy policy relations with the world. While the Administration was "contemplating" the petition, a bipartisan group of members of Congress presented him an energy plan that would maintain a strong domestic production and refining option. That plan included:

- A tax credit to preserve marginal production
- A tax credit to encourage new drilling
- Elimination of tax penalties and updating of tax rules on geological and geophysical cost, percentage depletion, and enhanced oil recovery
- Open up access to production in frontier areas on federal lands, like ANWR
- Provide for federal royalty reductions for marginal production and production in frontier areas like the deep Gulf of Mexico
- Look at environmental laws that were duplicative and overreaching
- Resolve federal royalty collection problems that limit production of natural gas

No action was taken on their plan. A year later a presidential finding of a national security threat was finally issued with no new actions proposed. But the presidential finding did warn us of what we would be facing without action. Specifically it said, "**the United States and its allies may find themselves constrained from pursuing either unilateral or multilateral foreign policy actions for fear of provoking producer countries into actions that could result in the manipulation of oil prices and increased prices for consumer countries.**"

During that time, domestic oil production dropped by over 500,000 barrels a day, imports accelerated, and 75,000 Americans lost their jobs.

Congress took the initiative to enact one item in their plan, a royalty holiday on Gulf of Mexico deep water drilling. This new production stopped the decline in domestic production by 1997, clearly demonstrating that our ability to spur domestic production.

The most significant energy policy initiated by the Clinton Administration during that time was a 4.3-cent increase in the gasoline tax.

The OPEC cartel clearly understood that U.S. energy policy was based on instant gratification seeking low gasoline prices from foreign sources and ignoring future consequences with a foreign cartel in charge of our transportation fuel and our prices. So in 1997, members of OPEC acted to consolidate their control of the American market by increasing production reducing world oil prices to historic low prices. Of course, there were other economic factors they hadn't adequately predicted that drove the price down even beyond their control. But the U.S. took no action and another 30,000 Americans lost their jobs. Domestic oil production went from holding steady to a 5.4% decline, an incredible drop of another 600,000 barrels a day. Today we have only 153 refineries down from 198 in 1990. Even when OPEC cut production to raise oil to $30 a barrel, domestic production has not been increased. Members of Congress clamored for another investigation of the threat to our national security of oil imports. The second Presidential finding in this administration was released at the end of March, again finding an increasing national security threat.

Twenty-eight states have taken the initiative with incentive programs for production. Since 1998, eleven states have enacted 25 new incentives to save domestic production, including Oklahoma, which acted in special session to enact a reduction in the gross production tax when prices fall. I proposed a fuel tax holiday similar to the one passed from the gross production tax for producers for consumers to protect them from OPEC shock.

The Clinton Administration says they were "caught napping" when fuel prices jumped. I would suggest otherwise. With two Presidential findings of national security risk in hand, they "knowingly" put American consumers at risk for these high prices with the foreign policy of looking to the OPEC cartel for more oil imports and gasoline instead of acting to stabilize domestic production and refining capacity. Yes, there is a real economic reason for these prices!

Regrettably, after Administration policies left America highly vulnerable to OPEC supply reductions, its requirements for new fuel additives actually aggravated the problem and contributed to today's price spikes in the Midwest. Speaking as a regulator of gasoline and the oil and gas industry in Oklahoma, I am disturbed by the notion that this Administration would sanction the implementation of new stringent standards on additives to gasoline on June 1 at the very beginning of the peak use of gasoline. A responsible regulatory approach would have been to implement new requirements on a schedule that is less likely to cause severe disruption to consumers. Development of contingency plans also should be done when there is potential for significant disruption. These are not extraordinary practices. They have been our practice at the Oklahoma Corporation Commission when implementing new regulatory requirements on this industry.

The Administration knew that the production increases they lauded in March were not sufficient to bring down prices going into the driving season. But listening to the President's comments the day he was lauding his work with OPEC, he set up the oil

industry as his scapegoat when the economic reality of too little production was felt in the summer. Now some in the Administration claim there is not economic reason for such increases. I disagree. It is all about an industry stripped of its infrastructure, stretched thin because of government intervention both domestic and foreign being asked to get new products to users in quantities that hadn't been predicted. Experts at the Congressional Research Service and the Energy Information Administration in recently issued reports agree.

Oklahoma is in the same PADD II distribution region as the upper Midwest. We saw the price begin to increase as demand outstripped product. In fact, demand in PADD II exceeds refining capacity in our region this year by close to 25 percent thanks to the loss of refinery infrastructure. So we all depend on pipelines from the Gulf. And with domestic production down to approximately 40 percent, we depend on imports getting to the ports, refined and put into those pipelines. Obviously, with such a tight situation any disruption anywhere is going to impact the market. There were several pipeline disruptions in the spring as suppliers were trying to build up inventory. Demand for gasoline is much higher than industry analysts had forecasted. And now with environmental rules already requiring as many as 38 different kinds of gasoline, it is predictable that adding the major changes required to make reformulated gasolines, particularly ethanol which has to be blended at the rack, to go only to specific U.S. markets would greatly contribute to disruption of the marketplace. In Oklahoma, spikes in price began in June when this changeover to reformulated gasoline began.

As these complicated infrastructure issues are resolved, gasoline prices will continue to fall. Hopefully we have learned lessons in regulatory policy from this government caused disruption.

That is the smaller, more temporary matter. The much more important, fundamental issue is whether we as a nation have learned the importance to our national security and economy of maximizing of domestic refining and production options. If we have not learned that fundamental lesson this episode will be replayed in the future with even more costly effect.

We have new evidence of the ability in America to reduce our vulnerability by producing oil here at home. A study just released by the Energy Information Agency of the Department of Energy predicts that if production were allowed from the Alaska National Wildlife Refuge then there was a 95 percent probability at that at least 5.7 billion barrels of oil could be recovered. At peak production this could increase domestic production by 1.9 million barrels per day (bpd). Since the Alaska pipeline could hold another 1 million-bpd, because of the decline in other Alaskan production, that increase could dramatically increase our energy security. At present we produce around 5.8 million-bpd and import around 10.4 million-bpd.

In addition, the environmental threat of increasing foreign oil imports is now coming to light. According to the Senate Energy Committee, at 65 percent dependence more than 30 giant supertankers each with 500,000 barrels of crude would be docking at

U.S. ports every day. That is more than 10,000 ships passing American coastlines unloading oil in American harbors. The environmental risk posed by tanker traffic is exponentially higher than American production according to the U.S. Coast Guard. In fact, American production is subject to the strictest environmental requirements in the world. Elimination of domestic production opportunities is an exercise in pseudo-environmentalism.

I agree with former National Security Advisor Perle who believes America needs a viable domestic production option to protect American consumers and deal with any adverse actions towards them by the OPEC cartel. I believe that the list provided by the Bipartisan group of members of Congress to the President in March of 1994 is a good starting point. Just think where we would be if we had only encouraged the preservation of all those marginal wells and opened up ANWR for production back in 1994 when the threat to American consumers was clearly articulated in that first Presidential finding. There is tremendous promise for oil and particularly natural gas in America.

Winston Churchill once said, "Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened." Control of transportation fuel by the OPEC cartel and the dire condition of the domestic production and refining infrastructure are compelling truths that Americans cannot afford to hurry by one more time.

STATEMENT FOR THE RECORD
OF
ROBERT PERCIASEPE
ASSISTANT ADMINISTRATOR
OFFICE OF AIR & RADIATION
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
COMMITTEE ON GOVERNMENTAL AFFAIRS
UNITED STATES SENATE
June 29, 2000

I appreciate having the opportunity to submit this statement for the record. I would like to share with you 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 requires 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, pipelines, 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 38 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 (June 26), the average retail price of conventional gasoline across the country was $1.65 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 $1.64 per gallon, while the average retail price in Chicago and Milwaukee was $2.08 per gallon.

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, over the past week, 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 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 their 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.

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.

MCAA

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Statement

of

Phyllis Apelbaum

Arrow Messenger Service

Chicago, Illinois

for the

Chicagoland Chamber of Commerce

and the

Messenger Courtier Association of the Americas

before the

Senate Government Affairs Committee

on the

Rising Oil Prices and the Executive Branch Response

June 29, 2000

Mr. Chairman, members of the Committee, my home state of Illinois Senator, Richard Durbin, thank you for allowing me to testify today. My name is Phyllis Apelbaum and I am owner of Arrow Messenger Service in Chicago, Illinois. I am a member of the Chicagoland Area Chamber of Commerce and also President of the Messenger Courier Association of the Americas. The MCAA represents approximately 500 courier companies in the US and abroad. Most of these companies are small businesses and many are multigenerational family owned. In my brief remarks today I hope to tell you a little about the effects of high gas prices on small business owners in the Chicago area and throughout the courier industry.

Courier companies are not glamorous businesses, but we perform a vital role. As the agents for the same-day delivery business we deliver the nation's time critical shipments. We know full well that someone can pay 33 cents to mail a letter across town – or pay FedEx or UPS to deliver it in three days or overnight. But when it has to get there the same day they call us. We deliver critical documents, medical supplies, blood, machine parts, even organs for transplant. We even facilitate same-day cross country shipping.

The courier industry in Chicago and most major cities utilizes, contrary to the view you might get walking the streets of Washington DC, mostly cars, vans and light trucks to undertake deliveries. One of our major costs has always been fuel to keep our fleets in operation. We have always been conscious of gasoline prices and fuel efficiency.

As the Committee knows the rise in gas prices has been the highest and most destructive in the Chicago area. This rise in gas prices is not an abstract concern or a minor annoyance – we feel it every day as we refuel our fleets. This is a problem that not only inconveniences vacationers who have many travel options – it is affecting our businesses in a very real and negative manner.

In Mid-May our drivers fueled the Arrow Messenger fleet of 110 vehicles for $1.77 a gallon up from $1.47 in January. Now we are paying $2.24 or more a gallon in the Chicago area for regular grade gasoline. This increase is costing my business thousands of dollars a month and over $35,000 since January. These figures are duplicated with other businesses throughout the greater Chicago area. We already employ complex dispatching software that allows us to do multiple pick up and deliveries on a single run. If there is a way to cut down on fuel costs and miles traveled we are already using it. Short of refusing to make deliveries there is little we can do to mitigate our fuel usage.

But it is not just couriers, the whole transportation sector in my area of the country has been especially hard hit. For example Chicago has 6,300 taxis and 15,000 drivers who are paying 30% more for gas and working an additional 2-4 hours per day to cover these increases. Multiply what the courier industry is going through by the entire transportation industry and you can see that millions, if not billions, of dollars is being drained out of the economy of the Mid-West. Crain's Chicago Business estimates that the gasoline price shock will cost the local economy 36,000 jobs over the coming year.

Gasoline is one of the largest costs for any courier business. As President of the Messenger Courier Association I have spoken with members from throughout the greater Chicago area. They echo what I know to be a fact – that the increase in gasoline prices is hurting and even disrupting their businesses. Until the gas price shock one of our toughest challenges was finding enough qualified drivers to make all the deliveries that our fast paced economy requires. After 40 years of working in the industry I can tell you

there has never been a more difficult time to hire and retain drivers and we are struggling to keep our vehicles on the road - on top of that companies are having drivers quit on a daily basis rather than pay exorbitant fuel costs.

There has been a variety of responses to this crisis. Many of our companies have added fuel surcharges. This is done on either a percentage basis or a flat fee. Others are simply having to raise their basic rates. Most of the members report that the surcharges don't cover the lost revenue due to the gas price increases. So we have the dilemma of losing money to keep a client in the hopes that gas prices will fall or letting the client go and jeopardizing future business.

I have heard the theories put forth as to why this has happened – OPEC, environmental regulations, price gouging, SUVs – I will leave that up to the economists among us to decide. But I can tell you that the increases have hurt my family owned business and many small and emerging business in the Chicago area and throughout the country. I urge the Committee to continue its investigation into this matter and I strongly support the FTC investigation into price gouging.

The courier industry has faced many challenges over the past 20 years. First the fax machine was going to wipe us out – but we survived and grew, then came e-mail and we grew. Now with the passage of the Electronics Signatures Act we face having to again adapt. The industry as a whole will survive this challenge over higher gas prices as well. What we fear is that many individual good hardworking family run courier companies will be put out of business or greatly disrupted by the gasoline price shocks. And eventually higher costs get passed along to consumers. This is the strongest economy that I have witnessed in my lifetime. Anything that jeopardizes this should be of the very highest concern to the members of Congress and the Administration.

I thank the committee for the opportunity to testify before you today. I would be happy to answer any questions you may have.

TESTIMONY OF
ATTORNEY GENERAL RICHARD BLUMENTHAL
BEFORE THE SENATE COMMITTEE ON GOVERNMENTAL AFFAIRS
JUNE 29, 2000

I appreciate the opportunity to speak before this committee on a critical economic issue facing many citizens across the nation and especially in my state of Connecticut: the shocking increase in oil and gasoline prices during the past year.

Let me say at the outset, we may be rightly accused of concentrating too narrowly on yesterday's calamities. Looming on the fall and winter horizon is tomorrow's crisis is an imminent shortage of home heating oil that will cause devastating price increases when cold weather comes. That crisis is written in the dry numbers of inventory, production and refining of oil products. Soon it will be visible in the faces and voices of homeowners confronting a reprise of last year's outrageous price spikes. This crisis is the elephant in the room that no one wants to acknowledge today.

We should learn from experience, especially our ongoing bouts with price and supply abuses. In Connecticut, gasoline prices have soared an astounding 90% between March of last year and now. Similar increases have been posted throughout the Northeast-MidAtlantic region, costing consumers in this area more than $21 billion on an annual basis, using the Federal Trade Commission figures that each 1% rise in gasoline prices costs consumers $240 million per year.

These numbers have real life consequences. Money spent on food and clothing is now going into the gas tank, families' vacation plans and seniors are paying higher percentages of meager fixed incomes just to reach the grocery store and pharmacy.

Connecticut, like our entire nation, relies primarily on motor vehicles for every day transportation because we do not have a highly concentrated population. Our largest city has only 137,000 people. Quick adaptation to mass transportation alternatives is impracticable even in the time of outrageously high gasoline prices. Rideshare programs, trains and bus transportation are simply not always available.

Connecticut and the rest of the Northeast region now face the whipsaw effect of high gasoline prices after a tough winter of skyrocketing heating oil costs -- wreaking havoc on many unprepared consumers, especially senior citizens who own their own homes. The financial body

blow of $2 per gallon for home heating oil has been followed within months by a second hit of $2 per gallon of gasoline -- now soon to be followed by a third this winter.

Indeed, the financial blows are likely to mount, not merely continue. The Energy Information Administration is predicting high heating oil costs again next year because the industry has failed to boost production adequately to replenish low heating oil inventories. The present focus on gasoline inventories may ironically hamper that replenishment of heating oil stocks. Indeed, both gasoline and residential heating oil stocks ended 1999 at their lowest levels in more than 10 years.

The industry has desperately and deceptively sought to shift the blame. It says the gasoline price spike is due to rising crude oil prices but crude oil prices have risen steadily for many months without generating price spikes in gasoline. It also blames the spike on the costs associated with the production of new reformulated gasoline, but the incremental cost of such measures has been estimated at only 4 cents per gallon and the need for producing such gasoline has been known for more than a year, allowing ample opportunity to allocate the costs over time. The industry also cites the increase demand for gasoline and heating oil as unexpectedly reducing inventories. Yet, in Connecticut, for example, we used the same amount of gasoline in 1999 as in 1992. Nationally, demand has been increasing at a steady, but very moderate rate, hardly a jump justifying the recent price spike. Finally, the industry blames taxes on the high cost of gasoline. In Connecticut, we have seen the highest prices for gasoline since the early 1980's, yet we have reduced our gasoline tax by 7 cents since July, 1997 and will reduce our tax again by 7 cents in the next two days.

The industry omits to mention record profits -- the result of increased revenues derived from the very same high cost of gasoline and heating oil.

Last Friday, I joined many national and state officials in calling for the Federal Trade Commission to expand its inquiry into the rapid rise in gasoline prices in the Midwest to study the price increases nationally. Because the petroleum market is a national one, we need the resources and the expertise of the Federal Trade Commission and the Department of Energy. I also urge the FTC to compare the gasoline pricing policies and experience in highly competitive markets with those policies and experience in more concentrated markets. Such information would be useful in understanding the impact of the recent consolidations within the oil industry on the recent gasoline price spike.

Congress needs to take action on four fronts to adequately address the current intolerable costs of energy:

- Establish minimum levels of gasoline and heating oil inventory
- Raise the antitrust standard for approving oil industry mergers
- Prohibit the industry practice of zone pricing
- Reduce dependence on gasoline and home heating oil

I. Establish minimum levels of gasoline and heating oil inventory

The Energy Information Administration cites as one of the prime causes of the recent gasoline price spikes the low levels of gasoline stocks in the United States. Lower supply and only slightly increased demand have caused drastic increases in price. In its most recent survey, the EIA found nationwide that gasoline stocks remain at low levels, averaging almost 20 million barrels less than last year, or approximately 10% lower inventory in 2000 than in 1999. In New England, the decline in available gasoline stocks has been even more dramatic: In April, available gasoline stocks were 34% below those existing at the same time in the previous year, while in May, available gasoline stocks were 30% lower. Clearly, the industry purposefully and intentionally reduced product inventory. There are lower gasoline supplies and higher prices but refinery profit margins are nearly three times those in 1999. While the industry profits handsomely from this self-serving reduction of inventories, the consumer is the one who pays and loses.

This phenomenon is hardly novel. In January, heating oil prices doubled to a record level of $2 per gallon, so that a person receiving a 200 gallon delivery faced a $400 bill to heat a home for about 4-6 weeks. Even worse, in some areas of Connecticut, there was simply no heating oil for delivery. East Coast refineries operated at 85% capacity during the winter of 1999, drawing down on inventories instead of adding to them for the approaching winter. Contrary to past years, inventories were not increased during the early winter season.

While the underlying cost of oil has been increasing, the dramatic spikes in gasoline and heating oil have been due to industry decision-making that has reduced available inventory during the winter season. This industry practice may lead to a devastating dearth of gasoline or heating oil especially when unexpected events occur such as sudden drop in temperatures, a pipeline break or a refinery fire.

Just-in-time inventory practices have been used successfully in other industries to reduce costs. But, there is a significant, indeed vital, difference between gasoline or heating oil and other goods such as toys or clothing in applying just-in time management techniques. With many other products, if the manufacturer is wrong, the consumer either does without the product,

pays a higher price or switches to a competitor. In gasoline and heating oil, the consumer almost always pays a drastically higher price for the product, with a significant windfall to the highly concentrated industry.

Gasoline and heating oil are the lifeblood of our economy and an essential life-line for many consumers. Inventory decisions cannot be left solely to an industry whose only focus is the bottom line. A recent statement by the head of the American Petroleum Institute boasts that "U.S. refiners and distributors reliably provide Americans with the fuels they need to get where they need to go, helping them earn a living and improving the quality of their lives." This industry recognizes the vital nature of its products but is willing to gamble the fate of consumers on a risky low inventory system.

I applaud the leadership and vision of Senators Joe Lieberman and Chris Dodd in calling for the establishment of a regional strategic petroleum reserve. Clearly, the facts demonstrate the need for the federal government to ensure adequate supplies of heating oil and gasoline.

Since the establishment of a regional strategic petroleum reserve could be expensive and time consuming to implement, Congress should also consider establishing a minimum inventory maintenance requirement. Mandating that oil companies keep a certain amount of product available would ensure that consumers are shielded from destructive price spikes and guard against shortages in supply. Such minimum requirements could be facilitated through tax credits, direct payments or other methods of ensuring or encouraging compliance with the minimum standard.

Currently, states require banks and insurance companies to maintain minimum reserves to pay consumer insurance claims and customer requests for withdrawal of funds from bank accounts. Similarly, minimum inventory requirements for heating oil and gasoline should be considered. If the industry will not guarantee sufficient supplies, then government is justified in doing so. Currently, the industry rewards rather than punishes companies that maintain minimal inventories of heating oil and gasoline.

II. Increase the standard for approving consolidation within the oil industry

Mergers have swept the oil industry -- prompting the Federal Trade Commission, Attorneys General like myself and other antitrust officials, to express strong alarm about the harm to consumers. Recent examples include: Mobil-Exxon, British Petroleum-Amoco; BP/Amoco-ARCO; Motiva (joint venture of Texaco/Shell/Saudi Aramco); Marathon-Ashland

refining; Tosco's acquisition of Unocal's refining business; a series of acquisitions by Ultramar/Diamond Shamrock.

We are right to be alarmed. The Mobil-Exxon merger, had it been approved as proposed, would have enabled the top four gasoline companies to control 73% of the market in half the metropolitan areas in the Northeast-MidAtlantic region. I appreciated the FTC's effort to reduce the anti-competitive impact of the transaction. On balance, as I advocated then, I believe consumers would have been better served by disapproving the deal even as modified.

In the retail area, one result is the power to engage in abuses such as zone pricing.

So too, in the refinery and production segments of the oil industry, the FTC has reviewed mergers that have concentrated market power in the hands of fewer players. There is vastly diminished competition on price and supply.

The merger trend has produced a cartel culture, with innovative companies less likely to buck the industry trend. Refiners and producers can reduce product levels, causing widespread supply shortages and higher prices, with confidence that there is no other company that will raise inventories and reap a significant financial reward.

A prominent business news source indicates that refining margins will reach their highest levels in 3 years, and will likely stay high through this year. The profit results are astounding: Ultramar 1st quarter, 2000, profits more than quadrupled; Chevron 4th quarter, up 63%; Arco 1st quarter, up 238%; Tosco 4th quarter, up 11%; Exxon-Mobil year end, up 34%.

The Federal Trade Commission and Congress should send a message that further consolidations within the oil industry will face a presumption of nonapproval in light of the desperate need for more competition. New rules should create a presumption that any merger in the oil industry will be rejected unless the oil companies can prove with clear and convincing evidence that consumers will benefit from the merger or acquisition and that tangible, specific steps will be taken to assure that consumers see better prices and services.

III. Zone pricing should be prohibited

Heightened scrutiny of oil industry mergers will take some time to bring relief to consumers through increased competition. One immediate step could bring some minor reductions in the price of gasoline to consumers: ban the practice of zone pricing.

I have already testified on zone pricing before the House Committee on Judiciary on April 7, 2000 and I have attached that testimony for the Committee's reference. I will not go into great detail on zone pricing before this committee but I would emphasize the importance of prohibiting this pernicious pricing practice.

Zone pricing is a mechanism used in almost every state where the major oil companies artificially create geographic areas for purposes of charging different prices for gasoline to dealers within the zone. Mobil has established 46 zones in a small state like Connecticut.

The power of the major oil companies to charge inflated, excessive, arbitrary prices results from gasoline dealer franchise agreements dictating that the gasoline dealers are required to purchase products from a single supplier. As a result of such sole source provisions, gasoline dealers are powerless to seek or shop for a cheaper supply of gasoline. Hence, consumers in the higher price zones pay a higher retail price -- in Connecticut, up to six cents per gallon.

Zone pricing is invisible and insidious. It distorts the free market. It is possible only because of restrictive contracts that include sole source provisions. It benefits only the oil industry, to the detriment of consumers.

I urge this committee to consider legislation to specifically ban the practice of zone pricing either as a separate law, an amendment to the antitrust price discrimination statute (Robinson-Patman Act) or an amendment to the Petroleum Marketing Practices Act. I have suggested legislative language contained in my testimony before the House Committee on Judiciary.

4. Reduce dependence on gasoline and heating oil

In addition to the steps suggested in this testimony to make the oil industry more competitive and pro-consumer, Congress should take the historic opportunity to aggressively pursue policies designed to lessen American dependence on OPEC and other foreign sources of oil.

First, mass transportation should be encouraged. Safe, clean and convenient mass transportation would be used by many citizens. I encourage you to discuss solutions with local and state officials. They live with the day to day problems of traffic and pollution. They will

know what will work for their communities.

Second, cars need to be made more efficient. Increasing the efficiency of cars and light trucks from 27 miles per gallon to 45 miles per gallon would save 237 billion gallons of gasoline over a 5 year period.

Finally, we need to increase our commitment of resources to develop alternative fuels and energy efficient technologies. During these good economic times, we should invest in programs that have long-term benefits.

Thank you for allowing me to address the committee on this most critical topic.

TESTIMONY BY

J. LOUIS FRANK, PRESIDENT

MARATHON ASHLAND PETROLEUM LLC

THE COMMITTEE ON GOVERNMENTAL AFFAIRS

UNITED STATES SENATE

HEARING ON

OVERSIGHT OF RISING PRICES AND THE EFFICIENCY AND EFFECTIVENESS OF

EXECUTIVE BRANCH RESPONSE - PART II

WASHINGTON, DC

JUNE 29, 2000

GOOD AFTERNOON. I'M J. LOUIS FRANK, PRESIDENT OF MARATHON ASHLAND PETROLEUM LLC, A COMPANY THAT MAKES AND MARKETS MOST OF ITS PRODUCTS IN THE MIDWEST.

I WELCOME THIS OPPORTUNITY TO DISCUSS THE GASOLINE MARKET CONDITIONS WE HAVE JUST EXPERIENCED IN OUR PART OF THE COUNTRY AND I LOOK FORWARD TO ANSWERING ANY QUESTIONS YOU OR OTHER MEMBERS OF THE COMMITTEE MIGHT HAVE.

LET ME START BY SAYING THAT A VERY COMPETITIVE GASOLINE MARKET ULTIMATELY DETERMINES THE PRICE OF GASOLINE. WORLDWIDE, CRUDE OIL PRICES HAVE RISEN RAPIDLY AND SUBSTANTIALLY. REFINERS HAVE EXPERIENCED SEVERE INCREASES IN THE COST OF RAW MATERIAL OVER A RELATIVELY SHORT PERIOD OF TIME. WITH THIS BACKDROP OF RISING CRUDE COSTS, A SERIES OF PIPELINE DISRUPTIONS AND OTHER CIRCUMSTANCES CREATED A SUPPLY AND DEMAND IMBALANCE IN THE MIDWEST.

WHEN THERE IS A SUPPLY SHORTAGE IN A COMPETITIVE MARKET, PRICES TEND TO RISE TO WHATEVER LEVEL IS NECESSARY TO BALANCE DEMAND WITH SUPPLY. WHEN SUPPLIES RETURN TO MORE NORMAL LEVELS, PRICES TEND TO RETURN TO LOWER LEVELS. THIS IS A MATTER OF SIMPLE ECONOMICS IN A MARKET ECONOMY. JUST SUCH AN IMBALANCE OF SUPPLY AND DEMAND OCCURRED IN THE MIDWEST OVER THE PAST FEW WEEKS, AND THAT IS THE REASON THAT PRICES IN THE AREA SURGED. LET ME EXPLAIN.

REFINERIES IN THE MIDWEST CAN SUPPLY ONLY ABOUT 75% OF THE REGION'S DEMAND. THE BALANCE, ABOUT 1 MILLION BARRELS (OR 42 MILLION GALLONS) PER DAY, MUST BE TRANSPORTED INTO THE REGION. A VERY SMALL AMOUNT IS SHIPPED IN BY TRUCK FROM NEIGHBORING STATES, BUT THE VAST MAJORITY OF THIS PRODUCT COMES IN FROM THE GULF COAST BY BARGE OR BY ONE OF TWO LARGE PIPELINE SYSTEMS. (SEE ATTACHED EXHIBIT TITLED "REGIONAL FUELS PROGRAM.") RECENT EVENTS IN THE MIDWEST ILLUSTRATE THE FRAGILE NATURE OF REFINING AND PRODUCTS DISTRIBUTION IN THE MIDWEST. A SIGNIFICANT PROBLEM AT A REFINERY OR IN THE TRANSPORTATION SYSTEM CAN CREATE A SHORTFALL OF SUPPLY, AND WHEN THIS HAPPENS THE SYSTEM HAS LITTLE OR NO CAPACITY TO PLAY CATCH UP.

IN MARCH, ONE OF THESE CRITICAL PIPELINE SYSTEMS, THE EXPLORER PIPELINE, EXPERIENCED A LINE FAILURE FOLLOWED BY A SIX-DAY OUTAGE, WHICH RESULTED IN A SHORTFALL OF ABOUT 8 MILLION BARRELS (OR 336 MILLION GALLONS) OF PRODUCTS TO THE MIDWEST. EXPLORER WAS REPAIRED AND RETURNED TO SERVICE, BUT PART OF THE SYSTEM MUST OPERATE AT A REDUCED CAPACITY PENDING COMPLETION OF CERTAIN SAFETY TESTS. AS A RESULT, THE REGION CONTINUES TO SUFFER A SHORTFALL OF UP TO 50 THOUSAND BARRELS (OR 2.1 MILLION GALLONS) PER DAY OF PIPELINE DELIVERIES.

MORE RECENTLY, WOLVERINE PIPELINE, WHICH CARRIES ABOUT 34% OF MICHIGAN'S PETROLEUM NEEDS FROM CHICAGO, ALSO EXPERIENCED A

RELEASE THAT RESULTED IN A NINE-DAY INTERRUPTION OF SUPPLY TO THAT AREA. THAT PIPELINE SYSTEM HAS SINCE RETURNED TO SERVICE, BUT IT TOO IS RUNNING AT REDUCED CAPACITY.

ANOTHER FACTOR THAT CONTRIBUTED TO THIS SUPPLY-DEMAND IMBALANCE IN THE MIDWEST WAS THE NEW PHASE II REFORMULATED GASOLINE (RFG) REQUIREMENTS WHICH BECAME EFFECTIVE JUNE 1. PHASE II RFG FOR THE CHICAGO AND MILWAUKEE MARKETS IS ONE OF A NUMBER OF UNIQUE FUELS THAT MARATHON ASHLAND PETROLEUM MUST MAKE FOR DIFFERENT PARTS OF THE COUNTRY. (SEE ATTACHED EXHIBIT TITLED "REGIONAL FUELS PROGRAM.") THIS GASOLINE IS MORE DIFFICULT TO MAKE THAN THE PREVIOUS FORMULATION. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) REGULATIONS REQUIRED US TO VIRTUALLY DRAIN OUR TANKS OF WINTER-GRADE PRODUCT BEFORE WE COULD ACCEPT DELIVERIES OF THE LOW-VAPOR PRESSURE SUMMER GRADE OF THIS GASOLINE IN MARCH AND APRIL. WE HAD TO BEGIN BUILDING INVENTORIES OF THIS NEW GASOLINE FROM GROUND ZERO AT ALMOST EXACTLY THE TIME AS THE SUPPLY DISRUPTIONS WITH EXPLORER WERE UNFOLDING. IN ADDITION, CONCERNS WITH UNOCAL'S GASOLINE PATENTS MAY HAVE CONSTRAINED PRODUCTION OF PHASE II RFG.

IF THESE SUPPLY ISSUES WERE NOT ENOUGH, EPA'S DECISION TO GRANT THREE WAIVERS FROM THE RFG REQUIREMENTS FOR THE ST. LOUIS AREA WITHOUT ANY SORT OF PENALTY BECAME THE STRAW THAT BROKE THE CAMEL'S BACK. IN A LETTER DATED MAY 18, 2000, DESCRIBING ONE OF

THESE WAIVERS, THE EPA ACKNOWLEDGED THE SHORTAGE OF RFG IN THE ST. LOUIS AREA, CITING THE EXPLORER OUTAGE, AND ENCOURAGED MARKETERS IN THAT AREA TO BUILD UP THEIR INVENTORIES OF RFG WHILE DISTRIBUTING CONVENTIONAL GASOLINE IN THE MARKET. THE RESULT WAS PREDICTABLE.

CONVENTIONAL GASOLINE THAT WAS ORIGINALLY DESTINED FOR THE CHICAGO AND MILWAUKEE AREAS WAS IMMEDIATELY DIVERTED TO ST. LOUIS. THIS CONTRIBUTED TO CONVENTIONAL GASOLINE SHORTAGES THAT IN TURN LED TO SEVERE PRICE INCREASES FOR THOSE PRODUCTS IN THE CHICAGO AND MILWAUKEE MARKETS. THESE SHORTAGES AND PRICE INCREASES EVENTUALLY SPREAD TO OTHER PARTS OF THE MIDWEST. (SEE ATTACHED EXHIBIT TITLED "CHICAGO MARKET WHOLESALE GASOLINE PRICES.")

WHAT DID MY COMPANY DO IN RESPONSE TO THE GASOLINE SUPPLY AND DEMAND IMBALANCES IN THE MIDWEST?

WE CONTINUED TO MANAGE OUR EXISTING GASOLINE SUPPLIES AS PRUDENTLY AS WE KNEW HOW, AND WE TOOK IMMEDIATE AND EXTRAORDINARY STEPS TO BRING ADDITIONAL SUPPLIES INTO THE MIDWEST. IN FACT, WE HAVE SUPPLIED ABOUT 10% MORE GASOLINE TO THE MIDWEST THIS YEAR THAN LAST YEAR. TO DO THIS WE RAN OUR REFINERIES AT FULL CAPACITY, AND, BECAUSE PIPELINES WERE NOT AVAILABLE, WE UTILIZED HIGHER COST TRUCKING AND BARGES TO BRING

PRODUCT IN FROM OTHER AREAS. WE CONTRACTED TO SHIP GASOLINE IN FROM AS FAR AWAY AS NEWFOUNDLAND, CANADA.

WHAT COULD BE DONE TO IMPROVE THE MIDWEST SUPPLY SITUATION IN THE SHORT RUN?

WHILE MIDWEST INVENTORIES ARE SLOWLY BUILDING AND PRICES APPEAR TO BE DROPPING, THE SUPPLY SITUATION IS STILL QUITE TENUOUS. ANY FURTHER PIPELINE OR REFINERY PROBLEMS COULD CAUSE THE SUPPLY SHORTAGE TO RECUR. AT THEIR REQUEST, MARATHON ASHLAND PETROLEUM SUBMITTED TO THE EPA AND UNITED STATES DEPARTMENT OF ENERGY (DOE) A LIST OF MEASURES THAT GOVERNMENT COULD TAKE TO PROVIDE SOME SHORT-TERM RELIEF TO THE MIDWEST.

AT THE TOP OF THIS LIST IS THE RECOMMENDATION THAT THE UNITED STATES DEPARTMENT OF TRANSPORTATION (DOT) TAKE WHATEVER STEPS ARE NECESSARY TO GET EXPLORER AND WOLVERINE SAFELY RUNNING AT FULL CAPACITY AS SOON AS POSSIBLE. WE ALSO RECOMMEND THAT DOT GRANT RELIEF ON DRIVER HOUR RESTRICTIONS FOR TRANSPORT DRIVERS IN THE MIDWEST AND THAT THE LARGER TRUCKS USED IN MICHIGAN BE ALLOWED IN OTHER MIDWEST STATES. TEMPORARY REMOVAL OF TERMINAL VAPOR RECOVERY UNITS LIMITS AND TANK OPERATING RESTRICTIONS WILL BE OF HELP IN CERTAIN LOCATIONS. A COMPLETE LIST CAN BE FOUND IN THE ATTACHED COPY OF MARATHON ASHLAND PETROLEUM'S LETTER TO EPA AND DOE.

MY COMPANY IS CURRENTLY WORKING ON SEVERAL LONGER-TERM INFRASTRUCTURE PROJECTS THAT COULD HELP EASE SITUATIONS LIKE THE ONE WE JUST EXPERIENCED. WE'RE SEEKING RIGHTS OF WAY AND PERMITS TO CONSTRUCT A NEW REFINED PETROLEUM PRODUCTS PIPELINE TO SERVE THE GROWING CENTRAL OHIO MARKET, BUT OUR PROGRESS HAS BEEN HAMPERED DUE TO RIGHT-OF-WAY LITIGATION. WE'VE ALSO JOINED TWO OTHER COMPANIES TO CONVERT A NATURAL GAS PIPELINE INTO A NEW PRODUCTS PIPELINE FROM THE GULF COAST TO THE MIDWEST, INCLUDING THE CHICAGO AREA. FEDERAL AND STATE GOVERNMENTS COULD HELP BY EXPEDITING THE PERMITTING PROCESS FOR THESE SIGNIFICANT PROJECTS AS WELL AS OTHERS OUR COMPANY HAS PLANNED, AND BY RETHINKING THE DEMANDS ON PETROLEUM REFINING AND MARKETING POSED BY NEW FUELS REGULATIONS.

IT IS OFTEN MENTIONED THAT THE UNITED STATES DOES NOT HAVE A COHESIVE NATIONAL ENERGY POLICY -- ONE THAT WOULD RECOGNIZE THE IMPORTANCE OF AMPLE, AFFORDABLE AND CLEAN ENERGY FOR THE NATION. SUCH A PLAN WOULD ENCOURAGE A VIABLE AND VITAL DOMESTIC PETROLEUM INDUSTRY—BOTH UPSTREAM AND DOWNSTREAM. IT WOULD ALSO EMPHASIZE THE NEED TO INCREASE THE ENERGY INDEPENDENCE OF THE UNITED STATES. IDEALLY IT WOULD THEN PROVIDE OUR CITIZENS SUFFICIENT ENERGY AT A COST THAT WILL SUSTAIN OUR ECONOMIC GROWTH IN AN ENVIRONMENTALLY RESPONSIBLE MANNER.

SIGNIFICANT COMPONENTS OF A COMPREHENSIVE NATIONAL ENERGY POLICY WOULD INCLUDE THE FOLLOWING FEATURES:

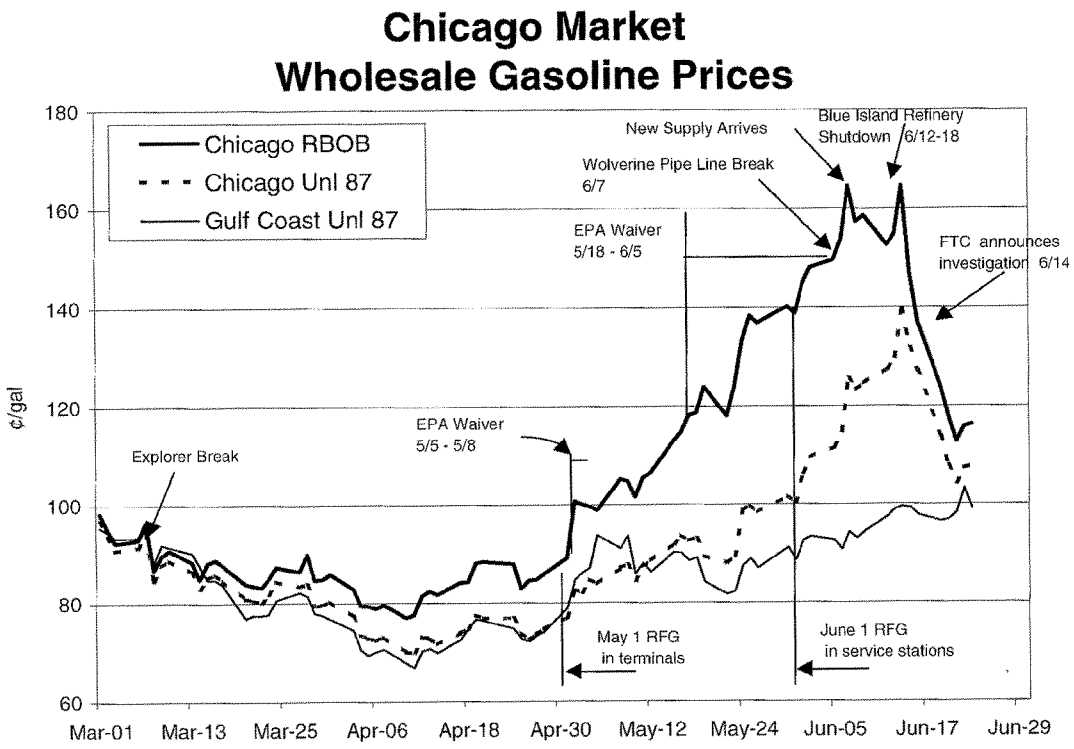
- ENCOURAGE INCREASED CRUDE OIL PRODUCTION FROM MARGINAL WELLS—THOSE THAT PRODUCE LESS THAN 10 BARRELS PER DAY.
- OPEN FEDERAL LANDS FOR ENVIRONMENTALLY RESPONSIBLE EXPLORATORY DRILLING FOR CRUDE OIL.
- OPEN OFFSHORE AREAS FOR DRILLING IN DEEP WATERS.
- RECOGNIZE THE NEED FOR STRENGTHENING THE DOWNSTREAM INFRASTRUCTURE OF THE DOMESTIC PETROLEUM INDUSTRY—THE SECTOR THAT INCLUDES REFINING, PIPELINING, TERMINALING AND MARKETING.

IN CLOSING, LET ME SAY THAT I AM VERY PROUD OF THE WAY MARATHON ASHLAND PETROLEUM RESPONDED TO THIS SITUATION AND, ON BEHALF OF THE 28,000 EMPLOYEES OF MY COMPANY, I AM SINCERELY AND PROFOUNDLY OFFENDED BY ANY ALLEGATION OR INSINUATION THAT WE HAVE ENGAGED IN EITHER PRICE GOUGING OR COLLUSION WITH OUR COMPETITORS.

AND I AM EQUALLY OFFENDED BY ASSERTIONS THAT PRICES HAVE COME DOWN IN RESPONSE TO CALLS FOR AN FTC INVESTIGATION. AS I SAID IN MY OPENING REMARKS, THE GASOLINE MARKET IS HIGHLY COMPETITIVE AND THE MARKET ULTIMATELY DETERMINES THE PRICE OF GASOLINE. PRICES IN THE MIDWEST WENT UP IN RESPONSE TO A

SUPPLY/DEMAND IMBALANCE AND THEY HAVE RESPONDED AS ADDITIONAL SUPPLIES BECAME AVAILABLE IN THE MARKET. IT IS A MATTER OF SIMPLE ECONOMICS. HOWEVER, THE SYSTEM IS FRAGILE AND ANY SIGNIFICANT DISRUPTION IN A REFINERY OR IN THE DISTRIBUTION SYSTEM COULD RESULT IN ANOTHER SUPPLY-DEMAND IMBALANCE IN THE MIDWEST.

AGAIN, I APPRECIATE THIS OPPORTUNITY TO APPEAR BEFORE THIS COMMITTEE, AND I LOOK FORWARD TO ANSWERING ANY QUESTIONS YOU OR OTHER MEMBERS OF THE COMMITTEE MAY HAVE.


Chicago Market
Wholesale Gasoline Prices
Chicago RBOB
Chicago Unl 87
Gulf Coast Unl 87
¢/gal
180
160
140
120
100
80
60
Mar-01
Mar-13
Mar-25
Apr-06
Apr-18
Apr-30
May-12
May-24
Jun-05
Jun-17
Jun-29
Explorer Break
EPA Waiver
5/5 - 5/8
EPA Waiver
5/18 - 6/5
Wolverine Pipe Line Break
6/7
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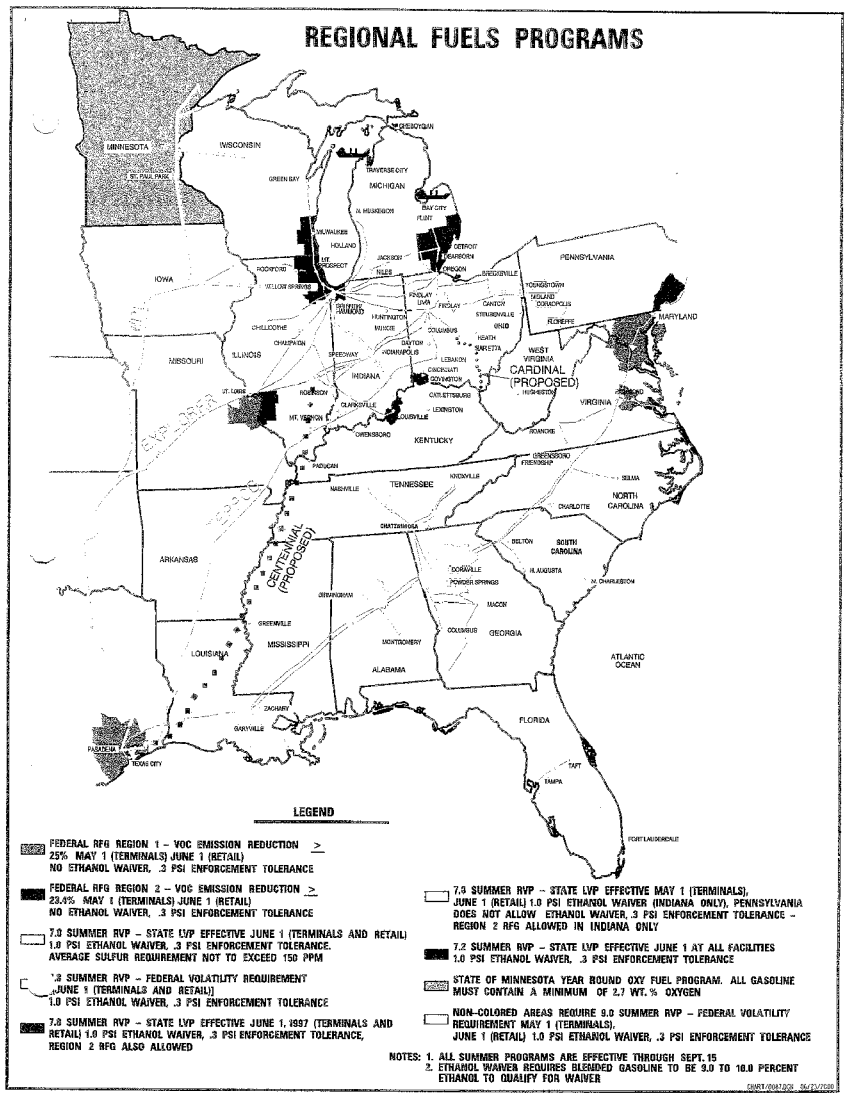
Blue Island Refinery
Shutdown 6/12-18
FTC announces
investigation 6/14
May 1 RFG
in terminals
June 1 RFG
in service stations


REGIONAL FUELS PROGRAMS
MINNESOTA
WISCONSIN
MICHIGAN
IOWA
ILLINOIS
MISSOURI
INDIANA
KENTUCKY
TENNESSEE
ARKANSAS
LOUISIANA
MISSISSIPPI
ALABAMA
GEORGIA
FLORIDA
SOUTH CAROLINA
NORTH CAROLINA
VIRGINIA
WEST VIRGINIA
PENNSYLVANIA
MARYLAND
ATLANTIC OCEAN
EXPLORER
PIPELINE
CENTENNIAL (PROPOSED)
CARDINAL (PROPOSED)
LEGEND
FEDERAL RFG REGION 1 – VOC EMISSION REDUCTION >= 25% MAY 1 (TERMINALS) JUNE 1 (RETAIL) NO ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE
FEDERAL RFG REGION 2 – VOC EMISSION REDUCTION >= 23.4% MAY 1 (TERMINALS) JUNE 1 (RETAIL) NO ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE
7.0 SUMMER RVP – STATE LVP EFFECTIVE JUNE 1 (TERMINALS AND RETAIL) 1.0 PSI ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE. AVERAGE SULFUR REQUIREMENT NOT TO EXCEED 150 PPM
7.8 SUMMER RVP – FEDERAL VOLATILITY REQUIREMENT (JUNE 1 (TERMINALS AND RETAIL)) 1.0 PSI ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE
7.8 SUMMER RVP – STATE LVP EFFECTIVE JUNE 1, 1997 (TERMINALS AND RETAIL) 1.0 PSI ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE, REGION 2 RFG ALSO ALLOWED
7.8 SUMMER RVP – STATE LVP EFFECTIVE MAY 1 (TERMINALS), JUNE 1 (RETAIL) 1.0 PSI ETHANOL WAIVER (INDIANA ONLY), PENNSYLVANIA DOES NOT ALLOW ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE – REGION 2 RFG ALLOWED IN INDIANA ONLY
7.2 SUMMER RVP – STATE LVP EFFECTIVE JUNE 1 AT ALL FACILITIES 1.0 PSI ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE
STATE OF MINNESOTA YEAR ROUND OXY FUEL PROGRAM. ALL GASOLINE MUST CONTAIN A MINIMUM OF 2.7 WT. % OXYGEN
NON-COLORED AREAS REQUIRE 9.0 SUMMER RVP – FEDERAL VOLATILITY REQUIREMENT MAY 1 (TERMINALS), JUNE 1 (RETAIL) 1.0 PSI ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE
NOTES: 1. ALL SUMMER PROGRAMS ARE EFFECTIVE THROUGH SEPT. 15
2. ETHANOL WAIVER REQUIRES BLENDED GASOLINE TO BE 9.0 TO 10.0 PERCENT ETHANOL TO QUALIFY FOR WAIVER

J.L. Frank
President

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Telephone 419/422-2121

June 13, 2000

VIA FAX: 202/564-1686

Robert Perciasepe
Assistant Administrator
Office of Air and Radiation
Environmental Protection Agency

VIA FAX: 202/586-0148

Melanie Kenderdine
Acting Director
Office of Policy
Department of Energy

Dear Ms. Kenderdine and Mr. Perciasepe:

Subject: Recommendations for Actions for Shorter-Term Relief of Midwest RFG-Conventional Gasoline Price Spread

In our meeting on Monday, June 12, you requested our recommendations for actions the federal government might take to relieve the current price differential between RFG and conventional gasolines in the Chicago and Milwaukee areas. We don't like these sorts of situations either. They are not good for us or our customers. Recent evidence seems to indicate that the price differentials between RFG and conventional gasolines is beginning to narrow in these areas. For example, the differential between RFG and conventional in the Chicago spot market has narrowed by a total of thirteen cents since June 9th, including an additional seven cents today.

We have already explained that Marathon Ashland is selling approximately 20% more product in these areas than last year, and that there is no "magic bullet" that will bring instant relief. We have also explained that a waiver of the RFG requirement would not solve the problem and that such a waiver without an appropriate penalty and enforcement mechanism could actually make the situation in the Midwest worse. Such a waiver would only serve to further undermine the credibility of the clean fuels program and add to the atmosphere of uncertainty that industry already faces with respect to clean fuels investments.

While we do not believe a waiver is needed, if you do grant a waiver, the most effective way to do so would be to grant a temporary waiver, with an appropriate penalty and enforcement mechanism, for the sale of Tier I RFG in Milwaukee and Chicago in lieu of Tier II RFG.

There are some things that the federal government could do, many of them in partnership with industry or state government, to improve the current situation in the shorter term. The actions that we recommend, giving paramount consideration to safety concerns, are as follows:

1. Expedite an increase in Explorer Pipeline operating pressure. Explorer Pipeline is currently at reduced pressure under DOT order.

2. Grant relief on DOT driver-hour restrictions for transport truck drivers operating in Ohio, Indiana, Illinois, Wisconsin and Michigan.

3. Grant relief in Ohio and Indiana to use the larger and heavier trucks currently utilized in Michigan.

4. Expedite the restart of Wolverine Pipeline and its return to full operating pressure.

5. Grant relief on restrictions of foreign flag vessels to deliver product to the U.S. on the Great Lakes.

6. Attempt to arrange some short-term relief on patent license fees with Unocal to take some of the uncertainty out of the RFG market.

7. Allow temporary exceedances without penalties at terminal vapor recovery units that are at or near capacity because of heavy throughput volumes due to market dislocations.

8. Grant terminal operators flexibility to operate tanks with floating roofs below normal operating minimums so greater tank volumes than are currently available can be distributed within the market.

9. Consider utilization of military transport trucks and other assets to provide additional transportation of motor fuels within the affected areas.

None of these actions individually is likely to create a rapid price response, but collectively they will add to the industry's ability to get product to the market and move product where it is needed within the market.

Although your current focus is on shorter-term solutions, we must take this opportunity to restate our concern that the situation you see now in the Chicago and Milwaukee markets will be repeated next year and will spread to other parts of the country:

1. A phase down of MTBE use with an oxygenate or renewable fuels mandate will cause similar problems in other RFG markets. We urge that your agencies support elimination of the oxygenate mandate and that you not support a renewable fuels mandate that would restrain our ability to provide adequate product supplies and distribute them efficiently.

2. The low sulfur diesel regulations now under consideration will strain the U.S. refining and logistics system to the breaking point. This could cause nationwide price and supply problems for on-road diesel. A phase-in of low-sulfur diesel would make this situation even worse. We urge you to reconsider the extremely low sulfur requirements that the proposed regulations would mandate.

3. Marathon Ashland is directly or indirectly involved in three major pipeline projects that could significantly increase the industry's ability to move products into the Midwest. Government action to expedite these projects could prevent a repeat of this year's supply difficulties:

   a. Wolverine Pipeline is currently in the process of obtaining rights of way and permits for a 16" pipeline from Jackson, Michigan, to Stockbridge, Michigan, and a 12" line from Stockbridge to La Paugh, Michigan. Government could expedite the permitting process for this project, including related tank construction.

   b. Centennial Pipeline, of which Marathon Ashland is a one-third owner, is currently trying to obtain FERC abandonment of a CMS Energy 26" pipeline from natural gas service. This pipeline will be converted from natural gas to products service from the Gulf Coast to the Midwest, including the Chicago market. The government could expedite this process. The government could also expedite the environmental assessment and permitting processes for this very significant project. An Environmental Assessment was submitted in 1999 and the governmental review process was nearly completed, but the assessment was withdrawn so CMS could enter into a joint venture to develop the products pipeline. Expediting the review process could accelerate this project by six months or more.

   c. Marathon Ashland is in the process of obtaining rights of way and construction and environmental permits for a new products pipeline from its Catlettsburg, Kentucky, Refinery to Columbus, Ohio, serving the Central Ohio market. Government could expedite this permitting process.

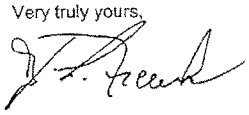
4. Government should take action to prevent private companies from obtaining patents on fuel blends that are mandated by fuels regulations. License fees on such patents amount to private "excise taxes" that only add to the price of cleaner fuels and further restrict market efficiency.

Finally, we take serious issue with the statements by government officials at the highest levels that we are engaged in either price gouging or collusion with our competitors or customers. We want to go on record as stating that we absolutely and unequivocally deny that we have engaged or are engaging in either price-gouging or collusion. We do not fear the outcome of an investigation into our behavior, but we think that such an investigation would not be a productive use of resources. We are producing and shipping to the Chicago and Milwaukee areas as much RFG and reformulated gasoline as we can. We are taking extraordinary actions to supply our regular customers as well as the rest of the market.

Governmental accusations of price gouging or collusion only inflame what is already a volatile situation and, in fact, put more pressure on government to take action "against" the refiners and others that are supplying this market. This sort of rhetoric is totally counterproductive.

We would be happy to provide you with more details on any of the recommendations mentioned above. We would also be happy to meet with you or other governmental officials at any time to give you our viewpoint on this highly dynamic situation.

Very truly yours,



JLF/ab
cc: (Via Fax and Overnight Mail)

The Honorable Carol M. Browner
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, NW/1101A
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1000 Independence Avenue, SW
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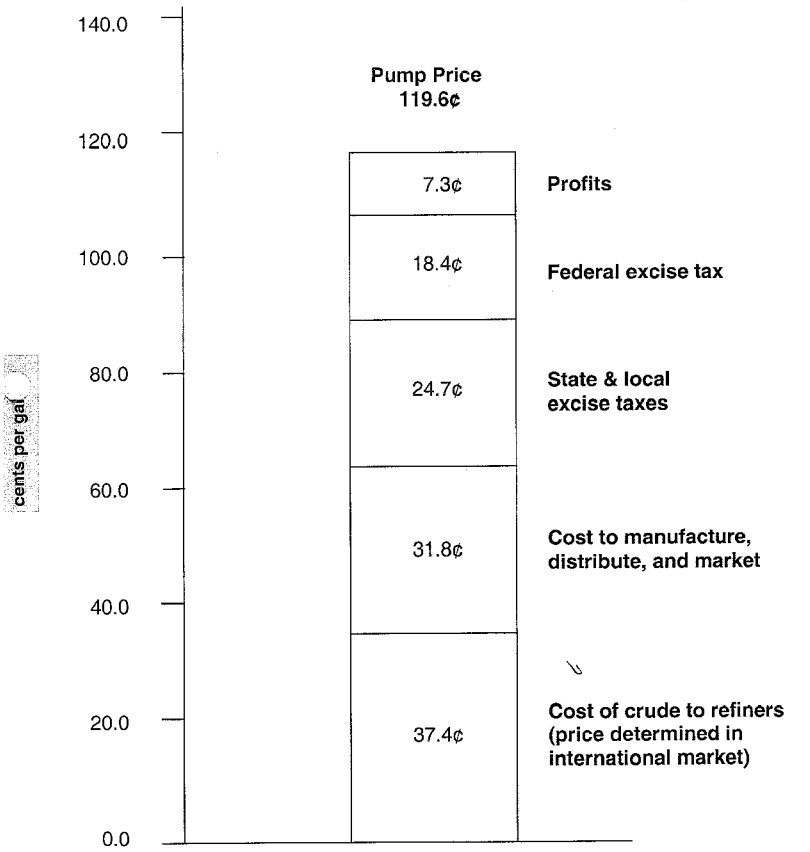
{122059.DOC 2}

The Honorable W. Michael McCabe
Deputy Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, NW/1101A
Washington, DC 20460

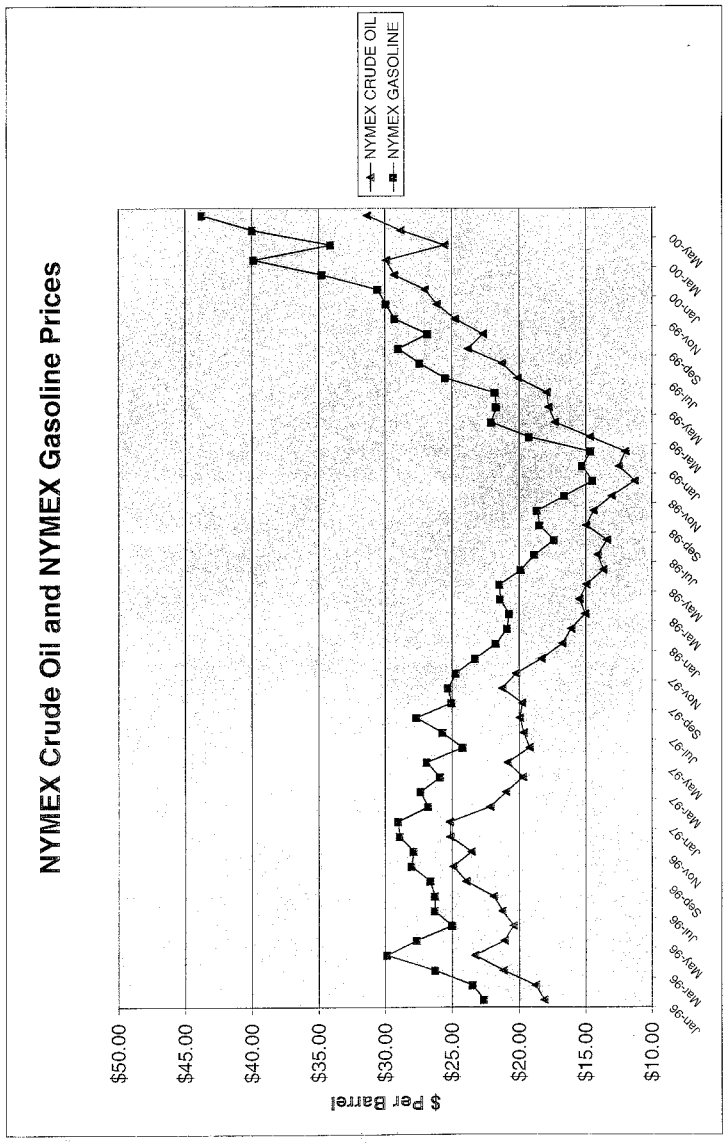
FAX: 202/501-1470

Patricia M. Richards, USX Corporation

Components of the Pump Price of Gasoline
(average for period January 1997 – September 1999)



Source: API Consumer Information Report: *Profits Are a Small Part of the Pump Price for Gasoline* 4/19/00


NYMEX Crude Oil and NYMEX Gasoline Prices
NYMEX CRUDE OIL
NYMEX GASOLINE
$ Per Barrel
$50.00
$45.00
$40.00
$35.00
$30.00
$25.00
$20.00
$15.00
$10.00
Jan-96
Mar-96
May-96
Jul-96
Sep-96
Nov-96
Jan-97
Mar-97
May-97
Jul-97
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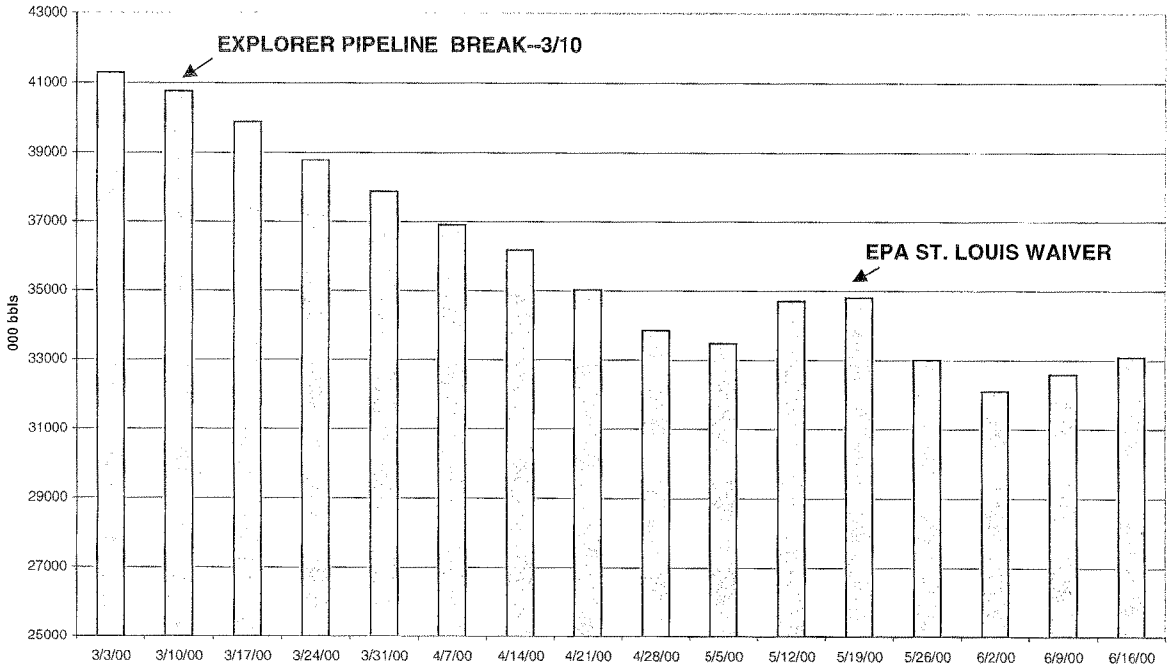
PADD2 CONVENTIONAL GASOLINE INVENTORIES



J.L. Frank
President

MARATHON ASHLAND Petroleum LLC

539 South Main Street
Findlay, OH 45840-3295
Telephone 419/422-2121

July 13, 2000

The Honorable George V. Voinovich
Chairman
Senate Subcommittee on Oversight of Government Management,
Restructuring, and the District of Columbia
601 Hart Senate Office Building
Washington, DC 20510

Dear Mr. Chairman:

Thank you for the opportunity to address the full Governmental Affairs Committee during your hearing on the "Oversight of Rising Prices and the Efficiency and Effectiveness of the Executive Branch Response" on June 29, 2000. It was my pleasure to represent Marathon Ashland Petroleum (MAP) and to have the opportunity to describe our efforts to meet the transportation fuel needs of our customers.

While testifying, I was asked the following question: "What can the Administration do in regard to the transportation fuels crisis?" I have summarized below what we view as the most significant areas of concern and have provided recommendations which we believe will best enable our industry to prospectively avoid the imbalances in supply and demand that have occurred in the past few weeks.

In most instances we have identified steps that could be taken by the US EPA with a request for Congressional oversight or encouragement. In others, we make direct suggestions for specific, targeted legislative action. I have also attached supplemental exhibits, which I would ask to have included in the public record along with this letter as addenda to my previously submitted testimony. Individuals copied on this correspondence will be receiving only the four exhibits directly cited in this letter.

Transportation Fuel Supply

The nation's growing demand for transportation fuels can be met only through the utilization of adequate and efficient domestic refining and transportation infrastructure and through access to sufficient supplies of crude oil. All of these elements have been and continue to be under attack.

Specifically, fifty of our nation's refineries, 12 in the Midwest alone, have closed in the last decade due to poor profitability and costly, burdensome environmental regulations. (Exhibit VI) Continued expansion of the Clean Air Act Amendments of 1990 by overly broad implementation, such as the recent Tier 2 gasoline sulfur requirements and EPA's current proposal for drastic reductions in diesel sulfur, will place even greater burdens on refineries, resulting in even more shutdowns. Additional Congressional oversight may help curtail this overzealous and ill-advised regulatory trend.

Further, both this country's refineries and its fuel transportation infrastructure are operating at near capacity levels. This is especially true in the Midwest. Therefore, any significant disturbance in refinery or pipeline operation will lead to shortages in the supply of fuel. Unfortunately, we find that our efforts to add capacity, by building new or expanding existing refinery units or pipelines, face an uphill battle against excessive litigation and regulation.

We would urge Congress to undertake all efforts possible to alleviate these types of roadblocks. A specific example would be legislation to prohibit EPA from finalizing its proposed New Source Review rule until the agency has truly listened to the practical implications for our industry of what it is proposing.

Finally, much of our nation's wealth of natural resources in the form of crude oil reserves have been designated off-limit through legislation, forcing greater dependence on imported crude oil. Until Congress rethinks these policies on domestic exploration this dependence will continue to grow.

Strengthening Our Nation's RM&T Infrastructure

In order to ensure the vitality of the nation's refining, marketing and transportation (RM&T) capability, return on investment for those assets must be improved. Significant future capital investment will clearly be required for both refineries and terminals in order to meet stationary source and fuel specification needs. Likewise, increased capital investment will be required to maintain and increase the capability of the petroleum pipeline transportation network.

For companies to choose to make these investments and to attract sufficient funding from the capital markets competitive returns must be projected. Brief or isolated periods of heightened returns such as we have experienced recently on these RM&T assets are not sufficient to attract this investment.

Our reality is that returns for the refining and marketing industry during the last decade have been dismal. While the financial performance of the companies comprising the S&P 500 achieved 17.4% total market return on capital over the past 10 years, the refining and marketing sector returned only 5.4% over the same period. (Exhibit XXIV) Clearly, if we are forced to employ a cost of capital at 9 or 10 percent, but we earn a return of only 5 to 6 percent, our industry is being systematically liquidated.

During the past decade, more than $43 billion has been invested in the refining and marketing industry according to the National Petroleum Council Study which was dated June 20, 2000. Almost half of this investment has been for environmental projects required by the Clean Air Act Amendments of 1990. (Exhibit I) Over the next six years, our industry will be faced with capital investments for the Tier 2 gasoline sulfur reduction requirements, low-sulfur diesel requirements, possible additional oxygenate mandates and the potential for significantly more stringent drivability index (DI) requirements.

The same NPC study estimates the total investment in these new fuel specifications alone to be $13 to $36 billion, depending on changes in proposed rules or legislative alternatives. These capital expenditures for mandated new fuel specifications will further reduce profitability and reinvestment alternatives for the industry. It is hard to understand why many companies would

choose to make such large investments when faced with the probability of continued low rates of return on capital invested.

What can Congress do? Let the market work. Capital will flow to fund these much needed infrastructure improvements if market mechanisms are free to reward those investments.

Our industry needs advocates in the legislative branch to help us put a halt to the onslaught of regulatory actions being taken by the administration with little or no regard for the resulting negative impact on the refining, marketing and supply sectors of our industry.

Anything that can be done by way of oversight hearings or legislative restrictions on further rulemaking could make a significant difference. Moreover, the enactment of legislation designed to control or restrict actions of the market place can seriously limit the ability of our industry to respond in a timely and efficient manner to supply/demand dynamics.

Policy On Fuel Requirements

We fully support the development of cost effective fuel regulations which can be justified on sound scientific principles and which meet a demonstrated environmental need. We oppose regulations which do not meet these basic principles for fear that any unnecessary expenditures will drain needed capital, which could be more beneficially applied to increase capacity and improve flexibility. Below is our outline for much needed changes to EPA's current fuels agenda:

Gasoline

The Tier 2 gasoline sulfur regulations have been finalized. While we believe that these regulations are not cost effective and will produce minimal measurable environmental benefit, we are working on plans to implement the new rule and to maximize the use of sulfur credits internally. EPA still has not developed a proposal to deal with turnarounds and unscheduled shutdowns and has not responded to industry proposals to address these issues. Further, the agency has not dealt satisfactorily with issues surrounding the large number of permits that will be required. If anything, we expect that both the number of permits to be handled and the time required for each permit will increase vastly if the agency promulgates a final New Source Review rule later this year.

Diesel

We strongly oppose EPA's proposal of a 15 ppm sulfur cap for highway diesel fuel. Meeting the national demand for this fuel will be very difficult for most refiners and nearly impossible for many. The refining and distribution systems of this country will continuously face the peril of noncompliance or fuel unavailability as the result of virtually any minor disruption or mechanical problem so long as we are forced to make this ultra-low sulfur diesel.

Additionally, it will be nearly impossible to protect this ultra-low sulfur diesel from contamination in the distribution system. We believe that the resulting supply and demand imbalances have the potential to create price and supply disruptions that can dwarf the recent gasoline disruptions in the Midwest.

EPA has developed its proposal based on very few facts and a lot of wishful thinking. Notwithstanding numerous unanswered questions concerning our ability to manufacture and distribute this ultra-low sulfur fuel and the ability of the engine manufacturers to develop effective emissions control technology, EPA appears committed to finalizing this rule by the end of the year. We would urge Congress to encourage EPA to accept our industry's proposal of a 50 ppm sulfur cap with a 30 ppm average or to impose a legislative delay on the rulemaking until all significant, unanswered questions have been addressed.

In addition, regardless of whether the new highway diesel sulfur level is ultimately set at 50 or 15 ppm, the magnitude of the design and construction efforts that will be required is staggering. The Tier 2 gasoline requirements alone will mandate the construction of new desulfurization units at nearly all US refineries outside of California. To the extent the lower sulfur diesel requirements can be implemented on a delayed timeline, the more likely it will be that we can achieve both gasoline and diesel desulfurization in this country without unprecedented supply disruptions and shortages of both products.

Oxygenates

We support a measured phase down of MTBE in gasoline, provided such a phase down is coupled with elimination of the existing oxygenate requirement. However, we oppose any new statutory provisions which would replace the existing oxygenate requirement with an ethanol or renewable or alternative fuels mandate either for RFG areas or for the total gasoline pool.

We do not oppose the use of ethanol. In fact, our company is the nation's largest purchaser and blender of fuel ethanol. (Exhibit XVII) We simply believe that government mandates are not a good idea. Historically these types of mandates have proven to be cost inefficient and result in unwarranted market interference.

Air Toxics

Fuel air toxics and benzene reduction regulations are currently being developed by EPA. We believe that the agency has already discharged its duty under the Clean Air Act Amendments of 1990 to control both air toxics and benzene levels. EPA's own support documents indicate that massive toxic and benzene reductions are already scheduled to occur as part of the Tier 2 rule. This, coupled with the large particulate matter reductions targeted for the proposed highway diesel fleet, make further air toxic or benzene reductions unjustifiable. Whatever steps Congress can take to prevent EPA from proposing and finalizing these additional regulations for fuel air toxics and benzene reductions will prevent imposition of an additional, unnecessary burden on our industry.

Environmental Permitting–Impact on RM&T

Permitting delays for new processes, controls, tanks, pipelines and service stations can be very costly and time consuming. Sources of these delays are numerous, but one pertinent example is the pressure the state or local permitting authorities feel from EPA to meet the agency's deadline for issuance of Title V permits.

In order to attempt to meet this schedule, many of these permitting authorities simply put construction permits on hold until their Title V permits have been issued. Any encouragement from

Congress for the EPA to work with these state and local authorities to ensure that permit applications for modifications or new construction to comply with new regulations do not fall behind Title V permits would be helpful.

Summary

In closing, we at Marathon Ashland Petroleum are proud of our response to the recent gasoline supply disruptions in the Midwest. To meet our commitments to our customers, we ran our refineries at near maximum capacity and took other extraordinary measures to move product into the affected markets.

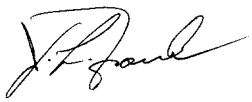
But, the story is not over. We believe that this recent experience foretells future similar transportation fuel supply disruptions, some perhaps even more severe and widespread than those experienced recently in the Midwest. It is our belief that decades of under-investment in our nation's retail, marketing and transportation infrastructures have resulted in the inability of these remaining assets to supply the growing energy needs of a robust American economy.

The reasons for this chronic under-investment are complex, but they can generally be attributed to a pattern of large capital requirements for environmental projects occurring during an extended period of very poor financial returns. The net result is the inability of an entire industry to attract adequate capital to maintain an infrastructure that is sufficiently capable and flexible to respond appropriately to the unforeseen outages or upsets that inevitably occur in the system.

We urge you and the other members of Congress to take all possible legislative steps to increase the viability of our industry and to encourage the EPA and other agencies and departments within the administration to acknowledge the need to enhance our nation's refining, marketing and transportation infrastructure and to work toward removing all significant barriers to our achieving this important goal.

I would welcome the opportunity to discuss our specific ideas with you, other members of Congress, and with representatives of the administration.

Yours very truly,



Attachments

cc: The Honorable Fred Thompson
The Honorable William V. Roth
The Honorable Ted Stevens
The Honorable Susan M. Collins
The Honorable Pete V. Domenici
The Honorable Thad Cochran
The Honorable Arlen Specter
The Honorable Judd Gregg
The Honorable Bill Richardson
The Honorable Carol M. Browner
Patricia M. Richards
USX Corporation
The Honorable Joseph I. Liebermann
The Honorable Carl Levin
The Honorable Daniel K. Akaka
The Honorable Richard J. Durbin
The Honorable Robert G. Torricelli
The Honorable Max Cleland
The Honorable Frank Pallone, Jr.
The Honorable John Edwards

Addendum to Testimony of J. Louis Frank
President, Marathon Ashland Petroleum LLC ("MAP")
Before the Committee on Governmental Affairs
United States Senate

June 29, 2000

Exhibits:

I. National Petroleum Council (NPC) draft report, "U.S. Petroleum Refining--Assuring the Adequacy and Affordability of Cleaner Fuels", June 20, 2000.
   - Operating Refineries vs. Average Capacity
   - Refining and Marketing Investments
   - Refining and Marketing Return On Equity vs. S&P 500

II. State/Federal Gasoline Excise Taxes (MAP)

III. U.S. Refinery Capacity (DOE/EIA, 1999 Petroleum Supply Annual)

IV. U.S. Refinery Capacity Utilization (DOE/EIA, 1999 Petroleum Supply Annual)

V. MAP Refinery Capacity Utilization (MAP)

VI. U.S. Refinery Closures (July 1999, API, Basic Petroleum Data Book)

VII. "Midwest Gasoline Price Increases", CRS Report, June 16, 2000

VIII. Why RFG Inventories Must be Taken to Near Zero Levels for Spring Conversion (MAP)

IX. J L. Frank Letter to the Editors; The Courier, The Cincinnati Post, and The Detroit News, June 2000

X. Chicago Market Wholesale Gasoline Price Chart (Source: Platts)

XI. PADD2 Conventional Gasoline Inventories (Source: API, "Weekly Bulletin")

XII. NYMEX Crude Oil and NYMEX Gasoline Prices (New York Mercantile Exchange)

XIII. Components of the Pump Price of Gasoline (API, Consumer Information Report: "Profits are Small Part of the Pump Price for Gasoline", April 14, 2000)

XIV. Regional Fuels Supply Map (MAP)

XV. MAP Refining Gasoline Production Comparison (MAP)

XVI. Energy Information Administration, "Update: A Year of Volatility- Oil Markets and Gasoline", June 20, 2000

XVII. U. S. Ethanol Production and MAP Purchases (DOE/EIA, Renewable Fuels Association and MAP data)

XVIII. CRS Report, "Environmental Protection Agency Options for Ameliorating the Effects of Reformulated Gas Requirements in the Chicago/Milwaukee Area", June 28, 2000.

XIX. PIRINC Study, "Gasoline101: A Politically Explosive Topic", June 2000

XX. "Energy Overview: Are Oil Companies Gouging Consumers?" by Fahnestock & Company, June 21, 2000.

XXI. "Who's to Blame?", Business Week, July 3, 2000

XXII. J. L. Frank Testimony on Diesel Sulfur, EPA Public Hearing, June 19, 2000, New York

XXIII. J. L. Frank letter to EPA on Diesel Sulfur, June 23, 2000

XXIV. Segment Returns in Refining and Marketing (Source: DOE/EIA: Performance Profiles of Major Energy Producers)

XXV. A Primer on Gasoline Prices (EIA pamphlet, www.eia.doc.gov)

XXVI. CATO Institute Testimony, House Committee on Government Reform, "The Effect of Federal Regulations on Gasoline Prices in the Milwaukee/Chicago Area", July 7, 2000.

XXVII. EPA Office of Mobile Sources Fact Sheet on RFG, November, 1999

EXHIBIT I

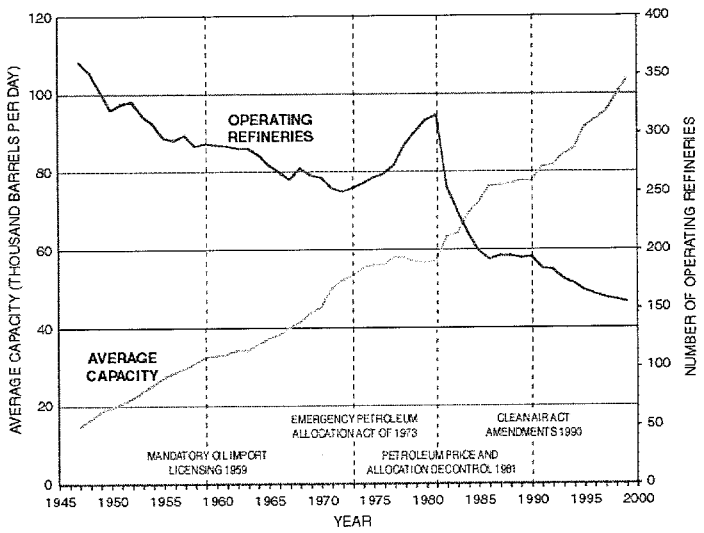
National Petroleum Council (NPC) draft report, "U.S. Petroleum Refining--Assuring the Adequacy and Affordability of Cleaner Fuels", June 20, 2000.

The following exhibits were taken from the June 20, 2000 draft release of the National Petroleum Council's report "U. S. Petroleum Refining – Assuring the Adequacy and Affordability of Cleaner Fuels":

- Operating Refineries vs. Average Capacity
  Since the oil industry was decontrolled in 1982, there has been a clear trend toward fewer and larger operating refineries. Companies have chosen to close smaller and presumably less efficient plants, while larger and more sophisticated refineries have been expanded. Some industry analysts cite the increased capital requirements for the manufacture of clean fuels as a contributor to this trend. Currently there are 155 operating refineries with 16.3 million barrels per day of crude oil distillation capacity. The average refinery has a capacity of 105,000 barrels per day.

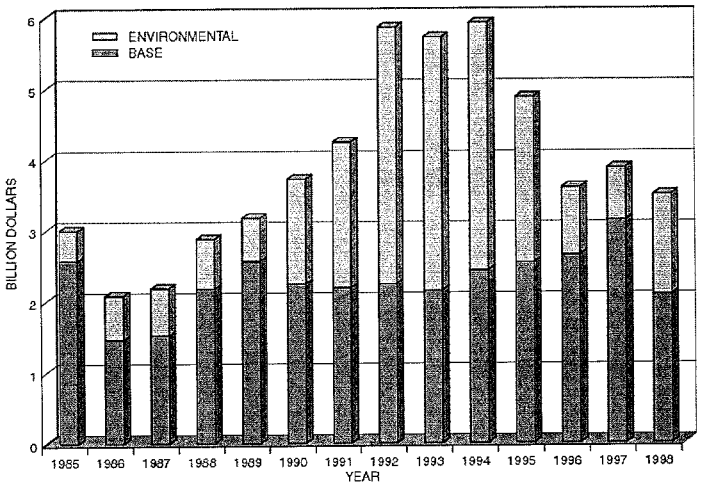
- Refining and Marketing Investments
  The U. S. refining and marketing industry (R & M) has invested heavily for both the maintenance and expansion of facilities and for the environment. According to data collected by the Department of Commerce and API, base R&M expenditures average around $2 billion per year while environmental expenditures vary from a few hundred million to as much as $4 billion per year. Environmental expenditures were at very high level in 1992 through 1995 in response to the Clean Air Act Amendments of 1990 and other clean fuel programs.

- Refining and Marketing Return on Equity vs. S&P 500
  The U. S. Petroleum industry has historically earned a lower rate of return on equity than the Standard & Poor 500 companies, 10.5% versus 12.5% as measured by the Energy Information Administration's (EIA) Financial Reporting System from 1981-1998. Within the petroleum industry, refining and marketing operations earn around a 5% return on capital employed versus 7% for the combined upstream and downstream segments.



Source: Data from API Basic Petroleum Data Book and EIA.

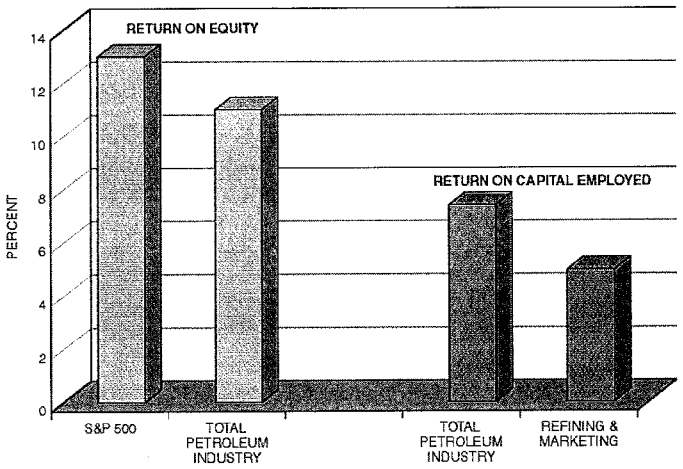
Figure 2. Average Capacity and Number of U.S. Operating Refineries



Source: *Data for Total from Oil & Gas Journal.*

Data for Environmental from API Reported Refining & Marketing Capital Investments 1990-1998; and Pre-1990 estimate from Department of Commerce.

Figure 4. Historical U.S. Refining and Marketing Investments



Source: Data from EIA's Financial Reporting System.

Figure 3. U.S. Refining and Marketing Return Comparison
1981-1998 Average

EXHIBIT II

State/Federal Gasoline Excise Taxes (MAP)

When examining the difference between the wholesale or dealer tank-wagon price of gasoline and the average retail or "street" price, it is important to consider both the Federal and State excise taxes. In the Midwest states where MAP markets most of its gasoline, state excise taxes range from 15.0 to 26.4 cents per gallon to go along with the 18.4 cents per gallon federal excise tax. The attachment depicts the level of excise taxes in all 50 states as of June 30, 2000. Many states and municipalities also have sales taxes on gasoline in addition to these excise taxes.

Federal and State Tranportation Fuel Excise Taxes as of June 30, 2000

	Gasoline (cents/gal)	Diesel (cents/gal)
Federal Transportation Fuel Taxes	18.4	24.4
State Transportation Fuel Taxes		
Alaska	8.0	8.0
Alabama	16.0	17.0
Arkansas	18.5	18.5
Arizona	18.0	18.0
California	18.0	18.0
Colorado	22.0	20.5
Connecticut	39.0	18.0
District of Columbia	20.0	20.0
Delaware	23.0	22.0
Flordia	13.3	13.3
Georgia	7.5	7.5
Hawaii	16.0	16.0
Iowa	20.0	22.5
Idoho	25.0	25.0
Illinois	19.0	21.5
Indiana	15.0	16.0
Kansas	20.0	22.0
Kentucky	15.0	12.0
Louisiana	20.0	20.0
Massachusetts	21.0	21.0
Maryland	23.5	24.5
Maine	19.0	20.0
Michigan	19.0	15.0
Minnesota	20.0	20.0
Missouri	17.0	14.0
Mississippi	18.0	18.0
Montana	27.0	27.0
North Caroline	23.1	23.1
North Dakota	21.0	21.0
Nebraska	23.9	23.9
New Hamshire	18.0	18.0
New Jersey	10.5	13.5
New Mexico	17.0	18.0
Neveda	24.0	27.0
New York	8.0	8.0
Ohio	22.0	22.0
Oklahoma	16.0	13.0
Oregon	26.0	26.0
Pennsylvania	12.0	12.0
Rhoad Island	28.0	28.0
South Caroline	16.0	16.0
South Dakota	22.0	22.0
Tennessee	20.0	17.0
Texas	20.0	20.0
Utah	19.0	19.0
Virginia	17.5	16.0
Vermont	19.0	16.0
Washington	23.0	23.0
Wisconsin	26.4	26.4
West Virginia	20.5	20.5
Wyoming	11.0	11.0

EXHIBIT III

U.S. Refinery Capacity (DOE/EIA, 1999 Petroleum Supply Annual)

Total U. S. Refining capacity, measured as crude oil distillation capacity on January 1, 2000, is 16,511,871 barrels per day in 158 operable refineries. (Source: Energy Information Administration 1999 Petroleum Supply Annual) The total industry capacity has declined some from 1991 through 1996, but has been growing over the last four years. Refining capacity in the Midwest, generally referred to as PADD 2, has been relatively stable at 3.6 million barrels per day. The much larger Gulf Coast region (PADD 3) with 7.55 million barrels per day of capacity has been growing for the last several years.

Table 36. Number and Capacity of Operable Petroleum Refineries by PAD District and State as of January 1, 2000

PAD District and State	Number of Operable Refineries			Atmospheric Crude Oil Distillation Capacity: Barrels per Calendar Day			Atmospheric Crude Oil Distillation Capacity: Barrels per Stream Day		
	Total	Operating	Idle[a]	Total	Operating	Idle	Total	Operating	Idle
PAD District I	17	16	1	1,704,000	1,610,000	94,000	1,792,958	1,693,958	99,000
Delaware	1	1	0	157,000	157,000	0	160,000	160,000	0
Georgia	2	2	0	33,400	19,400	14,000	40,000	24,000	16,000
New Jersey	6	5	1	668,000	588,000	80,000	693,158	610,158	83,000
Pennsylvania	6	6	0	772,800	772,800	0	824,400	824,400	0
Virginia	1	1	0	59,500	59,500	0	61,900	61,900	0
West Virginia	1	1	0	13,300	13,300	0	13,500	13,500	0
PAD District II	28	28	0	3,619,404	3,619,404	0	3,791,100	3,791,100	0
Illinois	6	6	0	1,029,515	1,029,515	0	1,079,000	1,079,000	0
Indiana	2	2	0	433,000	433,000	0	456,000	456,000	0
Kansas	3	3	0	294,400	294,400	0	306,000	306,000	0
Kentucky	2	2	0	227,500	227,500	0	236,300	236,300	0
Michigan	1	1	0	74,000	74,000	0	75,000	75,000	0
Minnesota	2	2	0	330,000	330,000	0	355,000	355,000	0
North Dakota	1	1	0	58,000	58,000	0	60,000	60,000	0
Ohio	4	4	0	525,500	525,500	0	539,000	539,000	0
Oklahoma	5	5	0	454,489	454,489	0	480,500	480,500	0
Tennessee	1	1	0	160,000	160,000	0	169,300	169,300	0
Wisconsin	1	1	0	33,000	33,000	0	35,000	35,000	0
PAD District III	57	56	1	7,552,942	7,546,242	6,700	7,984,312	7,977,312	7,000
Alabama	3	3	0	130,000	130,000	0	138,000	138,000	0
Arkansas	3	2	1	66,912	60,212	6,700	68,750	61,750	7,000
Louisiana	17	17	0	2,678,580	2,678,580	0	2,804,255	2,804,255	0
Mississippi	4	4	0	335,800	335,800	0	384,000	384,000	0
New Mexico	3	3	0	95,600	95,600	0	100,107	100,107	0
Texas	27	27	0	4,246,050	4,246,050	0	4,489,200	4,489,200	0
PAD District IV	16	15	1	540,755	530,755	10,000	572,200	559,700	12,500
Colorado	2	2	0	84,500	84,500	0	92,000	92,000	0
Montana	4	4	0	162,090	162,090	0	167,700	167,700	0
Utah	5	4	1	162,000	152,000	10,000	172,500	160,000	12,500
Wyoming	5	5	0	132,165	132,165	0	140,000	140,000	0
PAD District V	40	40	0	3,094,770	3,008,570	86,200	3,252,500	3,157,700	94,800
Alaska	6	6	0	359,550	359,550	0	383,000	383,000	0
California	23	23	0	1,982,000	1,905,000	77,000	2,082,400	1,997,600	84,800
Hawaii	2	2	0	147,500	147,500	0	152,000	152,000	0
Nevada	2	2	0	5,000	5,000	0	7,000	7,000	0
Oregon	1	1	0	0	0	0	0	0	0
Washington	6	6	0	600,720	591,520	9,200	628,100	618,100	10,000
U.S. Total	158	155	3	16,511,871	16,314,971	196,900	17,393,070	17,179,770	213,300
Puerto Rico	3	2	1	87,000	42,000	45,000	94,000	48,000	46,000
Virgin Islands	1	1	0	495,000	430,000	65,000	525,000	450,000	75,000

See footnotes at end of table.

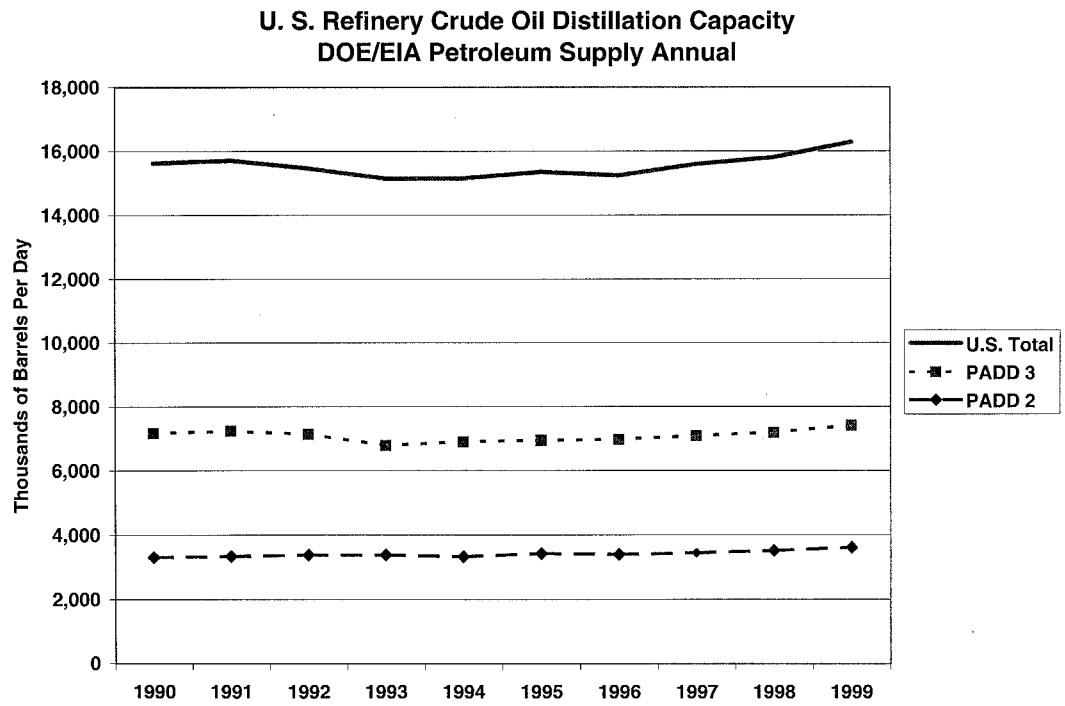
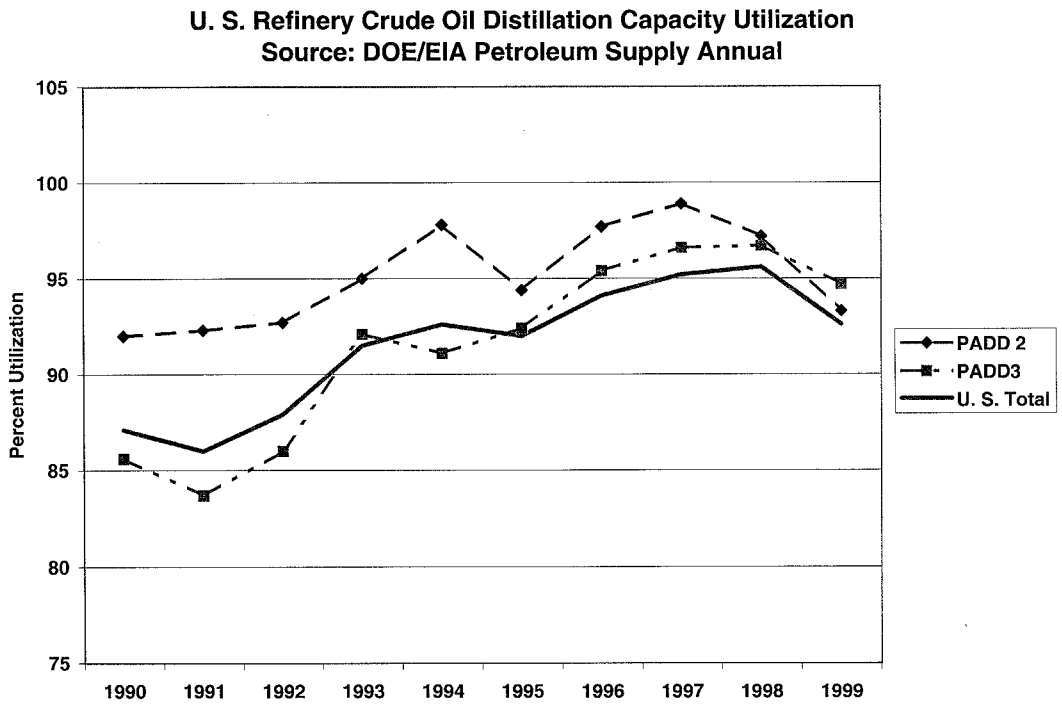

U. S. Refinery Crude Oil Distillation Capacity
DOE/EIA Petroleum Supply Annual
Thousands of Barrels Per Day
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
U.S. Total
PADD 3
PADD 2

EXHIBIT IV

U.S. Refinery Capacity Utilization (DOE/EIA, 1999 Petroleum Supply Annual)

U. S. refining industry crude oil throughputs have utilized an ever-higher percentage of refining capacity over the decade of the nineties, increasing from around 87% to above 95%. Refinery utilization in PADD 2 has historically been measurably higher, at 92% to 98%. Over the last few years, utilization in PADD 3 and the U. S. as a whole has increased to about the same level, around 95%. When the large Gulf Coast district is at high utilization, there is less spare capacity and a reduced ability to make up for supply shortfalls in the Midwest.



refcap utilization.xls

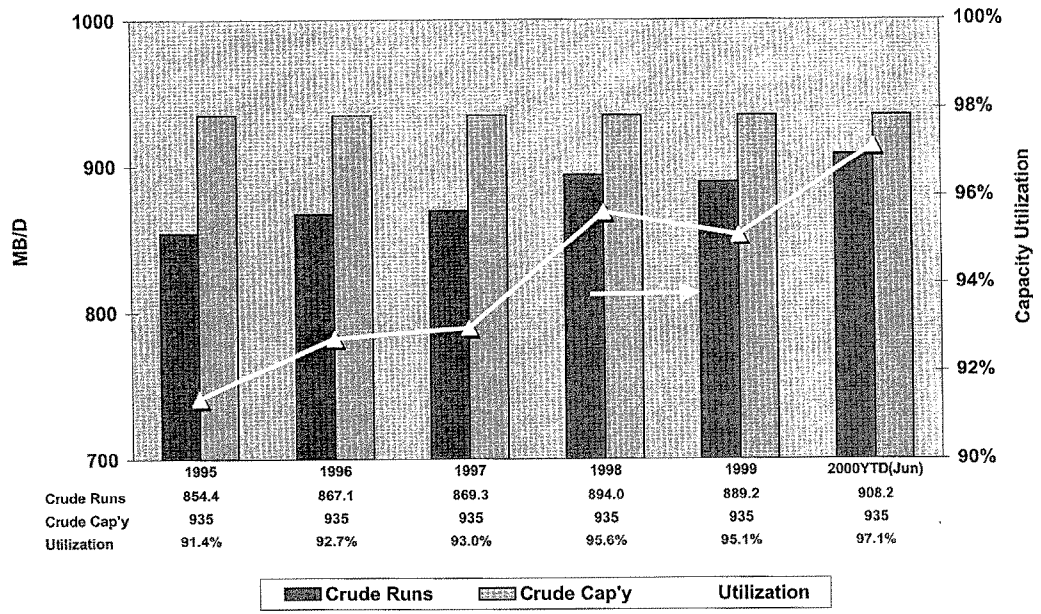
7/3/00

EXHIBIT V

MAP Refinery Capacity Utilization (MAP)

Marathon Ashland Petroleum (and its parent partners before 1998) have historically exceeded the national average utilization and have increased refinery utilization from 91% in 1995 up to 97% in 2000 year-to-date.

MAP LLC Refinery Crude Oil Distillation Capacity and Utilization



	1995	1996	1997	1998	1999	2000YTD(Jun)
Crude Runs	854.4	867.1	869.3	894.0	889.2	908.2
Crude Cap'y	935	935	935	935	935	935
Utilization	91.4%	92.7%	93.0%	95.6%	95.1%	97.1%

crudecap.xls

7/7/00

EXHIBIT VI

U.S. Refinery Closures (July 1999, API, Basic Petroleum Data Book)

The changes in U. S. refining capacity has unfortunately involved the shutdown of a number of refineries in all parts of the country, as shown in the exhibit. In PADD 2, there have been 13 refinery closures with a combined capacity of 337,300 barrels per day of capacity since 1987. In the larger PADD 3, there have been 27 shutdowns totaling 819 thousand barrels per day. In the U. S. total closings have numbered 63 refineries with nearly 1.6 million barrels per day of capacity.

United States Refineries Inoperable Shutdown (1)
as of January 1, 1987 through December 1, 1999

Refinery	Location	Crude Distillation Capacity (b/d)	Date of Last Operation	Date Shutdown	Years in Operation	PAD	Nelson Complexity Index (2)	
Cibro Refining	Albany, NY	41,850	Jul-93	Sep-93	14+	1		
St. Mary's Refg. Co.	St. Mary's, WV	4,000	Feb-93	Mar-93	45+	1		
Seminole Refining Corp.	St. Marks, FL	17,000	May-87	Mar-88	28	1		
Virginia Oil & Refining Co., Inc.	Jonesville, VA	1,000	Aug-87	Dec-87	2	1		
Total PAD I		63,850	4					
Barrett Refg. Corp.	Custer, OK	10,500	Jan-96	Jan-96	15	2	1.0	A
Coastal Refg. & Mktg.	Augusta, KS	0	May-93	Jun-93	7	2	5.0	A
Coastal Refg. & Mktg.	Wichita, KS	43,700	May-93	Jun-93	45+	2		
Crystal Refining	Carson City, MI	3,000	Oct-92	Sep-93	45+	2	1.0	A
Cyril Petrochemical Corp.	Cyril, OK	7,500	May-95	Dec-95	2	2		
Farmland Industries	Phillipsburg, KS	26,400	Dec-91	Jul-92	43+	2	3.2	A
Indian Refining	Lawrenceville, IL	80,750	Sep-95	Oct-95	6	2	9.0	A
Intercoastal Energy Services Corp.	Troy, IN	1,250	Nov-90	Mar-91		2		
Laketon Refining Co.	Laketon, IN	11,100	Jun-95	Jan-96	5	2	3.0	A
Marathon Oil Co.	Indianapolis, IN	50,000	Sep-93	Oct-93	45+	2	7.0	A
Motor Oils Refining	McCook, IL	1,500	Jan-88	Feb-88	6	2		
Total Petroleum, Inc.	Arkansas City, KS	56,000	Aug-96	Sep-96	4	2	6.6	A
UDS-Total	Alma, MI	45,600	Oct-99	Oct-99	n/a	2	7.9	B
Total PAD II		337,300	13					
Amerada Hess	Purvis, MS	30,000	Jan-94	Feb-94	35+	3		
Arcadia Refg. & Mktg.	Lisbon, LA	7,350	Jan-96	Jun-96	13	3		
Canal Refining Co.	Church Point, LA	9,500	May-97	Jun-97	44+	3	1.7	B
Donna Refining Partners Ltd.	Donna, TX	4,750	Nov-89	Dec-89	1	3		
Dubach Gas	Dubach, CA	8,500	Dec-93	Dec-93	20	3		
Eagle Refining	Jackson, TX	1,800	Jan-90	Oct-90		3		
El Paso Refining, L.P.	El Paso, TX	50,000	Oct-92	Dec-92	6	3		
GAMXX Energy Inc.	Theodore, AL	27,000	Jan-88	Mar-88	17	3		
Gold Line Refg., Ltd.	Lake Charles, LA	27,600	May-97	Apr-97	17+	3	15.3	B
Gold Line Refg., Ltd.	Jennings, LA	12,000	Jul-97	Jan-98	1	3		
Imron Refg., Inc.	San Leon, TX	7,000	NA	Aug-90	0	3		
Liquid Energy Corp.	Bridgeport, TX	10,000	Feb-87	Oct-88	6	3		
Longview Refining Assoc.	Longview, TX	13,300	Aug-92	Sep-92	3	3		
MacMillan Petroleum Co.	Norphlet, AR	5,800	Aug-87	Dec-87	39	3		
OGC Corp.	Egan, LA	5,000	Sep-87	Oct-88	2	3		
Pacific Refg.	Hercules, CA	50,000	Jul-95	Sep-97	29	3		
Petrolite Corp.	Kilgore, TX	600	Dec-97	Feb-98	45+	3		
Pride Refg. Inc.	Abilene, TX	42,750	May-98	Apr-98	37+	3	4.1	B
Rattlesnake Refining	Wickett, TX	8,000	Feb-92	Mar-92	2	3		
Sabine Resources	Stonewall, LA	12,000	(b)	Feb-92	0			
Shell Oil Co.	Odessa, TX	28,300	Oct-98	Nov-98	39+	3	4.3	B
Texas United Refining Corp.	Nixon, TX	20,900	Apr-92	Jun-92	17	3		
Thriftway Co.	Bloomfield, NM	4,000	Jan-92	Oct-92	6	3		
Trans-American Refining Corp. (3)	Norco, LA	300,000	(b)	Dec-92	0			
Unocal Corp.	Nederland, TX	120,000	Dec-89	Dec-89	6	3		
Vulcan Refining	Cordova, AL	9,500	Sep-90	Dec-90		3		
Warrior Asphalt Refining Corp.	Holt, AL	4,000	Aug-89	Dec-89	34	3		
Total PAD III		819,650	27					
Amoco Oil Co.	Casper, WY	40,000	Dec-91	Dec-91	6	4		
Landmark Petroleum Inc.	Fruita, CO	10,000	Jan-92	Nov-93	3+	4		
Mountaineer Refining Co., Inc.	LaBarge, WY	350	Dec-87	Jun-88	13	4		
Pennzoil Producing Co.	Roosevelt, UT	8,000	Sep-94	Oct-94	20+	4		
Total PAD IV		58,350	4					
Anchor Refining Co.	McKittrick, CA	10,000	Jun-91	Aug-91		5		
Beacon Oil Co.	Hanford, CA	17,300	Nov-87	Dec-87	27	5		
Chemoil Reg. Corp.	Long Beach, CA	18,000	Feb-94	Apr-94	5+	5		
Chevron	Kenai, AK	22,000	Jun-91	Jul-91	7	5		
Eco Asphalt Inc.	Long Beach, CA	10,550	(b)	Oct-92	0	5		
Fletcher Oil & Refining	Carson, CA	29,675	Sep-92	Oct-92	44+	5		
Gibson Oil & Refining	Bakersfield, CA	9,600	Jul-87	Dec-90		5		
Golden West	Santa Fe Springs, CA	47,000	Feb-92	Mar-92	9	5		

United States Refineries Inoperable Shutdown (1)
as of January 1, 1987 through December 1, 1999

Refinery	Location	Crude Distillation Capacity (b/d)	Date of Last Operation	Date Shutdown	Years in Operation	PAD	Nelson Complexity Index (2)	
Intermountain Refining Co.	Fredonia, AZ	3,800	Jan-94	May-96	1+	5	1.5	B
Newhall Refining Co., Inc.	Newhall, CA	22,500	Nov-89	Dec-89	42	5		
Petro Source Refining	Tonopah, NV	4,500	Sep-91	Dec-92	21	5		
Powerline Oil Co.	Santa Fe Springs, CA	46,500	Jun-95	Sep-95	8+	5		
Sound Refining Inc.	Tacoma, WA	40,000	Oct-98	Dec-98	30+	5	1.8	B
Sunbelt Refining Co.	Coolidge, AZ	10,000	Aug-93	Sep-93	3+	5		
Sunland Refining Corp.	Bakersfield, CA	12,000	Mar-95	Dec-95	47+	5	1.7	B
Total PAD V / No. of refineries		303,425	15					
Total U.S./ No. of refineries		1,582,575	63					

(1) The July 1999, API, Basic Petroleum Data Book, included data through 12/98, Alma was added for 1999.
(2) A - 1992 Marathon Economics study - calculated
B - 1996 Lehman Brothers publication

EXHIBIT VII

"Midwest Gasoline Price Increases", CRS Report, June 16, 2000

The Congressional Research Service report on the causes for high gasoline prices in Midwestern states attributes the price increases to five factors: 1) higher crude oil prices, 2) use of ethanol in the RFG process, 3) pipeline problems, 4) low inventories, and 5) a patented RFG process.

Committee on Science

F. James Sensenbrenner, Jr., Chairman
Ralph M. Hall, Texas, Ranking Democrat
www.house.gov/science/welcome.htm

June 20, 2000
Press Contact:
Jeff Lungren (Jeff.Lungren@mail.house.gov)
(202) 225-4275

CRS REPORT FINDS MIDWESTERN CONSUMERS ARE PAYING 50 CENTS PER GALLON MORE PRIMARILY DUE TO RFG REQUIREMENTS

WASHINGTON, D.C. – House Science Committee Chairman F. James Sensenbrenner, Jr., (R-WI) and Rep. Paul Ryan (R-WI) today released a Congressional Research Service (CRS) report on the causes for high gasoline prices in Midwestern states, including Wisconsin, Illinois, and Michigan.

The report finds, "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 [reformulated gas] situation in Chicago/Milwaukee…[T]he fact that RFG prices are above conventional gas suggests that the difference is due to the supply of RFG uniquely."

The report attributes the recent Midwestern price increases to five factors: 1) higher crude oil prices, 2) use of ethanol in the RFG process, 3) pipeline problems, 4) low inventories, and 5) a patented RFG process.

Chairman Sensenbrenner has forwarded the report to Wisconsin Gov. Tommy Thompson, Illinois Gov. George Ryan, and the Members of the Wisconsin congressional delegation. Chairman Sensenbrenner also forwarded the report to House Government Reform Committee Chairman Dan Burton (R-IN) and House Judiciary Committee Chairman Henry Hyde (R-IL) because both committees are considering holding hearings on the issue of high gas prices in the Midwest.

Recent requests by Midwestern areas for waivers from the RFG Phase II requirements have not been granted by the U.S. Environmental Protection Agency (EPA).

Chairman Sensenbrenner and Rep. Ryan said, "I think this report presents a strong case for the EPA granting relief – even on a temporary basis – for consumers from the new RFG requirements. Such an action would give the public some respite from these untenably high prices without harming our environment."

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Congressional Research Service ● Library of Congress ● Washington, D.C. 20540

Memorandum

June 16, 2000

SUBJECT : Midwest Gasoline Price Increases
FROM : Lawrence Kumins
Specialist in Energy Policy
Resources, Science, and Industry Division

Summary

Gasoline prices nationwide have risen about 60 cents per gallon since the beginning of 1999. Some localities – notably in Michigan, Illinois, and Wisconsin – have experienced even grater price hikes, often twice as much as the national average. These higher prices can be attributed to five factors. In summary, they are:

Higher Crude Oil Prices. Refiners' crude acquisition costs have risen by the equivalent of 48 cents per gallon during the past year and a half.

Use of Ethanol in Reformulated Gasoline. Reformulated gasoline (RFG) is required in numerous areas designated by EPA as ozone nonattainment areas. About 30% of the gasoline sold in the United States is RFG. Refiners serving the Chicago and Milwaukee areas use ethanol instead of MTBE (the additive used in most other RFG areas) to meet the oxygen requirements of the RFG program. New requirements for Phase 2 of this program which took effect June 1, 2000, have made it more difficult and costly to make RFG with ethanol. How much more costly is a matter of debate. EPA estimates the impact of Phase 2 requirements at 5-8 cents per gallon. RPG prices in Chicago and Milwaukee are at least 50 cents above RFG prices elsewhere, however. Not all of this difference can be attributed to the RFG requirements or the use of ethanol. In fact, non-reformulated gasoline sold in areas near Chicago and Milwaukee is priced well above comparable gas sold elsewhere.

Pipeline Problems. Two oil pipelines serving the upper Mid West have been experiencing operational difficulties. The Wolverine Pipeline between Chicago area refineries and Michigan had a spill and is slowly being brought up to capacity. It is expected to be fully operational on June 17. Meanwhile, ExxonMobil has put its branded gasoline distributors on allocation. The Explorer pipeline serving St. Louis and Chicago is operating at 10% reduced throughput, meaning St. Louis deliveries are reduced by about 50,000 barrels per day (b/d) and Chicago by about 34,000 b/d. In a tight regional market, supply reductions of this magnitude can be extremely disruptive, and lead to significant price increases.

Low Inventories. The EPA reports that crude oil and gasoline inventories are extremely low. There is the equivalent of about 2 days of consumption in working inventory. When stocks get this low, misallocations to the distribution system cannot easily be corrected. And refiners are slow to but extra gasoline on the market when needed because they are unable to replace

those barrels with gasoline or extra crude runs at their plants.

Patented RFG Process. Patents by Unocal on an important reformulated gasoline process may have some marginal impact on price and availability of RFG. However, with regional gasoline prices as high as they are, any license fee owed to Unocal once the license fee is ultimately determined would be too small to create a barrier to making RFG or the blending material for ethanol-based RFG.

In summary, some of the increased prices in Chicago/Milwaukee and Detroit can be attributed to these factors. About 48 cents of the current price is likely due to higher crude costs. This impacts gasoline consumers everywhere. It can also roughly estimated that 25 cents of the regional price increase is due to transportation difficulties and another 25 cents, roughly estimated, could be due to the unique RFG situation in Chicago/Milwaukee. These figures are very rough approximations based on spot market valuations, which do not comprise a complete series of price data. They are intended as rough estimates of each factors contribution to higher prices.

Oil Supply Price Background

Retail prices of petroleum products and motor fuels have risen sharply this year. Volatile oil prices have been driven up largely by production cutbacks by the Organization of Petroleum Exporting Countries (OPEC). The reduced OPEC production quotas have combined with strong world demand to boost crude oil prices from $10 per barrel at the end of 1998 to about $30 per barrel by late 1999.[1]

OPEC output quotas also resulted in reduced petroleum stocks around the world. In the United States, crude oil and gasoline inventories are well below normal levels. Spot shortages of home heating oil and diesel fuel occurred in eastern part of the nation during winter 2000. Now that gasoline is in seasonally high demand, short supplies and instances of volatile prices are cropping up around the country. The most notable price increases are in the upper Mid West, where pump prices have exceeded $2.00 per gallon.

Table 1 shows wholesale prices for regular grade reformulated gasoline (RFG) at important spot market trading centers around the nation. These prices do not include taxes or other charges such as transportation and dealer costs. RFG, which is oxygenated to reduce carbon monoxide emissions, must be substituted for regular gasoline in certain urban regions during the warmer months of the year.

[1] All prices cited in this memo are from the U.S. Department of Energy's Energy Information Administration.

Table 1. Wholesale RFG Prices (regular grade) 6/9/00

Location	Price range (cents/gal)
Metro NY	106 to 108
New Jersey	104 to 108
Baltimore	107 to 109
Boston	106 to 111
Norfolk	107 to 116
Philadelphia	104 to 107
Chicago	**161 to 168**
Dallas/Ft. Worth	106 to 110
Houston	104 to 113

Source: *Platt's Oilgram Price Report*, June 9, 2000. Page 5

While providing a one-day snapshot of RFG prices, these figures are generally representative of current marketplace conditions. They show that Chicago RFG – in round numbers – is about 50 cents per gallon above the eastern half of the nation.

Platt's publishes a wide array of data for regular gasoline prices at terminals around the country. On June 15, 2000, the wholesale price of regular gas was about $1.27 per gallon in Chicago, excluding taxes and other charges. Detroit posted at a range of $1.37 to $1.70, a very wide band typically associated with some sort of market disturbance. The eastern part of the nation (Petroleum Allocation for Defense District 1, or PADD 1) was clustered close to the $1.00 per gallon mark.

With Chicago RFG prices running about 50 cents above the eastern part of the nation – and regular gasoline 27 cents above – a generalized supply shortfall in the Chicago area is strongly suggested. And the fact that RFG prices are above conventional gas suggests that the difference is due to the supply of RFG uniquely. That conventional fuel is above priced above the rest of the nation suggests a shortage in the region resulting from pipeline transport problems. And with regard to Detroit, prices above the rest of the nation – as well as an usually wide range in price quotes – suggests that there may well be a supply disruption having local impact.

It must be reiterated that this effort to attribute price differentials to the availability of FG and to pipeline supply difficulties is a simplistic exercise based on incomplete data. It has been undertaken in order to separate the price effects of generalized regional shortage due to transport breakdowns from the tight supply of RFG blending material.

Higher Crude Costs

Gasoline and crude oil reached their lowest prices in recent history in December 1998 and January 1999. In December 1998, crude cost U.S. refiners $9.84 per barrel; in January 1999 crude was $10.47. Similarly, gasoline of all types sold at the pump (including all taxes, etc.) for an average of $1.05 and $1.03 per gallon December and January.

Since that time, petroleum prices have risen consistently; in mid-June of 2000, crude is in

the $30 per barrel area, an increase of roughly $20 per barrel or 48 cents per gallon. It is likely that all 48 cents have been included in pump prices.

OPEC has set production quotas that resulted in much higher crude prices than were anticipated. Crude oil on the N.Y. Mercantile Exchange (NYMEX) is trading at about $33 per barrel (bbl) as of mid-June. All petroleum products are affected more or less proportionally by high-priced crude oil, and consumers of all fuels look toward the June 21, 2000, OPEC meeting, at which a production increase is to be discussed.

Chicago-Milwaukee RFG

RFG is a smaller percentage of regional gasoline supply in the mid-continent than in most other regions. Essentially, it is used only in Chicago and Milwaukee; the rest of the region uses conventional fuel. These cities have virtually banned the oxygenate MTBE from RFG sold in their cities. Instead, ethanol is used to increase the oxygen content of RFG to minimize carbon monoxide emissions. In current market conditions, the price of the gasoline base material needed for oxygenate blending (called RBOB) – rather than the cost of ethanol – has become the primary factor in the region's high prices.

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 is very hard to manufacture, 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). When demand exceeds local refiners' ability to manufacture low-volatility RBOB, supplies are brought in from Gulf coast refiners by pipeline.

Low volatility RBOB is a specialty product; not all refiners can or will manufacture gasoline to such 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 could adversely affect the price and availability of this material in this consuming region.

Troubled Pipelines

Two pipelines that play important roles in supplying gasoline to the upper Mid West are currently suffering operational difficulties. Petroleum is most efficiently transported in large quantities by pipeline. When the pipeline system has capacity problems, it can be supplemented by truck, and/or waterway transport in some cases. But pipelines' ability to move large amounts of fuel is difficult to replicate by supplementary transport, as are the low-costs inherent in pipelining.

The Explorer pipeline transports fuel from the Golf coast to Chicago, traveling south to north and passing through St. Louis. The Explorer had a fire near St. Louis in March 2000. The damage was repaired quickly, and transport resumed. But as a result of the investigation into the incident, the pipeline company and the Department of Transportation entered into a verbal agreement to reduce operating pressure by 20%. This translates into a volumetric reduction (measured in b/d) of 10%. The Department of Energy (DOE) estimates that this has reduced the pipeline's throughput to St. Louis from 550,000 barrels per day to 500,000, creating an extremely tight local gasoline market. After St. Louis the pipeline's diameter becomes narrower to match reduced northbound requirement, although it is probable that the flow reduction in this segment of the pipeline is also 10%.

The other pipeline that is having problems is the Wolverine pipeline, which has a capacity of 186,000 barrels per day and runs eastward from Niles, Illinois, to Jackson, Michigan. A leak in early June has caused an interruption of service. Gasoline is currently being trucked around the break, which is being repaired. The pipeline is scheduled to be back in full service on June 17. While the repairs are being made, Michigan supplies have been disrupted and prices have spiked.

U.S. Crude Oil Inventories

OPEC attempts to set prices by administering the level of supply sent to the world market. When OPEC members met last March, they set quotas that were not high enough for refiners around the world to rebuild crude stocks depleted by winter heating demand. Thus, low inventories are a problem around the world. In the United States, crude oil stocks are presently 20 million barrels under the normal range for this time of year, according to the Energy Information Administration (EIA). They stand at 31 million barrels above the lowest operational inventories ever observed in recent times. This is the equivalent of 2 days of refinery operations.

Gasoline stocks are in similarly tight condition. While U.S. inventories are just below the lower range of normal seasonal stocks, they are only 16 million barrels above the minimum operational level of 185 million barrels.[2] This means that the amount of readily marketable gasoline in the U.S. production and distribution system is the equivalent of slightly less than two days of current consumption.

When oil inventories get this close to minimum operating level, refiners' flexibility is diminished, and they are less able to deal with such factors as unanticipated demand changes, distribution difficulties, or special requirements. The latter includes such factors as the demand for RBOB suitable for ethanol blending.

[2] Minimum operational levels are the lowest inventory levels that have been observed in the United States in recent times. Such levels have been associated with distributional problems.

The Unocal Patent Issue

Unocal, a large, integrated oil company, has substantial gasoline production in its California refineries. California has special air quality problems, and special gasoline is needed to meet California Air Resources Board (CARB) specifications, which are currently tighter than national Phase II RFG requirements. In 1990, Unocal researches discovered a unique way of manufacturing gasoline with minimum volatility, as well as some other parameters helpful in meeting clean gasoline requirements. A patent was applied for and in 1994, the U.S. Patent and Trademark Office awarded Unocal its first patent. Four other patents were subsequently awarded to the company.

In 1995, Unocal announced its intention to license the patent to other refiners. Shortly thereafter, six major refiners sued Unocal, challenging the validity of its patents. The U.S. District court found in favor of Unocal, upholding the patent's validity and awarding Unocal damages of 5.75 cents per gallon on the gallons manufactured that infringed on Unocal's patent. In March 2000 the initial verdict was upheld in the U.S. Court of Appeals for the Federal Circuit.

How much gasoline is involved in the Unocal patent? Most gasoline is made by processes other than those patented by Unocal. In California, where CARB gasoline is often made using the Unocal process, the company estimates that only 2.9% of the gallons produced would involve its patent; 71% fell outside the patent. Around the rest of the nation, an even smaller amount would fall under the patent. Unocal has asserted that the proportion of regular RFG subject to its patent is small, but increases as octane increases. Most gasoline sold nationwide is regular grade.

Refiners have substantial latitude in which to formulate gasoline, and can choose to blend around the patents by changing the mix of ingredients. Refiners contend that, while they can often avoid the patent issue, "blending around" can cost them as much as 5 cents per gallon in higher manufacturing costs. But the patents might be a factor in the manufacturing of RBOB suitable for ethanol blending. Because of such RBOB's low volatility, it may well be dependent on Unocal's process.

At this point, negotiations about licenses and appropriate fees are beginning. There seems to be agreement on both sides that the 5.75 cents-per-gallon judgment handed down in court is too high for future license fees. It is likely that fees may be smaller when the negotiations are complete.

Meanwhile, refiners using the Unocal process without a license operate in an area of uncertainty, because the cost of licensing the Unocal process has not yet been determined. Some contended that this uncertainty created by the court decision has adversely impacted RFG production. However, given the high market prices for gasoline generally, and for RFG and RBOB specifically, prices may already be high enough to cover whatever costs might be incurred when the license fee issue is resolved.

This memorandum was prepared by the Resources, Science, and Industry Division to enable distribution to more than one congressional client.

EXHIBIT VIII

Why RFG Inventories Must be Taken to Near Zero Levels for Spring Conversion (MAP)

This document summarizes the nature of the inventory turnover required each spring and fall due to gasoline volatility requirements. The RFG Phase II requirements result in the most severe inventory shifts faced by the industry to date.

WHY RFG INVENTORIES MUST BE TAKEN TO NEAR ZERO LEVELS FOR SPRING CONVERSION

BACKGROUND

Every year the pipelines, terminals, jobbers and service stations must convert their gasoline from winter grade to summer. This process has taken place for decades because spark ignition gasoline engines need different fuel properties for satisfactory operation under winter conditions than they do under summer conditions. Vapor pressure is the primary variable that changes. Gasolines need high vaporization rates in the winter to ensure ignition and good starting. In the summer high vaporization can cause fuel line vapor lock and therefore must be avoided.

ASTM developed regional requirements for gasoline vapor pressure based on seasons of the year and geographic location. In the early 1990's EPA started requiring low Reid vapor pressure (RVP) gasoline of 7.8 psi in southern cities with ozone problems during the summer ozone season, which is defined as June 1 to September 15. In 1995 EPA started requiring Phase I RFG year round in cities with ozone problems or cities that elected to opt into the RFG program. Phase II RFG requirements went into effect January 1, 2000, with the summer specifications required to met by May 1 at the terminal level and by June 1 at the station level.

Table 1 shows the change in northern RFG summer specifications from Phase I to Phase II. The large reductions in VOC emissions forces drastic reductions in RVP as can be seen in Table 2

TABLE 1
PHASE I VS PHASE II FOR NORTHERN, SUMMER RFG

	PHASE I RFG	PHASE II RFG
VOC EMISSION REDUCTION, %	17.1	27.4
NOx EMISSION REDUCTION, %	1.5	6.8
TOXICS EMISSION REDUCTION, %	16.5	21.5
OXYGEN CONTENT, WT%	2.1	2.1
BENZENE, VOL %	0.95	0.95

TABLE 2
EXPECTED VALUES OF KEY RFG PROPERTIES

	PHASE I RFG	PHASE II RFG
RVP, psi	7.8-8.3	6.8-7.0
SULFUR, ppm	330-500	150-170
BENZENE, WT%	0.95	.7-.8

PAST CONVERSIONS WITH CONVENTIONAL GASOLINE

In the past tanks could be converted to the lower RVP requirement simply by lowering the tank volume and moving in a batch of sub-RVP gasoline. For example a tank of 12.0 psi gasoline could be converted to 8.0 psi by lowering the level to 20% of operating capacity and then filling

the remainder of the tank with 7.0 psi gasoline. This operation requires an accurate prediction of sales to be certain that the remaining tank volume is below the targeted level and accurate pipeline movements to be certain that the new batch of lower RVP gasoline arrives after the targeted level has been reached but before the tank is empty and sales have to be stopped.
The situation is compounded by a distribution network that in many cases has three to five tanks essentially in series that must be converted one after the other. For example after MAP's Texas City refinery converts its refinery tanks, batches must be sent to convert tankage at the Pasadena terminal, after this Explorer tankage must be converted, then MAP's Griffith tankage, then tankage at the Chicago terminals and finally the station tanks must be converted. Milwaukee and Cleveland have similar supply chains.
Using the example above for a four tank distribution chain, assuming all the tanks start with 13.5 psi gasoline (the typical RVP going into conversion season) and are at 20% when new batches arrive, you can calculate that the first batch of 7.0 gasoline converts the first tank to 8.3. But that 8.3 RVP batch converts the second tank in the system to 9.3, the third tank to 10.2 and the fourth tank to 10.8 RVP. In this example it takes three consecutive 7.0 psi batches until the fourth tank is below the targeted 8.0 RVP. Given 20 days of shipping time, it takes two months of perfect operations, selling exactly at forecast and with no change in pipeline delivery schedules to convert this system of four tanks.

RFG CONVERSIONS

From Table 2 the targeted range for Phase I RFG was 7.8 to 8.3 RVP. Thus, the four tank example above roughly approximates how tanks were converted to Phase I RFG summer gasoline in the north. It should be noted that if sales were below forecast or pipeline deliveries were ahead of schedule, the fourth tank in the system, most likely a terminal tank would be full of off spec material. Unless this tank volume can be sold before May 1, it will remain full of material that can not be sold until after September 15 and thus it is effectively out of service for the summer.

Summer grade northern Phase II RFG, however, has a targeted RVP of 6.8 to 7.0 (Table 2). Summer grade RFG also has a minimum RVP requirement of 6.4 psi to be certified at the refinery gate. The addition of even 5% of 13.5 psi RFG to a 6.4 RVP batch reaches the 6.8 RVP target. Further complicating the situation is the fact that the measurement reproducibility for RVP is +/- 0.3 psi. This effectively means that the lower limit and the targeted RVP are virtually the same and conversion from a 13.5 psi RVP using the traditional tank conversion procedure will not work for Phase II RFG. The only workable solution is to nearly empty the tank before the new batch arrives.

The requirement to empty RFG tanks as they are converted in the spring results in a drastic reduction in RFG stocks during this time period. Unless this inventory reduction can be quickly rebuilt, the entire RFG distribution system is vulnerable to refinery upsets or distribution problems.

EXHIBIT IX

J. L. Frank letter to the editors; The Courier, The Cincinnati Post, and the Detroit News, June 2000

The attached exhibit is an editorial letter written by J. L. Frank to the Findlay Courier, June 20, 2000.

The Courier
The Findlay Publishing Company

VIEWPOINT

Why gasoline soared

Interruptions, regulations reduced supply

By J.L. "CORKY" FRANK

Consumers are understandably concerned about the recent surge in gasoline prices, particularly those in the Midwest. Much of the increase nationwide is related to the price of crude oil, which has nearly tripled since January 1999, and to the implementation of regulations which force refiners to produce an ever-widening array of motor fuels for different markets. In addition to these factors, the Midwest has been experiencing an imbalance of gasoline supply and demand. The primary causes of this imbalance are new fuels required June 1 for the Chicago, Milwaukee and St. Louis markets and a series of pipeline and refinery disruptions.

As is frequently the case, the market initially reacted to this supply-demand imbalance with sharp price increases. However, thanks to a highly competitive market, and to the extraordinary efforts of hard-working men and women of Marathon Ashland Petroleum and other companies in the industry, there are indications that relief is forthcoming.

This situation illustrates the fragile nature of petroleum product supply and distribution in the Midwest. It also highlights the need for improvements in the supply and distribution system, and for a different approach to fuels regulations, in order to avoid similar problems in the future.

By way of background, the Midwest's refining capacity satisfies only about 75 percent of the region's demand for petroleum products. Consequently, gasoline and other products must be imported into the Midwest by pipeline and barge from the nation's other refining centers at a rate of more than 42 million gallons per day. When significant interruptions occur in the transportation system, the supply balance is quickly upset.

One such event occurred in March of this year, when Explorer Pipeline, a major source of petroleum products from the Gulf Coast to Chicago, suffered a leak. This incident resulted in the loss of approximately 336 million gallons of product to the Chicago market, which is a major transshipment point for the Midwest. The lost supply could not be replaced due to a lack of available capacity on Explorer or other systems. When the Explorer Pipeline returned to service, it was not allowed to operate at full capacity due to regulatory constraints. This reduced capacity continues to impact gasoline deliveries to the Midwest at a rate of about 63 million gallons per month.

Meanwhile, as Chicago inventories dwindled, the U.S. EPA granted a waiver postponing the use of reformulated gasoline in the St. Louis market. The EPA urged marketers in St. Louis to use conventional gasoline for immediate consumption, and at the same time to build supplies of reformulated gasoline for sale when the waiver expired. This worsened the supply shortage in the Chicago market.

As product supply grew tighter in the Chicago market, it began to affect surrounding markets. This included Michigan, which receives significant supplies from Chicago on the Wolverine Pipeline system. On June 7, Wolverine Pipeline suffered a leak, requiring much of its pipeline system to be shut down for a total of nine days. Wolverine Pipeline resumed operation last Friday, but, again, regulations require that it operate at less than full capacity. This pipeline outage, in an area where product was already in short supply and where demand was strong, had a devastating effect on inventories. This resulted in a corresponding increase in prices as market forces acted to allocate scarce product.

From my company's perspective, the supply situation seems to be coming back into balance and when this is accomplished, market forces will do their job on the price front.

A series of other Midwest supply interruptions and refinery outages also occurred in recent months and each event adversely impacted supplies in the Midwest.

These incidents occurred in a supply and distribution system already challenged by the need to supply multiple grades of gasoline now required by environmental regulations. For example, in our 21-state marketing area, we once transported and stored just three grades of gasoline. Now we handle 16 grades, including EPA's Phase II reformulated gasoline. This new gasoline, which was required at retail locations for the first time on June 1, proved more difficult and expensive to make than previous specifications.

Not every refinery can economically produce every grade of fuel that environmental regulations now require. The sheer number of fuel grades has forced refiners to choose which ones they will produce. If one refiner is unable to produce a particular fuel grade, there is the possibility that other refiners may not have the capacity to make up the shortfall. This can lead to supply shortages until markets have the chance to react.

Another major logistical challenge occurs each spring and fall when winter gasoline stocks must be changed for summer stocks or vice versa. In preparation for this summer's changeover, environmental regulations forced refiners and marketers to virtually empty their storage tanks and start the driving season with lower product inventories than in previous years.

As a result of all these factors, gasoline supplies in the Midwest this spring, including blending components used to make reformulated gasoline, were 15 percent below the five-year average for the region and the lowest since 1981, according to the U.S. Energy Department. The imbalance of supply with demand, coupled with a rebound in crude oil prices, resulted in sharply increased gasoline prices in many Midwest markets.

I'm proud to tell you that the men and women of Marathon Ashland Petroleum have worked around the clock to help remedy this situation. In addition to running our refineries at capacity, we've taken extraordinary measures to deliver products to the Midwest. For example, we have brought in additional, higher cost trucking resources from as far away as Louisiana, Texas and Florida to transport products from sources not normally used to supply these markets and have used barges to move product into the region from as far away as the New York Harbor, Newfoundland, Canada and the Gulf of Mexico.

From my company's perspective, the supply situation seems to be coming back into balance and when this is accomplished, market forces will do their job on the price front. However, let me caution that the Midwest's supply and distribution system is delicately balanced. As we have seen in recent weeks, one unfortunately-timed incident or a new round of regulatory requirements can put tremendous pressure on this system.

Marathon Ashland Petroleum is currently working on several projects that could help ease situations like the one we are experiencing now. We're seeking rights of way and permits to construct a new refined petroleum products pipeline to serve the growing central Ohio market, but our progress has been hampered due to right-of-way litigation. We've also joined two other companies to convert a natural gas pipeline into a new products pipeline from the Gulf Coast to the Midwest, including the Chicago area. Federal and state governments could help by expediting the permitting process for these significant projects as well as others our company and the industry have planned, and by rethinking the demands on our industry posed by new fuels regulations. Until changes occur, we will operate with a system in which any upset can cause potentially significant supply shortages and resultant price increases.

The Federal Trade Commission has announced that it is conducting investigations of our industry's pricing practices. While we would prefer the government use its resources to help the industry with projects that would improve our infrastructure, we know that it is not unusual for such investigations to be launched during times of volatility in gasoline markets. Our company's record of being exonerated by these investigations is spotless. We're confident that the current investigation will yield the same results. In the meantime, we will continue to work as hard as possible to provide products to our customers.

J.L. "Corky" Frank is president of Marathon Ashland Petroleum Company LLC.

EXHIBIT X

Chicago Market Wholesale Gasoline Price Chart (Source: Platts)

Chart of Chicago market wholesale gasoline prices, March 1 to June 30, 2000. The data shows the timing of pipeline disruptions, RFG availability requirements, and EPA waiver announcements.

Chicago Market
Unleaded Gasoline Prices

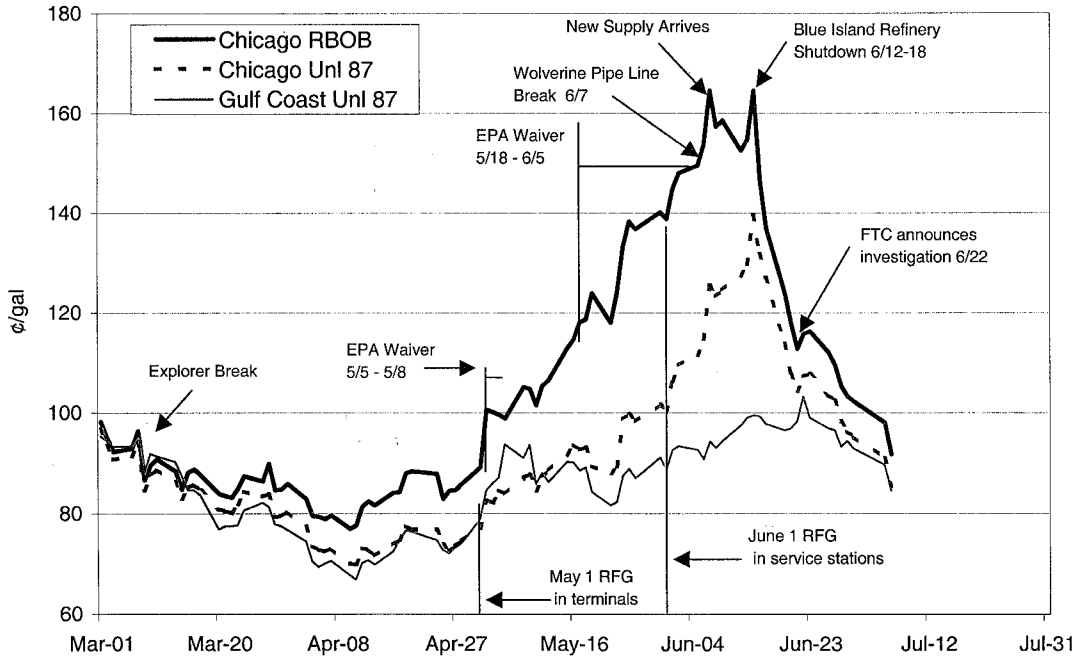


EXHIBIT XI

PADD2 Conventional Gasoline Inventories (Source: API, Weekly Bulletin")

Chart of PADD 2 conventional gasoline inventories, weekly for March through June 2000. The chart shows the remarkable decline in the level of gasoline stocks due to the Explorer pipeline disruption and other factors.

PADD2 CONVENTIONAL GASOLINE INVENTORIES

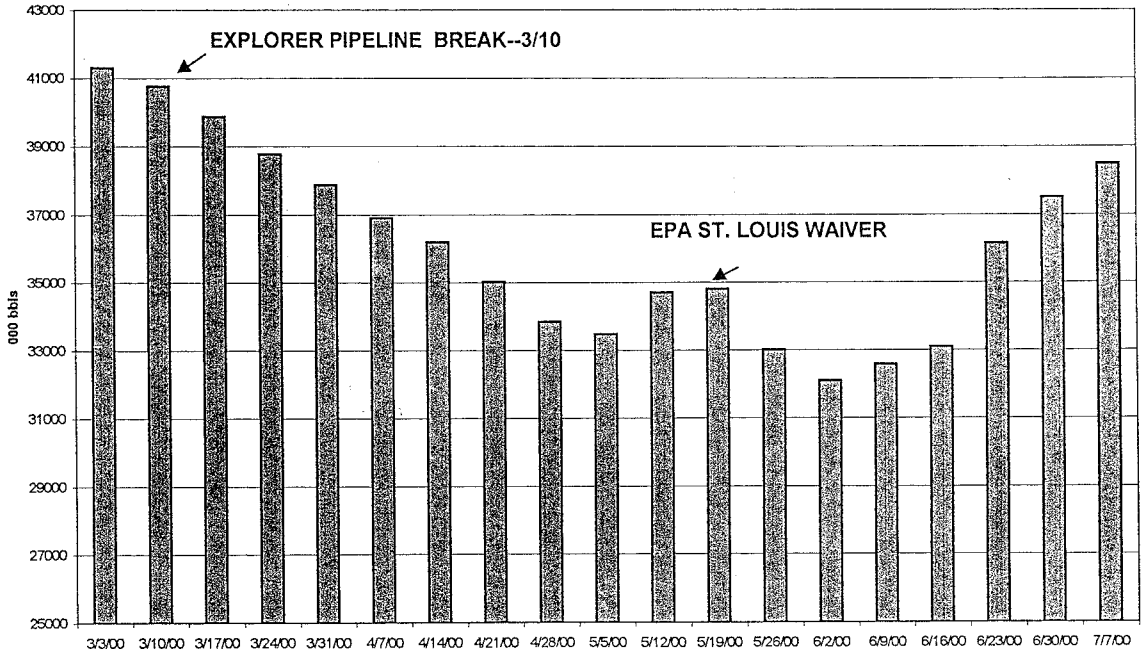
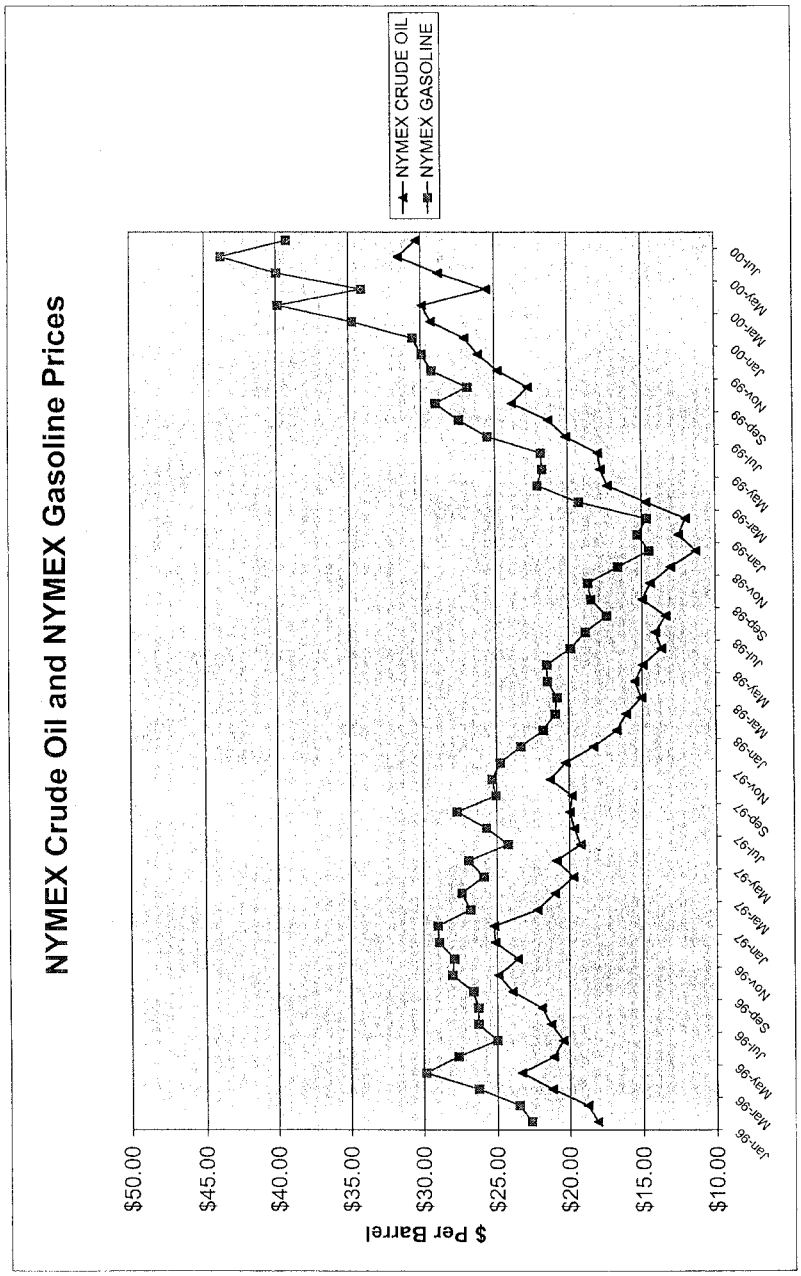


EXHIBIT XII

NYMEX Crude Oil and NYMEX Gasoline Prices (New York Mercantile Exchange)

Chart of NYMEX crude oil and gasoline prices. The data clearly shows that gasoline price changes have generally been in line with crude oil price changes from 1996 through to the present.


NYMEX Crude Oil and NYMEX Gasoline Prices
NYMEX CRUDE OIL
NYMEX GASOLINE
$ Per Barrel
$50.00
$45.00
$40.00
$35.00
$30.00
$25.00
$20.00
$15.00
$10.00
Jan-96
Mar-96
May-96
Jul-96
Sep-96
Nov-96
Jan-97
Mar-97
May-97
Jul-97
Sep-97
Nov-97
Jan-98
Mar-98
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Jul-98
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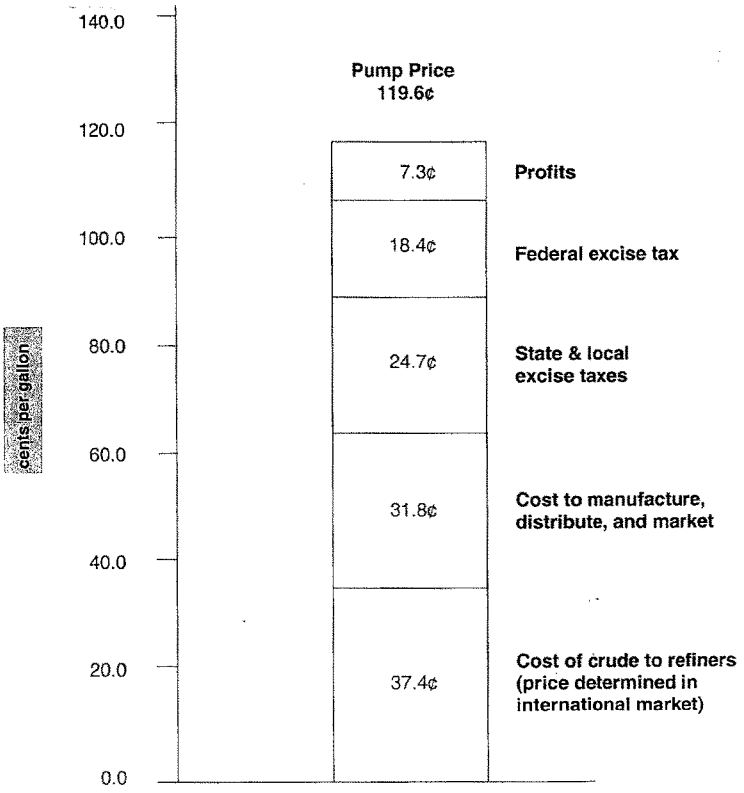
Nov-98
Jan-99
Mar-99
May-99
Jul-99
Sep-99
Nov-99
Jan-00
Mar-00
May-00
Jul-00

EXHIBIT XIII

Components of the Pump Price of Gasoline (API, Consumer Information Report: "Profits are Small Part of the Pump Price for Gasoline", April 14, 2000)

This chart visually depicts the various components of gasoline retail prices (in cents per gallon), taken as the average from January, 1997 through September, 1999. The data illustrates that the delivered cost of crude oil accounts for 37 cents, the costs to manufacture, distribute and market add 32 cents, state and local taxes add 25 cents, federal excise tax is 18 cents, and refining and marketing profits averages just 7 cents.

Components of the Pump Price of Gasoline
(average for period January 1997 – September 1999)



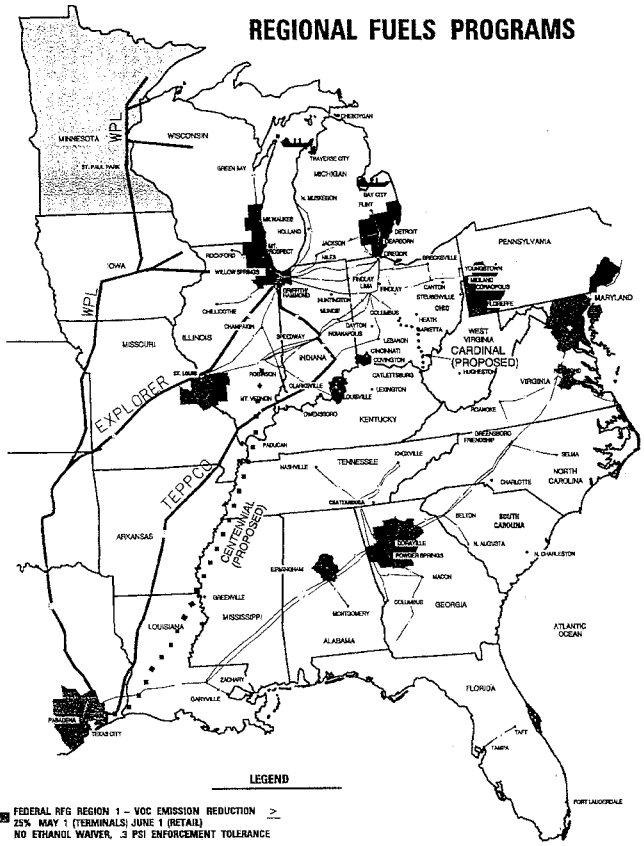
Source: API Consumer Information Report: *Profits Are a Small Part of the Pump Price for Gasoline* 4/19/00

EXHIBIT XIV

Regional Fuels Supply Map (MAP)

This map depicts the numerous regional gasoline programs mandated by states and municipalities as part of their EPA attainment plans and the petroleum product pipelines that service the Midwestern states. It helps explain the strain that multiple gasoline specifications place on the transportation facilities and how local supply shortfalls can easily occur due to pipeline accidents.

REGIONAL FUELS PROGRAMS



LEGEND

- FEDERAL RFG REGION 1 – VOC EMISSION REDUCTION ≥ 25% MAY 1 (TERMINALS) JUNE 1 (RETAIL) NO ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE
- FEDERAL RFG REGION 2 – VOC EMISSION REDUCTION ≥ 23.4% MAY 1 (TERMINALS) JUNE 1 (RETAIL) NO ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE
- 7.0 SUMMER RVP – STATE LVP EFFECTIVE JUNE 1 (TERMINALS AND RETAIL) 1.0 PSI ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE. AVERAGE SULFUR REQUIREMENT NOT TO EXCEED 150 PPM
- 7.8 SUMMER RVP – FEDERAL VOLATILITY REQUIREMENT (JUNE 1 (TERMINALS AND RETAIL) 1.0 PSI ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE
- 7.8 SUMMER RVP – STATE LVP EFFECTIVE JUNE 1, 1997 (TERMINALS AND RETAIL) 1.0 PSI ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE, REGION 2 RFG ALSO ALLOWED
- 7.8 SUMMER RVP – STATE LVP EFFECTIVE MAY 1 (TERMINALS), JUNE 1 (RETAIL) 1.0 PSI ETHANOL WAIVER (INDIANA ONLY), PENNSYLVANIA DOES NOT ALLOW ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE – REGION 2 RFG ALLOWED IN INDIANA ONLY
- 7.2 SUMMER RVP – STATE LVP EFFECTIVE JUNE 1 AT ALL FACILITIES 1.0 PSI ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE
- STATE OF MINNESOTA YEAR ROUND OXY FUEL PROGRAM. ALL GASOLINE MUST CONTAIN A MINIMUM OF 2.7 WT.% OXYGEN
- NON-COLORED AREAS REQUIRE 9.0 SUMMER RVP – FEDERAL VOLATILITY REQUIREMENT MAY 1 (TERMINALS), JUNE 1 (RETAIL) 1.0 PSI ETHANOL WAIVER, .3 PSI ENFORCEMENT TOLERANCE

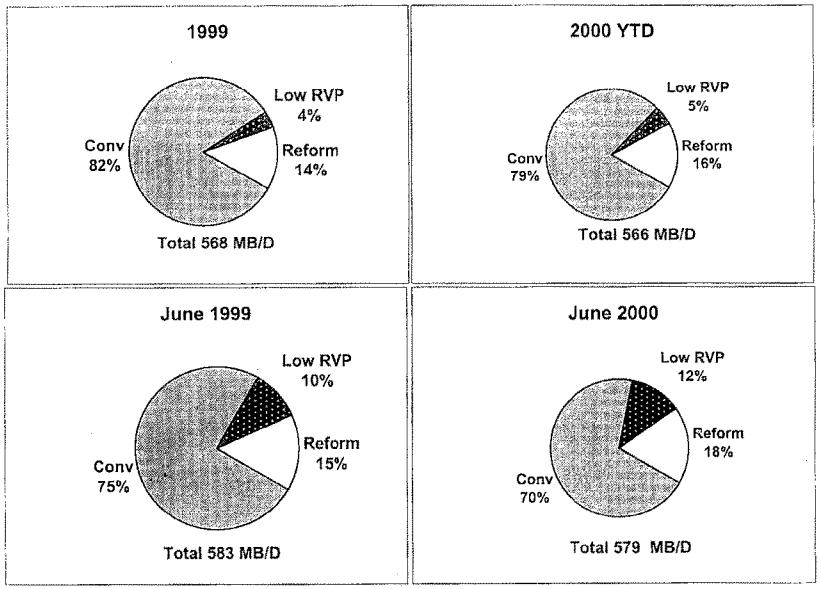
NOTES: 1. ALL SUMMER PROGRAMS ARE EFFECTIVE THROUGH SEPT. 15
2. ETHANOL WAIVER REQUIRES BLENDED GASOLINE TO BE 9.0 TO 10.0 PERCENT ETHANOL TO QUALIFY FOR WAIVER

EXHIBIT XV

MAP Refining Gasoline Production Comparison (MAP)

This chart shows Marathon Ashland Petroleum refinery gasoline production by grade for 1999 and June year-to-date 2000. The data illustrates that the production of low RVP and reformulated gasoline increased as a percent of total refinery output. The graphs of June production highlight the year-to-year changes in the gasoline grade mix.

MAP LLC Refinery Gasoline Production



MAPGslProd.xls

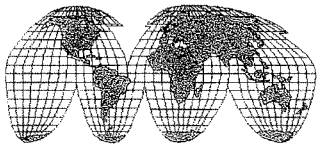
7/11/00

EXHIBIT XVI

Energy Information Administration, "Update: A Year of Volatility-Oil Markets and Gasoline"

This report notes that while nominal gasoline prices were much higher than at this time last year, they are much less than the prices experienced in the first half of the 1980's when adjusted for inflation. World crude oil prices are expected to decline as increased oil production from OPEC and others enter the market.

Update: A Year of Volatility
Oil Markets and Gasoline

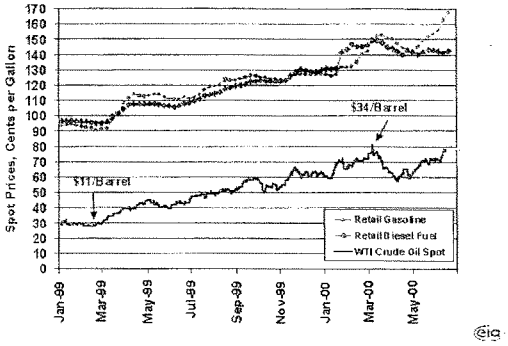


June 20, 2000

Energy Information Administration

Slide 1 of 17

Retail Product Prices Driven by Crude



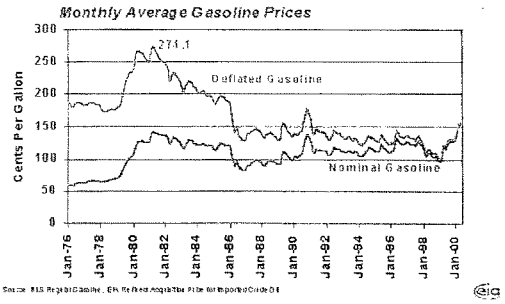
Slide 2 of 17

Notes:

- Retail prices for both gasoline and diesel fuel are much higher this year than last, driven mostly by the rise in world crude oil prices to their highest levels since the Persian Gulf War.
  - The U.S. average retail regular gasoline price reached nearly $1.70 per gallon Monday, June 19.
  - Retail on-highway diesel fuel prices peaked at almost $1.50 per gallon on March 13, but have declined to hover just over $1.40. On June 19, U.S. prices averaged $1.42.

- While movement in underlying crude oil prices has been the major driver for prices of products, low product inventories have caused increased price spreads between product prices and crude oil, further adding to consumer prices.
  - Gasoline prices have recently been pushed upward by concerns over the adequacy of summer supplies, including refinery problems producing summer RFG during the winter-to-summer transition and the uncertainties surrounding the ability of foreign refineries to make Phase II summer RFG and the Unocal RFG patent issue.
  - Diesel fuel prices, by comparison, rose sharply starting in late January due to low inventories and high demand for heating fuels. While diesel fuel prices have recently softened as the heating season ended, prices may turn upward again if crude oil prices remain high. Strong demand this summer in combination with low stocks would also put upward pressure on diesel fuel prices this summer.

Gasoline Prices in Inflation-Adjusted Terms

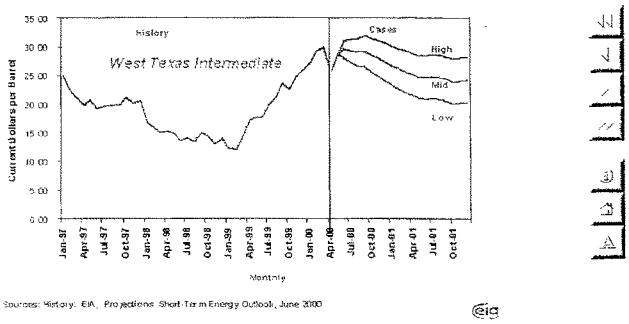


Slide 3 of 17

Notes:

- While EIA has noted that from an economic viewpoint, prices today are not that high in real terms, consumers seem to react more to rapid changes than overall levels.
    - Today's gasoline prices, now at almost $1.70 for regular unleaded gasoline, are much less than prices experienced in the first half of the 1980's when adjusted for inflation. Crude oil peaked at almost $39 nominally in 1981, which is equivalent to $76 per barrel in today's dollars.
    - Yet consumers remember the low prices they paid last year, and organizations budgeted their usual percentage increase for fuel purchases, only to find that those percentages were way too low.
- Price volatility often can be of more concern to consumers in the short run than price level itself. Volatility makes planning and budgeting more difficult, and when prices increase rapidly, they can catch consumers unprepared.

Crude Oil Prices High But May Relax Some By Year's End



Slide 4 of 17

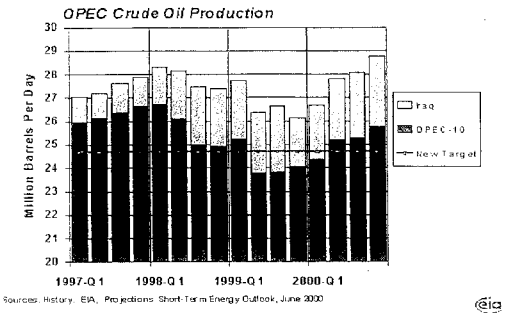
Notes:

- Current WTI prices over $30 per barrel reflect uncertainties in supply, on top of inventories that are still low, despite some recent improvements.

- World oil prices are expected to show a gradual decline as increased oil production from OPEC and others enters the world oil market, although the actual path may not be as smooth as that shown on the graph. The average price of WTI was almost $30 per barrel in March, but dropped to $26 in April as the market responded to the additional OPEC production. However, prices strengthened again and recently have been staying over $32, as growing gasoline production needs pull on the crude market in the face of low crude oil and gasoline stocks. EIA expects adequate OPEC supplies to be introduced into the market throughout the rest of the year to bring WTI crude oil price down somewhat by year end.

- These crude oil price projections reflect:
  - Fairly low world demand growth during 2000 of 1.7 percent, or 1.3 million barrels per day.
  - Non OPEC production growth during 2000 of over 1.2 million barrels per day.
  - Growth in Iraqi production of 700 thousand barrels per day from Q1 to Q4 2000. Iraqi production is estimated at 3.0 million barrels per day in the fourth quarter 2000.
  - Growing OPEC leakage over the current OPEC target.

EIA OPEC Production Assumption Projects Increasing Leakage



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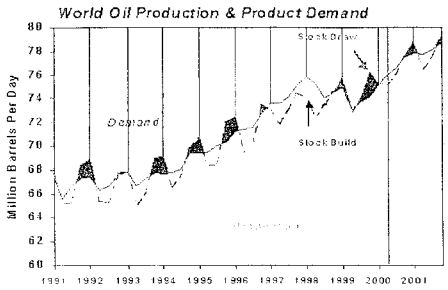
Notes:

- Production levels for all of OPEC (including Iraq) are assumed to rise about 2.1 million barrels per day from the first quarter to the fourth quarter this year.
- The EIA base case assumes OPEC-10 production (excluding Iraq) will increase about 1.4 million barrels per day from first to fourth quarter, putting them almost 1.1 million barrels per day over their new quota by the end of 2000.
  - In the second quarter, OPEC-10 production is assumed to exceed the new quota by 0.5 million barrels per day, returning to the levels of production in early 1999.
  - OPEC-10 production in the third quarter is assumed to be close to second quarter production, and production in the fourth quarter is assumed to rise about 0.5 million barrels per day over second quarter.
- Iraqi production is assumed to increase almost 0.7 million barrels per day from first to fourth quarter, which could be optimistic depending on their ability to keep their oil supply infrastructure intact.

Supply/Demand Forecasts Leave Little Room for Winter Drawdown



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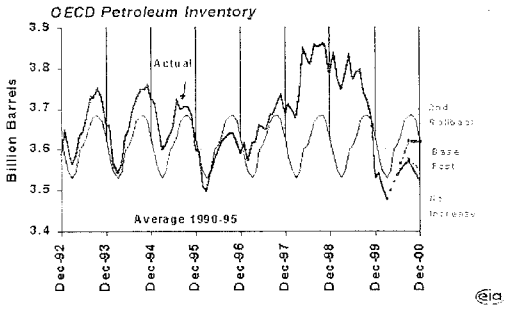
Notes:

- During 1999, we saw stock draws during the summer months, when we normally see stock builds, and early estimates indicate we had very large stock draws this past winter.
  - Normally, crude oil production exceeds product demand in the spring and summer, and stocks build.
  - These stocks are subsequently drawn down during the fourth and first quarters (dark blue areas). When the market is in balance, the stock builds equal the draws.
- As we look ahead using EIA's base case assumptions for OPEC production, non-OPEC production, and demand, we expect near normal stock building during summer 2000 -- about 800 thousand barrels per day second quarter and 500 thousand barrels per day in the third quarter 2000. But since we are beginning the summer with very low stock levels, even a normal build will have us entering the winter with seasonally low stocks.
- While the base case begins the winter 2000/2001 with low stocks, EIA's assumptions have OPEC increasing production enough to minimize stock draws over the winter months, and support prices in the $25-$30 range.

Price Volatility Will Remain Until Inventories Rebuild



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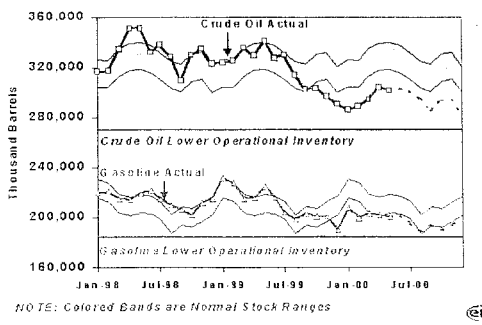
Notes:

- In EIA's forecasts, the base case assumptions have OECD inventories remaining low for the rest of the year. Even with EIA's assumed OPEC leakage increases and rising Iraqi production, supply is not quite sufficient in the base case for a normal stock build in either the second or the third quarter.
- This year, prices fell with April's increase in OPEC production, but recently rebounded to earlier high levels as strong demand and concerns over third quarter supply have added pressure to the market.
- There still is much uncertainty ahead. Prices could fall back if OPEC announces sizeable production increases at their June meeting. But prices could turn back up in the third quarter, depending on the weakness of the third quarter stock build in preparation for the high-demand winter quarters.

Low Stocks Mean Tight Markets



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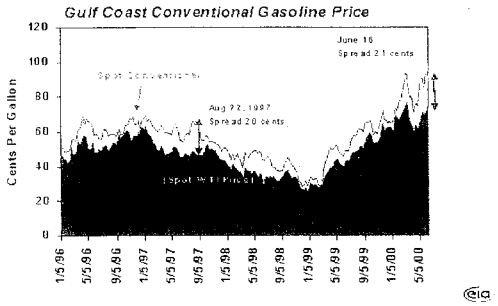
Notes:

- Similar to the EIA base case projections for OECD petroleum stocks, U.S. stock projections are expected to remain low through the rest of this year.
- This chart shows two important components of U.S. stocks, crude oil and gasoline. While stocks are currently low, they did improve somewhat in March and April.
  - Crude oil inventories are still below normal levels.
  - Gasoline stocks at the end of February had dropped about 5 percent below the low end of the normal range. Gasoline inventories are now at the low end of the normal band.
- The U.S. inventory data, which are accurate and timely, will be an important price barometer to watch. Low inventories leave little cushion to absorb unexpected events such as refinery or logistical disruptions.

Tight Markets Lead to High Gasoline Spreads



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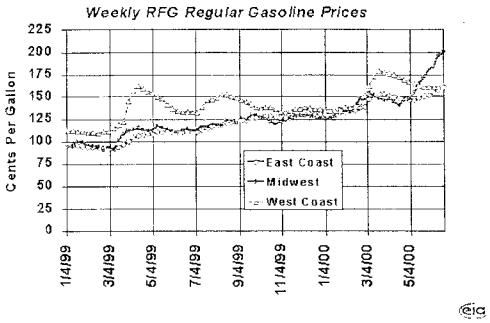
Notes:

- Low crude oil and product stocks tend to mean high crude oil and product prices
- Low gasoline stocks in the spring and summer increase the price of gasoline relative to crude oil. The difference between gasoline spot prices and crude oil spot prices are shown as the green band in the graph.
  - During May, this gasoline price spread is typically about 12 cents per gallon
  - In May 1999, the gasoline price spread averaged 6 cents per gallon.
  - In May and June 2000, it averaged about 20 cents per gallon, similar to the spreads seen during late summer 1997, when we had a gasoline price runup as demand outstripped capacity for a time.
- Accompanying low stocks and high gasoline spreads is the increased potential for price volatility.

MidWest RFG Price Rose Quickly



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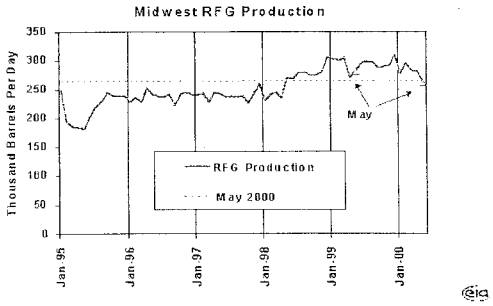
Notes:

- The gasoline market is tight throughout the United States, but the impact can be more pronounced on RFG than on conventional gasoline.
- Midwest RFG is showing the first signs of gasoline price volatility this summer.
  - This is stemming mainly from St. Louis, Chicago and Milwaukee.
  - The loss of supplies to St. Louis coming from the Explorer Pipeline created high RFG prices in that area.
  - Chicago and Milwaukee will be discussed in more detail later in the presentation.

Midwest RFG Production Somewhat Low



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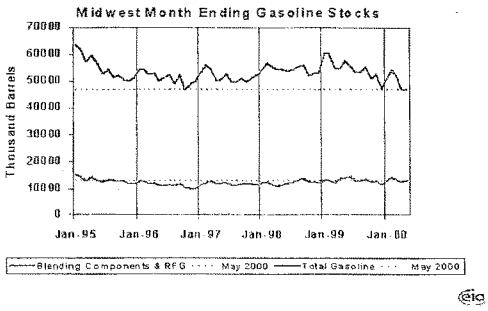
Notes:

- RFG production in total for Midwest has been somewhat low the past couple of months, but these production levels do not indicate a critical supply situation is likely in the near term.
- However, gasoline demand in Midwest seems to be growing more strongly in 2000 than it has for the past couple of years in this region. Weak production combined with strong demand can cause inventories to be drawn down faster than usual.
- Furthermore, in the Chicago and Milwaukee RFG areas, which account for over 2/3 of Midwest RFG consumption, the RFG is almost exclusively made by blending ethanol with blending components called "reformulated gasoline blendstock for oxygenate blending" or RBOB at local terminals. Most of the RBOB comes from about 7 refineries that serve that area. (Some additional RBOB comes from a few additional refineries on the Gulf Coast.)
- The summer-grade RBOB that gets blended with ethanol is fairly difficult to make, and not many refineries outside of the Chicago/Milwaukee area produce the product. With the Phase II RFG program, some refiners were unable to produce as much RBOB as last year, and others were able to produce more. This created a change in supply patterns to which the markets are adjusting.

Midwest Conventional Stocks Very Low; RFG Not As Extreme



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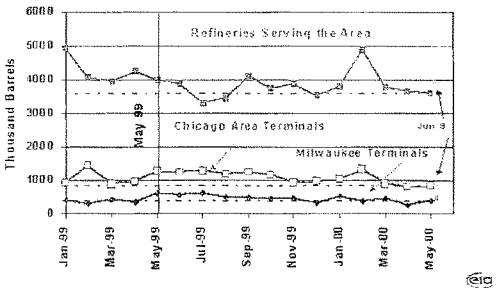
Notes:

- Midwest gasoline stocks (including blending components which are used to make RFG) are very low. Total gasoline stocks at the end of May are about 13% lower than the five year average for this time of year, and the lowest ever since 1981 when EIA began collecting this data.
- With the addition of a new RFG region, St. Louis, into Midwest, one would expect RFG and blending component stocks to increase in total. But they did not. They are at about the same levels as we saw in 1998 and 1999 at this time of year. St. Louis added about 18% demand to the RFG market in Midwest, but without a corresponding increase in overall inventory levels.

Regional Inventories Low

Blending Component & RFG Inventories in Serving Chicago & Milwaukee Areas



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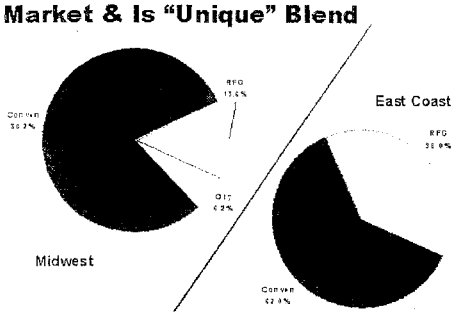
Notes:

- In the Chicago and Milwaukee areas, inventories of blending components used to make RFG and RFG are low, particularly at the Chicago terminals and at the 7 refineries supplying the area.
  - About 3/4 of the blending component and RFG gasoline inventories are stored at the main Midwest refineries that produce RFG for the Chicago and Milwaukee areas, and 1/4 at the terminals.
- The latest weekly data for June 9 indicate there may be some increases in supply occurring, as evidenced by the increases in refinery stocks and slight increases in terminal stocks. Furthermore, spot prices in the Chicago area began to fall at the end of last week, which also provides an indication that the supply situation may be improving. Still the area is functioning with no room for error, so this improvement can quickly disappear if any further problems develop.
- Once the region begins to recover, there will be some delay before wholesale price improvements are seen at the retail level.

Midwest RFG Is Small Fraction Of Market & Is "Unique" Blend



EIA Prime Supplier Data 1999 For Period After MO Entered the Program

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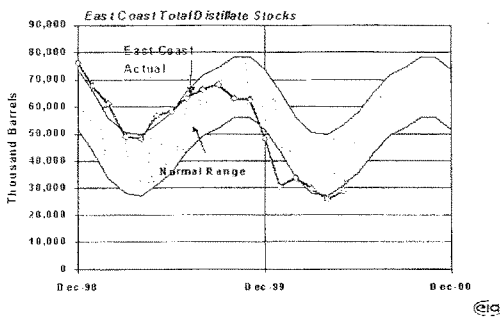
Notes:

- Why has there been such a large RFG price increase in the Chicago/Milwaukee areas?
- There is no one answer. A large part of the price reaction to the region's low stocks stems from the small size of this market, the unique nature of the area's summer-grade ethanol-blended Phase II RFG, and a difficult transition from the winter to the summer grade gasoline.
  - The RFG market in the Midwest is about 13% of the Midwest total gasoline market, compared to the East Coast, where RFG represents about 38%. A small market has fewer nearby options for product when any problems occur. Furthermore, because RFG is relatively expensive to produce, the industry has a disincentive to store extra product.
  - The special gasoline blend used in this area during the summer is produced at refineries and sent to terminals near the local market to be combined with ethanol in order to produce the finished RFG. While that special blend can be produced on the Gulf Coast by a few refineries and shipped to Chicago and Milwaukee terminals, it is both a difficult and relatively expensive material to produce and a long trip to the final destination. Thus, an initial price runup does not immediately bring in new supplies from outside the region.
  - The complexity of the transition from winter to summer grade gasoline also contributed to the problem. Many storage tanks had to be drained completely before the new summer-grade product could be added in order to preserve the clean fuel qualities. This exposed the area to very low stocks during the transition. Also some refineries produced less RFG blending component volumes this year than last and others produced more, which required market distribution adjustments.
- Contributing to the problem are the uncertainties surrounding supply that result from the temporary West Shore pipeline shutdown and the UNOCAL patent, which is lending uncertainty to all RFG producers.

While Gasoline Has the Limelight, Distillate Is Being Watched



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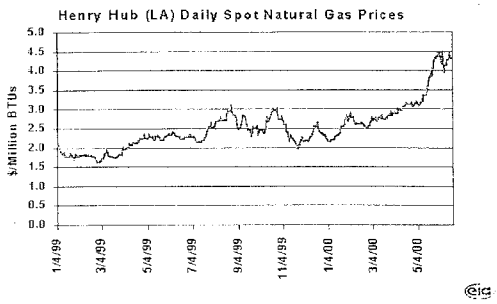
Notes:

- While the public is currently focusing on gasoline, EIA is watching the distillate market closely.
- As the normal stock band shows, we typically build distillate stocks during the summer for use during the winter.
- Given the low gasoline stocks, it is unlikely refinery yields will be tilted to diesel versus the normal pattern, so at best, the distillate fuel oil build will be normal. In this case we would begin the winter with below average stock levels.
- Below average stock levels translate to increased potential for price volatility.

Natural Gas Supply Concerns Driving Up Prices



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Notes:

- Natural gas prices are surging as summer gets underway. Utility demand for natural gas usually peaks during the summer, but supplies this year are in question.
- While increasing crude oil prices have probably helped to move natural gas prices higher through March and April, the latest May surge seems to be stemming from a confluence of factors raising concerns over the ability of supply to meet the peak summer demand days this year. The concerns center on:
  - A hot summer being expected this year;
  - A larger share of power generation using natural gas -- especially with the addition of some new merchant power plants expected to be in service this June;
  - The hurricane season beginning, which affects natural gas production;
  - Overall demand growth eating into excess deliverability;
  - Natural gas inventories lower than last year, and, while not at record absolute lows, providing less coverage as measured in days of supply.
- Ironically, an important alternative fuel for the electric generating companies is distillate fuel oil. If natural gas prices remain high, utilities may use more distillate this summer, hindering a buildup of heating oil stocks for the winter.

Conclusion: Volatile Prices Likely in the Year Ahead

- Gasoline markets: Low stocks, high prices, volatility
- Winter heating fuel: May have low inventories going into winter, resulting in price volatility
- Natural gas: High prices and supply concerns may impact distillate stock build for winter and can mean high natural gas prices this winter
- But maybe OPEC will add more supply, stocks will build, and prices will fall

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Notes:

- In conclusion, EIA believes we may see more price volatility in the oil markets before the inventory situation improves, and inventories will not improve quickly as petroleum demand remains fairly strong and worldwide production does not keep pace.

EXHIBIT XVII

U.S. Ethanol Production and MAP Purchases (DOE/EIA, Renewable Fuels Association and MAP data)

This chart illustrates U. S. fuel ethanol production and capacity, as well as MAP's purchases of ethanol. Ethanol capacity is nearing full utilization and the Renewable Fuels Association predicts significant capacity additions in the near term. MAP is the largest purchaser of fuel ethanol in the United States.

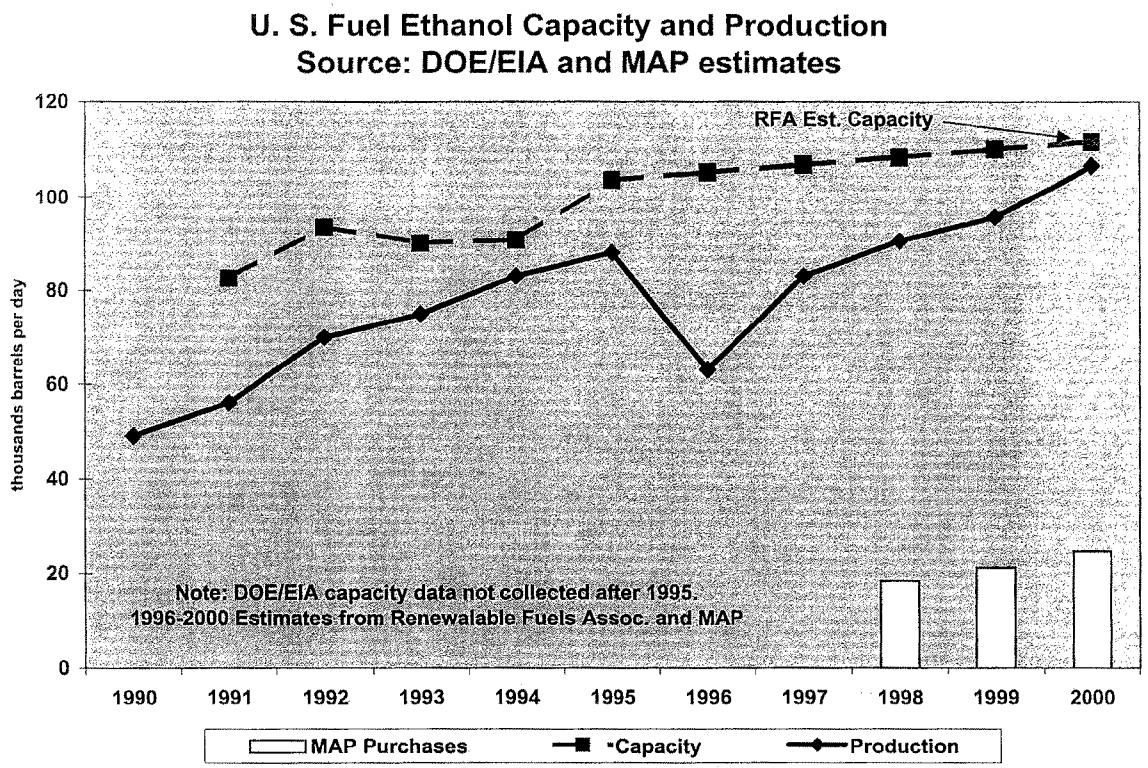
U. S. Fuel Ethanol Capacity and Production
Source: DOE/EIA and MAP estimates
thousands barrels per day
120
100
80
60
40
20
0
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
RFA Est. Capacity
Note: DOE/EIA capacity data not collected after 1995.
1996-2000 Estimates from Renewalable Fuels Assoc. and MAP
MAP Purchases
Capacity
Production

EXHIBIT XVIII

CRS Report, "Environmental Protection Agency Options for Ameliorating the Effects of Reformulated Gas Requirements in the Chicago/Milwaukee Area", June 28, 2000.

This report examines EPA options for ameliorating the effects of Reformulated gasoline in the Chicago/Milwaukee area. The report explains the fact that the EPA election to use enforcement discretion in waiving the RFG requirement for St. Louis was a problematic course of action. EPA could have chosen to waive the RFG provisions by other legal means provided for in the Clean Air Act.

Congressional Research Service · Library of Congress · Washington, D.C. 20540

Memorandum June 28, 2000

TO : House Government Reform Committee
Attention: Mildred Webber

House Science Committee
Attention: Richard Russell

FROM : Morton Rosenberg
Specialist in American Public Law
American Law Division

SUBJECT : Environmental Protection Agency Options for Ameliorating the Effects Of Reformulated Gas Requirements in the Chicago/Milwaukee Area

The Clean Air Act amendments of 1990[1] required areas with poor air quality to add chemicals called "oxygenates" to gasoline as a means of improving combustion and, thereby, reducing emissions.[2] Section 211 (k) of the Act[3] and the regulations promulgated thereunder[4] prohibit the sale of conventional gasoline in an area in which reformulated gasoline (RFG) is required. Violators of the regulatory requirements may be assessed a civil penalty of up to $25,000 for each day of such violation as well the amount of economic benefit or savings resulting from the violation.[5]

Recent steep rises in the retail price of gasoline in midwestern RFG areas have resulted in calls by federal, state and local elected officials and gasoline marketers for ameliorative action by the Environmental Protection Agency (EPA) and for the institution of Federal Trade Commission and congressional committee investigations as to whether the increased prices are due to environmental rules, high prices for crude oil, supply disruptions or collusion, or some combination of these factors. Your particular interest at the moment is the nature of any possible actions the EPA may take to temporarily

[1] Pub. L. 101-589.
[2] See generally, CRS Issue Brief IB 10004, *Clean Air Act Issues in the 106th Congress*, at pp. 4-6 (CRS Issue Brief).
[3] *Codified at* 42 U.S.C. 7545 (k) (1994).
[4] 40 CFR Part 80, Subpart D.
[5] 40 CFR 80.79, 80.80.

mitigate the impact on consumers of the price rises in the Chicago/Milwaukee area.

Our review of EPA's authority and recent practice in this area indicates that at least three courses of ameliorative action may be available to the agency, each of which may be subject to issues of practical utility or possible questions of authority, or both. These options are a waiver under Section 211 (k) (2) (B) of the Act; a waiver under 40 CFR 80.73; or an exercise of prosecutorial discretion not to take enforcement action regardless of Section 80.73's applicability for the period required for prices to be stabilized.

Some background on agency use of waivers and judicial approbation of their utilization is useful in assessing the scope and limitations of EPA authority in the area. Judicial precedent has long been strongly supportive of waiver and variance authority of rulemaking agencies as a means of assuring regulated parties of due process.[6] The courts have recognized that rules, by definition, tend to cover a broad range of people and activities and often affect many divergent interests. At times individual and specific activities are regulated by accident or because it was impossible to sort them out, or regulations have unanticipated untoward effects. In such circumstances courts have found that agency waivers and variances provide a legitimate mechanism for pursuing both fairness and the public interest in particular, individualized cases.[7] As a panel of the District of Columbia Circuit Court of Appeals observed, "waiver processes are a permissible device for fine tuning regulations, particularly where, as here, the Commission must enact policies based on 'informed prediction' .... So long as the underlying rules are rational, as we find them to be here, waiver is an appropriate method of curtailing the inevitable excesses of the agency's general rule."[8]

As a consequence, it has been accepted that rulemaking agencies should provide a reasonable opportunity to petition for individual treatment in the form of waiver, exemption or variance. The source for such a requirement traces back to remarks in Supreme Court rulings in *United States v. Storer Broadcasting Co.*,[9] and *National*

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[6] See, *e.g.*, *Chemical Manufacturer Association* v. *Natural Resources Defense Council, Inc.*, 470 U.S. 116, 132-133 and ft. 25 (1985)("[T]he availability of [EPA's] FDF variances makes bearable the enormous burden faced by EPA in promulgating categories of sources and setting effluent limitations. . . . Unfortunately, EPA will not be appraised of and will fail to consider unique factors applicable to atypical plants during the categorical rulemaking process, and it is thus important that EPA's nationally binding categorical pretreatment standards. . . be tempered with the flexibility that the FPF variance mechanism offers, a mechanism repugnant to neither the goals nor the operation of the Act.")

[7] *American Trucking Associations, Inc.* v. *Federal Highway Administration*, 51 F.3d 405, 414 (4th Cir. 1995).

[8] *National Rural Telecom Association* v. *FCC*, 988 F.2d 174, 181 (D.C. Cir. 1993).

[9] 351 U.S. 192 (1956).

[10] 319 U.S. 190 (1943).

Broadcasting Co. v. United States.[10] Both of those cases appear to uphold the FCC's rulemaking efforts partly because the agency built into its regulatory scheme the flexibility necessary to offer individual treatment to those covered by the rule.[11] Neither case expressly required provision for waiver or variance, but the existence of such opportunity made the Court more comfortable with the rule. *Storer Broadcasting* in particular has been read over the years to support a right to petition for waiver or variance.[12]

The viability of waiver or variance to do individual justice was recognized by the Court in *Chemical Mfrs. Ass'n v. Natural Resources Defense Council, Inc.*[13] The Court noted that EPA had long used a variance process "as a mechanism for ensuring that its necessarily rough-hewn categories do not unfairly burden atypical plants." [14] In the 1977 amendment to the Clean Water Act, however, Congress prohibited the EPA from modifying requirements as to specific toxic pollutants. The NRDC challenged the EPA's continuation of the practice of occasionally granting variances. For several reasons, the Court found sufficient flexibility in both the language and the history of the Act to permit the variances. Since the agency wrote the standards, it appeared reasonable to the Court to assume that it had the inherent power to provide for variance.[15] Nor, the Court found, did the variance process frustrate the legislative intent or work a result inconsistent with the Act's goals.[16] Not compelled then by the Act, its history, or surrounding considerations to strike down the variance procedure, the Court considered the advisability of the variance process in this context. The Court found nothing to forbid "sensible variance mechanisms for tailoring the categories it promulgates."[17]

While most cases involve statutory or regulatory waiver provisions, a number involve the exercise of waiver authority in the absence of such authority,[18] confirming the indication of the Court in *Chemical Mfrs. Association* that rulemaking agencies have inherent authority to provide appropriate waivers.[19]

Also, the courts have made challenging the denial of a waiver a "difficult task."[20]

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[10] 319 U.S. 190 (1943).
[11] 315 U.S. at 204-05; 319 U.S. at 225.
[12] *E.g.*, *FPC v. Texaco, Inc.*, 377 U.S. 33, 40-41 (1964); *National Petroleum Refiners Assoc. v. FTC*, 482 F.2d 672, 692 (D.C. Cir. 1973, *cert. denied*, 415 U.S. 951 (1974).
[13] 470 U.S. 116 (1985).
[14] 470 U.S. at 120.
[15] 470 U.S. at 125-130.
[16] 470 U.S. at 129.
[17] 470 U.S. at 134.
[18] See, *e.g.*, *NTN Bearing Corp. v. United States*, 74 F.3d 1204, 1207 (Fed. Cir. 1995); *MacLeod v. ICC*, 54 F.3d 888, 891 (D.C. Cir. 1995); *National Petroleum Refiners Assoc. v. FTC*, 482 F.2d 672, 692 (D.C. Cir. 1973).
[19] See also, *National Rural Telecom Association v. FCC*, 988 F. 2d 174, 181 (D.C. Cir. 1993) ("As this Court has held, waiver processes are a permissible device for fine tuning regulations, particularly where, as here, the Commission must enact policies based on 'informed prediction.' [citation omitted] So long as the rules are rational, as we find them to be here, waiver is an appropriate method of curtailing the excesses of the agency's general rule.").
[20] *MacLeod v. ICC*, 54 F.3d 888, 891 (D.C. Cir 1985).

A challenger must show that the reasons for denial were so insubstantial as to constitute an abuse of discretion.[21] Although a request for a waiver that is "stated with clarity and accompanied by supporting data" must not be "subject to perfunctory treatment, but must be given a hard look" by the agency,[22] a court will set aside a waiver determination only if it is arbitrary and capricious or contrary to law.[23] Review under this standard is generally deferential to the agency. A court will determine whether the agency has "articulated a satisfactory explanation for its action, including a rational connection between the facts found and the choice made."[24] The agency's decision must be based on the factors made relevant by Congress and must not constitute a clear error of judgment.[25]

Finally, it may be noted that none of the waivers and variances that were the subjects of the above-discussed cases were issued pursuant to notice and comment rulemaking, and no questions were raised by the courts with respect to the informal processes used to make the determinations. This is hardly surprising since, as the case law makes apparent, waivers and variances are intended as vehicles to provide an element of flexibility and fairness in the regulatory process by authorizing the expeditious agency correction of errors or imposition of unanticipated burdens in individual cases, and not to alter the substantive policy of the agency's governing regulation. As the *Chemical Manufacturers* Court observed:

> An FDF variance does not excuse compliance with a correct requirement, but instead represents an acknowledgment that not all relevant factors were taken sufficiently into account in framing that requirement originally, and that those relevant factors, properly considered, would have justified--indeed required--the creation of a subcategory for the discharger in question. As we have recognized, the FDF variance is a laudable corrective mechanism, " an acknowledgment that the uniform . . . limitation was set without reference to the full range of practices, to which the Administrator was to refer." [citation omitted] *It is, essentially, not an exception to the standard setting process, but rather a more*

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[21] *MacLeod v. ICC, supra*, 54 F.3d at 891; *Florida Cellular Mobil Communication v. FCC*, 28 F.3d 191, 199 (D.C. Cir. 1994), *cert. denied*, 514 U.S. 1016 (1995); *NTN Bearing Corp. v. U.S.*, 74 F.3d 1204, 1207 (Fed. Cir. 1995); *Green County Mobilphone, Inc. v. FCC*, 765 F. 2d 275, 238 (D.C.Cir. 1985). *P&R Temmer v. FCC*, 743 F.2d 918, 929 (D.C. Cir. 1984).

[22] *Bellsouth Corporation v. FCC*, 162 F. 3d 1215, 1224 (D.C. Cir. 1999); *WAIT Radio v. FCC*, 418 F. 2d 1153, 1157 (D.C.Cir. 1969).

[23] 5 U.S.C. 706 (2) (1994)

[24] *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.* 463 U.S. 29, 43 (1987); *Gilbert v. NTSB*, 80 F.3d 364, 368 (9th Cir. 1996).

[25] *Gilbert v. NTSB, supra*, 80 F.3d at 368.

fine-tuned application of it.[26]

We now turn to EPA's waiver options.

Section 211 (k) (2)(B) of the Clean Air Act requires that the oxygen content of gasoline shall equal or exceed 2 percent by weight but that the "Administrator may waive, in whole or part, the application of this subparagraph for any ozone nonattainment area upon a determination by the Administrator that compliance with such requirement would prevent or interfere with the attainment by the area of a national primary ambient air quality standard." The statutory provision would appear to have virtually no utility in the current situation. The Administrator may waive the oxygen content requirement only upon a finding that enforced compliance would in any particular nonattainment area impede attainment in that area "of a national primary ambient air quality standard." Since there appears no dispute that allowing even the temporary use of conventional gasoline will have the deleterious effects sought to be minimized by RFG requirements, it does not appear that the Administrator could validly make such determination. Indeed, just such a contention has been made in opposition to a petition by the State of California under Section 211 (k)(2)(B) requesting a waiver of the federal oxygenates requirement because the oxygenate it is using, methyl tertiary-butyl ether (MTBE), is contaminating water supplies in the State. Opponents contend that California's proferred ground for the waiver is not a contemplated ground for waiver under the statutory provision. The State's petition, which was filed on March 25 1999, has yet to be acted upon.[27] It would seem, then, that the statutory waiver mechanism is arguably neither an apposite nor expeditious vehicle for resolving the instant situation.

Arguably more promising is the EPA's regulatory waiver provision found at 40 CFR 80.73 which permits the issuance of waivers which would allow the distribution of gasoline "for a brief period" which does not meet the requirements for reformulated gasoline in appropriate "extreme and unusual circumstances" that "could not be avoided by the exercise of prudence, diligence and due care." If such extraordinary circumstances are found to obtain, the Administrator then must (1) make a finding that it is in the public interest to waive the requirement; (2) make a finding that the refiner, importer, or oxygenate blender exercised due diligence and still was not able to avoid the nonconformance; (3) the petitioners must show how they will expeditiously achieve the RFG requirements; (4) the petitioners must agree to make up the air quality detriment that has been caused, "where practicable;" and (5) EPA must assure that no windfall accrues to any refiner, importer or oxygenate blender by requiring them to pay into the U.S.

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[26] *Chemical Manufacturers Association* v. *EPA*, *supra*, 470 U.S. at 130 (emphasis supplied).

[27] CRS Issue Brief, *supra*, at 4-5.

[28] **§80.73 Inability to produce conforming gasoline in extraordinary circumstances.**

In appropriate extreme and unusual circumstances (e.g., natural disaster or Act of God) which are clearly outside the control of the refiner, importer, or oxygenate blender and which could not have been avoided by the exercise of prudence, diligence, and due care, EPA may permit a refiner, importer, or oxygenate blender, for a brief period, to distribute gasoline which does not meet the requirements for reformulated gasoline, if:

(a) It is in the public interest to do so (e.g., distribution of the nonconforming gasoline is necessary to meet projected shortfalls which cannot otherwise be compensated for);

Treasury an amount equal to the economic benefit resulting from the nonconformity minus the amount expended to make up for the air quality detriment.[28]

While the regulatory waiver provision appears to be a more viable vehicle for the present situation, the EPA has until recently followed a third, arguably more problematic course of action. To achieve the effect of a waiver the agency announced in dealing with RFG supply shortages in the St. Louis area that it would " exercise enforcement discretion," *i.e.*, it would not act to impose and enforce nonconformance penalties during a specified period when conventional gasoline would be brought into the area. The conditions imposed by EPA for its prosecutorial forebearance between March 17 and May 5, 2000, as detailed in letters from EPA, did not conform with the requirements of Section 80.73, particularly with regard to the avoidance of windfall profits. Thereafter, until June 19, 2000, windfall profit conditions gradually became more explicit. The chronology is as follows.

On March 17, 2000, the EPA's Assistant Administrator for Enforcement and Compliance, apparently responding to a request from the Missouri Petroleum Marketers and Convenience Store Operators, acknowledged that there was a RFG supply disruption in the St. Louis area caused by a pipeline leak and that the Department of Energy had advised EPA that RFG supplies would be inadequate until early April. In light of the situation, the Enforcement Office announced that effective immediately it would exercise enforcement discretion and would enforce the RFG requirements as follows:

Distributors may receive deliveries of conventional gasoline into terminal tanks normally used to store RFG provided the volume of conventional gasoline is no greater than the volume necessary to supply the terminal's demands through April 3, 2000. Distributors may continue to deliver gasoline from such a tank to facilities in the St. Louis covered area subsequent to April 3 if the tank has received a delivery of RFG.

- Distributors may deliver conventional gasoline to retail outlets and wholesale purchaser-consumer facilities (facilities) in the St. Louis covered area. This category of enforcement discretion expires on April 3, 2000

(b) The refiner, importer, or oxygenate blender exercised prudent planning and was not able to avoid the violation and has taken all reasonable steps to minimize the extent of the nonconformity;

(c) The refiner, importer, or oxygenate blender can show how the requirements for reformulated gasoline will be expeditiously achieved;

(d)The refiner, importer, or oxygenate blender agrees to make up air quality detriment associated with the nonconforming gasoline, where practicable; and

(e) The refiner, importer, or oxygenate blender pays to the U.S. Treasury an amount equal to the economic benefit of the nonconformity minus the amount expended, pursuant to paragraph (d) of this section, in making up the air quality detriment.

- Distributors may receive deliveries of conventional gasoline into terminal tanks normally used to store RFG provided the volume of conventional gasoline is no greater than the volume necessary to supply the terminal's demands through April 3, 2000. Distributors may continue to deliver gasoline from such a tank to facilities in the St. Louis covered area subsequent to April 3 if the tank has received a delivery of RFG.

- Beginning on April 3, 2000, only RFG may be delivered to terminals that supply facilities in the St. Louis covered area.

- Beginning on May 1, 2000, the gasoline at terminals that supply facilities in the St. Louis covered area must meet all applicable RFG standards including the VOC emissions control standards, and these standards will not be enforced at terminals until this date.

- Beginning on June 1, 2000, the gasoline at retail outlets and wholesale purchaser-consumer facilities in the St. Louis covered area must meet all applicable RFG standards including the VOC emissions control standard, and these standards will not be enforced at these facilities until this date.

The letter makes no reference to Section 80.73 or the conditions and findings that are required by that regulation for approval of a waiver.

On April 3, 2000, the EPA Enforcement Office advised the Missouri Petroleum Marketers that because the anticipated shipments of RFG would not be available as anticipated, the "enforcement discretion relief" under the conditions described in its March 17, 2000 letter would be extended to April 5. On May 5 the continued inadequacy of supplies led EPA to again extend the nonenforcement period to May 8. This time, however, the agency added the following penalty provision: "Each distributor supplying conventional gasoline to the St. Louis covered area under the terms of this enforcement discretion is subject to a penalty of $0.15 per gallon for every gallon of conventional gasoline distributed to the RFG area during the period of this enforcement discretion." EPA also imposed two additional conditions:

> 1) A distributor who has RFG supplies must supply RFG instead of conventional gasoline, and if RFG is made available to other distributors these other distributors must use reasonable efforts to distribute RFG instead of conventional gasoline. However, a distributor supplying gasoline to a retail outlet that has been selling RFG containing MTBE is not required to supply RFG containing ethanol to such retail outlet; and
>
> 2) Any distributor who distributes conventional gasoline in the St. Louis covered area under this enforcement discretion explicitly agrees to be subject to the penalty provision above, and agrees to provide EPA

> sufficient information to determine the appropriate penalty amount. Any party who does not comply with these conditions will be liable for violating Section 211 of the Clean Air Act and the RFG regulations at 40 CFR Part 80.

The reference to 40 CFR Part 80 is the first, albeit oblique, mention of the waiver provision.

On May 18, 2000 EPA again acknowledged that shortages would continue until mid-June. As a consequence EPA encouraged use of conventional gasoline but advised that if the shortages continued after June 5, "EPA intends to condition [continued] relief on the payment of penalties that are sufficiently large to create a *significant disincentive to distribute conventional gasoline* instead of RFG." (emphasis in original). EPA also announced that if the shortage continued beyond June 5, all parties distributing conventional gasoline after that date had to sign a Compliance Agreement in which they agreed to " pay to the U.S. Treasury penalties that will be specified at the time the regulatory relief is granted. The size of those penalties will be sufficiently large to at least reflect the benefit gained by substituting conventional gasoline for RFG." EPA again reverted to the exercise of enforcement discretion as the basis of its authority, but made no direct reference to Section 80.73. The nonenforcement period ended on June 19, 2000.

In May 2000, the EPA received requests from the Petroleum Marketers Association of Wisconsin to provide "enforcement discretion" for the requirement to use RFG in the Milwaukee metropolitan area because of the steep increases in the retail cost of RFG. Exercise of enforcement discretion was denied on May 26, 2000 on the ground that there were adequate supplies in the area and that the anticipated shutdown of a pipeline supplying the area would not cause a shortage. EPA also approvingly referenced a communication from the American Petroleum Institute which stated that "issuance of petroleum waivers injects uncertainty into the market and could lead to higher gasoline prices," as well as assurances from distributors that adequate supplies of RFG would be available in the area. EPA noted the health benefits that accrue as a result of the use of RFG and then distinguished its exercise of prosecutorial discretion in St. Louis as follows:

> Given these compelling health benefits from RFG, it is EPA's position that the RFG requirements should be waived only in an extraordinary situation. The RFG regulations provide that relief may be appropriate in extreme and unusual circumstances, such as a natural disaster or an Act of God which clearly is outside the control of the regulated party. For example, the recent regulatory relief granted in St. Louis, described below, was the result of a catastrophic, unexpected situation that could not have been avoided by the exercise of prudence, diligence and due care.
>
> On May 18, 2000, EPA granted regulatory relief for the St. Louis metropolitan area allowing use of

> conventional gasoline through June 5. The RFG supply situation in St. Louis, however, was significantly different than in Milwaukee. The supply problem in St. Louis resulted when the Explorer Pipeline experienced a break on March 10, 2000, that forced it to shut down completely for five days and to operate at less than full capacity until September or October of this year. Most of the gasoline used in St. Louis is transported by the Explorer Pipeline. As a result of this unexpected, ongoing supply interruption, most terminals supplying gasoline to St. Louis were out of RFG altogether when relief had not been granted retail stations there would have had no gasoline. The relief will allow RFG supplies to build, so that sufficient RFG will be available to supply the St. Louis market for the remainder of the summer high ozone season.

Thus, retrospectively EPA appears to be describing a situation that would have triggered Section 80.73. However, their actual communications and actions in the matter at the time seemed to ignore the specific findings that had to be made and the conditions that had to be imposed in order to grant an 80.73 waiver. For example, EPA did not impose a windfall profits recovery requirement until very late in the process.

EPA's initial use of "enforcement discretion," or prosecutorial discretion as it is more commonly known, without regard to Section 80.73's specific requirements, may have been legally problematic. EPA may have believed that its action conformed with the Supreme Court's ruling in *Heckler v. Chaney*,[29] where the Court held that the decision to initiate or not initiate a proceeding was within the unreviewable discretion of the agency. That case involved the refusal by the Food and Drug Administration (FDA) to review drugs used to carry out the death penalty as "safe and effective" for human executions. The Court found that FDA possessed the kind of broad discretion under the Administrative Procedure Act that is unreviewable because there is "no law to apply." The Court noted the traditional reluctance of courts not to second guess agency decisions not to enforce given an agency's expertise, and better understanding of its enforcement policies and available resources.[30] It also stated that "[t]his Court has recognized on several occasions over many years that an agency's decision not to prosecute or enforce, whether through civil or criminal process is a decision generally committed to an agency's absolute discretion."[31] This was also reflective of the Court's further recognition "that an agency's refusal to institute proceedings shares to some extent the characteristics of the decision of a prosecutor in the Executive Branch not to indict -- a decision that has long been regarded as the special province of the Executive Branch, inasmuch as it is the Executive who is charged by the Constitution to "take care that the laws be faithfully executed."[32]

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[29] 470 U.S. 714 (1985).
[30] 470 U.S. at 831-32.
[31] *Id.* at 831.
[32] *Id.* at 832.

But the Court also emphasized, however, that the presumption of unreviewability of inaction is rebuttable.[55] In that case the Court recognized that Congress can delineate and otherwise circumscribe an agency's discretion. Subsequent case law interpreting and applying *Chaney* have found that agency rules implementing statutory directives may create one or more mandatory, justiciable standards. See, *e.g.*, *McAlpine* v. *United States*, 112 F. 3d 1429 (10th Cir. 1997) (Department of Interior decision declining to acquire land in trust for Indians held subject to judicial review in light of an agency rule that the agency "shall" consider seven factors in making such a decision which thereby provided " law to apply."); *Greater Los Angeles Council on Deafness* v. *Baldridge*, 827 F. 2d 1353 (9th Cir. 1987) (an agency's rule obligating itself to investigate every complaint alleging violation of a statute and to inform complainant of its reason for declining an enforcement action in response to a complaint held to provide "law to apply."). Such rulings are reflective of the long established doctrine that agencies are bound to obey their own legislative rules. See, *e.g.*, *Accardi* v. *Shaughnessy*, 347 U.S. 260 (1954); *Service v. Dulles*, 354 U.S. 363 (1957); *Mine Reclamation Corp. v. FERC*, 30 F.3d 1519, 1524 (D.C. Cir. 1994).

40 CFR 80.73 is arguably such a binding rule and the failure of EPA to follow its terms during the first several months of the St. Louis situation would likely be held to be subject to judicial review although we would not speculate on the outcome of such a challenge. Arguably, however, the continued utilization of "enforcement discretion" by EPA rather than applying the prescriptions of Section 80.73 casts doubt as to the legal substantiality of both grants and denials of waivers (or their equivalents). Thus while the factual distinctions made by EPA between the St. Louis and Milwaukee situations may be both sound and persuasive, the uncertainty of the legal basis for those decisions leaves a cloud of doubt for future similar situations.

In summary, then, it would appear that Section 80.73 is, in the words of *Heckler*, the "law to apply" and that the use of prosecutorial discretion may be legally problematic. Thus, the regulation would appear to be the sole viable vehicle by which EPA might provide waiver relief for situations like St. Louis or Chicago/Milwaukee.

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[55] *Id.* at 833

EXHIBIT XIX

PIRINC Study: "Gasoline 101: A Politically Explosive Topic", June 2000

This Petroleum Industry Research Foundation, Inc. report focuses on the factors contributing to the gasoline price increases both nationally and in the Midwest. Higher crude oil prices, low stocks, and problems introducing new, more stringent, Phase 2 reformulated gasoline inhibited domestic production and imports. Transportation disruptions and the blending of ethanol contributed to the price spikes. As these problems are overcome, prices begin to moderate but the system will continue to be volatile until inventories are rebuilt.

PIRINC

June 2000

You may be interested.

PIRINC has prepared the enclosed report, *Gasoline 101: A Politically Explosive Topic.*

Few subjects attract as much public outcry as rising gasoline prices. The past several weeks have seen both, especially in certain areas of the Mid-West. As has happened before, there have been numerous calls for investigations of industry price "gouging. A significant increase in US gasoline prices was inevitable, given the worldwide increase in crude oil prices since early last year. But the gasoline price increases exceeded the increase in crude prices, adding to public concern that prices are, in the words of one public official, "unfair and inappropriate.".

This report focuses on the factors contributing to the gasoline price increases both nationally and in the most severely impacted parts of the Mid-West. Apart from higher crude prices and low stocks, other domestic factors include the problems associated with the introduction of more stringent, Phase II reformulated gasoline. These have inhibited both domestic production and imports. The UNOCAL patent infringement case further inhibited supply. Disruptions to the logistics system, notably pipelines serving the Mid-West, and problems of blending ethanol as opposed to MTBE in making Phase II gasoline contributed to price spikes in parts of the Mid-West. Each of these domestic factors individually had only a minimal impact. But together, they produced a noticeable shortfall in supply of an extremely price inelastic product and therefore a sharp increase in gasoline prices. As these problems are overcome, prices are already beginning to moderate. However, until inventories are rebuilt, the system remains vulnerable.

If you have any questions or comments, please call John Lichtblau, Larry Goldstein or Ron Gold.

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Gasoline 101: A Politically Explosive Topic

Few subjects attract as much public outcry as rising gasoline prices. The past several weeks have seen both, especially in certain areas of the Mid-West. In mid-June, the U.S. average gasoline price was up by about 50 cents/gallon versus the same time last year ($1.66 versus $1.15/gallon) with about 20 cents of the increase coming since the beginning of May. The overall averages conceal some very wide geographic disparities. On the East Coast (PADD 1) the year-on-year increase in gasoline prices averaged about 47 cents a gallon while in the Mid-West (PADD 2), the increase averaged 71 cents, and in reformulated areas, 85 cents/gallon.[1] These gasoline price increases far exceeded the increase in crude prices, which went up by 33 cents a gallon versus mid-June, 1999. As has happened on previous occasions, there have been numerous calls for investigations of industry price "gouging," including a request by Clinton Administration for an expedited review of price developments by the Federal Trade Commission.

This note focuses on the factors contributing to the gasoline price increases both nationally and in the most severely impacted parts of the Mid-West. Many commentaries have made the point that the price increases, especially in Chicago and Milwaukee, have far exceeded the apparent costs of producing the new Phase 2 reformulated gasoline required this year under EPA mandate. This discrepancy is then cited as evidence that prices are "unfair and inappropriate."[2] But while costs are important, price in the short term is determined by the interaction between supply and demand. Price serves a critical function in a competitive market, namely adjusting demand to accommodate changes in supply conditions. When price is not allowed to play this role, the result is long lines at the pumps, rationing, or outright shortage. Consumers require a relatively stable amount of gasoline for their normal routines, with limited possibilities for using less when the price goes up and not much reason to use more when the price goes down, especially in the near-term. Thus, in economic terms, demand for gasoline, a necessity for most consumers, has a very low near-term price elasticity. As a result, the price adjustments tend to be disproportionately large.[3] Over time however, history shows that they are also self-correcting.

There are several identifiable factors that contributed to the run-up in prices. These include the rise in world crude prices and low world stocks resulting from OPEC's production decisions. Within the U.S. interrelated problems associated with the introduction of more stringent, Phase II reformulated gasoline this year inhibited both domestic production and imports. The UNOCAL patent infringement case further inhibited supply. Disruptions to the logistics system, notably pipelines serving the Mid-West, and problems of blending ethanol as opposed to MTBE in making Phase II gasoline contributed to even sharper price increases in the Mid-West than

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[1] RFG areas are ozone non-attainment areas where reformulated gasoline is required. Note the sharp price increases in the Mid-West RFG areas, especially Chicago and Milwaukee did not occur in other regions. In PADD 1, prices in RFG areas went up by about the same 47 cents/gallon as the overall average for the region since mid-June 1999.

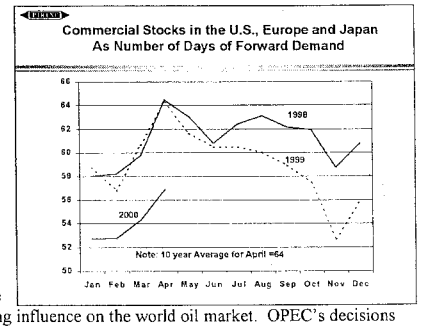
[2] "We think the prices that are being charged are unfair and inappropriate," Robert Perciasepe, assistant administrator at the Environmental Protection Agency, as reported by Reuters on June 13.

[3] That is to say, a relatively large change in price is required to elicit a small change in demand. For example, if price elasticity =-0.1, a 10% increase in price reduces demand by only 1%. If price elasticity=-1 (called unit price elasticity) demand would be reduced about in proportion to the price change. The price elasticity for gasoline in the very near term is even smaller than –0.1, as is discussed later in the note.

elsewhere. Apart from the increases in crude prices, and the exceptionally low level of stocks, both globally and within the U.S., none of the other factors by themselves would have had more than a minimal impact. But together, they produced a noticeable shortfall in supply of an extremely price inelastic product and a sharp increase in gasoline prices. As production and logistics problems are overcome, prices will moderate, indeed this is already happening. However, until inventories are rebuilt, the system remains vulnerable.

Global and National Considerations

A significant increase in US gasoline prices was inevitable, given the world-wide increase in crude oil prices that began early last year. From its low-point of about $12/barrel, or 29 cents/gallon, in February of last year, the price of WTI rose to nearly $18 (or 43 cents/gallon) by June 1999, and has since risen further to $32 (or 76 cents/gallon) as of mid-June of this year. Another key element influencing prices is the exceptionally low levels of inventories in the US and elsewhere.

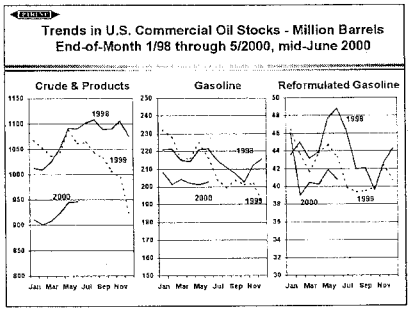


The chart on the right shows commercial oil stocks for the three major OECD consuming regions, the U.S., Europe and Japan. Stocks are measured in terms of days of forward, or anticipated, demand that they would cover and are shown by month since the beginning of 1998. In 1998 and through early 1999, stocks were at extremely high levels. April stocks for both years amounted to just over 64 days of forward demand, well above the 1995-2000 average of 61, and higher than any year since 1993. These high inventories were a major depressing influence on the world oil market. OPEC's decisions in March 1998, June 1998, and March 1999 to cut production were designed to bring down inventories and thereby strengthen the world crude market. The first two production cuts were overwhelmed by the reductions in demand resulting from the fall-out of the Asian financial crisis and recession. But the third, coming at a time of economic recovery in Asia and improved growth elsewhere, has had the intended effect. Since March of last year, commercial stocks in the main OECD regions have moved sharply lower. Indeed, stocks so far this year are running at historically low levels.

The extremely low level of stocks has not only helped push up prices, as OPEC originally intended, but has also left the world oil market without the cushion of high inventories and therefore extremely vulnerable to any supply interruptions, or sudden surges in demand. While OPEC intended crude oil prices to move up, it has become concerned about the extreme vulnerability of the market, and has moved to raise official production ceilings, first in March of this year, and again this month. Nonetheless, it will take time for inventories to be rebuilt to "normal" levels and a market safety margin re-established.

U.S. Inventory Levels

The specific U.S. inventory situation also shows exceptional tightness, both overall and for the product currently in the headlines, gasoline. The chart below shows commercial inventory levels since January 1998 for total crude and products, gasoline, and reformulated gasoline. Figures are in millions of barrels.



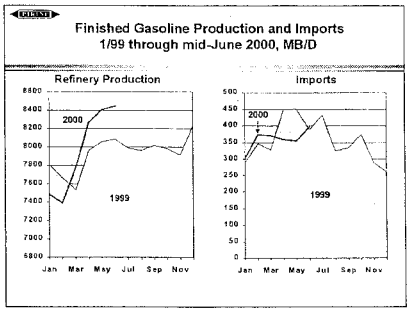
The left panel shows the trends for crude and products. By the end of 1999, total commercial stocks had fallen by 15% relative to their end-1998 level. There has been only minimal improvement since then. As of mid-June, total stocks were over 100 million barrels, or 11%, below year-earlier levels.

The middle panel shows the trends for total gasoline. These stocks have been running about 10% below year-earlier levels with no sign of any significant spring build as occurred in the prior years. The situation for reformulated gasoline, which accounts for about 30% of total gasoline sales, is shown in the right panel. Stocks at the beginning of the year were similar to levels in 1998-99 but fell sharply in February with only a marginal recovery since that low-point. The new Phase II standard came into effect on May1, except at the retail level where the deadline was June 1.[4] The run-down in inventories started at the beginning of the year in anticipation of the changeover to the new standard. The problem has been the insufficient build-up of the new Phase II product. Mid-June stocks are 6% below the June 1999 level and 16% below their June 1998 level despite the fact that demand is up.

Trends in U.S. Gasoline Supplies

Low gasoline stocks mean there has been minimal flexibility to meet unanticipated supply/demand developments---which have indeed occurred. A year ago, the Department of Energy, in its June 1999 Short-Term Energy Outlook, projected about a 2% growth in gasoline demand for 2000 versus 1999 and an average retail price of $1.20/gallon. The 2% figure was reasonable given their moderate price assumption and anticipated economic growth of 3.6% for 1999 decelerating to 1.7% this year. Gasoline stocks were assumed to remain about level. Implicitly, supplies of gasoline from domestic and foreign refineries were assumed to grow in line with projected demand. However, this did not happen. The chart below summarizes trends in refinery production and imports.

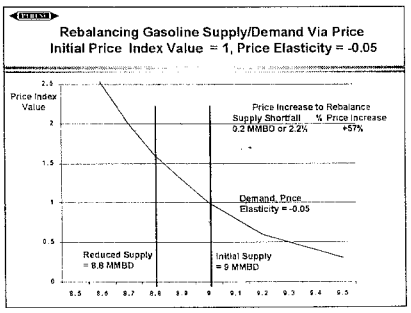
[4] January 2000 was the first month in which Phase II standards applied to gasoline production and imports, although effectively, since the oxygenate and benzine standards were unchanged, the program impacted the supply chain when the more severe summer VOC standard came into effect.



The panel on the left shows refinery production of finished gasoline. Since February, production has been running above 1999 levels. For the year to date, production is up about 100 MBD versus 1999, an increase of about 1.5%. The panel on the right shows imports of finished gasoline. Since February, imports have been running below 1999 levels. For the year to date, imports are running about 15 MBD below year-ago levels, a decline of about 4%. Total supplies of finished gasoline from domestic production and imports are up only about 1% or about 85 MBD so far this year---about 1% below demand as anticipated by the Department of Energy last year. Moreover, economic growth has been much stronger than anticipated. GDP growth this year in the latest Short-Term Energy Outlook is now projected at 4% (other outside forecasters are projecting still higher growth, 5%), well above their projection made a year ago. The much higher projection indicates that, in the absence of the sharp price increases seen this year, demand growth would have been well above the 2% rate.

Implications of a Low Price Elasticity

As noted earlier, consumers find it extremely difficult to cut back their normal use of gasoline for commuting, shopping, vacation travel, etc., especially in the short-term. Since gasoline is therefore price inelastic, price increases tend to be disproportionately large for what appear to be very modest shortfalls in supply. A reasonable estimate, in line with recent experience, would place the short-term price elasticity for gasoline at about –0.05. The implications of such a low figure are illustrated in the chart below.



The chart shows a downward slopping demand curve with a constant price elasticity of –0.05 intersecting an initial supply curve fixed at 9 MMBD at a price index value of 1.0.[5] If supply is suddenly reduced to 8.8 MMBD, a decline of 2.2% from its initial level, the price has to rise by nearly 60% to clear the market.[6] For the week ending June 19, the Department of Energy

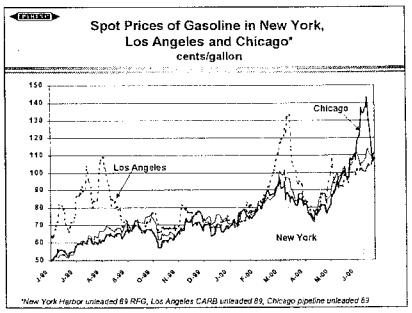
[5] Last year gasoline demand for June through August was about 8.8 MMBD. A 2% increase for 2000 would raise demand to about 9 MMBD. . Supply is production plus imports plus stock change.

[6] For an 0.1 MMBD or 1.1% reduction in supply, the price increase would be 25%. For an 0.3 MMBD loss of supply, or 3.3%, the price would have to double to clear the market.

reports U.S. gasoline prices averaging about $1.70/gallon, up 56 cents, or about 50% from their average a year ago. This is approximately the increase required at the national level to offset a shortfall in anticipated supplies of about 2% given the low estimated price elasticity of gasoline.

The 2% figure is about in line with estimates of short-term supply losses (2 to 3%) arising from the impact of the more severe RVP requirements for Phase II gasoline, the effects of the UNOCAL patent infringement judgement on refiners and blenders, and the more limited availability of imports. These problems apply only to summer specifications for reformulated gasoline and will not apply to supplies after September 15.

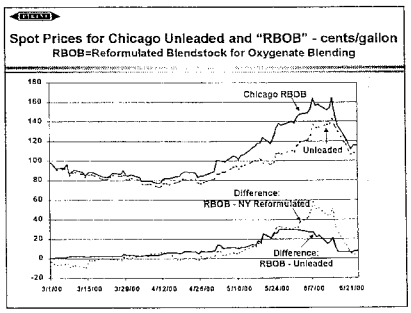
Regional Price Disparities: Mid-West Consumers Paying California Prices



So far, the discussion has focused on national trends but this year in Chicago and Milwaukee, and last year in California, the public has been concerned about local price spikes in excess of the national trends. The chart on the right shows daily movements since last June in spot prices for gasoline in New York, Los Angeles, and Chicago. The prices used are the New York harbor price for reformulated unleaded 89 octane, Los Angeles CARB (reformulated) 89 octane, and Chicago unleaded (nonreformulated) 89 octane. At this time last year, spot prices in Los Angeles were running far above New York and Chicago prices, with differentials exceeding 40 cents/gallon at their peak. Los Angeles also experienced a very brief, price spike again this year in March. Recently, Los Angeles prices have been at or slightly below New York levels. Until nearly the end of May, Chicago spot prices tended to run slightly below the New York prices. But toward the end of the month a substantial differential opened up as Chicago prices rose to peaks in the second week of June roughly 30 cents/gallon above New York prices. They have subsequently declined, slipping below New York prices as of June 21. However, these price movements don't fully capture the price developments in the Chicago area.

The Chicago prices shown are for nonreformulated unleaded regular gasoline while prices shown for New York and Los Angeles are for reformulated gasoline. Chicago (and Milwaukee as well) is an ozone nonattainment area as designated by the EPA and is required to use reformulated gasoline. Both Chicago and Milwaukee use a reformulated gasoline with ethanol as the oxygenate, as opposed to MTBE, generally used elsewhere in the country. Because ethanol is not a petroleum product, it must be segregated from other gasoline components up to the rack, the point just before delivery to the pump. At that point it is added to a reformulated gasoline blendstock for oxygenate blending---or RBOB---specially formulated to be used with ethanol. RBOB accounts for about 90% of the total volume of a gallon of reformulated gasoline made with ethanol. The spot price of Chicago RBOB is typically about the same as the price of

unleaded regular shown in the chart above. But this year has been very different. As shown in the chart below, in early March of this year, Chicago spot price of RBOB was almost identical to the price of the unleaded regular. By mid-April, the differential had widened to about 5 cents/gallon and by early May, 10 cents. By late May into early June, the differential reached about 30 cents/gallon. Since then, the differential has fallen back to about 7 cents.



The dotted line toward the bottom of the chart shows the differential between the spot price of Chicago RBOB and New York reformulated unleaded. In early June, the differentials peaked at nearly 60 cents/gallon. As of late June, the differential is down to about 4 cents/gallon.

Retail Price Developments

For consumers, the sharp rises in spot prices for ethanol-based reformulated have meant exceptionally sharp increases in pump prices in Chicago and Milwaukee. The table below shows pump prices for unleaded regular in Chicago, Milwaukee, selected other Mid-West cities, as well as Los Angeles and New York for June 9, 1999, March 29, 2000 and June 7,2000.[7] The left three columns show actual prices while the three right columns show price changes between the periods. The Mid-West cities are shown in descending order of the June 1999 to June 2000 price changes. Between June 1999 and March of this year, the pump price increases for the Mid-West cities shown ranged between 30 and 42 cents/gallon, with neither Chicago nor Milwaukee standing out. Note the exceptionally low price change for Los Angeles, a result of the price surge the year earlier in California as a result of supply problems discussed below.

		6/9/99	3/29/00	6/7/00	6/99 to 3/00	3/00 to 6/00	6/99 to 6/00
Chicago	RFG area	126.8	164.7	210.9	37.9	46.2	84.1
Milwaukee	RFG area	115.4	149.2	191.8	33.8	42.6	76.4
Louisville	RFG area	108.3	145.2	170.4	36.9	25.2	62.1
Cleveland		106.8	149.2	164.9	42.4	15.7	58.1
Detroit		111.5	147.5	161.8	36	14.3	50.3
Kansas City		107.3	138.5	157.3	31.2	18.8	50
Indianapolis		112.4	150.6	159.6	38.2	9	47.2
St. Louis*	RFG area	109.9	140	156.2	30.1	16.2	46.3
Minn.-St. Paul		118.4	150	160.5	31.6	10.5	42.1
Los Angeles	RFG area	141.6	155.4	163.6	13.8	8.2	22
New York	RFG area	133.5	159.1	169.5	25.6	10.4	36

** Temporary waiver granted in June due to pipeline problems.*

[7] Prices are for self-service unleaded as published in the *Oil & Gas Journal*.

The pattern of price changes is very different for March-June of this year. Chicago and Milwaukee show by far the largest price increases, up 46 and 43 cents/gallon respectively. Louisville, another RFG area is next with an increase of 25 cents. Elsewhere the price increases ranged from 8 to 16 cents.

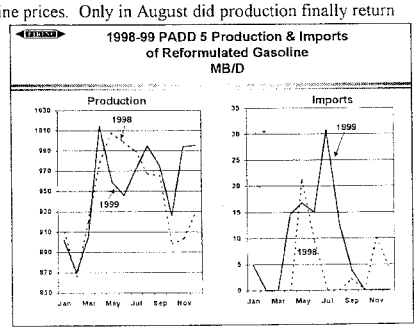
It is precisely these large local price spikes at the pump that trigger public anger, confusion, and demands for investigations. Of course, if gasoline were a uniform, fungible, easily transportable product, then in a competitive market such large spikes should not occur---and if they did, the public would have every reason to be suspicious about just how competitive the market really is. But 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. As is discussed below, the most vulnerable areas of the country to this problem, and therefore price spikes, are the two that have had them, California and Chicago-Milwaukee.

The "Islands" of California and Chicago-Milwaukee

Although California and the Chicago-Milwaukee sections of the country are geographically very different, with respect to gasoline, they are both "islands," dependent primarily on local sources for supply and very difficult to reach from elsewhere. Their isolation from the rest of the country is the result of their dependence on "boutique" fuels, not readily available elsewhere.

California

California has imposed more severe requirements for reformulated gasoline than the rest of the country. In 1999, a series of refinery problems reduced production at a time of rising local demand. The left panel of the chart on the right shows monthly trends in PADD 5 production of reformulated gasoline in 1998 and 1999. In May and June of 1999, production was down by about 50 MBD or about 5% from the year before. This was the period In 1999 of the sharpest spikes in spot Los Angeles CARB gasoline prices. Only in August did production finally return to about year-earlier levels, and in November-December significantly exceed 1998 levels. (New refinery problems in March of this year resulted in temporary production losses and the price spike that occurred at the same time.)



Refiners elsewhere in the world have some limited capability to make CARB standard reformulated although those that do so must take into account the time and cost required to ship the product to California as well as the additional cost of making it.[8] As shown

[8] For U.S. refiners, an additional cost element is the requirement to use U.S. flag ships.

in the left panel of the chart, imports of reformulated gasoline into PADD 5 did indeed move up, reaching a peak of 30 MBD in July versus none the year before. The higher imports, coming from as far away as Finland and Asia, moderated the price spike but only a return to normal refinery operations brought it to an end.

Chicago and Milwaukee

Chicago and Milwaukee are "islands" for a different reason, their use of ethanol as the oxygenate for reformulated gasoline. This year, Phase II reformulated gasoline requirements came into effect. While the introduction of Phase II gasoline began in January at the refinery level, the more critical summer standard (with lower VOC emissions) did not apply until May 1, or in the case of retail facilities, June 1. At the national level, the more severe requirements had certain particular consequences, especially on availability of imports. So far this year, U.S. total production of reformulated is slightly above last year's levels, but imports are down. The table on the side summarizes the key figures. Production for the first 6 months of this year (more precisely, production through June 16th) has been averaging 12 MBD above year-earlier levels, a growth rate of only 0.5%. Imports, however, are down 28 MBD over the same period, indicating some loss of ability to supply the reformulated product under the new, more severe standards.

U.S. Production and Imports of Reformulated Gasoline, 1st 6 months 2000 vs. Year Earlier
MBD

	2000	1999
Production	2,532	2,520
Imports	172	201

In its Fact Sheet on Reformulated Gasoline issued in November, 1999, the EPA estimated that additional costs of phase II reformulated would be on average about 1 to 2 cents/gallon more than Phase I, with costs somewhat higher for some parts of the country and some refiners.[9] The Fact Sheet went on to state:

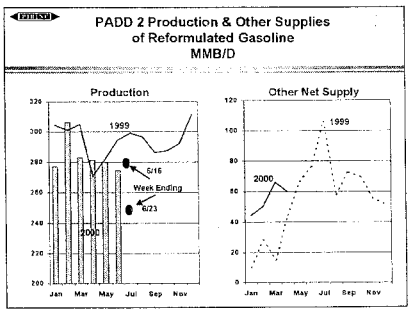
> "It is not possible to accurately predict the retail price of Phase II RFG in the year 2000 because it will be influenced by many factors including production costs, weather, crude oil prices, taxes and local and regional market conditions. <u>It is important to note that, at the start of the Phase II RFG program, retail prices may be higher or fluctuate more.</u>"

Clearly this was indeed the case for Chicago and Milwaukee, where "local and regional market conditions" were particularly adverse. Chicago and Milwaukee are the principal areas in the Mid-West required to use reformulated gasoline. St. Louis voluntarily opted in to the program in 1999 but received a temporary waiver in June in the face of significant loss of supplies due to problems with the Explorer pipeline. The Cincinnati and Louisville areas also opted into the program but have had no comparable supply difficulties. Even though Chicago and Milwaukee are far away from other consuming centers, this alone would not account for their problems. After all both are ports and of course Chicago is a major rail, road, and pipeline center. But they are unique in their réliance on ethanol as the oxygenate for reformulated gasoline. When it turned out to be more difficult than anticipated to make the ethanol-based Phase II product, there was no where else to turn for immediate relief. Ethanol-based reformulated requires a unique

[9] The complete Fact Sheet may be accessed on the internet at www.epa.gov/oms/f99040.htm. The underlining is PIRINC's

blendstock (RBOB) generally not made elsewhere, and any MTBE-based reformulated gasoline could not be co-mingled with the local supply and therefore could not be moved through normal distribution channels.

Specific supply figures for Chicago and Milwaukee are not available, but overall figures for PADD 2 indicate what has happened. The chart below summarizes supply conditions for reformulated in PADD 2. The panel on the left shows local monthly production of reformulated for 1999, the solid line, and 2000 through June, the bars, with June represented by production through mid-month. In general, production has been running below year-earlier levels, with shortfall especially noticeable in June, the start of the Phase II program at the retail level. The most recent data for the weeks ending June 16 and June 23, show no consistent improvement. So far this year, PADD 2 production of reformulated gasoline is running about 3% below year-ago levels. This is different from the national situation where production is slightly above year-ago levels. For the June to date, the situation is much worse, with production in PADD 2 running about 7% below June 1999 levels.

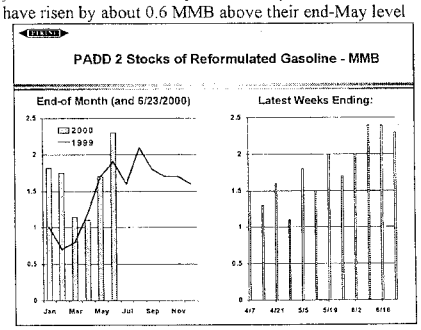


In principle, a shortfall in local PADD 2 production could be moderated, or even eliminated by increased supplies from other sources, imports, stocks, or shipments from other regions of the country. In reality, imports of reformulated gasoline are virtually zero and stocks are typically very low, in the 1 to 2 million barrel range, or about 2 to 4% of the U.S. total reformulated stocks, well below the PADD 2 share, about 10%, of U.S. total reformulated demand. The absence of imports and low stocks of reformulated gasoline are consistent with a disproportionate reliance on ethanol, since problems of co-mingling severely limit prospects for imports and make holding of the finished product difficult. The panel on the right shows trends in net supply of reformulated gasoline excluding local production. By default, the figures reflect almost exclusively shipments from elsewhere in the country, primarily PADD 3. The latest data available are only for April of this year. Early in the year, shipments were running well ahead of year-earlier levels. But shipments fell back in April to year-earlier levels. The Explorer pipeline, the major carrier of oil products to the Mid-West was shut down for 10 days in March and has run at reduced levels since then.

Signs of Improvement

Although data are sparse, there are already some tentative signs of improvement. The disruptions in the logistics system are of course being addressed. However, the sharp run-up in Chicago area prices appears to have encouraged extra-ordinary efforts to bring in supply. This is showing up in a recent rise in stocks of reformulated gasoline in PADD 2, although as noted

earlier, they remain low relative to other parts of the country. The chart below summarizes these trends. While end-of-month stocks in January-February of this year were ahead of 1999 levels, they fell back in March-April to about year-earlier levels. In May as well, they tracked levels of a year ago. As of June 23, inventories have risen by about 0.6 MMB above their end-May level and 0.4 above their level at the end of June 1999. As the weekly data indicate, the build-up was particularly noticeable in the first two weeks of June. This build-up, although modest in overall volume, came despite lower production of reformulated gasoline within PADD 2 itself.



In effect, the modest inventory build in the face of a production decline could only occur if extraordinary efforts were underway to make and ship the product from elsewhere by barge, rail, or even tanker trucks.

The latest Department of Energy statistics indicates the improved local supply situation is filtering through to retail prices. They report that the average price of gasoline in PADD 2 reformulated areas fell from $2.01/gallon on June 16 to $1.92 on June 23, a decline of 9 cents a gallon. This was a larger decline than reported for the U.S. as a whole of 2 cents/gallon (from $1.71 to $1.69) for all gasoline (and from $1.73 to $1.71 for gasoline sold in RFG areas). Retail prices in Chicago and Milwaukee should continue to decline.[10]

Issues for the Future

While this summer's immediate gasoline problems are easing, they highlight serious regulatory issues that remain with us. 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. The multiplication of "boutique" gasolines reduces the flexibility of the distribution system to respond to local supply problems. When they do develop, the regulatory authorities are then faced with a choice of going back on their standards, at least temporarily, or standing by and accepting the inevitable, necessary price spikes.[11] If standards are waived, then those in the industry who made the greatest effort to meet the standards are penalized relative to those who did the least. Creating a "no good deed goes unpunished" precedent sends exactly the wrong

[10] It should be kept in mind that retail prices move more slowly, both up and down, than spot prices. Just as the price increases seen by consumers lagged prices paid by dealers, so too will the price declines as dealers return to more normal margins.

[11] The authorities seem to have chosen a modified version of this alternative, namely stand by and demand investigations.

signal for future compliance efforts. Moreover, there are other regulatory actions that could lead to similar choices. The EPA and many states are moving towards a three-year phase-out of MTBE (penalizing those who invested to produce it in the first place). Because of current oxygenate requirements for reformulated gasoline, this phase-out will mean greatly expanded use of ethanol in producing the Phase II product. Given the problems encountered with ethanol this year, it would be rash to assume a smooth path in the future.

The requirement for the use of an oxygenate is itself questionable since vehicles with fuel injection instead of carburetors (fuel injectors have been in use since 1983) don't need it. California, the country's leader in fuel stringency, has asked that the oxygenate requirement be waived.

There is no argument about the need to improve local air quality and that vehicle emissions will continue to be a legitimate, prime target of regulatory concern. But recent price developments are an urgent signal of the need to reassess the process in view of the supply risks associated with the present system, especially if tight global market conditions persist.

EXHIBIT XX

"Energy Overview: Are Oil Companies Gouging Consumers?" by Fadel Gheit, Fahnestock & Company, June 21, 2000.

This report notes that the U. S. petroleum refining and marketing industry has averaged less than a 7% return on capital over the last 10 years, and typically earns more than its cost of capital in only one quarter a year. The average profit is $0.05/gallon in the past five years.

01:13pm EDT 21-Jun-00 Fahnestock & Company (Fadel Gheit 212-668-8935) BPA CHV R
Energy Overview: Are Oil Companies Gouging Consumers?

** FAHNESTOCK ** FAHNESTOCK ** FAHNESTOCK ** FAHNESTOCK ** FAHNESTOCK **

ENERGY OVERVIEW
June 21, 2000

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Are Oil Companies Gouging Consumers?

No Summer Gifts

Crude oil prices continue to surge despite promises by OPEC to increase production. We don't think that crude oil prices are likely to drop significantly from current levels in the next few weeks even if OPEC, yielding to US pressure, increases production by 700,000 bpd, which is less than 1.0% of world consumption. We believe US strong-arm tactics to pressure OPEC to increase production essentially, has backfired. It is also difficult for US allies in OPEC to justify to their counterparts the logic of subsidizing the world's strongest economies at their own expense. In addition, there is no evidence that $30/b oil has hurt economic growth or dampened demand growth for petroleum products. Consequentially, US consumers should not keep high hopes for any gifts from OPEC this summer.

The Great Gas Conspiracy

The US government is probing possible anti-competitive practices by the oil industry that led to the recent sharp rise in gasoline prices in the Midwest region. The EPA, FTC, Department of Energy, and now Congress are all blaming the oil industry for higher crude oil prices, and, more importantly, higher gasoline prices. Some politicians even suggested investigating the oil industry for possible conspiracy with OPEC. Great minds think alike. High gasoline prices are likely to take center stage in this year's issue-less elections. The Republicans will blame higher gasoline prices in part on "Gore Tax", which is slightly more than four cents/gallon.

Are Gasoline Prices High?

Although US motorists complain about high gasoline prices, here are some sobering facts:

1. US gasoline prices adjusted for inflation are now lower than in 1990 or in 1980.

2. Gasoline bills as a percent of disposable income are the lowest in 20 years.

-- FIRST CALL --

3. Gasoline costs as a percent of total costs of owning an automobile, which include the purchase price and insurance and maintenance, are the lowest in decades and continue to decline as other costs continue to climb.

4. Average gasoline prices in the US are less than half the average prices in Europe and Japan and well below the average prices in many developing countries.

5. Federal, local and other taxes add approximately $0.40/gallon to the average price of gasoline.

6. US gasoline consumption of more than 370 million gallon/day is at an all time high and is up by 2.4% from last year's levels.

7. The US consumes more than 37% of world gasoline production.

Don't Blame The Oil Industry

The petroleum refining and marketing industry is among the worst performing industries when it comes to profitability. Its return on capital in the last 10 years averaged less than 7%, this was by far, the lowest return on capital among the main business segments of the oil industry, lagging exploration and production and chemical. Low margins and high environmental spending made it difficult for the industry to sustain profitable growth for any extended period. We estimate that in the last 10 years the industry returns exceeded its average cost of capital only in one quarter in each year. A very poor record, even for the oil industry.

Americans are led to believe, through the media and self-serving politicians, that they are being milked at the pump by the "Big Oils." Our analysis, however, shows that in the past five years on average oil companies earned less than $0.05/gallon annually on gasoline sales. The average profit at the peak of the summer driving season is less than $0.25/gallon, less than $0.15/gallon in good times and less than $0.03/gallon in tough times, with most profitable companies averaging $0.15/gallon.

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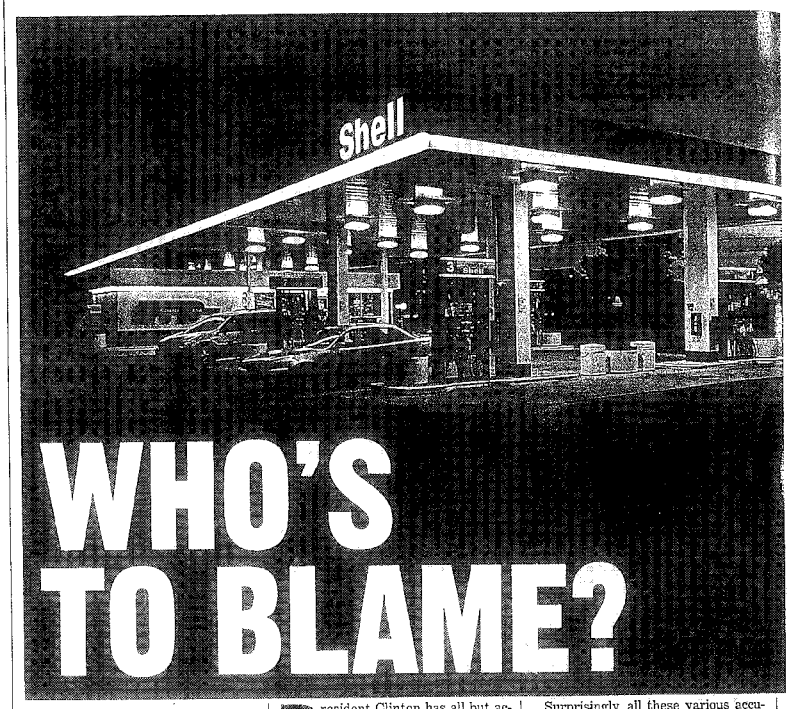
-> End of Note <-

-- FIRST CALL --

EXHIBIT XXI

"Who's to Blame?", Business Week, July 3, 2000.

This article examines the many accusations being made about the causes of higher gasoline prices; oil companies, OPEC, EPA, oil price speculators, refiners, and Unocal's patent all get their share.



WHO'S TO BLAME?

OPEC? Refiners? Speculators? Regulators? Yes, yes, yes, and yes

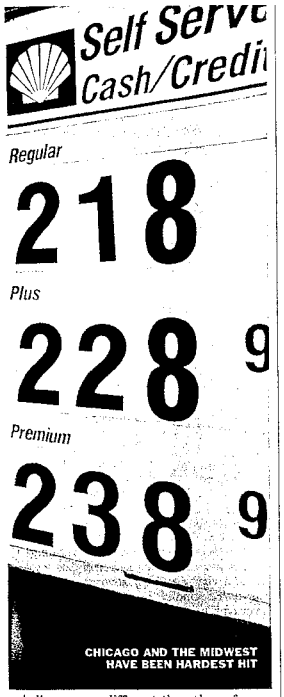
President Clinton has all but accused the oil industry of price fixing. The Federal Trade Commission is investigating gasoline refiners and retailers. Various members of Congress, as usual, are calling for hearings. And frustrated consumers are simply looking for some relief at the pump. There hasn't been this much agitation over gasoline prices since the OPEC oil embargo caused prices to double, to more than $20 a barrel, in late 1973 and early 1974.

So who's to blame? Democrats and consumer groups suspect the oil companies. Republicans and the industry are pointing fingers at the Environmental Protection Agency and recently implemented regulations on cleaner fuel. And of course, everybody is blaming OPEC.

Surprisingly, all these various accusations are correct—to a certain extent. Oil refiners failed to accumulate sufficient stocks of gasoline to meet the summer's peak demand. New clean-fuel regs definitely added to the per-gallon cost. And OPEC—with the help of other producers—has constrained the supply of crude, although as worldwide demand has increased since the beginning of the year, OPEC's grip has loosened. It was a fatal confluence of events, none of which by itself would have produced a national average price of $1.68 per gallon—a record before it is adjusted for inflation.

But one last element in the runup may be the least acknowledged: market psychology and expectations. Analysts say the markets for crude oil and gaso-

PHOTOGRAPH BY TODD BUCHANAN; CHART BY ALBERTO VENATIN



CHICAGO AND THE MIDWEST HAVE BEEN HARDEST HIT

line are no different than those for equities. Prices are set by a combustible blend of speculation, greed, and fear. While supply and demand rules in the long run, the near-term price of unleaded gas has been set as much by bets of thousands of large and small market players. Says Shell Oil Co. Chairman and CEO Steven Miller: "The perception of future oil supply and demand has a lot to do with the current price."

Indeed, a failed bet made by refiners last winter that prices for crude oil and gasoline would be lower this spring has prompted much of the current market hysteria. Last December and January, as the price of crude hovered in the mid- to high 20s, refiners—already struggling to supplement insufficient heating-oil stocks—failed to build gasoline inventories to the levels necessary to meet the heightened demand of the summer's peak driving season. They thought that higher interest rates would take their toll on the U.S. economy and consumption. Then, as the biggest per capita consumer of oil lost its appetite, the price of crude would fall and they could stock their refineries for less.

Crude-oil futures prices seemed to support this scenario. But speculators also watched gasoline inventories, and they, too, made a bet—that the rush to stock up would drive crude prices higher. Prices never went below $25, which left refiners scurrying to find affordable supply. "Refiners weren't anticipating $30 oil this late in the game," says Howard Rennell, president of Windham Group, a New York-based oil broker. "When they came back into the market, they bid the price up further."

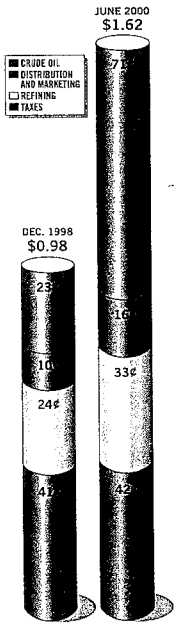
Despite the current nationwide panic, the price spike may dissolve as demand falls over the summer and refiners finish supplementing inventories. What is less likely to fade is the market's increasing volatility. The oil industry has adopted the same just-in-time approach as auto makers and retailers. Companies keep smaller stocks of crude oil and refined products. They no longer pay costly leases on fields they aren't ready to explore. And they don't drill production wells in fields when they don't need oil. So when demand leaps, they don't have much extra capacity.

The surprise this spring was the strength of the demand given the Federal Reserve Board's vigorous efforts to slow the economy. The Energy Dept. estimates that world demand will rise 1.8% this year and 2.5% in 2001, vs. 1.4% in 1999. "What all the calculations did not do was foresee the rebound in oil demand," says Daniel H. Yergin, chairman of Cambridge Energy Research Associates. "Few saw how buoyant the U.S. economy would be. And few expected a strong rebound in Asia so soon."

Meantime, refiners have hardly been scrambling to add capacity—for good reason. Until recently, gasoline prices had been totally uninspiring—particularly for a refining industry that returned less than 4% on capital in the decade of the 1990s, according to the American Petroleum Institute, an industry trade organization. That is less than half the average of the energy industry as a whole and well below the returns of the average Standard & Poor's 500-stock index company. On top of the lousy prices, refiners also had to invest as much as $90 billion to meet the new environmental requirements. The result: Gasoline production has increased only from 6.4 million barrels per day in 1984 to 8.5 million today. And now, even though gasoline demand has grown significantly, stocks of crude oil and gasoline are kept at around 500,000 barrels—down from the typical 800,000 barrels refiners would hold in the early 1980s.

WHY SO HIGH?

AVERAGE PRICE OF GASOLINE PER GALLON



DATA: DEUTSCHE BANC ALEX. BROWN INC.

The flash point for the U.S. crisis has been the Upper Midwest, where prices have topped $2.10 a gallon for regular unleaded in cities such as Detroit and Milwaukee, and more than $2.30 in Chicago. The region suffered two major pipeline outages since March and a refinery shutdown that further cut already constrained gasoline supplies—exactly the unexpected disruptions that just-in-time inventories cannot accommodate.

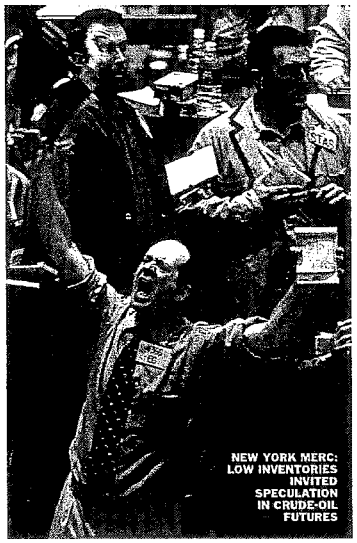
SHIRKERS. At the same time that refiners faced insufficient stocks, they also were wrestling with a new phase of reformulated gasolines, which took effect in about one-third of the nation beginning on June 1. But having known about these

changes for years, why weren't they better prepared? "The industry helped us write [the regs]. They should have had enough time," says EPA Assistant Administrator Robert Perciasepe.

Refiners say implementing all of the new formulas proved more complex than expected. Here, some of the blame lies with the states. The mandate to make cleaner-burning reformulated gasoline originally came from Washington, but individual states have tinkered with the formulations to suit their own particular air-quality problems and political interests. Atlanta and Birmingham, Ala., for instance, have different gasoline standards than Jacksonville and Tampa, Fla. El Paso is required to sell a different formula than East Texas. Citgo Petroleum Corp., a major U.S. refiner, says it must provide nine different forms of gasoline in just the eastern half of the country to satisfy the various permutations.

The reformulated gasoline already costs more to produce. But refinery officials say it is no coincidence that the Midwest suffered the highest prices in an effort to try to meet the EPA standards. Many of those states, in a nod to their farm constituencies, encourage the use of corn-based ethanol as an additive. In many other areas of the country, refiners use a natural gas-based additive called MTBE. Ethanol creates problems, refiners say, because it is difficult to store and causes gasoline to evaporate more quickly. In addition, because of the difficulty of making this gasoline, refineries produce less of it than conventional blends, leading to supply shortages.

Environmental regulators and industry officials had anticipated that the new fuels would cost more: 5¢ to 8¢ per gallon was the original estimate. But that didn't include the market's reaction to a supply shortage. Indeed, in the Midwest, reformulated currently sells for an average of 16¢ more than conventional gasoline.



NEW YORK MERC: LOW INVENTORIES INVITED SPECULATION IN CRUDE-OIL FUTURES

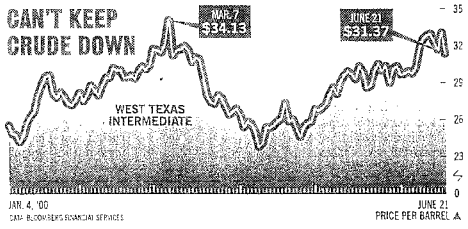
Further complicating matters was a suit won recently by Unocal Corp. supporting the company's claims that it held the patent on certain types of reformulated gasoline and was owed royalties from other refiners. As a result, refiners did everything they could to avoid using Unocal formulas, leading to additional costs and further shortages.

The trouble in the Midwest should have come as no surprise to gasoline consumers in California. After the state mandated its own special reformulated gasoline blend in March, 1996, the price of gasoline took off, jumping 30%, to $1.60 a gallon. Consumers were outraged. There were at least four separate state and federal investigations of California's gas prices, but no charges of improprieties were ever filed against the state's refiners. Capacity in the state is so tight that whenever there is a refinery outage, gasoline marketers must find out-of-state refiners who can meet California requirements.

PROFITS GALORE. But for the industry—though certainly not the consumer—there's a silver lining to all this. Thanks to higher oil prices and refining margins, analysts expect the average large oil company to double its earnings this year. In the second quarter, U.S. refining profits per barrel doubled from the levels of a year ago, to an average of $6.50 per barrel, one of the highest quarterly averages in a decade.

Of course, at these prices, oil companies and refineries are beginning to figure out ways to create more supply. Already, there is evidence that exploration and production spending is picking up. According to Lehman Brothers' mid-year E&P spending survey, as of May, companies are planning an 18.2% increase in worldwide E&P expenditures in 2000, vs. a 10.2% rise budgeted in December, 1999, when E&P budgets were originally put together. That 18.2% represents some $86.7 billion in spending, vs. $73.4 billion in 1999. And as of June 16, the U.S. rig count, at 871 actively drilling, had increased to its highest level since mid-May, 1998. That may be good news for the consumer. But in the meantime, better buy a compact to keep that sport-utility vehicle company.

By Christopher Palmeri in Los Angeles and Stephanie Anderson Forest in Dallas, with Roger O. Crockett in Chicago and Lorraine Woellert in Washington



PHOTOGRAPH BY RICHARD DREW/AP; WEST WORLD CHART BY LAURIE ALLTHREW

COMMENTARY

By Stanley Reed

DON'T BLAME SURGING PUMP PRICES ON OPEC

The Organization of Petroleum Exporting Countries has a message for the U.S.: There is a limit to how much we can do to lower current crude oil prices and, by extension, U.S. gasoline prices.

Of course, the 11 cartel members are being far too modest. It was, after all, their production cutbacks that started the upward price spiral in 1999 in the first place. But some facts do support the idea that their influence over prices may indeed be declining.

For starters, not only did OPEC promise to produce an additional 1.7 million barrels per day in March, it is actually surpassing that pledge by 600,000 barrels. So, throughout the second quarter, the Paris-based International Energy Agency reckons that daily worldwide production has been exceeding worldwide consumption by as much as 1.9 million barrels. Yet crude oil prices are trading close to their March peak.

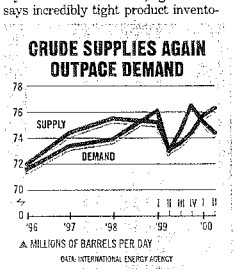
ALL THE WAY. Nevertheless, led by Saudi Arabia, the world's largest exporter, OPEC pledged on June 21 to hike production again, this time by around 700,000 barrels. Mexico, which is not a member of OPEC, is also expected to add 150,000 to 200,000 barrels a day, bringing its production back to the levels hit before oil producers began their regime of cutbacks more than a year ago.

Will these hikes make a difference? Ali I. Naimi, the Saudi Minister of Petroleum & Mineral Resources, isn't sure—primarily because he doubts that it was a shortage of crude oil that caused June's spikes in gasoline prices and crude. "Producers are trying to match supply and demand to establish stability in the market," he said in an interview in Riyadh, Saudi Arabia, just before leaving for OPEC's meeting in Vienna. "We are under tremendous pressure to increase production to respond to an apparent shortage of supply. But other than prices going up, the data doesn't support" the notion that there's a shortage.

NAIMI: *Speculators are part of the problem*

Naimi blames speculators for at least some of the price spikes. They saw very low gasoline and heating-oil inventories in the U.S. and a demand that didn't seem to be declining despite interest-rate hikes. Traders began betting that refiners would have to come into the market late to add to their inventories. "They are putting enormous pressure on the upper end to see if we are going to ease," says Naimi.

Of course, Naimi is hardly a disinterested observer. But David H. Knapp, who heads the IEA's oil-industry and markets division, agrees. He says incredibly tight product inventories in the U.S. are the main catalyst for higher crude prices. "It isn't so important what OPEC does as what the refiners do," says Knapp. "This is very much a product-led global oil market."



Moreover, the Saudis are also uncomfortable with prices as high as they are. With 1.9 million to 2.4 million barrels of spare capacity, the Saudis probably would have been willing to push production above 700,000 barrels just to avoid more heat from U.S. and Asian customers.

WINTER CHILL. But by ramming through a production hike, the Saudis would have risked the wrath of other OPEC members, such as Iran and Algeria, that don't have excess capacity. For them, a drop in price just means lower revenues and the potential loss of market share to new production. Besides Saudi Arabia, only the United Arab Emirates has a noteworthy 500,000 barrels a day of spare capacity to offer. And there is not much among non-OPEC producers either—although the IEA reports that Mexico is working hard to develop new supply.

That lack of slack leaves the market vulnerable. Principally, analysts are doubtful that Iraq can sustain a production of 3 million barrels a day.

So, the balancing act is getting very difficult for all of the players. Even if prices drop as the summer progresses and demand for gasoline begins to ease up in the U.S., analysts expect a similar crisis next winter, given the low levels of heating-oil inventories. So if OPEC doesn't increase now, it will face another crisis come its Sept. 10 meeting.

Reed covers the oil industry for BUSINESS WEEK from London and the Mideast.

BusinessWeek ONLINE

For an interview with Ali I. Naimi, go to the June 21 daily briefing at www.businessweek.com/today.htm

EXHIBIT XXII

J. L. Frank Testimony on Diesel Sulfur, EPA Public Hearing, June 19, 2000, New York

This is a speech delivered at an EPA public hearing in New York on June 19, 2000 by J. L. Frank, President of Marathon Ashland Petroleum LLC.

EPA Public Hearing, New York, June 19, 2000

Good morning. I'm J. Louis Frank, president of Marathon Ashland Petroleum LLC. I'm here today on behalf of the American Petroleum Institute.

The energy industry asks that you carefully consider our views on EPA's recently proposed diesel sulfur regulations.

First, understand that we support reducing sulfur content. This is an area where fuel producers can make a positive contribution. U.S. air quality has benefited because *of* – and in proportion *to* – the extent we have formulated fuels to cut tailpipe and exhaust stack emissions.

EPA statistics *prove* that nearly two-thirds of America's air quality improvement is due to clean fuels and clean engine technology. Moreover, the improvement has been steady and is ongoing. I'm proud of that result.

Please note that there was no magic involved, no instant alchemy. It was a painstaking process of finding what worked – technically, economically, commercially. We do this for a living. We can't afford to be wrong. Costs and benefits have to balance.

And that goes to the heart of industry's contention that pushing beyond a 90 percent reduction in diesel sulfur puts wishful thinking ahead of market reality. EPA's case is based on the use of vehicle technology that is still unproven. This is technology which EPA admits has not advanced from the chalkboard to the field trial stage. In preliminary tests, the EPA recommended technology has failed to hit target emission levels –regardless of fuel sulfur content.

Industry knows how to hit the 15 ppm standard. But we also know that volumes are cost-constrained. Many refiners will choose to produce less product. Any trucker or fleet operator can tell you what that will do to their business. Our estimate is that EPA's proposal would add about $2,500 to the cost of a trucker's annual operation.

Real-world constraints will also affect our ability to maintain the 15 ppm standard through thousands of miles of pipeline shipment, terminal storage and station disposition. Fifteen parts per million is equivalent to less than a tablespoon of water in an Olympic-size swimming pool. Contamination at the molecular level could endanger this fragile standard. The reality is that

refiners would actually have to reduce levels below 15 ppm to have a reasonable assurance that product stayed on spec.

EPA has raised the possibility of phasing in its sulfur requirements to mitigate their impact. This would necessitate purchasing additional tanks, piping and pumps to accommodate the sale of two varieties of highway diesel. Bottom line: less efficiency, more costs.

I am saying to you – on behalf of America's energy industry – that we are prepared to undertake a 90 percent reduction in diesel sulfur level – knowing full well what that entails in terms of production cost, quality maintenance, and capital investment.

We support this reduction and we understand its potential health benefit.

This is not a poker game. We are not arguing over table stakes. Anyone can demand too much too soon. Setting an appropriate regulatory standard, however, demands wisdom, courage and care.

Thank you for your time and consideration.

EXHIBIT XXIII

J. L. Frank letter to EPA on Diesel Sulfur, June 23, 2000

Letter to Office of Transportation and Air Quality, Environmental Protection Agency from J. L. Frank, President of Marathon Ashland Petroleum LLC, June 23, 2000. The letter expresses concern over EPA's arbitrary approach to the determination of costs and benefits of the API proposed 50 PPM sulfur limit on diesel fuel.

June 23, 2000

Fax No: 202-564-1686
Ms. Margo T. Oge
Director
Office of Transportation and Air Quality
Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20004

Dear Margo:

This letter is in response to your question at the New York Heavy Duty Highway Diesel NPRM hearing on June 19, 2000 regarding the calculation of benefits from the 50 ppm cap/30 ppm average sulfur that the oil industry has proposed for highway diesel fuel.

At that time I was unfamiliar with the methodology upon which EPA has based its conclusion that the industry's proposal would only achieve 20% of EPA's proposed benefits. I have now reviewed Chapter IX.C. of the agency's Regulatory Impact Analysis (RIA) and I am still at a loss to determine the basis EPA used to determine the benefits of 50 ppm sulfur.

The RIA totally ignores the real world experience of thousands of vehicles in Europe, which are already demonstrating the ability to meet Euro 5 standards on 50 ppm sulfur diesel fuel. This appearance of the agency's deliberate under valuation of the oil industry's proposal casts doubt on EPA's willingness to undertake a science-based, unbiased analysis of alternatives to this proposed rule.

I am very concerned with the apparent arbitrariness of EPA's approach, and would like to present the oil industry's case. There are many categories of potential benefits listed in the RIA. However, the primary benefits are in the areas of PM and NOx emission reductions and those are the two areas I will address.

The industry's proposed 50 ppm/30 ppm average sulfur level enables virtually the same PM benefits as EPA's proposal of a15 ppm sulfur cap. Over 8,000 European diesel vehicles, both light and heavy duty, are currently operating catalyzed diesel particulate filters (CDPF's) satisfactorily on 50 ppm sulfur fuel. Both Johnson-Matthey and Engelhard have publicly released data showing that PM emissions below EPA's proposed FTP PM standard of 0.01 gm/bhp-hr can be achieved using 50 ppm sulfur diesel fuel.

I am aware that EPA is concerned that out of these thousands of successful applications, there are fourteen failures on retrofitted buses in Finland. MECA and EMA have characterized these failures as being due to the inability to maintain the required temperature levels to assure regeneration. I am confident that EMA and MECA, given seven years lead time, can determine the appropriate level of insulating material or other engine calibration techniques to maintain the 20° C higher temperatures required to enable CDPF's to perform properly on 50 ppm cap/30 ppm average sulfur diesel. This task is made much simpler since they will be customizing the CDPF's for each new engine family.

In addition, I am aware that EPA is concerned about sulfate make and PM compliance over the proposed Supplemental Steady-State (SS) and Not-to-Exceed (NTE) test procedures. The DEC-SE study shows that on 30 ppm fuel current traps can meet PM levels of 0.02 g/bhp-hr over the OICA cycle – an 80% reduction from today's levels. The apparent arbitrary nature in which EPA selected the SS and NTE standards is troubling since it forces compliance far below the stated emission standards. EPA is claiming no environmental benefits associated with these standards beyond ensuring adequate in-use control. EPA could achieve the same in-use control through design and implementation of an effective EPA compliance and enforcement program without jeopardizing our nations fuel supply.

On NOx control, I am surprised that EPA would completely dismiss SCR technology, which is the NOx reduction technology of choice in Europe and like the CDPF has been tested and proven on thousands of European diesel vehicles using 50 ppm and higher sulfur diesel fuel. This technology easily achieves NOx levels of 0.5 gm/bhp-hr, and EPA even points out in the RIA that this technology may be capable of meeting the proposed 0.02 g/bhp-hr standard by 2007. SCR technology is ready to go today and does not need a four year phase-in or a technology review. In fact, it's ability to be operating in 100% of 2007 new diesel vehicles allows SCR technology to generate more early NOx emission reduction benefits than EPA's proposal.

While Heavy Duty Engine SCR is relatively insensitive to diesel sulfur levels, the Compact SCR technology to be used in smaller vehicles is reportedly somewhat sulfur sensitive, since it incorporates a platinum based oxidation catalyst. However, these catalysts are very similar to current gasoline oxidation catalysts, which successfully operate at sulfur levels up to 80 ppm. With the very low sulfur levels of 50 ppm, this technology is capable of meeting the 0.5 gm/brkhp-hr standard for the life of the vehicle.

It is difficult to understand why EPA would ignore a proven, ready-to-go technology, such as SCR, in favor of a totally unproven technology, such as NOx Adsorbers. In the NPRM EPA repeatedly refers to the relative risks of each technology. EPA needs to truly quantify these risks and calculate the risk corrected expected benefits of each technology path. This will demonstrate that the NOx Adsorber technology, even if given a very optimistic risk factor of 50%, plus its 15 ppm diesel

requirement, is too risky and has a much lower expected benefit value than the oil industry's recommendation.

Sincerely,

(Original Signed by J. L. Frank)

/ab

Attachment

cc: The Honorable Carol M. Browner
Administrator
Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460
Fax No: 202-501-1450

The Honorable Bill Richardson
Secretary of Energy
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585
Fax No: 202-586-7644

Mr. Robert Perciasepe
Assistant Administrator
Office of Air and Radiation
Environmental Protection Agency
Fax No: 202-564-1686

Ms. Melanie Kenderdine
Acting Director
Office of Policy
Department of Energy
Fax No: 202-586-0148

Mr. John Spotila
Office of Management and Budget
Eisenhower Executive Office Building
17th and Pennsylvania Ave, NW
Washington, DC 20503
Fax No: 202-395-4852

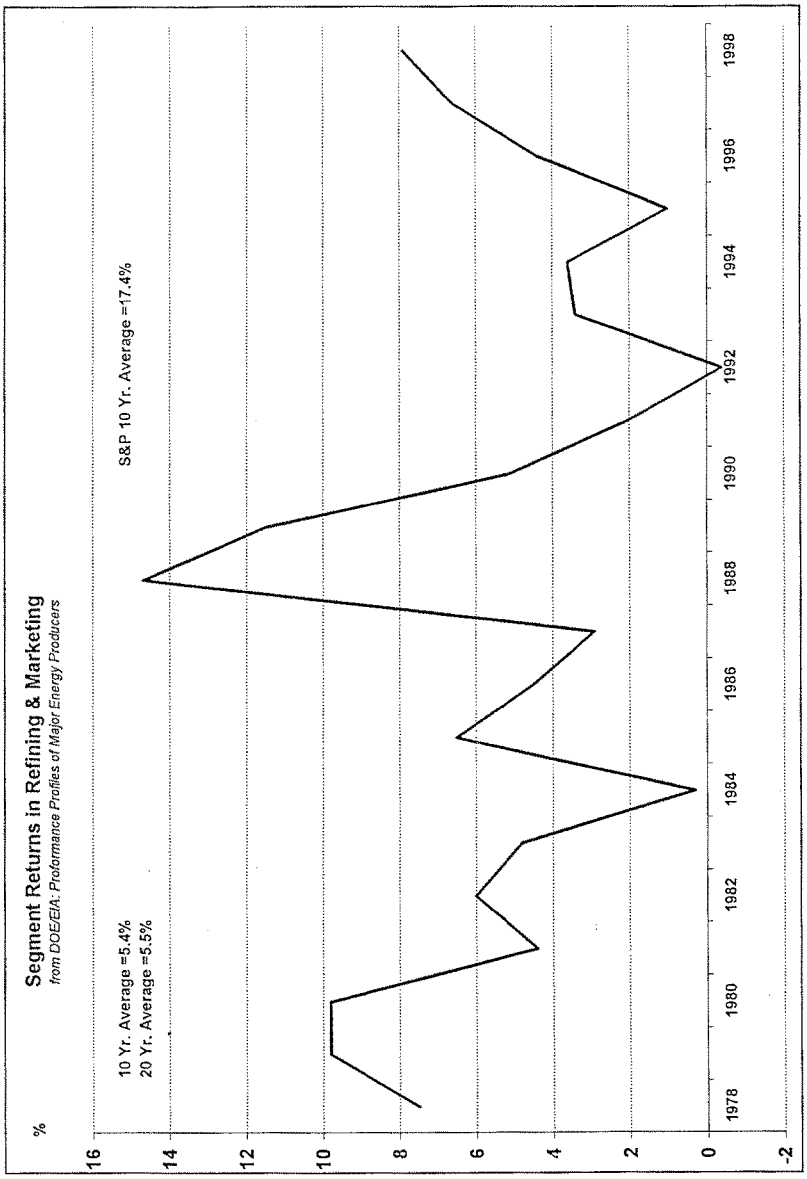
Ms. Patricia M. Richards
USX Corporation
Washington, DC
Fax No: 202-783-6309

bcc: Red Cavaney, American Petroleum Institute
Edward H. Murphy, American Petroleum Institute
Urvan Sternfels, NPRA
MAP Board of Managers and Officers w/attachment
M. E. Leister w/attachment

EXHIBIT XXIV

Segment Returns in Refining and Marketing (Source: DOE/EIA: Performance Profiles of Major Energy Producers)

This chart depicts the return on capital of the refining and marketing segments of U. S. Petroleum industry. The data was drawn from the DOE/EIA: Performance Profiles of Major Energy Producers.


Segment Returns in Refining & Marketing
from DOE/EIA: Proformance Profiles of Major Energy Producers
%
10 Yr. Average =5.4%
20 Yr. Average =5.5%
S&P 10 Yr. Average =17.4%
16
14
12
10
8
6
4
2
0
-2
1978
1980
1982
1984
1986
1988
1990
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1998

EXHIBIT XXV

A Primer on Gasoline Prices (EIA pamphlet, www.eia.doc.gov)

This brochure published by DOE/EIA explains the various components of the retail price of gasoline and why prices change from time to time and differ according to regions.

A Primer on Gasoline Prices

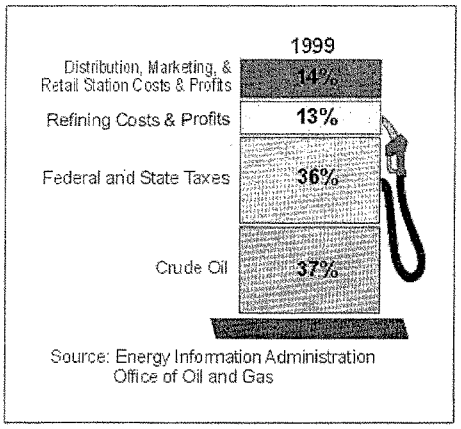
Gasoline, one of the main products refined from crude oil, accounts for just about 20 percent of the energy consumed in the United States. The primary use for gasoline is in automobiles and light trucks. Gasoline also fuels boats, recreational vehicles, and various farm and other equipment. While gasoline is produced year-round, extra volumes are made in time for the summer driving season. Gasoline is delivered from oil refineries mainly through pipelines to a massive distribution chain serving 180,000 retail gasoline stations throughout the United States. There are three main grades of gasoline: regular, midgrade, and premium. Each grade has a different octane level. Price levels vary by grade, but the price differential between grades is generally constant.

What are the components of the retail price of gasoline?

The cost to produce and deliver gasoline to consumers includes the cost of crude oil to refiners, refinery processing costs, marketing and distribution costs, and, finally, the retail station costs and taxes. The prices paid by consumers at the pump reflect these costs, as well as the profits (and sometimes losses) of refiners, marketers, distributors, and retail station owners.

In 1999, when the price of crude oil averaged $17.46 per barrel, crude oil accounted for about 37% of the cost of a gallon of regular grade gasoline (Figure 1). The share of the retail price of regular grade gasoline that crude oil costs represent varies somewhat over time and among regions. For example, on the West Coast, crude oil represented about 31% of the price of gasoline in 1999, while on the Gulf Coast, it represented 39%.

Figure 1. What Do We Pay for in a Gallon of Regular Grade Gasoline?



Federal, State, and local taxes are a large component of the retail price of gasoline. Taxes (not including county and local taxes) account for approximately 36 percent of the cost of a gallon of gasoline. Within this national average, Federal excise taxes are 18.4 cents per gallon and State excise taxes average 19.96 cents per gallon. Also, seven States levy additional State sales taxes, some of which are applied to the Federal and State excise taxes.[1] Additional local county and city taxes can have a significant impact on the price of gasoline.

Distribution, marketing and retail station costs and profits combined make up 14% of the cost of a gallon of gasoline. Only 28% of service station outlets today are company stations, i.e., are owned or leased by a major oil company and operated by its employees. Nearly 72% are operated by independent dealers free to set their own prices. The price on the pump reflects both the retailer's purchase cost for the product and the other costs of operating the service station. It also reflects local market conditions and factors, such as the desirability of the location and the marketing strategy of the owner.

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[1]U. S. Department of Transportation, Federal Highway Administration, *Monthly Motor Fuel Reported by States* , February 2000, Table MF-121T.

Why are California gasoline prices higher and more variable than others?

The State of California implements its own reformulated gasoline program with more stringent requirements than Federally-mandated clean gasolines. In addition to the higher cost of cleaner fuel, there is a combined State and local sales and use tax of 7.25 percent on top of an 18.4 cent-per-gallon federal excise tax and an 18.0 cent-per-gallon State excise tax.

California prices are more variable than others because there are relatively few supply sources of its unique blend of gasoline outside the State. California refineries need to be running near their fullest capabilities in order to meet the State's fuel demands. If more than one of its refineries experiences operating difficulties at the same time, California's gasoline supply becomes very tight and the prices soar. Supplies could be obtained from the Gulf Coast and foreign refineries; however, California's substantial distance from those refineries is such that any unusual increase in demand or reduction in supply results in a large price response in the market before relief supplies can be delivered. The farther away the necessary relief supplies are, the higher and longer the price spike will be.

Why Do Gasoline Prices Fluctuate?

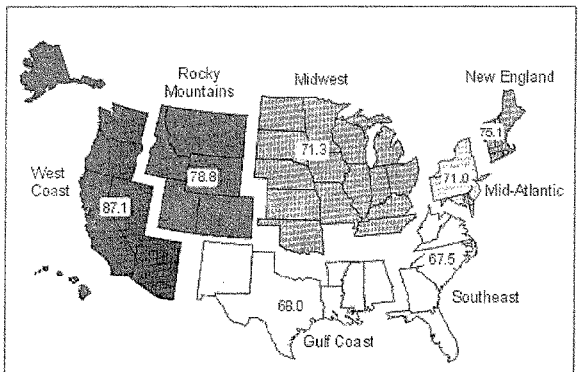
Even when crude oil prices are stable, gasoline prices normally fluctuate due to factors such as seasonality and local retail station competition. Additionally, gasoline prices can change rapidly due to crude oil supply disruptions stemming from world events or domestic problems, such as refinery or pipeline outages.

Seasonality in the demand for gasoline - When crude oil prices are stable, retail gasoline prices tend to gradually rise before and during the summer, when people drive more, and fall in the winter. Good weather and vacations cause U.S. summer gasoline demand to average about 5% higher than during the rest of the year. Prices during the summer typically show a 3.5 cent-

per-gallon increase, even after correcting for changes in crude oil prices.

Changes in the cost of crude oil - Events in crude oil markets were a major factor in all but one of the five run-ups in gasoline prices between 1992 and 1997, according to the National Petroleum Council's study *U.S. Petroleum Supply - Inventory Dynamics* .

Figure 2. Motor Gasoline Prices at Retail Outlets, 1999 Average Regular Grade, by Region
(cents per gallon, **excluding taxes**)



Source: Preliminary data from the Energy Information Administration's *Petroleum Marketing Monthly*, Table 31.

Crude oil prices are determined by worldwide supply and demand, with significant influence by the Organization of Petroleum Exporting Countries (OPEC). Since it was organized in 1960, OPEC has tried to keep world oil prices at its target level by setting an upper production limit on its members. OPEC has the potential to influence oil prices worldwide because its members possess such a great portion of the world's oil supply, accounting for nearly 40% of the world's production of crude oil and holding about 67% of the world's estimated crude oil reserves.

Rapid gasoline price increases have occurred in response to crude oil shortages caused by, for example, the Arab oil embargo in 1973, the Iranian revolution in 1978, the Iran/Iraq war in 1980, and the Persian Gulf conflict in 1990. The most recent gasoline price increases are due in part to OPEC crude oil production cuts in 1999. In addition, higher demand from a recovering Asian economy caused more competitive bidding for crude oil supplies in the international market and was a contributing factor to an increase in gasoline prices in 1999.

Product supply/demand imbalances - A continuing economic boom in the United States has led to greater demand for gasoline. If demand rises quickly or supply declines unexpectedly due to refinery production problems or lagging imports, gasoline inventories (stocks) may decline rapidly. When stocks are low and falling, some wholesalers become concerned that supplies may not be adequate over the short term and bid higher for available product. Such was the case

in late summer 1997, as a demand surge drained gasoline stocks and prices rose rapidly.

Gasoline may be less expensive in one summer when supplies are plentiful vs. another summer when they are not. These are normal price fluctuations, experienced in all commodity markets. For example, the price of corn is higher than normal just before harvest time because corn inventories are depleted at that time. Prices may remain high after the harvest if a drought occurred during the growing season, thereby limiting the supply of corn. Or prices may decline when a healthy crop is produced.

However, prices of basic energy (gasoline, electricity, natural gas, heating oil) are generally more volatile than prices of other commodities. One reason is that consumers are limited in their ability to substitute between fuels when the price for gasoline, for example, fluctuates. So, while consumers can substitute readily between food products when relative prices shift, most do not have that option in fueling their cars.

Why do gasoline prices differ according to region?

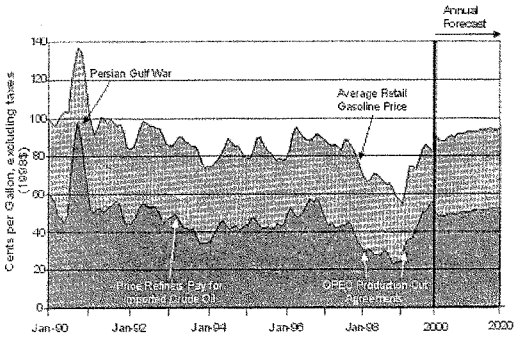
Although price levels vary over time, Energy Information Administration (EIA) data indicate that average retail gasoline prices tend to be typically higher in certain States or regions than in others (Figure 2). Aside from taxes, there are other factors that contribute to regional and even local differences in gasoline prices:

Proximity of supply - Areas farthest from the Gulf Coast (the source of nearly half of the gasoline produced in the U.S. and, thus, a major supplier to the rest of the country) tend to have higher prices. The proximity of refineries to crude oil supplies can even be a factor, as well as shipping costs (pipeline or waterborne) from refinery to market.

Supply disruptions - Any event which slows or stops production of gasoline for a short time, such as planned or unplanned refinery maintenance, 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.

Competition in the local market - Competitive differences can be substantial between a locality with only one or a few gasoline suppliers versus one with a large number of competitors in close proximity. Consumers in remote locations may face a trade-off between higher local prices and the inconvenience of driving some distance to a lower-priced alternative.

Figure 3. The Price Refiners Pay for Imported Crude Oil and Average Retail Gasoline Price (Average of All Grades)



Source: Energy Information Administration *Petroleum Marketing Monthly* DOE/EIA-0380, various issues and the *Annual Energy Outlook* DOE/EIA-0383(2000), December 1999.

Long-term (Years 2000 to 2020) Outlook for Gasoline Prices

In the future, gasoline prices are expected to be pushed generally higher by an increase in the population and an economic expansion, particularly in the third world (Figure 3). In addition, tighter environmental standards on the quality of gasoline will also be a factor in higher prices as will the lack of available U.S. refining capacity. The lack of available refining capacity is already contributing to higher retail prices in California (see box on California) and is expected to spread to other States. Offset by lower tax rates, though, U.S. retail gasoline prices are expected to remain among the lowest in the world.

Environmental programs - Some areas of the country are required to use special gasolines. Environmental programs, aimed at reducing carbon monoxide, smog, and air toxics, include the Federal and/or State-required oxygenated, reformulated, and low-volatility (evaporating more slowly) gasolines. Other environmental programs put restrictions on transportation and storage. The reformulated gasolines required in some urban areas and in California add three and five cents, respectively, to the price of conventional gasoline served elsewhere.

Operating costs - Even stations co-located have different traffic patterns, rents, and sources of supply that influence retail price.

Additional copies of this pamphlet may be obtained from EIA by contacting the National Energy Information Center (NEIC) at 202-586-8800 or E-Mail: infoctr@eia.doe.gov. The full text is available on EIA's Web site www.eia.doe.gov under "Petroleum," then select "Analysis" on the left sidebar.

The Energy Information Administration publishes many analytical reports on the subject of motor gasoline price changes. For more technical analyses, see: *Price Changes in the Gasoline Market* , *Motor Gasoline Assessment Spring 1997* , and *Assessment of Summer 1997 Motor Gasoline Price Increases* . These analyses, and others, are available at www.eia.doe.gov under "Petroleum," then select "Analysis" on the left sidebar.

EXHIBIT XXVI

CATO Institute Testimony, House Committee on Government Reform, "The Effect of Federal Regulations on Gasoline Prices in Milwaukee/Chicago Area", July 7, 2000.

The CATO Institute testimony before the House Committee on Government Reform examines the factors contributing to the gasoline supply shortfall and the economic forces, which caused the elevated prices.

TESTIMONY of

Jerry Taylor,
Director, Natural Resource Studies, Cato Institute

before the

Committee on Government Reform
Subcommittee on National Economic Growth,
Natural Resources, and Regulatory Affairs
United States House of Representatives

The Effect of Federal Regulations on Gasoline Prices in the Milwaukee/Chicago Area

July 7, 2000

I'd like to thank the members of the Subcommittee on National Economic Growth, Natural Resources, and Regulatory Affairs for the opportunity to testify today on the effect that federal regulations have had on gasoline prices in the Milwaukee/Chicago area.

There is no mystery as to why gasoline prices have spiked here but nowhere else: the Milwaukee/Chicago market is suffering from a shortage of gasoline and this shortage is entirely responsible for the surge in prices. My testimony today will examine the factors that have contributed to this shortfall as well as the economic laws that govern gasoline markets. In short, the June spike in Milwaukee/Chicago gasoline prices was largely caused by federal and state regulations mandating the use of ethanol blended reformulated gasoline in this market.

The only other explanation for the price spike that's been offered - the contention that oil companies are colluding to gouge consumers - is also examined and dismissed as extremely unlikely. No single oil company has enough market power to significantly affect retail prices and there is absolutely no evidence of collusion. A basic understanding of the gasoline markets strongly suggests that, if prices had not gone up dramatically in May/June, 1970-style gasoline lines at the pump would have been the inevitable result.

I conclude by suggesting some policy steps that would reduce the likelihood of such disruptions in the future. Less - not more - regulation is in order.

The National Gasoline Market

A gallon of gasoline in the United States today is - on average - 60 cents more expensive than it was a year ago. This represents about a 50 percent increase in price. Gasoline prices in the Milwaukee/Chicago area, however, peaked at about double the price of a year ago.

So about half the price increase experienced in the Milwaukee/Chicago area was due to the general increase in world oil prices. The Congressional Research Service, for instance, reports that refiners' crude acquisition costs have risen by the equivalent of 48 cents per gallon of gasoline over the past year and a half. That price increase is explained by three factors; OPEC production restraint, low domestic inventories of oil, and surging demand for oil products. About this there is little dispute, so I will not dwell upon it this morning.

As an aside, the price increase appears more dramatic than it actually is. First, it was preceded by the lowest inflation-adjusted oil prices in recent history: less than $10 a barrel in December 1998, a price that allowed gasoline to sell at $1.05 a gallon. Price increases were virtually inevitable, and given the historic lows of December 1998, they were bound to appear dramatic by comparison. Second, real prices even in the Milwaukee/Chicago area still don't approach the historic peak price of $2.67 a gallon, which was set nationally in March 1981 after adjusting for inflation.

Nevertheless, why are prices higher in the Milwaukee/Chicago area than elsewhere? Simply put, the imbalance between gasoline supply and demand is greater here than elsewhere in the country.

Imbalances in Supply & Demand

Disruptions in the transportation network are primarily responsible for limiting the supply of gasoline in the Milwaukee/Chicago area. An inability on the part of refiners to produce enough gasoline to keep up with surging demand has also contributed to the problem. Given the inelasticities of the gasoline market, those two factors alone explain the disparity between regional and national prices.

Gasoline demand has increased by 4 percent since last year according to the American Automobile Association but supply has remained unchanged. This imbalance is complicated by a shrinkage in inventory stocks: mid-June national inventories of reformulated gasoline were 6 percent below the June 1999 level and 16 percent below those of June 1998.

While this disparity between the supply and demand of reformulated gasoline has affected all markets that rely on the reformulated gasoline equally, the Milwaukee/Chicago market has been additionally hit by a production shortfall of the specific blend of reformulated gasoline that is required there and nowhere else. Going into the spring, only six refineries (all located in Illinois) were producing RBOB that could be sold in the Milwaukee/Chicago market. But production at those and the other facilities making gasoline dedicated to the Milwaukee/Chicago market is running about 7 percent below production a year ago and stockpiles are unusually low.

The cheapest and easiest way to supplement the production at those Illinois facilities is to ship gasoline via pipelines from Gulf Coast refineries. Unfortunately, the main pipeline that services the Milwaukee/Chicago area - the Explorer pipeline, which ships gasoline from refineries on the Gulf Coast to Chicago - experienced a major fire near St. Louis in March. Although the damage was repaired quickly and the pipeline opened for business ten days later, the owners of the pipeline and the U.S. Department of Transportation entered into a joint agreement to reduce the operating pressure of the pipeline by 20 percent, which reduced the volume of gasoline moving through the pipeline by 10 percent. A rupture in the Wolverine Pipeline on June 8 - the one dedicated reformulated gasoline pipeline from Chicago to Detroit that serves the Milwaukee region -- has further reduced pipeline traffic by 20 percent although it returned to full operation by the end of the month.

While trucks and barges are an alternative means of delivering gasoline to the Chicago/Milwaukee market, it's a far more expensive method of delivery and a limited delivery alternative given the paucity of unused truck and barge capacity. The upshot is that trucks and barges have not been able to make up the shortfall in deliveries caused by the pipeline problems and the use of trucks and barges has added expense.

An imbalance of only a few percent between supply and demand seems at first blush to be a minor problem, but given the nature of gasoline markets, it is quite serious.

Gasoline Economics 101

The demand for gasoline is inelastic in the short run. That is, it takes a large increase in price to reduce consumer demand even a little in the near term. Economists calculate that short-term price elasticity for gasoline is about -0.05. That is, if prices go up 1 percent, consumer demand will decrease in the short term by only one-twentieth of 1 percent.

Accordingly, when the demand for gasoline outstrips the available supply (even by just a little), prices have to go up a lot in order to keep the gasoline pumps from literally running dry. Thus, if local gasoline supplies are 2-3 percent below where they need to be to meet unmoderated consumer demand - the figure most market analysts believe to be correct for the Milwaukee/Chicago area - price would have to jump by more than 50 percent in order to prevent spot shortages.

Prices, remember, are used to allocate scarce goods. Although demand for gasoline is far more elastic in the long run, in the short run, small disparities in supply and demand (in either direction) will always by necessity have a large impact on prices.

Thus, we know all we need to know to explain the supposed mystery of retail gasoline prices in the Milwaukee/Chicago area. OPEC production cutbacks and surging world oil demand have driven the price of oil from around $10 a barrel in the winter of 1998/99 to around $30 a barrel today, adding 50-60 cents to the price of gasoline per gallon. Pipeline ruptures and production shortfalls have further reduced Milwaukee/Chicago supplies by 2-3 percent, which -- given the inelasticities of demand - explains the 50 cent difference between peak regional gasoline prices and national average gasoline prices.

Why the Production Shortfall?

What role have politicians played in all of this? Approximately three-quarters of the price hike in the Milwaukee/Chicago area can be explained by circumstances largely outside of government's control; the OPEC production restraint and the pipeline ruptures. This is also the conclusion of economist Lawrence Kumins in his June 16 report on midwestern gasoline prices for the Congressional Research Service.

One-quarter of the price spike, however, can be laid directly at the doorstep of government. Refineries have had a hard time keeping up with the demand for reformulated gasoline in the Milwaukee/Chicago market, and that production shortfall is a logical consequence of poorly designed federal and state policies. Refinery production has been limited by the reformulated gasoline mandate passed as part of the 1990 Clean Air Act, unnecessarily burdensome environmental regulations promulgated by the EPA, and the continued demagogic nature of Congress, which deters investment in the refining industry.

Reformulated Gasoline Mandate

As a consequence of the Clean Air Act Amendments of 1990, areas that violated federal air quality standards were required to sell only specially reformulated gasoline beginning June 1, 2000. This new gasoline is blended with various oxygenates (primarily methyl tertiary butyl ether - MTBE, or ethanol) in order to reduce the emission of carbon monoxide, a significant contributor to wintertime smog, and to reduce the amount of toxic chemicals, such as benzene, in the fuel. This reformulated gasoline now serves 30 percent of the country.

While today's reformulated gasoline (known in the regulated community as "Phase II" reformulated gasoline, or RFG-2) is 1-2 cents more expensive per gallon than last year's "Phase I" reformulated gasoline and 5-8 cents more expensive than conventional gasoline, the real consumer impact of reformulated gasoline is related to the rigidity it imposes on national gasoline markets.

The accompanying map of the United States shows the different federal requirements for retail gasoline. As of October 1999, there were essentially seven separate gasoline markets. As of today, there are eight; gasoline is reformulated with ethanol in Milwaukee and Chicago but with MTBE elsewhere.

This is a crucial point. As noted earlier, gasoline intended for ethanol reformulation requires a unique blendstock known in the trade as "RBOB." That's because ethanol evaporates easily and unburned evaporated fuel is a major contributor to smog. Gasoline intended for ethanol blending must, accordingly, be specially made in order to minimize ethanol evaporation rates.

Because of RBOB's unique characteristics, it must be segregated from other gasoline all the way up the transportation system until the point just before it is mingled with ethanol and delivered to the service station. Accordingly, it cannot move through normal distribution channels and requires an entirely separate, dedicated transportation network.

This congressionally mandated balkanization of the gasoline market has seriously hampered the flexibility that refiners would otherwise have to react to spot shortages (and the related opportunity for profit making). Because it is inefficient to segment refining operations to produce multiple fuel blends, refiners generally dedicate their facilities to the production of one particular gasoline blend. Going into the spring, most of the RBOB for the Milwaukee/Chicago market was produced by six refineries in Illinois. Unfortunately, shifting production from one blend to another is costly and time consuming. Accordingly, refiners cannot react quickly to profit-making opportunities.

Why did the refining industry initially underproduce RBOB? Two reasons. First, whenever new gasoline blends are introduced to the market, an adjustment period almost always takes place that is frequently characterized by temporary supply and transportation dislocations. Refiners and merchant facilities need time to figure out the marketplace, their place in it, and to learn the most efficient way to deliver the new product to consumers. This shakeout is temporary but inevitable. As even the EPA acknowledged in its November 1999 "Fact Sheet on Reformulated Gasoline":

> It is not possible to accurately predict the retail price of Phase II RFG [reformulated gasoline] in the year 2000 because it will be influenced by many factors including production costs, weather, crude oil prices, taxes, and local and regional market conditions. *It is important to note that, at the start of the Phase II RFG program, retail prices may be higher or fluctuate more*.

Accordingly, there should be no surprise that the introduction of this fuel in the Milwaukee/Chicago area on June 1 led to problems as the industry adjusted to new market conditions. Government mandates will always produce such periods of temporary dislocation.

Second, a federal appeals court ruled in March that Unocal legitimately held a patent on the most efficient method of producing RBOB. Refiners were forced to either pay Unocal royalties on RBOB production (imposing a 1-5 cent per gallon tariff on the cost of RBOB) or use a less efficient means of producing the blend. While the direct cost of the Unocal patent is thus minor, the indirect cost has been a reduction in RBOB production. Given the low profit margin that refiners typically operate under, many refiners simply chose to dedicate their facilities to the production of other blends.

Environmental Regulatory Burdens

As noted a moment ago, the refining business is not a particularly profitable one. Its profit margins, in fact, are smaller than the industrial average and no new refinery has been built in over thirty years. Refining capacity is shrinking annually due to plant shutdowns despite continually increasing demand.

The lack of profitability within this industry can be easily traced to several causes.

First, air pollution and hazardous waste regulations hit this particular industry harder than almost most any other. While such regulatory burdens might be justified as the

price society must pay for a cleaner environment, that is unfortunately not the case. A 1990 joint study by the U.S. EPA and Amoco found that a typical refinery could meet all of EPA's emission mandates at only 20 percent of the cost if only the federal government would allow the plant managers flexibility in how they go about controlling emissions.

Second, delays in permit review and issuance seriously constrain a refiner's ability to react to profitable market opportunities such as the one presented today by high prices in the Milwaukee/Chicago area. Retooling a plant to produce a different gasoline blend requires federal permits to ensure that no additional air pollutants would result from the change. Often, these permit reviews take so long that windows of market opportunity close before refiners are capable of taking advantage of them.

Third, the federal government is constantly issuing new orders regarding how gasoline can be made. Those orders, which require constant retooling and reinvestment in facilities, not only impose steep up-front costs but curtail a plant's ability to capture profits from previous mandated retoolings and reinvestments. The refining industry is today facing 12 major regulatory actions over the next 10 years, all of which will require major capital investments. Many of those regulatory actions concern additional mandated changes in gasoline blends such as the reduction of sulfur in gasoline and diesel fuel, total elimination of MTBE from reformulated gasoline, and the reduction of various toxic substances. These changes alone will cost between $1.8 billion and $5 billion depending upon how the regulations are promulgated by EPA.

As long as government is insensitive to the regulatory costs it's imposing on this industry, it cannot legitimately complain when the industry occasionally stumbles under the weight of its regulatory burdens. In short, the government has made certain that there is little profit to be made in the business of refining gasoline, capacity is naturally dwindling, and the industry's ability to quickly and efficiently adjust to dislocations caused by new mandates is disappearing.

Regulatory Uncertainty

The final contributing factor to the shortfall of gasoline this summer is the constant threat of regulatory and policy change that deters companies from entering the market, investing in efficient practices and technologies, or stockpiling supplies. If businessmen are uncertain about whether new regulations will be imposed that might prevent them from recouping the cost of plant investments, less plant investment will be made. Similarly, if politicians threaten to impose windfall profit taxes or other forms of regulatory intervention to ensure that occasional shortages never present the opportunity for significant profit, then companies will refrain from investing in stockpiling and other activities that only prove profitable under such conditions.

It is a cardinal rule of economics that stable rules are good rules. Even poorly drafted, inefficient regulations can be mitigated and overcome in time by market actors. Constant change, however, spawns uncertainty, and uncertainty in the marketplace restricts corporate time horizons in ways that often prove disastrous for consumers.

The "Price Gouging" Charade

The foregoing analysis should put to rest the charge that oil companies are "gouging" the public. Price increases in the Milwaukee/Chicago region were necessitated by a shortfall in supply, a shortfall that was caused by a number of factors. Moreover, there is no dispute about the fact that there *has been* a shortfall. The fault line is between those who understand that, given the inelasticities of demand, such a shortfall will have major pricing implications and those who simply do not understand the basic economics of this industry.

Even so, the logic of the "price gouging" charge is threadbare. Federal regulatory officials deny the possibility of shortages by pointing out that reformulated fuel stocks are just as plentiful today as they were last year when no such price shock occurred. But demand is about 4 percent higher today than last year, a disparity that is great enough to trigger the spike. Moreover, such assertions about overall reformulated fuel stocks ignore the fact that the particular reformulated fuel stock relied upon by the Milwaukee/Chicago market -- RBOB -- is undeniably in shorter supply.

Spectacularly high industry profits are not evidence of gouging. Given the inelasticities of consumer demand for gasoline, prices had to go up substantially to bring demand in balance with supply. If they had not, then the Milwaukee/Chicago area would have undergone a replay of the 1970s when long gasoline lines and dry service station pumps traumatized the nation. Suppliers who had gasoline for the Milwaukee/Chicago market on hand and who were able to deliver it cheaply to market (inframarginal suppliers) are indeed making a substantial profit. Those who had to retool their refineries this spring to make RBOB for the Milwaukee/Chicago market and those who had to secure special truck or barge service to get that gasoline to market (extramarginal suppliers) are making significantly less.

Regardless, those high prices were necessary not only to ration a scarce good; they were also necessary to signal to other refiners that a valuable commodity was in short supply. If prices had somehow been kept down by government action, refiners would have been even less likely to help mitigate the shortage and the supply crisis would have been even worse.

Finally, the charge of price gouging has little internal consistency. If oil companies have enough market power to gouge consumers at will, why have they waited until this year to exercise that power? Why did they not "gouge" in 1999, or in 1998 (when industry profits were at their lowest point in years), on anytime over the last several decades? Moreover, why would oil companies gouge the Milwaukee/Chicago area but nowhere else?

The answer some give is that the industry needed an "excuse" to gouge, and the introduction of Phase II ethanol-blended reformulated gasoline this June was the excuse they needed and an excuse that was not available in any other market. But what critics miss is that businesses do not need an "excuse" to raise prices if that's what they want to do. This is, after all, a relatively free market and companies are free to charge whatever they think the market will bear anytime they chose.

Oil companies should not have to apologize for their profits this year. Given the short-term inelasticies of both supply and demand in this industry, minor imbalances in *either* direction will dramatically move prices either up or down. Massive but

temporary transfers of wealth are just as likely to benefit consumers as they are to benefit producers in the oil business because temporary periods of excess supply are as likely as are temporary shortfalls of supply. Nobody shed a tear when consumers were "gouging" oil companies in 1998 when the short-term inelasticities of the gasoline markets crashed prices through the floor. Nobody should shed a tear now when those same market inelasticities produce windfall profits for producers.

Finally, for a charge of price gouging to have credence, federal investigators will have to find evidence of collusion between oil companies. That's because no one company has enough market power to unilaterally drive up prices. But absolutely no evidence of collusion has been unearthed so far, and 30 years of on-again, off-again public witch-hunts have yet to produce even a shred of evidence that oil companies have *ever* colluded to fix prices.

The belief that oil companies get together to profit at the expense of consumers appears to be genetically hard-wired into our heads. But much like the belief in extraterrestials, it has yet to be substantiated. Given the perfectly understandable nature of the current price spike in the Milwaukee/Chicago area, it's a pretty safe bet that this particular investigation by the Federal Trade Commission -- like all investigations that have come before it -- will turn up empty. It is my hope, however, that those who are so demagogically accusing the industry of unjustified profiteering without any evidence will just as loudly and energetically apologize to it once the FTC investigation concludes with its inevitable findings.

Conclusion

Of the approximately $1 per gallon increase in gasoline prices that Milwaukee/Chicago area drivers have experienced over the past year, about 50 cents can be attributed to OPEC production decisions, 25 cents can be attributed to unfortunate pipeline breaks during particularly inopportune times, and 25 cents can be attributed to the market complications imposed by the reformulated gasoline mandate originally imposed in the 1990 Clean Air Act and put into place this June.

Congress would be best advised to eliminate the reformulated gasoline mandate in its entirety. Not only has it been responsible for an (albeit largely temporary) 25 cent per gallon increase in gasoline prices, it accomplishes absolutely nothing in the way of air quality. The fuel injection systems that replaced conventional carburetors in cars built since 1983 include computerized oxygen sensors to determine when the fuel-air mix is optimized from an emissions perspective. By automatically mixing gasoline in such a way as to minimize carbon monoxide emissions, fuel injectors accomplishing through technology what the mandated reformulated gasoline attempts to accomplish via fuel design. Eric Stork, the head of EPA's Mobile Source Air Pollution Control Program from 1970 till 1978, told the *New York Times* recently that reformulated gasoline was a good idea 30 years ago, but in cars built in 1983 or later, the fuel is "obsolete and pointless."

Congress should also demand that environmental regulations shift from a command-and-control basis to a "performance" based regime. Federal agencies might still require that no more than *x* amount of this or that pollutant come from a facility or gasoline blend but should allow plant managers to undertake whatever actions they wish to meet the standard. As long as companies are required to verify their

emissions (and allow public verification of their findings), such a regulatory reform would dramatically reduce regulatory burdens on refiners while maintaining current strict air quality standards.

Finally, congress should force regulatory changes to expedite the issuance of federal air emission permits and reconsider the onslaught of new fuel recipe mandates that are in the hopper. As a recent report by the National Petroleum Council (an official advisory body to the secretary of the Department of Energy) warned, those mandates threaten to replay the dislocations that have hit the Milwaukee/Chicago market in other markets on and off for years to come.

Thank you for your patience, and I look forward to answering any questions you may have.

EXHIBIT XXVII

EPA Office of Mobile Sources Fact Sheet on RFG, November, 1999

The EPA fact sheet on reformulated gasoline describes the history of the program as well as its basic elements. The fact sheet also provides an estimate of the increased cost associated with RFG production and states, "at the start of the Phase 2 RFG program, retail prices may be higher or fluctuate more."

United States Environmental Protection Agency
Air and Radiation
Office of Mobile Sources
EPA420-F-99-040
November 1999

NOTE: The on-line version of this document has been provided for your convenience, although it does not meet EPA graphic standards. Please see the the Adobe Acrobat Portable Document Format (PDF) version or the original for the correct formatting and layout. The information is unchanged from the original.

Emission Facts

Reformulated Gasoline

Reformulated gasoline (RFG) is gasoline blended to burn cleaner and reduce smog-forming and toxic pollutants in the air we breathe. About 75 million people are breathing cleaner air because of RFG. The second phase of the RFG program, which will begin in 2000, will achieve even greater reductions in air pollution than Phase I RFG.

History of RFG

Despite tremendous progress in reducing U.S. air pollution since the Clean Air Act was passed almost 30 years ago, cars and trucks are still a major source of pollution because the number of cars and trucks and the number of miles driven keeps growing.

One way to reduce air pollution from cars and trucks is to use a gasoline that is designed to burn cleaner. This cleaner burning gasoline, called reformulated gasoline or RFG, is required by the Clean Air Act in cities with the worst smog pollution, but other cities with smog problems may choose to use RFG. The federal RFG program was introduced in 1995; RFG is currently used in 17 states and the District of Columbia. About 30 percent of gasoline sold in the U.S. is reformulated. Each oil company prepares its own formula that must meet federal emission reduction standards.

The RFG program is a significant step toward cleaning the air we breathe, and a significant component of the country's smog reduction strategy. RFG's air quality benefits, combined with other industrial and transportation controls aimed at smog reduction, together are responsible for the long-term downward trend in U.S. smog.

Air Quality Benefits of RFG

The first phase of the RFG program was designed to reduce the air pollution that causes smog by 64,000 tons per year in the areas that use RFG, compared to conventional gasolineÑthe equivalent of eliminating the smog-forming emissions from over 10 million vehicles.

When the more stringent standards of Phase II RFG replace Phase I in 2000, the program is designed to reduce smog pollutants by an additional 41,000 tons per year in RFG areas, for a combined equivalent of eliminating the smog-forming emissions from about 16 million vehicles.

The RFG program also reduces emissions of toxic air pollutants such as benzene, a known human carcinogen. Phase I and Phase II RFG combined reduce toxic pollutants by about 24,000 tons per

year in RFG areas, the equivalent of eliminating the toxic emissions from over 13 million vehicles.

A study by the Northeast States for Coordinated Air Use Management, an organization of state air quality experts, shows that Phase I RFG reduced cancer risk from gasoline by about 12 percent, and Phase II RFG is expected to reduce cancer risk by 19 percent.

Analysis of fuel data submitted to EPA by industry for compliance purposes shows that emission reductions from the RFG program have been more than the program requires each year since the program's introduction in 1995.

Performance and Fuel Economy

EPA conducted a fleet testing program in 1998 to evaluate car and truck performance with Phase II RFG, compared to Phase I RFG. Testing took place in Boston, Chicago, and Houston. The test fleet drove over one million miles with Phase II RFG. Performance testing was also conducted in 1998 with utility, lawn, and garden equipment, and with motorcycles and marine engines. In addition, EPA sponsored fuel economy testing with Phase II RFG, compared to Phase I RFG.

All available data indicate that no difference in car or truck performance or fuel economy is expected when Phase II RFG replaces Phase I RFG. In addition, no difference in performance is expected with utility, lawn, and garden equipment, or with marine engines or motorcycles.

Note that changing from conventional gasoline to RFG, which is oxygenated, results in a one to three percent fuel economy loss; that is less than one mile per gallon for a vehicle that gets 25 miles per gallon. However, there is no additional oxygenate in Phase II RFG compared to Phase I, so there is no additional fuel economy loss.

Production Cost and Retail Price

Prior to the introduction of Phase I RFG, EPA estimated that the cost to industry to produce the fuel would be about three to five cents per gallon more than conventional gasoline. The Lundberg survey, conducted by an independent market research firm, concluded in October 1997 that RFG's retail price has been about three cents per gallon more than conventional gasoline. The retail price does not necessarily reimburse all production expenses.

EPA estimates that Phase II RFG will, on average, cost one to two cents per gallon more to produce than Phase I RFG. In some parts of the country and for some refiners, production costs could be higher. It is not possible to accurately predict the retail price of Phase II RFG in the year 2000 because it will be influenced by many factors, including production costs, weather, crude oil prices, taxes, and local and regional market conditions. It is important to note that, at the start of the Phase II RFG program, retail prices may be higher or fluctuate more.

Oxygen Requirement

In the Clean Air Act, Congress specified that RFG contain oxygen — two percent by weight. MTBE (methyl tertiary butyl ether) and ethanol are the two most commonly used substances that add oxygen to gasoline. Oil companies decide which substance to use to meet the law's requirements.

Leaking storage tanks are the number one cause of gasoline contamination of water. Small spills and improper disposal are also sources of contamination.

Many chemicals in gasoline—including MTBE—can be harmful in water. MTBE is highly soluble and travels faster and farther in water than other gasoline components.

MTBE has a strong taste and odor, so even small amounts of MTBE in water can make a water supply distasteful. In most cases where MTBE has been detected, MTBE concentrations are below levels of public health concern. At high levels, MTBE may pose a public health threat. EPA's MTBE advisory level for taste and odor is 20 to 40 parts per billion.

EPA is concerned about the presence of MTBE in ground and surface water. In November 1998, EPA established a panel of independent scientists and other experts to examine MTBE's performance in gasoline, its presence in water, and alternatives to its use. Panel recommendations made to EPA in July 1999 include:

- Ensure no loss of current air quality benefits from RFG.
- Reduce the use of MTBE, and seek Congressional action to remove the oxygen requirement in RFG.
- Strengthen the nation's water protection programs, including specific actions to enhance the Underground Storage Tank, Safe Drinking Water, and private well protection programs.

EPA has announced its intention to work with Congress to provide a targeted legislative solution that maintains the air quality benefits of RFG while allowing reductions in the use of MTBE. EPA will also protect water supplies by improving gasoline leak protection and remediation programs.

For more Information

Additional documents on RFG are available electronically on the Office of Mobile Sources Internet site at:

http://www.epa.gov/oms/rfg.htm

Document information is also available by writing to:

U.S. Environmental Protection Agency
Office of Mobile Sources
NVFEL Library
2000 Traverwood Drive
Ann Arbor, MI 48105

Statement of Red Cavaney
President and CEO, American Petroleum Institute
before the Senate Committee on Governmental Affairs
June 29, 2000

I am Red Cavaney, President and CEO of the American Petroleum Institute (API). Thank you for this opportunity to present the views of API on rising oil prices and the efficiency and effectiveness of the Executive Branch's response. 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. They know people rely on gasoline to get where they need to go and that higher prices can affect their lifestyles and wellbeing. Our industry works hard to ensure consumers have a readily available and affordable fuel supply – a fact borne out by history.

Over the past decade, gasoline has been more affordable than ever. Adjusted for inflation, 1998 prices were the lowest ever; in 1999, they were second lowest. Prices have been low because companies have competed hard to reduce their costs and because supplies have been plentiful.

But 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 higher national average. There are four main reasons:

First, world crude oil prices have sharply risen, the result of a decision by international oil 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 has risen 35 percent.

Second, inventories have been lower than usual. With crude prices high, companies have built them more slowly. And prior to June 1, companies were clearing storage tanks of winter-time fuels to accommodate the new cleaner-burning gasoline, which also affected how much supply was available in the system to meet fuel shortfalls that occurred later in the Midwest due to pipeline and other problems. Pipelines are critical because Midwest refineries make less than 85 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, "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 difficult-to-make, cleaner-burning gasoline which was introduced on June 1 costs more to manufacture everywhere, but special problems developed in the Midwest, where ethanol is the typical oxygenate component. Refiners weren't able to make quite as much special base fuel as quickly as needed. That tightened supplies, 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 cleaner-burning reformulated gasoline. Refiners, importers and blenders have publicly indicated that they may avoid possible infringement of the patents by making or importing less reformulated gasoline. Not surprisingly, reformulated gasoline imports have averaged less than typical for this time of year.

For all of these reasons, today's gasoline supplies haven't been enough to meet demand at the record low prices that consumers enjoyed not long ago. That's why prices rose. This conclusion is completely consistent with the findings of a just-issued Congressional Research Service report and the Energy Information Administration's latest report (June 20, 2000).

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 beginning to exert downward pressure on prices.

In fact, spot prices for the Chicago market started falling back on June 7, less than a week after the new gasoline was introduced, and have fallen 30 percent since. Prices at the consumer level typically follow trends in spot markets at varying intervals, depending on how much higher-priced product is still in the system and other factors. There have already been some reports of pump prices beginning to decline.

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 downwards.

Gasoline prices in perspective

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 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 gas tax, and a Chicago gas tax.

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, 2000. As of June 12, crude oil prices have risen to above $30 per barrel. This was roughly triple what they were at their low point in late 1998.

Date	Crude Price $/BBL	Gasoline Price $/Gal.
1/4/00	$25.00	$1.314
3/7/00	$34.13	$1.539
3/20/00	$29.43	$1.569
4/10/00	$23.85	$1.516
5/1/00	$25.87	$1.461
6/12/00	$31.74	$1.664
6/16/00	$30.35	$1.771

Source: DOE/EIA

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.

Making and distributing cleaner-burning gasoline

The oil and gas industry also introduced a new cleaner-burning, government-required gasoline to America on June 1, 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 (RFG)—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 government

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 cleaner-burning reformulated gasoline. Refiners, importers and blenders have publicly indicated that they may avoid possible infringement of the patents by making less reformulated gasoline, and reformulated gasoline 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 reformulated gasoline.

For all of these reasons, today's gasoline supplies haven't been enough to meet demand at the record low prices that consumers enjoyed not long ago. That's why prices rose. I should point out that this conclusion is completely consistent with the findings of a just-issued Congressional Research Service report and the DOE/EIA latest report of June 20, 2000.

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.

The first step 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. 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 drill 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 little or no environmental impact, and they would help moderate higher crude oil prices.

Today, we import some 55 percent of our crude oil, meaning that we are 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 America's needs, but they cannot draw upon our vast reserves unless greater access is provided to government lands for responsible 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 government lands.

Congress has refused to authorize exploration on that small section of the Arctic National Wildlife Refuge that was specifically 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, we now can 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 disturbance of 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.

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. This applies especially to fuels regulations, including EPA's new

diesel sulfur proposal, which sets a standard beyond what the technology will support. It also includes regulations that now restrict access to the most promising locations in this country to add to our supplies of oil and natural gas.

U.S. oil and natural gas companies know how to make and deliver gasoline, and all strive to be the lower cost provider. Even with occasional price spikes, they do a good job serving their customers. But with better regulations – still fully protective of the environment – they could do even better, and the risk of market volatility would be reduced.

STATEMENT OF SENATOR EVAN BAYH
SENATE COMMITTEE ON GOVERNMENT AFFAIRS
JUNE 29, 2000

Between May and June, the Midwest has experienced astronomical spikes in gasoline prices. At the end of May, the average price for gasoline across my home state of Indiana was $1.49. On June 27, the average price was $1.76. In many places across the Midwest, the price of a gallon of regular gasoline costs more than $2.00. Consumers' obligations don't diminish when prices soar. People still have to get to work, businesses need to deliver inventory, and families still need to take a vacation. So a price hike creates a real hardship for families and small businesses. In northwest Indiana, particularly, consumers are suffering. The citizens of Indiana, and of all the Midwestern states, are angry. Prices for gasoline have exceeded the national average for weeks and they want to know why. So do I.

I thank the members of the Government Affairs Committee for holding this hearing. I also requested a hearing in the Energy and Natural Resources Committee that will be held on July 13. Both of these provide an opportunity to bring the powers of Congress to bear on identifying the causes of the price spikes in Indiana and overall increases nationwide. We have seen a lot of finger-pointing and heard a lot of buck-passing, but we still don't have the answers we need to move ahead with real solutions to the problem. There may not be any single reason 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. I want to know how each of these factors contributes to high prices. Let's identify the problem and fix it.

Wholesale gas prices (for conventional and reformulated fuel) have been dropping for the last two weeks. In Chicago (as of 6/23), the per-gallon price for conventional gas was $1.22 to $1.25. The price of reformulated gas was $1.19 to $1.40 per gallon. Retail prices are dropping slightly as well. Nationally, regular gasoline is down 2.3 cents a gallon to $1.658 a gallon. The national average for reformulated fuel dropped 1.8 cents to $1.682 a gallon.

We need to understand why it takes so long to see prices drop at the pump when we've seen them rise overnight. After eight weeks of increases in the Midwest, prices are dropping, but remain above the national average. Wholesale prices dropped between 25 and 40 cents a gallon last week. Average retail prices in the Midwest dropped 8 cents a gallon, to $1.794, for regular gasoline. Reformulated gasoline fell 12.2 cents to $1.881 a gallon. In Indiana, the average statewide price for regular gasoline was $1.766 as of June 27 and $1.72 on June 28. This is a welcome downward trend, but it does not change our task.

Volatile fuel costs are not good for families, businesses or the economy. I believe that the Administration and the Congress have a duty to 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. Last week, I wrote to the President urging him to exert all due diplomatic pressure on OPEC to live up to its earlier agreement to increase supply when oil prices exceeded $28/barrel. I also noted that we need to push for increased baseline production to ease supply problems that will extend beyond the summer. If reserves don't increase, the home heating oil shortages and price increases of last winter will be back. While I was pleased that OPEC agreed to raise production, the new production levels may not be enough to significantly ease this summer's price pressures and ensure that last winter's heating problems are not repeated.

A number of downstream, domestic causes have been suggested for 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. I am aware that the Administration, through the Department of Energy, EPA and the FTC, is investigating the problem, but Congress should play a role as well. I support the FTC investigation and I am determined to evaluate the possibility that the market is being manipulated.

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 have risen by 50 cents a gallon in some Midwest cities.

However, throughout this price upheaval, ethanol prices have been stable and supplies are abundant. What's more, the price of *all* kinds of gasoline in the Midwest has soared past the national average. Reformulated gasoline is only required in two counties in Northwest Indiana, but prices are above the national average all over the state. In Michigan, where prices are even higher, reformulated fuel is not used at all. So the reformulated fuel requirement doesn't fully explain the spiking prices.

Gasoline price spikes, on the heels of last winter's high prices, are yet another reminder of the dangers of our dependence on imported oil -- which now fills more than half of the nation's energy needs. Our national energy policy must recognize the need for diverse supplies and the importance of investments in technologies that reduce demand.

As a nation, we can move toward energy independence by promoting for 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 are critical to an effective national energy policy. 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.

Through these hearings, I hope that we will be able to identify what's causing the gasoline prices to skyrocket and move forward on providing the relief consumers need so badly. Then, I believe we should finish the job by taking hard lesson of this summer's gas prices to heart and commit to such an strategy that moves us away from foreign oil and toward greater energy security.

STEVEN R. SMITH
President

National Rural Letter Carriers' Association

1630 Duke Street, 4th Floor
Alexandria, Virginia 22314-3465
(703) 684-5545

Good afternoon, Mr. Chairman and Members of the Committee. I am Steve Smith, President of the 100,000 member National Rural Letter Carriers' Association. Most rural letter carriers drive their own vehicles while serving as a "post office on wheels." Rural letter carriers provide all the services available at a small post office to our customers. Rural letter carriers sell stamps and money orders; accept parcels, and even Priority Mail. Daily, we travel more than 3 million miles on almost 67,000 rural routes delivering to more than 29 million American families across the United States.

Rural letter carriers purchase, operate and maintain their own vehicles. The U.S. Postal Service provides a mileage reimbursement for providing and maintaining our vehicles. This mileage reimbursement is called an Equipment Maintenance Allowance (EMA). The floor or basis for the mileage reimbursement EMA is based on the Consumer Price Index (CPI) in

the Expenditure Category for Private Transportation established jointly in each new collective bargaining agreement. These collective bargaining agreements are between the U.S. Postal Service and the National Rural Letter Carriers' Association.

The CPI for the Urban Wage Earners and Clerical Workers (CPI-W) has an Expenditure Category for Private Transportation (an unadjusted index) that measures changes in that category. The Private Transportation Index is the trigger for the increases or decreases in the mileage reimbursement paid to rural letter carriers by the U.S. Postal Service. The rate of rural letter carriers reimbursement is adjusted following release of CPI-W Private Transportation for May and November. These indices are trailing statistics.

The rate of our reimbursement is determined from this chart every six months. Historically over a year, the price of gasoline fluctuates within the marketplace and the six-month time period generally reflects a balanced price. Normally the six-month time period has worked. However, because of the rapid increase in the price of gasoline recently, over 100% in some areas

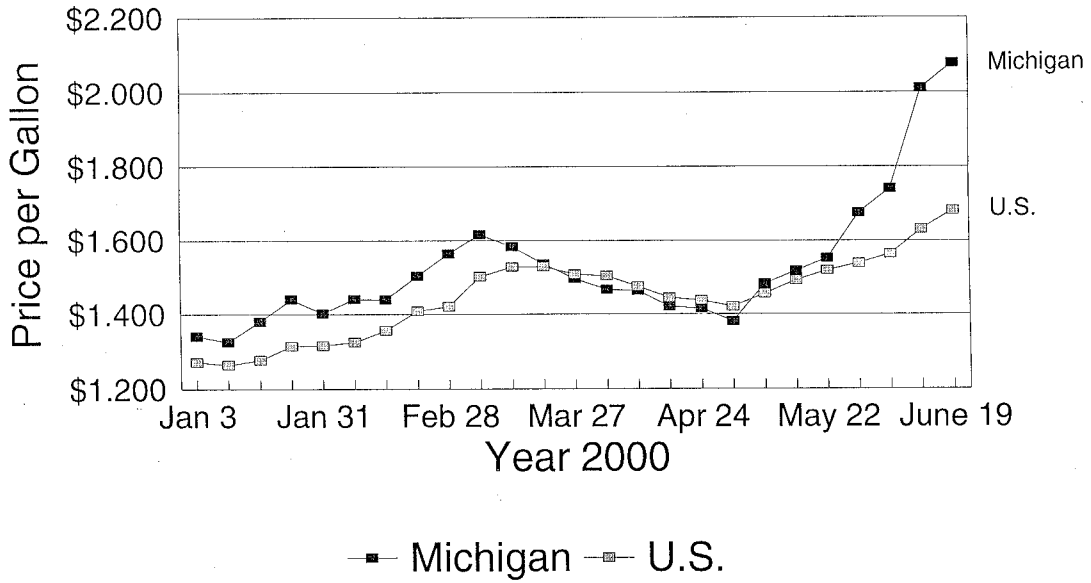
of the U.S., rural letter carriers are losing money because the time period adjustment is only done twice a year. NRLCA's May 2000 adjustment did not adequately reflect the dramatic escalation of gas prices earlier this year. Now, rural letter carriers are forced to wait until November to have their reimbursement adjusted.

Rural letter carriers are experiencing high gas prices, ranging from $1.60 to over $2.10 per gallon. When driving a route over 100 miles a day, our carriers are experiencing a dramatic loss of revenue out of their pocketbooks. NRLCA suspects a lot of the great fluctuation is simply market supply and demand. However, we have found a $0.25 to $0.50 variation in the same geographical area. NRLCA suspects these variations are more complex than simply supply and demand problems. Perhaps some oil suppliers are greedier than others or perhaps filling station owners are seizing on an opportunity to increase their profit margin for a brief period of time. Rural letter carriers call and write us asking why the sudden escalation in prices. Unfortunately, we don't have answers to tell our members. NRLCA hopes the Committee and Congress could get answers for our beleaguered rural letter carriers.

Thank you, Mr. Chairman, for your efforts.

Weekly Gas Prices

Michigan and U.S. Averages



Addendum to Senator Levin's Statement

First Quarter 2000

CORPORATE SCOREBOARD

Glossary

SALES: Includes all sales and other operating revenues. For banks, includes all operating revenues.

PROFITS: Net income before extraordinary items. For banks, profits are net income after security gains or losses.

MARGINS: Net income from continuing operations before extraordinary items as percent of sales.

RETURN ON INVESTED CAPITAL: Ratio of net income before extraordinary items and discontinued operations, plus minority interest and interest expenses (except for banks), adjusted by tax rate (all for most recent 12 months) to latest available total funds invested in company.

RETURN ON COMMON EQUITY: Ratio of net income available for common stockholders (most recent 12 months) to latest available common equity, which includes common stock, capital surplus, and retained earnings.

PRICE-EARNINGS RATIO: Based on Apr. 27, 2000, common-stock price and corporate earnings from continuing operations before extraordinary items for most recent 12-month period.

GROWTH IN COMMON EQUITY: Average annual percentage growth in historical common equity for latest five-year period.

GROWTH IN EARNINGS PER SHARE: Average annual percentage growth in basic historical earnings per share, including common-stock equivalents, for the latest five-year period.

MARKET VALUE: Latest available shares outstanding times stock price on Apr. 27, 2000.

EARNINGS PER SHARE: For most recent 12-month period. For most companies, this figure represents diluted earnings per share.

COMPANY SYMBOL	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE	12 MONTHS EARNINGS PER SHARE
	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 %	1ST QUARTER 1999 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-27	COMMON EQUITY %	EARNINGS PER SHARE %	SHARES OUTSTANDING 4-27 $ MIL.	
ALL-INDUSTRY COMPOSITE	1742819.9	16	127247.0	27	7.3	6.7	10.9	16.7	29	14	11	12743869	1.81
1 AEROSPACE & DEFENSE													
INDUSTRY COMPOSITE	32947.8	-10	1423.2	-21	4.3	4.9	9.5	12.8	19	12	5	104653	2.14
BOEING BA	9910.0	-31	418.0	-11	4.2	3.3	14.0	19.0	16	5	17	34591	2.47
GENERAL DYNAMICS GD	2548.0	22	184.0	-43	7.2	16.1	23.6	23.4	16	17	18	11951	3.65
GOODRICH (B.F.) GR	1378.2	-2	88.1	13	6.2	5.4	9.1	16.0	19	13	7	3479	1.62
HONEYWELL INTERNATIONAL HWM	381.6	2	30.1	-14	7.9	9.3	27.0	26.4	16	27	53	2119	1.32
LOCKHEED MARTIN LMT	5562.0	-10	54.0	-80	1.0	4.3	5.6	8.2	18	4	-2	9502	1.36
NEWPORT NEWS SHIPBUILDING NNS	499.0	9	21.0	17	4.5	4.2	12.8	36.6	12	8	NA	1090	2.86
NORTHROP GRUMMAN NOC	2080.0	-1	173.0	66	8.3	5.0	12.9	18.9	9	22	33	5095	7.90
RAYTHEON RTN.B	4231.0	-2	80.0	-67	1.9	5.5	3.4	2.6	25	28	-19	7432	0.87
UNITED TECHNOLOGIES UTX	5390.0**	17	377.0	36	5.9	5.1	11.1	12.7	34	10	-13	29394	1.82
2 AUTOMOTIVE													
INDUSTRY COMPOSITE	122845.3	13	4913.8	7	4.0	4.2	11.6	21.9	9	4	10	163062	4.99
(A) CARS & TRUCKS													
GROUP COMPOSITE	94568.8	12	3951.8	5	4.2	4.5	11.6	23.3	9	-3	12	130282	6.95
FORD MOTOR F	42894.0	14	1932.0	9	4.5	4.7	11.6	19.7	9	NA	20	66426	5.96
GENERAL MOTORS GM	45858.0	10	1743.0	-2	3.8	4.3	11.6	28.5	11	2	-2	57498	8.65
NAVISTAR INTERNATIONAL NAV [2]	2155.0	13	70.0	15	3.2	3.2	19.7	42.1	4	15	51	2173	8.39
OSHKOSH TRUCK OSKB [3]	330.5	11	11.9	82	3.6	2.2	11.6	14.4	12	4	16	514	2.76
PACCAR PCAR	2331.3	8	154.9	30	6.6	5.6	NA	29.3	6	12	23	3580	7.87
(B) PARTS & EQUIPMENT													
GROUP COMPOSITE	23817.7	12	866.9	13	3.6	3.6	12.5	21.0	9	35	11	27188	2.49
AMERICAN AXLE & MFG. HOLDINGS AXL	835.9	20	40.1	38	4.8	4.2	18.6	41.7	6	2	33	687	2.53
ARVIN INDUSTRIES ARV	868.2	16	19.6	7	2.3	2.5	10.7	15.7	6	10	43	561	3.79
AUTOLIV ALV	1084.0	16	55.2	25	5.1	4.7	10.1	10.8	14	59	1	2877	2.06
DANA DCN	3636.0**	7	245.0	51	6.7	4.7	13.4	20.6	8	28	8	4822	3.65
DELPHI AUTOMOTIVE SYSTEMS DPH	7804.0	4	290.0	2	3.7	3.8	24.4	31.7	10	NA	NA	11295	1.92
DETROIT DIESEL DDC	536.2	-9	10.1	19	1.9	2.1	11.1	11.9	8	7	7	389	1.91
DURA AUTOMOTIVE SYSTEMS DRRA	682.8	158	16.5	76	2.4	3.5	6.9	12.9	5	91	14	268	3.14
FEDERAL-MOGUL FMO	1643.7	0	13.9	-77	0.8	3.7	6.6	11.7	5	39	16	978	2.97
HAYES LEMMERZ INTERNATIONAL HAZ [11]	565.6	4	15.6	174	2.8	1.0	9.0	29.7	7	-2	22	465	2.06
LEAR LEA	3805.1	42	62.0	23	1.6	1.9	9.1	18.1	7	42	18	1901	3.98
MARK IV INDUSTRIES IV [10]	492.2	15	18.2	5	3.7	4.1	9.1	18.0	33	10	-2	843	1.67

(1) First quarter ended Feb. 29. (2) First quarter ended Jan. 31. (3) Second quarter ended Mar. 31. (4) Second quarter ended Feb. 29. (5) Second quarter ended Jan. 31. (6) Third quarter ended Mar. 31. (7) Third quarter ended Feb. 29. (8) Third quarter ended Feb. 29. (9) Fourth quarter ended Mar. 31. (10) Fourth quarter ended Feb. 29. (11) Fourth quarter ended Jan. 31. *Sales exclude excise taxes. **Sales include excise taxes and other income. †Revenue from some major subsidiaries are not included in consolidated sales, parent's share of earnings is included in profits. NA = not available. NM = not meaningful. Earnings per share are for latest 12 months, not necessarily for end of most recent fiscal year. They include all common stock equivalents but exclude extraordinary items.

DATA: COMPUSTAT PROVIDED BY STANDARD & POOR'S INSTITUTIONAL MARKET SERVICES

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES		PROFITS		MARGINS		RETURN				5-YEAR GROWTH			
	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 %	1ST QUARTER 1999 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-27	COMMON EQUITY %	EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-27 $ MIL.	12 MONTHS EARNINGS PER SHARE
MERITOR AUTOMOTIVE MRA[3]	1196.0	3	57.0	14	4.8	4.3	26.8	26.9	4	NA	NA	939	3.90
MOOINE METL MOO[4]	285.2	1	14.6	-16	5.1	6.2	10.9	13.6	11	12	9	726	2.20
WABASH NATIONAL WNC	352.8	8	9.1	42	2.6	1.9	8.6	10.4	9	21	4	137	1.71
(C) TIRE & RUBBER													
GROUP COMPOSITE	4458.8	29	95.1	67	2.1	1.6	7.8	9.0	14	5	-4	5592	1.77
COOPER TIRE & RUBBER CTB	922.3	97	31.6	0	3.4	6.7	7.6	13.8	8	7	4	1947	1.80
GOODYEAR TIRE & RUBBER GT	3536.5	18	63.6	149	1.8	0.8	7.9	7.7	17	4	-1	4145	1.76
3 BANKS													
INDUSTRY COMPOSITE	90997.9	13	13284.0	9	14.6	15.3	4.8	18.9	13	21	12	654419	2.87
(A) BANKS - EAST													
GROUP COMPOSITE	31493.0	17	4506.0	15	14.3	14.5	NM	21.6	14	13	17	227223	3.32
ASSOCIATED BANC-CORP ASBC	268.7	12	43.1	11	16.0	16.2	21.3	18.4	10	32	6	1656	2.64
BANK OF NEW YORK BK	1370.0	19	338.0	7	19.1	21.0	NA	31.7	18	4	11	31203	2.32
CHASE MANHATTAN CMB	5773.0	18	1360.0	18	14.9	14.7	13.9	24.7	11	18	21	60668	6.54
FLEETBOSTON FINANCIAL FBF	6160.0	31	957.0	45	15.5	14.0	NM	15.9	15	30	14	33021	2.48
M&T BANK MTB	470.9	10	68.2	2	14.5	15.6	7.5	14.9	13	22	15	3368	13.10
MBNA KRB	1377.7	23	234.6	26	17.2	12.9	NA	25.2	21	32	30	21980	1.27
MELLON FINANCIAL MEL	1494.0	-6	253.0	10	16.9	14.6	NA	24.0	16	3	22	16292	1.87
MORGAN (J.P.) JPM	5414.0	11	628.0	5	11.6	12.3	NA	16.7	12	3	7	21349	10.75
NORTH FORK BANCORPORATION NFB	235.8	6	1.9	-97	0.7	23.4	20.9	27.3	17	24	29	2864	1.27
PEOPLE'S HERITAGE FINANCIALGROUP PHBK	279.6	0[5]	39.3	181	14.2	5.5	NA	19.7	8	32	11	1157	1.63
PNC FINANCIAL SERVICES GROUP PNC	2026.0	0	308.0	-5	15.2	16.1	NA	20.4	11	5	18	13059	4.13
STATE STREET STT	1431.0	28	196.0	24	10.5	10.8	16.1	23.3	26	16	23	15815	3.96
SUMMIT BANCORP. SUB	752.3	14	124.9	5	16.6	18.0	NA	15.2	10	24	11	4502	1.58
(B) BANKS - MIDWEST													
GROUP COMPOSITE	25722.1	8	3864.0	-5	15.0	17.0	NM	17.5	15	25	9	219704	2.14
BANK ONE ONE	6574.0	-3	689.0	-40	10.5	17.0	NA	15.0	12	26	5	35424	2.89
COMERICA CMA	980.6	25	197.2	12	18.1	20.2	NA	20.3	10	5	15	6729	4.20
FIFTH THIRD BANCORP FITB	1007.3	19	206.4	17	20.5	20.8	10.2	17.8	28	23	14	20257	2.24
FIRSTAR FSR	1661.4	5	307.8	7	18.5	18.2	10.3	16.2	29	55	14	24736	6.89
HUNTINGTON BANCSHARES HBAN	628.7	4	104.2	8	16.6	16.0	NA	19.7	10	11	6	4249	1.87
KEYCORP KEY	2295.0	15	367.0	25	16.0	14.7	NA	18.5	7	7	0	8095	2.63
MARSHALL & ILSLEY MI	644.9	18	90.6	6	14.0	15.6	12.9	16.7	16	17	24	4954	2.22
NATIONAL CITY NCC	2158.9	4	321.3	-8	14.9	16.9	NA	24.1	8	22	9	10699	2.21
NORTHERN TRUST NTRS	809.6	22	113.3	19	14.0	14.3	NA	19.6	36	13	18	11366	1.82
OLD KENT FINANCIAL OK	492.2	6	57.0	-13	12.4	15.1	17.6	20.5	15	6	11	3731	2.08
TCF FINANCIAL TCB	270.1	5	40.7	9	15.1	14.5	NA	20.9	11	20	15	1903	2.07
U.S. BANCORP USB	2359.3	10	379.0	3	16.1	18.5	NA	19.9	10	26	12	16957	2.07
WELLS FARGO WFC	5874.0	13	1010.0	14	17.2	17.0	NA	16.4	18	48	8	68507	2.31
(C) BANKS - SOUTH & SOUTHEAST													
GROUP COMPOSITE	30454.4	13	4451.2	14	14.6	14.5	6.9	18.0	11	28	9	184297	3.50
BANK OF AMERICA BAC	14132.0	14	2240.0	17	15.9	16.4	7.8	18.1	10	30	4	64960	4.04
BB&T BBT	1099.0	16	162.2	5	14.8	16.3	NA	19.8	14	33	14	9145	2.89
CENTURA BANKS CBC	342.7	44	8.0	-70	2.3	11.4	NA	13.3	13	16	10	1639	3.15
COMPASS BANCSHARES CBSS	490.7	11	86.1	1	18.0	15.4	NA	18.3	10	16	9	2196	1.00
FIRST TENNESSEE NATIONAL FTN	541.7	-8	39.5	-25	7.3	9.0	13.8	18.9	11	10	12	2493	1.75
FIRST UNION FTU	6155.0	11	840.0	19	13.5	12.8	NA	20.1	9	26	6	32231	3.45
HIBERNIA HIB	342.5	13	50.1	70	14.6	9.8	8.7	14.5	9	18	6	1862	1.19
POPULAR BPOP	621.5	17	64.2	3	10.3	12.0	8.7	16.0	11	13	15	2715	1.85
REGIONS FINANCIAL RGBK	947.0	17	146.0	12	15.4	16.0	11.4	17.7	9	28	6	4515	2.44
SOUTHTRUST SOTR	829.0	19	118.1	13	12.2	13.4	NA	15.6	9	22	13	4181	2.71
SUNTRUST BANKS STI	2047.7	6	319.4	13	15.6	14.9	8.3	15.2	15	19	10	16420	3.67
SYNOVUS FINANCIAL SNV	450.9	21	61.4	21	13.6	13.6	16.3	19.4	22	16	16	5222	0.84
UNION PLANTERS UPC	726.6	7	101.3	4	13.9	14.3	11.3	15.4	10	38	8	3836	2.91
WACHOVIA WB	1716.2	17	244.3	1	14.3	16.6	NA	17.9	13	12	6	12462	4.92
(D) BANKS - WEST & SOUTHWEST													
GROUP COMPOSITE	3328.5	30	462.8	26	13.9	14.4	7.0	17.7	15	16	15	23195	2.33
BANCWEST BWE	351.4	9	49.4	16	14.1	13.1	8.8	9.7	12	27	2	1240	3.44
FIRST SECURITY FSCO	346.8	11	68.4	-10	10.7	13.2	NA	11.1	11	19	16	2806	1.33
PACIFIC CENTURY FINANCIAL BOH	323.5	1	39.8	12	12.3	11.0	8.8	11.2	12	4	2	1623	1.70
PROVIDIAN FINANCIAL PVN	1355.4	76	174.3	54	12.9	14.8	NA	40.6	22	NA	NA	12923	4.20
UNIONBANCAL UB	751.6	14	140.9	26	18.7	17.1	13.3	15.6	10	NA	30	4903	2.85
4 CHEMICALS													
INDUSTRY COMPOSITE	25884.5	21	2271.6	35	8.8	7.9	6.4	8.9	33	6	-7	119351	1.27
AIR PRODUCTS & CHEMICALS APD[7]	1347.2	7	47.6	-55	3.5	8.5	7.7	10.6	21	5	15	7051	1.47
CABOT CBT[7]	534.0	23	41.0	24	7.7	7.5	12.2	15.2	18	4	2	1761	1.60
CK WITCO CKW	769.0	84	29.7	-50	3.9	14.9	NM	-25.7	NM	7	NA	1340	-2.51
CYTEC INDUSTRIES CYT	360.4	1	32.1	14	8.9	7.9	15.0	23.9	10	33	20	1185	2.84

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES: 1ST QUARTER 2000 $ MIL.	SALES: CHANGE FROM 1999 %	PROFITS: 1ST QUARTER 2000 $ MIL.	PROFITS: CHANGE FROM 1999 %	MARGINS: 1ST QUARTER 2000 %	MARGINS: 1ST QUARTER 1999 %	RETURN: ON INVESTED CAPITAL %	RETURN: ON COMMON EQUITY %	RETURN: P/E 4-27	5-YEAR GROWTH: COMMON EQUITY %	5-YEAR GROWTH: EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-27 $ MIL.	12 MONTHS EARNINGS PER SHARE
DOW CHEMICAL DOW	5381.0**	22	416.0	26	7.7	7.5	11.6	16.2	17	6	7	24527	6.29
DUPONT DD	7593.0**	21	903.0	28	10.6	10.0	2.3	3.0	NM	6	-33	50810	0.48
EASTMAN CHEMICAL EMN	1717.0	19	68.0	172	5.6	2.4	3.8	5.7	39	7	-29	3626	1.19
FERRO FEE	360.5	9	18.4	8	5.1	5.3	15.3	31.2	12	9	15	801	1.90
FULLER (H.B.) FULL †	321.2	-2	9.7	28	3.0	2.3	9.5	12.1	12	6	-1	544	3.29
GRACE (W.R.) GRA	344.9	8	24.2	20	6.6	5.4	88.5	94.3	7	NA	NA	767	1.96
GREAT LAKES CHEMICAL GLK	390.2	11	28.4	-6	7.3	9.3	8.6	13.8	11	-7	-21	1402	2.40
HANNA (M.A.) MAH	632.7	6	10.2	32	1.7	1.2	6.4	6.9	14	5	-5	572	0.69
INTERNATIONAL FLAVORS & FRAGRANCES IFF	369.9	1	43.8	-10	11.8	13.3	17.9	16.3	23	-4	-5	3643	1.49
LUBRIZOL LZ	436.2	-3	30.1	-23	6.9	8.7	10.8	14.4	13	-2	-8	1429	2.08
LYONDELL CHEMICAL LYO	1136.0	33	317.0	NM	27.9	0.2	7.2	23.3	10	56	NA	2161	1.90
MILLENNIUM CHEMICALS MCH	425.0	16	25.0	170	5.9	2.4	NM	-31.3	NM	0	NA	3354	-4.46
PRAXAIR PX	1230.0	16	114.0	6	9.3	9.7	12.2	19.3	16	21	15	6898	2.76
RohM & HAAS ROH	1739.0**	65	123.0	12	7.1	11.7	4.8	7.3	28	12	6	7315	1.79
SCOTTS SMG *	728.4**	13	63.6	15	8.7	8.2	8.2	16.7	30	8	18	1008	1.20
USEC USU *	281.8	6	22.8	40	8.0	6.2	8.9	10.6	4	-15	-23	407	1.18
WELLMAN WLM	273.0	25	4.2	133	1.5	0.8	NM	-1.1	NM	1	NA	660	-0.22
5 CONGLOMERATES													
INDUSTRY COMPOSITE	48726.9	22	3628.6	28	7.4	7.1	9.5	22.4	43	9	11	603645	2.82
ALLEGHENY TECHNOLOGIES ATI	625.4	7	41.3	2	6.6	6.9	7.6	8.4	19	38	-18	1964	1.22
BAXTER INTERNATIONAL AXE	745.1	25	16.1	109	2.2	1.3	11.7	16.8	16	-1	10	3201	2.08
GENERAL ELECTRIC GE	29996.0**	24	2592.0	20	8.6	8.9	9.4	26.2	46	10	14	532193	3.35
HONEYWELL INTERNATIONAL HON	8044.0	8	506.0	15	6.4	7.6	15.8	19.3	20	20	10	43381	1.68
IKON OFFICE SOLUTIONS IKN *	1380.3	1	34.9	57	2.5	1.7	NM	-2.8	NM	0	-23	918	-0.26
PALL PLL *	284.7	6	19.8	112	13.6	5.7	10.8	11.0	35	5	-14	2790	0.64
TENNECO AUTOMOTIVE TEN	882.0	12	1.0	-94	0.1	2.0	NM	-19.9	NM	-25	NA	299	-2.31
TEXTRON TXT	3237.0**	18	158.0	9	4.9	5.3	8.5	14.5	15	5	0	9163	4.18
TRW TRW	4565.3	47	209.3	NM	4.6	NM	10.3	21.9	10	4	10	7235	6.72
VIAD VVI	608.7	3	26.1	75	6.4	4.0	15.9	18.8	12	6	119	2363	1.45
WHITMAN WH	548.9	48	10.2	-29	1.9	3.9	4.2	3.6	41	4	-24	1547	0.27
6 CONSUMER PRODUCTS													
INDUSTRY COMPOSITE	79662.9	5	5828.6	-2	7.3	7.8	16.4	27.6	23	9	8	557595	1.78
(A) APPAREL													
GROUP COMPOSITE	7304.7	9	386.6	16	5.3	4.9	13.1	15.6	17	7	7	23021	1.95
BROWN SHOE BWS **	356.5**	5	3.0	50	1.1	0.8	11.3	14.2	6	-3	35	181	1.98
JONES APPAREL GROUP JNY	1082.4	23	70.6	20	6.5	6.4	12.3	17.1	18	20	29	3472	1.87
KELLWOOD KWD *	461.2	5	5.4	174	1.2	0.4	2.2	2.2	50	8	-28	487	0.25
LIZ CLAIBORNE LIZ	809.6	16	46.3	4	5.7	6.4	18.6	21.5	14	-2	22	2388	3.26
NIKE NKE †	2161.8	-1	145.3	17	6.7	5.7	15.6	17.1	22	15	8	11842	1.94
PHILLIPS-VAN HEUSEN PVH **	237.0	-9	2.6	314	0.9	0.2	6.4	1.0	13	-4	25	236	0.62
REEBOK INTERNATIONAL RBK	709.8	-2	31.7	77	4.1	2.3	6.8	6.7	40	-12	-43	980	0.44
VF VFC	1368.7	1	80.6	-6	5.9	6.3	14.9	16.4	9	4	15	3243	2.98
(B) APPLIANCES & HOME FURNISHINGS													
GROUP COMPOSITE	18392.0	13	912.4	36	5.0	4.1	15.2	20.6	26	4	18	65063	1.64
ARMSTRONG WORLD INDUSTRIES ACK	825.7	0	30.3	-36	3.7	-5.8	-0.1	-0.5	NM	-11	-40	774	-0.08
BED BATH & BEYOND BBBY **	574.6	37	48.4	41	8.4	8.2	23.3	23.6	41	40	34	5184	0.93
BEST BUY BBY **	4314.6	25	163.8	51	3.8	3.1	34.2	31.7	51	23	59	17081	1.63
CIRCUIT CITY GROUP CC **	3476.2	15	160.1	34	4.6	3.8	15.2	15.9	35	NA	7	11854	1.86
FURNITURE BRANDS INTERNATIONAL FBN	563.9	6	30.6	10	5.4	5.2	12.7	24.2	9	10	34	960	2.23
HARMAN INTERNATIONAL INDUSTRIES HAR *	423.9	13	22.3	74	5.3	3.4	10.8	15.1	13	18	20	1115	3.98
HEILIG-MEYERS HMY **	506.6**	-23	4.3	NM	0.9	NM	NM	-11.0	NM	8	NA	190	-0.97
KIMBALL INTERNATIONAL KBA/B *	309.5	7	11.6	24	3.7	3.3	11.0	10.0	10	6	12	543	1.29
LA-Z-BOY LZB *	376.9	18	21.3	20	5.7	5.6	14.4	17.5	10	7	14	811	1.53
LEGGETT & PLATT LEG	1043.6	18	73.8	12	7.1	7.4	13.1	17.7	14	22	17	4196	1.49
LINENS 'N THINGS LIN	327.0	20	5.1	41	1.5	1.3	13.1	13.7	24	42	50	1228	1.31
MAYTAG MYG	1095.5	7	75.9	-13	5.9	7.9	34.1	114.3	10	49	24	2845	3.90
PIER 1 IMPORTS PIR **	380.1**	14	34.0	20	9.0	8.5	17.0	17.0	15	16	39	1067	0.75
TANDY TAN	1047.3	18	69.7	25	6.7	6.3	26.7	30.3	17	-14	2	10556	1.53
WHIRLPOOL WHR	2590.0	4	112.0	300	4.3	1.1	20.0	22.7	11	1	17	4715	5.72
WILLIAMS-SONOMA WSM **	537.2	22	44.7	31	8.3	10.0	16.1	17.8	70	24	56	1837	1.16
(C) BEVERAGES													
GROUP COMPOSITE	17719.8	-3	782.4	-44	4.4	7.7	11.9	21.7	39	7	5	225005	1.14
ANHEUSER-BUSCH BUD	2811.9	5	350.3	10	12.5	11.9	16.2	36.6	23	-2	10	32931	3.04
BROWN-FORMAN BF.B *	495.2	9	54.8	11	11.1	10.8	19.3	21.5	18	15	6	3811	3.12
CANANDAIGUA BRANDS CDB **	527.2	15	15.5	35	2.9	2.8	7.5	14.9	12	27	36	889	4.18
COCA-COLA KO	4761.0	0	-58.0	NM	NM	17.6	16.8	17.1	71	14	2	119209	0.66
COCA-COLA ENTERPRISES CCE	3293.0	1	-24.0	NM	NM	NM	3.3	7.9	NM	18	2	9099	0.20
COORS (ADOLPH) RKY	464.5	6	14.8	24	3.2	2.7	9.7	11.3	20	4	14	1838	2.54

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE	12 MONTHS
	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 %	1ST QUARTER 1999 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-27	COMMON EQUITY %	EARNINGS PER SHARE %	SHARES OUTSTANDING 4-27 $ MIL.	EARNINGS PER SHARE
PEPSI BOTTLING GROUP PBG	1545.0	6	17.0	NM	1.1	NM	4.8	9.0	19	NA	NA	3127	1.09
PEPSICO PEP	4191.0	-18	422.0	27	10.1	6.5	21.6	32.9	28	-1	7	54042	1.44
(D) PERSONAL CARE													
GROUP COMPOSITE	18367.2	6	1556.2	-3	8.5	9.2	19.5	32.7	29	8	10	188808	1.67
AVON PRODUCTS AVP	1324.9	9	74.8	NM	5.6	NM	124.5	NM	23	NA	3	9189	1.67
CLOROX CLX *	1034.0**	4	106.0	382	10.3	2.2	14.3	18.0	28	10	7	8884	1.72
COLGATE-PALMOLIVE CL	2241.8	3	239.9	15	10.7	9.6	23.6	52.2	36	2	25	33972	1.53
DIAL DL	373.1	-6	21.5	-17	5.8	6.5	37.8	27.5	12	41	49	1449	1.14
ECOLAB ECL	526.3	8	42.6	22	8.1	7.2	21.3	23.3	28	11	17	5056	1.37
ESTEE LAUDER EL *	1034.3	8	60.4	13	5.8	5.6	17.0	24.3	36	33	33	10087	1.17
GILLETTE G	2045.0	5	258.0	-4	12.6	13.9	19.8	41.8	33	12	7	40078	1.14
PROCTER & GAMBLE PG *	9783.0	6	753.0	-26	7.7	11.2	17.6	26.7	28	6	13	80083	2.39
(E) TOBACCO													
GROUP COMPOSITE	17880.3	4	2191.0	14	12.3	11.2	21.0	38.4	7	16	9	55698	3.25
PHILIP MORRIS MO	15990.0	3	2009.0	12	12.9	11.8	25.6	52.2	7	4	9	50895	3.33
R.J. REYNOLDS TOBACCO HOLDINGS RJR	1922.0	14	80.0	167	4.2	1.6	3.2	3.5	9	NA	NA	2178	2.29
UST UST	368.3	5	102.0	-6	27.7	31.0	77.7	230.6	6	-3	6	2626	2.70
7 CONTAINERS & PACKAGING													
INDUSTRY COMPOSITE	12134.9	8	306.9	45	2.5	1.9	6.2	9.9	17	18	-3	26333	1.22
(A) GLASS, METAL & PLASTIC													
GROUP COMPOSITE	4735.0	-2	-9.0	NM	NM	2.8	5.9	8.7	12	23	7	6271	1.36
AMERICAN NATIONAL CAN GROUP CAN	521.1	-2	-116.0	NM	NM	3.0	-1.8	-3.7	NM	NA	NA	918	-0.83
BALL BLL	817.6	0	20.0	27	2.4	1.9	9.7	16.2	10	2	9	656	3.30
CROWN CORK & SEAL CCK	1640.0	-9	23.0	-23	1.4	1.7	5.8	8.3	13	16	-2	2136	1.32
OWENS-ILLINOIS OI	1345.6	3	58.7	-15	4.4	5.3	8.6	14.3	8	48	10	2038	1.74
SILGAN HOLDINGS SLGN	410.7	3	5.3	-5	1.3	1.4	9.6	NM	10	NA	-3	222	1.21
(B) PAPER													
GROUP COMPOSITE	7399.9	16	315.8	324	4.3	1.2	6.3	10.5	19	15	-7	20062	1.16
ACX TECHNOLOGIES CPK	263.4	53	-0.9	NM	NM	2.7	3.3	2.6	8	-2	1	129	0.56
BEMIS BMS	500.7	11	29.6	58	5.9	4.2	11.6	16.3	20	11	9	1901	1.90
GAYLORD CONTAINER GCI *	291.2	45	-3.4	NM	NM	NM	NM	NM	NM	NA	NA	282	-0.28
MAIL-WELL MWI	568.0	29	18.3	10	2.9	3.4	8.0	16.6	7	64	40	433	1.23
PACTIV PTV	686.0	3	29.0	383	4.2	0.9	NM	-8.9	NM	NA	NA	1392	-0.53
SEALED AIR SEE	716.6	6	55.0	18	7.7	6.9	7.9	27.1	32	NA	NA	8731	1.79
SMURFIT-STONE CONTAINER SSCC	1865.0	9	40.0	NM	2.1	NM	8.0	16.0	11	NA	-6	3267	1.33
SONOCO PRODUCTS SON	676.3	21	45.0	2	6.7	7.8	13.0	21.8	11	6	6	2046	1.85
TEMPLE-INLAND TIN	1033.0	22	66.0	112	6.3	3.1	9.8	11.8	12	1	-9	2687	4.01
WESTVACO W *	799.6	23	50.2	93	6.3	3.9	4.4	6.1	23	3	-6	3136	1.36
8 DISCOUNT & FASHION RETAILING													
INDUSTRY COMPOSITE	183553.9	16	7778.4	11	4.2	4.4	11.2	15.8	34	12	17	675225	1.24
ABERCROMBIE & FITCH ANF **	362.9	21	76.7	27	20.9	19.8	47.1	47.1	7	NA	78	1652	1.39
ALBERTO-CULVER ACV *	553.8	14	22.8	14	4.1	4.1	12.6	16.1	14	12	15	1310	1.72
AMAZON.COM AMZN	573.9	95	-306.4	NM	NM	NM	NM	NM	NM	345	NA	16504	-2.90
AMERICAN EAGLE OUTFITTERS AEOS **	285.4	34	37.1	40	13.0	11.7	34.3	24.3	10	39	50	907	1.86
AMES DEPARTMENT STORES AMES **	1277.2**	47	96.1	329	7.5	2.6	NM	2.9	29	52	1	526	0.62
ANNTAYLOR STORES ANN **	297.3**	13	15.9	35	5.4	4.5	10.7	12.7	11	10	15	618	2.05
AUTOZONE AZO *	924.2	8	39.1	8	4.2	4.2	12.7	21.0	13	21	16	3085	1.73
BARNES & NOBLE BKS **	1324.6	29	103.5	-2	7.8	10.2	10.1	15.2	10	19	35	1161	1.81
BJ'S WHOLESALE CLUB BJ **	1275.6	21	47.7	27	3.7	3.6	19.0	19.3	25	28	NA	2652	1.47
BORDERS GROUP BGP **	1082.2	16	96.5	14	9.0	9.2	12.4	11.3	14	2	39	1224	1.13
BRADLEES BRAD **	471.0**	NA	17.8	NA	3.8	NA	NM	-21.5	NM	NA	NA	46	-1.01
BURLINGTON COAT FACTORY BCF *	693.8	18	33.0	43	4.8	3.9	11.0	10.7	11	10	6	653	1.36
CDW COMPUTER CENTERS CDWC	864.0	60	35.3	79	4.1	3.7	29.1	24.0	41	45	49	4599	2.56
CHARMING SHOPPES CHRS **	348.4	28	8.6	NM	2.5	NM	9.3	10.5	14	-7	NA	579	0.42
CLAIRE'S STORES CLE **	307.5	37	41.1	21	13.4	15.1	14.9	22.0	11	27	28	679	1.71
COLE NATIONAL CNJ **	274.7	1	-2.2	NM	NM	NM	3.2	1.3	49	161	-36	94	0.13
CONSOLIDATED STORES CNS **	1847.6	9	119.3	0	6.5	7.0	7.5	7.4	15	40	2	1378	0.85
COSTCO WHOLESALE COST *	7737.0**	17	181.6	19	2.3	2.3	12.9	14.8	46	19	33	25027	1.23
CSK AUTO CAO **	328.4	32	-6.1	NM	NM	3.4	7.2	20.0	16	NA	NA	285	0.98
DILLARD'S DDS **	2594.9**	1	25.8	-85	1.0	7.9	4.3	5.8	9	7	-6	1401	1.55
DOLLAR GENERAL DG **	1177.7	19	90.6	16	7.7	7.9	22.8	23.6	29	22	27	6145	0.81
DOLLAR TREE STORES DLTR	291.8	28	14.8	34	5.1	4.9	25.0	28.3	29	83	49	3896	1.51
ELECTRONICS BOUTIQUE HOLDINGS ELBO **	314.6	24	15.5	-6	4.9	6.5	40.2	19.6	16	NA	NA	397	1.10
FAMILY DOLLAR STORES FDO *	858.5	14	55.0	32	6.4	5.5	20.9	21.7	21	13	18	3403	0.93
FEDERATED DEPARTMENT STORES FD **	5973.0**	19	448.0	10	7.5	8.1	8.5	12.1	10	18	41	7553	3.62
FINLAY ENTERPRISES FINLY **	396.0	7	28.3	8	7.3	7.3	5.6	19.4	5	108	62	403	2.01
FOOTSTAR FTS	439.7	0	2.8	-67	0.6	1.9	30.5	22.2	14	-14	3	786	2.65
GAP GPS **	3858.0	27	413.8	32	10.7	10.4	38.0	50.5	29	7	34	51362	1.26

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES: 1ST QUARTER 2000 $ MIL.	SALES: CHANGE FROM 1999 %	PROFITS: 1ST QUARTER 2000 $ MIL.	PROFITS: CHANGE FROM 1999 %	MARGINS: 1ST QUARTER 2000 %	MARGINS: 1ST QUARTER 1999 %	RETURN: ON INVESTED CAPITAL %	RETURN: ON COMMON EQUITY %	P/E 4-23	5-YEAR GROWTH: COMMON EQUITY %	5-YEAR GROWTH: EARNINGS PER SHARE %	MARKET VALUE OUTSTANDING SHARES 4/22 $ MIL.	12 MONTHS' EARNINGS PER SHARE
GOODY'S FAMILY CLOTHING GDYS [1]	390.9	10	0.9	-90	0.2	2.4	9.0	9.5	11	18	28	211	0.59
HOME DEPOT HD [1]	9174.0	26	578.0	38	6.3	5.8	16.6	18.8	69	26	25	535364	1.00
HOMEBASE HBI [1]	327.1	6	-3.8	NM	NM	0.1	3.2	2.7	7	-6	-34	75	0.28
INSIGHT ENTERPRISES INSI	467.0	38	12.3	81	2.6	2.0	17.6	18.5	25	120	52	1060	1.44
INTIMATE BRANDS IBI [3]	1801.7	18	278.9	20	15.5	15.2	64.9	82.1	22	34	19	9604	1.61
JO-ANN STORES JAS.A [1]	456.3	-9	20.6	-2	4.5	6.0	7.0	9.5	7	12	11	167	1.08
KMART KM [1]	11104.0	7	412.0	17	3.7	3.4	8.2	10.4	7	2	20	3911	1.22
KOHL'S KSS [1]	1867.5	25	120.8	28	7.5	7.3	18.2	15.1	66	40	30	16616	0.78
LANDS' END LE [1]	448.8	-17	28.3	10	6.3	4.7	16.1	16.2	28	9	9	1315	1.04
LIMITED LTD [1]	1288.8	3	316.5	26	9.8	7.7	21.7	23.6	22	-5	27	9863	2.00
LOWE'S LOW [1]	2789.3	20	148.9	51	3.9	3.1	11.5	14.3	31	26	21	20432	1.75
MAY DEPARTMENT STORES MAY [1]	4769.0**	4	513.0	7	10.7	10.4	12.6	22.3	37	-3	7	8891	2.80
MEN'S WEARHOUSE MENS [1]	398.5	15	30.5	74	7.7	6.6	14.1	12.0	19	38	30	839	1.32
MICHAELS STORES MIKE [1]	671.8	24	45.6	54	6.9	5.6	19.4	19.8	29	14	-4	3303	2.01
NEIMAN MARCUS GROUP NMG.A [1]	890.3**	13	41.3	32	4.6	4.0	11.9	14.3	11	197	20	1757	2.35
NORDSTROM JWN [1]	1564.4**	7	56.5	0	4.3	4.3	11.9	17.1	19	-2	6	3752	3.46
OFFICE DEPOT ODP	2063.3	17	100.0	8	3.6	3.8	12.8	14.2	14	23	8	3385	0.76
OFFICEMAX OMX [1]	3391.1	11	23.0	NM	1.7	NM	1.3	0.0	60	7	-21	617	0.09
PAYLESS CASHWAYS PCSH [1]	347.1	-11	-5.2	NM	NM	NM	NM	-1.8	NM	NA	NA	45	-0.13
PAYLESS SHOESOURCE PSS [1]	604.8	6	15.2	8	2.5	2.5	16.4	19.4	12	NA	17	3762	1.37
PC CONNECTION PCCC	326.1	45	7.1	61	2.2	2.0	23.5	29.0	28	83	NA	720	1.56
PENNEY (J.C.) JCP [1]	9854.0**	3	-12.0	NM	NM	2.2	3.7	4.4	12	6	-20	3654	1.16
PEP BOYS-MANNY, MOE & JACK PBY [1]	556.0	-1	10.8	NM	NM	NM	4.1	4.4	11	9	-33	322	0.58
PETCO ANIMAL SUPPLIES PETC [1]	275.4	14	9.2	18	3.3	3.2	8.5	10.6	37	33	NA	243	1.02
PETSMART PETM [1]	570.0	-2	-4.6	NM	NM	3.3	NM	-10.1	NM	15	NA	753	-0.28
ROSS STORES ROST [1]	694.5	10	42.7	-6	6.1	7.2	24.0	35.3	12	14	43	1734	1.64
SAKS SKS [1]	2037.0**	4	120.5	20	5.9	5.1	6.8	9.0	9	79	-1	1672	1.36
SEARS, ROEBUCK S	8973.0	4	235.0	61	2.6	1.7	12.5	23.7	9	9	4	13068	4.08
SHOPKO STORES SKO [1]	1258.8	37	49.4	22	3.9	4.4	10.8	15.3	5	3	18	534	3.71
SPIEGEL SPGLA	714.9	14	20.2	NM	2.8	NM	11.4	15.8	9	5	NA	1296	0.86
SPORTS AUTHORITY TSA [1]	423.5	-8	-156.1	NM	NM	0.2	NM	-51.4	NM	12	NA	92	-5.20
STAGE STORES SGE [1]	374.8	9	109.1	NM	NM	NM	NM	NM	NM	NA	NA	11	-4.50
STAPLES SPLS [1]	2630.8	27	119.4	58	4.5	3.4	NA	12.2	29	37	36	9636	0.67
TALBOTS TLB [1]	375.6**	12	15.3	88	4.1	2.4	11.8	13.6	28	3	-8	1833	1.85
TARGET TGT [1]	10930.0**	9	522.0	17	4.8	4.4	13.7	16.9	27	16	20	30997	2.54
TIFFANY TIF [1]	559.8**	26	84.6	59	15.1	12.0	15.3	19.2	38	27	13	5132	1.06
TOYS 'R' US TOY [1]	5027.0	2	235.0	-24	4.7	6.3	6.6	8.0	13	5	NA	3569	1.14
U.S. OFFICE PRODUCTS OFIS [3]	624.4	-6	-26.2	NM	NM	NM	NM	-42.7	NM	190	NA	74	-4.08
VALUE CITY DEPARTMENT STORES VCD [1]	511.6	21	20.2	25	3.9	3.8	9.0	10.6	10	9	-24	328	1.02
VENATOR GROUP Z [1]	1327.0	0	60.0	102	4.5	2.2	3.6	1.6	80	-4	-35	1619	0.13
WAL-MART STORES WMT [1]	51394.0	26	1916.0	23	3.7	3.8	14.6	21.6	46	14	17	257115	1.25
WILSONS THE LEATHER EXPERTS WLSN [1]	317.3	23	51.8	42	16.3	14.2	20.6	25.2	6	31	28	198	1.94
ZALE ZLC [4]	736.0	30	84.0	31	11.4	11.3	14.5	12.8	15	16	28	1454	2.85
3 ELECTRICAL & ELECTRONICS													
INDUSTRY COMPOSITE	53204.8	25	6220.8	81	11.7	8.1	10.2	11.6	69	16	9	1192730	1.37
(A) ELECTRICAL PRODUCTS													
GROUP COMPOSITE	7332.7	17	503.0	18	6.9	6.8	14.8	21.7	11	-1	0	23799	3.81
AMETEK AME	255.8	11	16.8	15	6.5	6.3	16.7	29.1	11	25	10	658	1.02
COOPER INDUSTRIES CBE	1038.9	12	83.9	11	8.1	8.2	14.4	19.5	10	-6	10	3233	3.59
EATON ETN	2325.0	40	131.0	56	5.6	5.1	16.3	24.9	9	7	10	6082	6.96
HUBBELL HUB.B	360.7	-2	35.1	-12	9.7	10.8	15.8	16.5	12	7	8	1679	2.16
NATIONAL SERVICE INDUSTRIES NSI [4]	605.4	19	20.3	-18	3.3	4.6	11.7	18.5	7	-5	12	668	2.91
ROCKWELL INTERNATIONAL ROK [4]	1784.0	5	164.0	15	9.2	8.4	18.5	23.4	12	-4	0	7508	3.24
SMITH (A.O.) AOS	335.0	48	14.2	18	4.2	5.2	7.6	12.0	9	5	4	468	2.21
SPX SPW	627.8	-3	37.8	22	6.0	4.6	8.3	20.8	29	-4	3	3313	2.65
(B) ELECTRONICS													
GROUP COMPOSITE	13641.2	17	592.5	160	4.3	2.0	2.9	3.6	NM	8	-11	191227	0.54
HARRIS HRS [4]	455.2	2	-14.3	NM	NM	5.0	NA	0.8	NM	7	-15	2118	0.14
HUGHES ELECTRONICS GMH	1703.1	85	108.3	NM	NM	NM	NM	14.4	NM	3	NA	35158	1.75
L-3 COMMUNICATIONS HOLDINGS LLL	377.1	37	10.9	51	2.9	2.6	8.5	10.7	20	NA	NA	1739	1.85
LITTON INDUSTRIES LIT [4]	1349.0	19	36.8	16	2.7	3.9	7.6	8.5	11	15	17	1927	2.59
MOTOROLA MOT	8768.0	13	448.0	125	5.1	2.6	5.2	5.3	12	10	-14	71123	1.62
QUALCOMM QCOM [1]	727.7	22	199.7	NM	27.4	NM	10.8	10.5	NM	44	58	13302	0.78
SENSORMATIC ELECTRONICS SRM [4]	261.1	6	19.6	113	7.5	3.7	7.0	7.2	24	NA	NA	1259	0.70
(C) INSTRUMENTS													
GROUP COMPOSITE	5222.4	31	440.5	85	8.4	6.0	13.9	14.3	61	28	15	98256	1.28
AGILENT TECHNOLOGIES A [2]	2246.0	26	131.0	77	5.8	4.1	12.7	12.7	62	NA	NA	41019	1.46
DANAHER DHR	667.8	9	71.6	21	8.2	7.5	13.9	16.4	30	29	20	8016	1.87
KLA-TENCOR KLAC [4]	413.0	96	73.3	253	17.8	0.9	13.7	13.7	71	42	-5	13024	1.00

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH			
	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 %	1ST QUARTER 1999 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4/27	COMMON EQUITY %	EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4/27 $ MIL.	12 MONTHS EARNINGS PER SHARE
PE BIOSYSTEMS GROUP PEB [9]	368.1	12	56.1	21	15.2	14.1	NA	30.1	70	13	12	12443	0.66
PERKINELMER PKI	402.7	65	16.2	102	4.0	2.3	7.7	6.6	72	4	-4	2510	0.75
TEKTRONIX TEK [7]	277.0	1	-16.8	NM	NM	4.5	NA	0.6	NM	7	NA	2800	0.23
TERADYNE TER	648.1	89	109.1	606	16.8	6.2	24.1	24.5	68	16	10	18384	1.57
(D) SEMICONDUCTORS & OTHER COMPONENTS													
GROUP COMPOSITE	27008.5	32	4684.8	85	17.3	12.4	12.7	13.8	71	24	20	879448	1.42
ADVANCED MICRO DEVICES AMD	1092.0	73	189.3	NM	17.3	NM	7.1	10.4	60	2	NA	13035	1.43
ALTERA ALTR	272.8	46	75.2	60	27.6	26.2	20.9	20.6	87	49	53	21149	1.22
AMPHENOL APH	300.0	27	20.3	146	6.8	3.5	15.7	NM	41	NA	21	2487	1.46
ANALOG DEVICES ADI [3]	490.3	63	93.0	211	19.0	9.9	14.4	14.9	NM	24	13	25231	0.71
ATMEL ATMI	429.2	48	41.9	151	9.8	5.8	9.5	7.4	93	14	-19	10266	0.50
AVX AVX [9]	490.3	57	70.9	839	14.2	2.4	16.6	17.1	55	16	-12	8533	1.79
BENCHMARK ELECTRONICS BHE	349.2	138	2.0	-61	0.6	3.4	4.0	3.6	64	46	11	621	0.60
CONEXANT SYSTEMS CNXT [3]	501.7	58	-132.3	NM	NM	2.4	NA	-0.8	NM	NA	NA	12604	-0.07
CYPRESS SEMICONDUCTOR CY	264.2	66	53.1	473	20.1	5.6	11.2	17.0	47	11	-4	6175	1.13
INTEL INTC	8021.0	43	2732.0	33	34.1	26.1	19.8	22.3	54	27	26	418795	2.32
JABIL CIRCUIT JBL [4]	837.6	50	33.9	52	4.1	4.0	14.1	17.1	65	60	93	7069	0.63
JDS UNIPHASE JDSU [8]	394.6	439	-240.9	NM	NM	17.2	NM	-9.5	NM	151	NA	69622	-1.31
KEMET KEM [9]	258.1	80	38.1	NM	14.7	1.7	15.0	19.5	42	25	-12	3106	1.70
LSI LOGIC LSI	615.2	33	86.2	NM	14.0	0.9	10.4	12.0	80	22	-3	17974	0.75
MICRON TECHNOLOGY MU [4]	1392.6	36	161.3	620	11.6	2.2	8.2	9.7	82	25	NA	35962	1.60
MOLEX MOLX [4]	867.6	33	57.6	29	16.2	10.6	13.6	11.3	52	9	12	10609	1.09
NATIONAL SEMICONDUCTOR NSM [3]	348.9	10	327.8	NM	93.7	NM	NM	-20.8	NM	0	NA	11557	-2.18
SANMINA SANM [3]	555.3	98	43.6	53	7.9	10.2	NA	11.6	52	74	38	7887	1.35
SCI SYSTEMS SCI [4]	2218.7	38	49.7	53	2.2	2.0	12.0	13.9	41	30	38	7527	1.28
SOLECTRON SLR [4]	2859.7	32	99.9	27	3.5	3.6	16.1	11.1	67	46	28	27399	0.69
TEXAS INSTRUMENTS TXN	2853.0	27	426.0	67	16.1	12.3	11.7	14.1	85	23	-1	130502	1.87
THOMAS & BETTS TNB	689.7	8	35.9	4	5.4	5.6	10.0	13.5	12	16	17	1749	2.58
VIASYSTEMS GROUP VG	384.6	24	-130.7	NM	NM	NM	NM	NM	NA	NA	NA	1194	NA
VISHAY INTERTECHNOLOGY VSH	538.9	27	14.3	NM	13.8	0.2	12.0	15.5	44	10	-17	5998	1.80
XEROX XLNX [9]	306.6	66	476.4	NM	NM	21.3	53.6	38.7	38	38	44	23334	3.90
10 FOOD													
INDUSTRY COMPOSITE	85003.1	8	2944.9	9	3.5	3.4	11.8	20.6	19	1	2	209141	1.36
(A) FOOD DISTRIBUTION													
GROUP COMPOSITE	11752.5	19	183.2	36	1.6	1.4	13.5	19.0	22	1	11	15614	1.42
INTERNATIONAL MULTIFOODS IMC [10]	595.0	4	6.9	-1	1.2	1.2	8.2	9.9	10	1	-36	246	1.31
NASH FINCH NAFC	862.7 [11]	-5	2.3	90	0.3	0.1	6.7	9.4	5	-5	-2	82	1.43
SUPERVALU SVU [10]	5541.9	32	72.1	33	1.3	1.3	12.5	13.3	11	1	20	2645	1.78
SYSCO SYY [8]	4722.9	11	102.0	41	2.2	1.7	16.4	28.4	29	2	13	12441	1.28
(B) FOOD PROCESSING													
GROUP COMPOSITE	42908.6	5	2122.5	2	4.9	5.1	13.5	24.7	18	-3	0	143150	1.42
AGRIBRANDS INTERNATIONAL AGX [4]	288.1	-7	11.0	41	3.8	2.5	13.6	12.9	8	NA	NA	396	4.69
ARCHER DANIELS MIDLAND ADM [8]	3111.8	-8	103.0	777	3.3	0.3	5.2	4.6	21	4	-13	5034	0.48
BESTFOODS BFO	2218.0	1	160.0	11	7.2	6.6	31.1	84.9	20	-17	14	14245	2.55
CAMPBELL SOUP CPB [5]	1916.0	5	281.0	28	14.7	12.0	48.3	285.7	35	-34	4	11316	1.26
CHIQUITA BRANDS INTERNATIONAL CQB	658.1	-5	-35.0	-28	5.3	7.0	NM	-19.7	NM	0	NA	251	-1.32
CONAGRA CAG [7]	5797.6	2	143.4	16	2.5	3.0	7.1	9.4	32	5	4	9568	0.80
CORN PRODUCTS INTERNATIONAL CPO	444.2	12	3.6	-77	0.8	4.0	5.6	-6.6	14	NA	NA	831	1.74
DEAN FOODS DF [1]	976.8	-2	25.2	669	2.6	0.3	9.1	15.0	10	5	1	884	2.57
DOLE FOOD DOL	1166.2	-3	36.4	-3	3.2	3.2	6.4	8.9	21	-8	-20	984	0.85
GENERAL MILLS GIS [5]	1619.6	8	153.3	9	9.5	9.4	33.5	1758.8	19	-21	7	11026	1.97
HEINZ (H.J.) HNZ [6]	2294.6	1	171.1	42	7.5	5.3	15.3	38.9	18	-5	-2	12378	1.94
HERSHEY FOODS HSY	993.1	5	71.2	-68	7.2	23.8	16.4	28.4	21	-5	22	8516	2.20
HORMEL FOODS HRL [2]	903.9	13	43.8	3	4.9	5.3	17.0	19.5	14	5	8	2211	1.12
IBP IBP	3882.0	21	34.7	-39	0.9	1.8	14.3	16.7	5	15	5	1810	1.14
INTERSTATE BAKERIES IBC [7]	1035.6	0	20.4	-31	2.0	2.9	12.9	18.9	8	30	43	859	1.60
KELLOGG K	1751.9	0	161.7	36	9.2	6.8	17.1	44.5	26	-16	-8	9590	-0.94
LANCASTER COLONY LANC [6]	262.8	6	20.1	-8	7.7	8.8	23.5	23.6	10	12	12	1036	2.51
McCORMICK MKC [1]	462.4	-5	24.4	34	5.3	4.1	21.9	31.0	21	-6	14	2195	1.53
NABISCO GROUP HOLDINGS NGH	2069.0	12	47.0	370	2.3	0.5	6.0	9.1	15	-17	-18	4158	0.87
NABISCO HOLDINGS NA	2069.0	12	60.0	67	2.9	1.9	6.1	9.8	26	-2	34	9810	1.44
PILGRIM'S PRIDE CHX [3]	373.3	13	9.0	-38	2.4	4.4	13.6	18.5	5	14	16	305	1.42
QUAKER OATS OAT	1172.1	9	1.8	-98	0.2	8.1	44.4	185.4	25	-29	2	6692	2.63
RALSTON PURINA RAL [7]	690.8	0	161.1	25	21.9	17.5	23.8	46.9	9	26	16	4932	1.84
SARA LEE SLE [6]	4841.0	5	267.0	7	5.4	5.3	28.9	81.8	12	-19	34	13494	1.30
SMITHFIELD FOODS SFD [8]	1377.2	32	17.5	-68	1.3	5.3	4.9	8.3	13	28	30	1156	1.61
WRIGLEY (WM.) JR. WWY	503.3	5	74.6	7	14.8	14.5	26.5	27.5	27	11	8	8451	2.71

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES 1ST QUARTER 2000 $ MIL.	SALES CHANGE FROM 1999 %	PROFITS 1ST QUARTER 2000 $ MIL.	PROFITS CHANGE FROM 1999 %	MARGINS 1ST QUARTER 2000 %	MARGINS 1ST QUARTER 1999 %	RETURN ON INVESTED CAPITAL %	RETURN ON COMMON EQUITY %	P-E 4-27	5-YEAR GROWTH COMMON EQUITY %	5-YEAR GROWTH EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-27 $ MIL.	12 MONTHS' EARNINGS PER SHARE
(C) FOOD RETAILING													
GROUP COMPOSITE	30342.0	9	639.3	32	2.1	1.7	7.8	12.2	23	13	9	50377	1.15
ALBERTSON'S ABS [1]	8996.9	6	263.8	39	2.7	2.0	5.5	7.5	32	15	-5	12506	1.00
DELHAIZE AMERICA DTA	2479.2	-3	85.5	12	2.6	2.4	14.2	17.8	9	11	14	2746	1.93
GREAT ATLANTIC & PACIFIC TEA GAP [1]	2421.1	9	7.0	NM	0.3	NM	3.2	1.7	40	-1	NA	703	0.37
HANNAFORD BROTHERS HRD	646.8	1	22.6	13	2.7	2.4	13.3	13.8	31	6	8	3048	2.33
INGLES MARKETS IMKTA [2]	466.1 [1]	5	6.4	55	1.4	0.9	6.9	9.5	11	8	-14	236	0.97
PENN TRAFFIC PNFT [1]	526.2	NA	24.2	NM	NM	NA	NM	-83.3	NA	NA	NA	124	NA
RUDDICK RDK [2]	662.3	5	13.4	5	2.0	2.0	8.8	11.4	10	8	9	519	1.12
SAFEWAY SFY	7096.3	16	241.9	18	3.4	3.4	11.4	24.0	24	49	32	23014	1.96
7-ELEVEN SVEY	2137.3 [1]	19	14.8	688	0.7	0.1	9.9	NM	19	NA	-12	1537	0.20
WEIS MARKETS WMK	519.8	5	17.9	-16	3.4	4.3	8.2	8.0	18	4	2	1593	1.83
WINN-DIXIE STORES WIN [1]	3199.4	0	10.3	-83	0.3	1.8	6.7	5.8	35	5	-4	2417	0.47
11 FUEL													
INDUSTRY COMPOSITE	124408.9	51	7933.8	196	5.9	3.0	9.5	14.0	26	9	1	585905	2.22
(A) COAL, OIL & GAS													
GROUP COMPOSITE	125956.2	56	7644.1	205	6.1	3.1	10.1	15.5	23	8	2	485875	2.59
AMERADA HESS AHC	2831.0	84	224.0	215	7.9	4.6	12.1	18.5	16	0	19	5820	6.53
APACHE APA	447.1	174	116.3	NM	26.0	NM	8.1	12.8	17	21	32	6645	2.74
ARCH COAL ACI	354.2	-18	-15.0	NM	NM	NM	NM	NM	NM	-4	NA	205	-0.45
ASHLAND ASH [1]	1844.0	22	25.0	71	1.4	0.7	2.9	4.0	9	13	40	2426	3.79
BURLINGTON RESOURCES BR	652.0	50	77.0	NM	11.8	0.0	3.3	2.7	NM	7	60	8882	0.35
CHEVRON CHV	11354.0	11	1014.0	337	8.9	2.1	10.8	15.9	21	5	7	58038	4.23
COASTAL CGP	2527.6	11	173.6	29	6.9	7.6	7.1	13.7	20	10	16	10642	2.48
CONOCO COC.B	8591.0 [1]	62	390.0	361	4.6	1.8	11.7	23.3	15	NA	NA	16862	1.87
CONSOL ENERGY CNX [4]	537.5 [1]	7	23.0	-10	4.3	4.4	NM	35.2	9	NA	NA	768	1.10
DEVON ENERGY DVN	247.7 [1]	298	61.3	922	17.8	6.9	4.6	7.1	24	60	25	3866	2.01
EXXON MOBIL XOM	55061.0	42	3490.0	135	6.3	2.8	12.0	16.2	29	9	2	280786	2.63
KERR-MCGEE KMG	675.6	79	165.2	NM	21.9	NM	12.9	23.3	11	-7	-1	5027	4.26
MITCHELL ENERGY & DEVELOPMENT MND.B [1]	280.5	62	35.3	NM	12.6	NM	13.1	26.4	12	12	NA	1163	1.85
OCCIDENTAL PETROLEUM OXY	2500.0	87	271.0	NM	10.8	NM	12.5	25.4	9	1	-4	6071	2.82
PHILLIPS PETROLEUM P	4768.0	88	250.0	257	5.2	2.8	8.5	17.3	16	9	-3	12411	3.09
SUNOCO SUN	2779.0	82	63.0	283	2.4	1.2	7.6	9.6	19	1	7	2666	1.63
TEXACO TX	11271.0	57	574.0	168	5.1	2.8	9.5	13.1	18	6	2	28867	2.84
TOSCO TOS	4630.2	76	74.0	158	1.6	1.1	13.7	23.2	10	35	22	4713	3.15
UNION PACIFIC RESOURCES GROUP UPRT	522.0 [1]	26	92.7	119	17.7	10.2	NM	13.3	23	-13	-29	4706	0.98
UNOCAL UCL	1681.0	81	124.0	NM	7.4	0.3	6.0	19.5	24	1	5	7749	0.93
USX-MARATHON GROUP MRO	7846.0	62	254.0	113	3.2	2.5	11.7	16.4	10	NA	6	7590	2.54
VALERO ENERGY VLO	2978.6	119	30.7	NM	1.0	NM	4.1	4.4	25	2	-9	1941	0.64
VASTAR RESOURCES VRI	596.9	60	77.4	107	13.0	5.4	16.1	30.9	29	90	6	7640	2.15
(B) PETROLEUM SERVICES													
GROUP COMPOSITE	8452.7	3	289.7	60	3.4	2.2	4.6	4.4	NM	20	-6	100030	0.54
BAKER HUGHES BHI	1157.3	-5	18.4	60	1.6	3.8	2.1	0.9	NM	18	-27	10492	0.08
BJ SERVICES BJS [2]	390.6 [1]	45	29.3	NM	7.5	NM	4.6	3.7	NM	32	NA	5139	0.44
COOPER CAMERON CAM	336.6 [1]	-12	12.7	18	3.8	2.8	9.0	5.8	90	16	-12	3872	0.82
HALLIBURTON HAL	2859.0 [1]	-12	27.0	-49	0.9	1.6	6.7	5.0	75	21	-1	25111	0.61
NABORS INDUSTRIES NBR	279.1	88	17.9	50	6.4	8.0	2.6	2.1	NM	38	74	5258	0.23
NOBLE AFFILIATES NBL	271.8	55	26.9	NM	9.9	NM	9.6	12.6	24	12	64	2907	1.50
SCHLUMBERGER SLB	2137.4	1	136.2	97	6.4	3.3	4.9	5.1	NM	13	-5	44557	0.70
SMITH INTERNATIONAL SII	525.4	58	11.3	71	1.8	1.7	6.7	8.5	63	25	1	3909	1.24
WEATHERFORD INTERNATIONAL WFT	365.4	49	10.0	166	2.6	1.4	2.2	1.3	NM	76	6	4485	0.21
12 HEALTH CARE													
INDUSTRY COMPOSITE	106472.7	12	10208.8	12	9.6	9.6	17.4	23.6	40	12	12	1326536	1.32
(A) DRUG DISTRIBUTION													
GROUP COMPOSITE	35358.3	17	417.9	30	1.2	1.1	10.7	12.7	31	27	25	52549	0.93
AMERISOURCE HEALTH AAS [2]	2842.2	19	24.3	20	0.9	0.8	14.4	38.7	17	NA	-14	998	1.53
BERGEN BRUNSWIG BBC [2]	3862.9 [1]	17	17.3	55	0.5	0.8	3.1	7.2	21	21	-22	664	0.21
BINDLEY WESTERN INDUSTRIES BDY	2476.7	25	12.1	25	0.5	0.5	18.7	11.1	15	17	5	572	1.11
CARDINAL HEALTH CAH [4]	1433.1 [1]	16	199.6	112	2.9	1.4	12.5	19.9	25	43	31	15594	2.20
D&K HEALTHCARE RESOURCES DKWD [4]	427.2	100	2.5	19	0.6	1.0	10.1	21.4	5	30	29	38	1.89
LONGS DRUG STORES LDG [1]	1931.6	14	23.9	2	2.3	2.5	8.3	7.8	13	6	9	926	1.76
McKESSON HBOC MCK [4]	9305.1 [1]	12	-86.2	NM	NM	NM	6.5	5.8	26	31	-26	4772	0.66
PHAR-MOR PMOR [4]	308.7	8	-7.3	NM	NM	0.4	NM	-4.4	NM	NA	NA	28	-0.30
WALGREEN WAG [4]	5608.8	20	238.9	19	4.3	4.3	18.7	17.9	42	17	17	28959	0.68
(B) DRUGS & RESEARCH													
GROUP COMPOSITE	39527.3	11	6780.3	5	17.2	18.0	22.6	29.3	43	11	15	974283	1.31
ABBOTT LABORATORIES ABT	3352.2	1	693.0	4	20.7	20.2	29.2	33.3	25	12	12	60080	1.58
ALLERGAN AGN	391.8	22	43.5	24	11.1	10.9	24.7	30.4	41	1	15	7708	1.46

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES 1ST QUARTER 2000 $ MIL.	SALES CHANGE FROM 1999 %	PROFITS 1ST QUARTER 2000 $ MIL.	PROFITS CHANGE FROM 1999 %	MARGINS 1ST QUARTER 2000 %	MARGINS 1ST QUARTER 1999 %	RETURN ON INVESTED CAPITAL %	RETURN ON COMMON EQUITY %	P-E 4-27	5-YEAR GROWTH COMMON EQUITY %	5-YEAR GROWTH EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-27 $ MIL.	12 MONTHS EARNINGS PER SHARE
AMERICAN HOME PRODUCTS AHP	3336.5	17	1746.0	224	52.3	18.8	NM	-2.2	NM	11	NA	73253	-0.02
AMGEN AMGN	834.1	8	296.2	8	32.1	33.2	34.7	36.9	62	18	27	65309	1.04
BRISTOL-MYERS SQUIBB BMY	5260.0	8	1221.0	15	23.2	22.0	41.4	50.0	24	9	19	102268	2.14
GENENTECH DNA	364.2**	21	-25.9	NM	NM	4.8	NM	-21.9	NM	28	NA	23593	-4.51
LILLY (ELI) LLY	2481.1	9	845.5	87	34.5	20.0	38.8	56.1	29	-3	18	88152	2.67
MERCK MRK	8851.4	17	1409.6	15	16.9	17.2	30.6	46.0	29	3	12	185835	2.54
PFIZER PFE	4315.0	10	1180.0	45	27.3	20.6	38.4	40.1	46	16	16	164459	0.92
PHARMACIA PHA	4293.0	5	49.0	-68	0.9	6.1	3.9	7.9	87	12	-10	33462	0.54
SCHERING-PLOUGH SGP	2406.0	10	628.0	17	26.1	24.7	40.9	42.6	26	29	19	60813	1.48
SIGMA-ALDRICH SIAL	284.0	4	41.7	7	14.7	14.3	11.1	11.6	18	33	7	2712	1.53
WARNER-LAMBERT WLA	3407.1	13	1398.3	NM	NM	12.1	-0.7	-0.9	NM	21	18	100691	-0.08
(C) HEALTH-CARE SERVICES													
GROUP COMPOSITE	15818.5	7	656.4	-15	4.1	5.3	6.2	7.7	32	13	-10	44204	0.69
COLENBRANDA HEALTHCARE COL	4571.0	-9	296.0	-6	6.0	6.9	8.2	11.1	25	2	-14	15455	1.13
EXPRESS SCRIPTS ESRX	1476.3	64	21.4	50	1.5	1.5	15.4	25.1	9	61	50	1448	4.40
HEALTH MANAGEMENT ASSOCIATES HMA[1]	906.7	20	50.5	6	12.4	14.0	12.0	16.7	25	30	25	3872	0.63
HEALTHSOUTH HRC	1021.3	-1	65.3	-41	6.4	10.7	3.8	1.0	92	52	-18	2182	0.06
LABORATORY CORP. OF AMERICA HLDGS. LH	482.7	11	25.7	82	5.8	3.4	8.1	12.2	34	-9	NA	755	0.17
OXFORD HEALTH PLANS OHP	1022.4**	-4	43.6	131	4.3	1.3	NM	232.5	6	-6	51	1646	3.56
PHYCOR PHYC	306.8	-26	-25.9	NM	NM	0.7	NM	NM	NM	18	NA	44	-6.31
QUEST DIAGNOSTICS DGX	853.5	125	17.8	141	2.1	1.9	2.2	1.0	NM	18	NA	2549	0.11
QUORUM HEALTH GROUP QHGI[4]	455.6	2	17.3	-6	3.8	4.1	6.0	8.3	15	17	1	783	0.71
TENET HEALTHCARE THC[7]	2860.0	1	38.0	-60	1.3	4.4	3.8	4.0	56	23	-7	8013	0.46
UNIVERSAL HEALTH SERVICES UHS	541.0**	4	28.6	-5	5.3	5.8	8.3	11.9	22	22	21	1630	2.43
WELLPOINT HEALTH NETWORKS WLP	2145.2**	21	79.6	12	3.7	4.0	19.1	23.6	17	-2	10	4825	4.57
(D) MEDICAL PRODUCTS													
GROUP COMPOSITE	15768.6	8	2354.1	45	14.9	11.2	18.3	23.9	33	12	8	255500	1.80
BARD (C.R.) BCR	268.6	6	31.5	18	11.7	10.7	18.7	21.4	18	4	12	2209	2.39
BAUSCH & LOMB BOL	408.8	4	29.3	161	9.6	3.8	7.5	12.8	21	3	17	3273	2.17
BAXTER INTERNATIONAL BAX	1581.0	6	191.0	7	12.1	12.2	14.5	24.1	24	4	0	19048	2.74
BECTON, DICKINSON BDX[1]	925.1	6	119.7	32	12.9	10.3	13.2	16.9	22	4	6	6476	1.16
BOSTON SCIENTIFIC BSX	679.0	-4	106.0	6	15.6	14.1	19.0	21.2	30	27	45	11197	0.91
GUIDANT GDT	630.7	6	118.8	130	18.8	8.3	32.0	47.0	43	23	30	17273	1.31
JOHNSON & JOHNSON JNJ	7319.0	9	1314.0	15	18.0	16.9	22.9	26.8	27	17	12	138344	3.07
MALLINCKRODT MKG[4]	659.0**	-2	57.9	-7	8.8	8.0	12.0	37.9	30	-1	9	1843	2.76
MEDTRONIC MDT[4]	1258.8**	18	263.2	NM	20.9	NM	22.1	22.7	70	24	11	65578	0.78
OWENS & MINOR OMI	854.5	15	6.8	25	0.8	0.7	8.9	16.1	14	7	43	351	0.85
ST. JUDE MEDICAL STJ	295.5	11	15.8	NM	5.4	NM	5.8	6.4	51	7	-21	2635	0.62
STRYKER STK	582.1	8	51.8	NM	8.9	NM	9.2	13.1	78	13	-22	6382	0.92
SYBRON SYB[3]	326.4	20	39.0	20	11.9	11.9	10.1	21.5	24	28	19	3147	1.24
13 HOUSING & REAL ESTATE													
INDUSTRY COMPOSITE	22191.7	12	980.7	9	4.4	4.5	12.7	20.7	10	14	17	46204	2.59
(A) BUILDING MATERIALS													
GROUP COMPOSITE	12022.4	13	559.7	8	4.7	4.9	14.9	26.4	11	13	15	35263	2.77
AMERICAN STANDARD ASD	1622.0	10	60.0	22	3.3	3.0	26.9	NM	11	NA	2	2000	3.27
JOHNS MANVILLE JM	516.9	4	45.1	20	8.7	7.8	23.0	31.0	6	-2	30	1476	1.75
LENNOX INTERNATIONAL LII	716.3	46	5.7	-13	0.8	1.4	8.4	9.8	5	NA	NA	486	1.73
MARTIN MARIETTA MATERIALS MLM	278.7	18	7.3	-8	2.6	3.3	10.4	16.1	20	16	17	2496	2.57
OWENS CORNING OWC	1257.0	11	48.0	8	3.8	3.9	21.5	NM	4	NA	10	1016	4.74
PPG INDUSTRIES PPG	2087.0	15	139.0	13	6.7	6.8	12.7	18.5	16	4	6	9362	3.32
RPM RPM[7]	431.4	10	3.7	-39	0.9	1.6	5.5	9.8	16	18	8	1059	0.81
SHERWIN-WILLIAMS SHW	1221.9	8	40.9	42	3.3	2.0	15.2	18.5	12	11	11	1183	1.68
SOUTHDOWN SDW	279.5**	14	34.0	15	12.2	12.0	19.9	25.3	10	40	31	2141	5.82
TECUMSEH PRODUCTS TECUA	476.2	-3	9.0	79	1.9	0.7	10.9	10.9	8	5	-1	908	5.41
USG USG	838.0	14	106.0	23	11.3	10.5	20.9	50.0	5	NA	189	2071	8.86
VALSPAR VAL[4]	322.7	22	11.5	18	3.5	3.1	11.7	20.6	18	18	14	1513	1.91
VULCAN MATERIALS VMC	515.0	7	23.3	-12	4.5	5.5	11.8	17.8	19	13	21	4369	2.32
WATSCO WSO	286.3	10	3.1	25	1.1	0.9	7.8	10.2	12	6	22	401	1.02
YORK INTERNATIONAL YRK	895.1	14	23.1	-26	2.6	2.3	8.0	11.0	12	6	-3	940	2.07
(B) CONSTRUCTION & REAL ESTATE													
GROUP COMPOSITE	10169.3	11	421.0	11	4.1	4.1	10.4	15.1	8	16	22	12941	2.32
APARTMENT INVESTMENT & MGMT. AIV	259.2	93	25.9	85	10.0	10.4	5.3	2.2	73	74	-1	2647	0.54
BEAZER HOMES USA BZH[1]	333.0	2	8.8	9	2.7	2.6	11.2	19.7	4	8	22	164	4.00
CENTEX CTX[4]	1725.5	12	70.0	3	4.1	4.4	19.5	18.9	6	13	24	1467	3.82
CHAMPION ENTERPRISES CHB	519.5	-17	1.3	-94	0.3	3.4	7.1	6.8	11	44	11	331	0.62
CLAYTON HOMES CMH[4]	307.0	0	35.9	3	11.7	11.3	NA	16.1	8	16	12	1283	1.12
FLEETWOOD ENTERPRISES FLE[3]	852.3	6	15.9	-25	1.9	2.6	12.2	16.7	5	-4	18	482	2.99
HORTON (D.R.) DHI[1]	798.8	14	39.5	18	4.9	4.8	11.1	20.4	5	60	32	828	2.76

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH			
	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 %	1ST QUARTER 1999 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-27	COMMON EQUITY %	EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-27 $ MIL.	12 MONTHS' EARNINGS PER SHARE
MINNESOTA MINING & MFG. MMM	4052.0	7	487.0	27	12.0	10.2	23.9	29.8	19	-2	6	34606	4.60
PARKER HANNIFIN PH [4]	1393.1	11	106.7	39	7.7	6.1	13.9	17.7	16	13	34	5108	3.10
TELEFLEX TFX	427.6	9	26.8	16	6.3	5.9	12.5	15.9	13	14	17	1291	2.57
TOWER AUTOMOTIVE TWR	685.4	37	39.1	32	5.4	5.5	7.6	16.4	7	69	45	714	2.24
TUPPERWARE TUP	268.6	-7	19.2	8	7.1	7.1	23.8	55.3	13	-24	-20	1070	1.30
(B) MACHINE & HAND TOOLS													
GROUP COMPOSITE	4280.5	9	210.0	43	4.9	3.7	12.6	21.6	11	5	9	10437	2.80
BLACK & DECKER BDK	1037.6	6	60.2	54	5.8	4.0	20.4	42.1	11	-10	17	3581	3.65
KENNAMETAL KMT [4]	483.0	1	14.1	547	2.9	0.5	5.3	6.4	18	10	17	868	1.59
LINCOLN ELECTRIC HOLDINGS LECO	281.8	0	24.4	466	8.7	1.5	18.6	20.8	10	13	10	897	2.09
NACCO INDUSTRIES NC	673.2	10	9.2	-29	1.4	2.1	8.8	9.0	7	14	10	431	6.20
SNAP-ON SNA	556.0**	17	33.8	5	6.1	6.6	10.3	15.3	12	1	8	1573	2.19
STANLEY WORKS SWK	695.4	2	48.2	59	6.9	4.4	18.7	23.8	16	-2	11	2859	1.87
TEREX TEX	553.5	31	20.1	-73	3.6	8.1	NM	38.3	2	NA	NA	428	6.30
(C) SPECIAL MACHINERY													
GROUP COMPOSITE	30696.8	15	2249.2	133	7.3	3.6	12.1	17.2	31	16	3	239886	1.70
AGCO AG	529.8	-6	10.7	NM	NM	NM	NM	-1.9	NM	14	NA	204	-0.26
APPLIED MATERIALS AMAT [1]	1667.0	125	328.6	483	19.7	7.6	20.8	21.0	61	31	12	77539	1.25
BRIGGS & STRATTON BGG [6]	468.7	-2	42.1	1	9.0	8.8	29.2	34.5	8	-5	0	878	5.21
CATERPILLAR CAT	4919.0	1	258.0	26	5.2	4.2	10.6	18.2	14	14	6	14094	2.79
CUMMINS ENGINE CUM	1648.0	10	42.0	75	2.5	1.6	9.3	12.3	8	5	-6	1367	4.59
DEERE DE [7]	2338.5**	-5	37.7	-24	1.6	2.0	7.8	5.5	42	10	-7	9586	0.97
DONALDSON DCI [3]	259.3	18	17.4	32	6.7	6.0	18.7	24.4	15	6	18	1039	1.49
DOVER DOV	1251.9	29	117.3	69	9.4	7.3	17.4	21.2	24	16	14	10442	2.17
FMC FMC	959.0	-2	32.8	8	3.4	3.1	18.2	29.4	9	9	5	1771	6.80
HARNISCHFEGER INDUSTRIES HRZIQ [3]	285.3	8	-17.5	NM	NM	NM	NA	NM	NM	NA	NA	31	-7.09
ILLINOIS TOOL WORKS ITW	2468.0	12	219.1	16	9.1	8.7	15.1	18.1	22	24	18	18632	2.96
INGERSOLL-RAND IR	1974.3	5	109.6	22	7.1	6.0	12.7	18.3	14	15	20	7688	3.45
ITT INDUSTRIES IIN	1205.3	10	51.3	21	4.3	3.9	18.7	22.0	12	-15	42	2813	2.65
McDERMOTT INTERNATIONAL MDR	591.7	-21	7.8	NM	1.3	NM	2.5	1.0	62	4	4	514	0.14
MILACRON MZ	396.9	1	15.1	0	3.8	3.9	12.5	14.4	9	24	4	629	1.90
NOVELLUS SYSTEMS NVLS	274.3	138	57.5	511	21.0	8.2	14.2	14.2	64	23	1	7747	1.01
PENTAIR PNR	712.3	51	33.9	NM	4.8	0.5	9.4	13.6	13	18	15	1839	2.98
STEWART & STEVENSON SERVICES SSSS [11]	287.4	12	4.9	NM	1.7	NM	5.8	5.2	19	0	NA	338	0.62
TIMKEN TKR	685.8	10	16.0	-3	2.3	2.7	5.8	5.9	18	8	0	1115	1.00
TORO TTC [7]	280.2**	12	0.9	15	0.3	0.3	10.4	12.3	12	11	-11	394	2.55
TYCO INTERNATIONAL TYC [3]	7070.0	35	855.9	428	12.1	3.1	12.7	19.9	30	61	20	70791	1.55
UNOVA UNA	494.8	-2	-0.5	NM	NM	-0.7	4.3	3.5	29	NA	NA	760	0.47
(D) TEXTILES													
GROUP COMPOSITE	4284.5	3	123.1	-4	2.9	3.1	9.5	20.0	12	11	55	7239	1.37
BURLINGTON INDUSTRIES BUR [2]	402.1	0	0.6	NM	0.1	NM	1.0	0.6	NM	3	NA	223	0.04
COLLINS & AIKMAN CKC	534.8	12	7.0	203	1.3	0.5	6.7	NM	NM	NA	NA	375	0.05
DEXTER DEX	261.8	-6	12.4	-82	4.7	24.6	9.2	10.9	24	5	16	1245	2.23
INTERFACE IFSIA	263.2	-5	-8.8	NM	NM	1.8	3.7	2.5	22	15	3	170	0.17
MOHAWK INDUSTRIES MHK	765.3	8	34.0	22	4.4	3.9	14.0	24.0	9	23	55	1356	2.76
SHAW INDUSTRIES SHX	966.5	3	42.2	5	4.3	4.2	18.1	25.6	10	4	-1	2132	1.66
SPRINGS INDUSTRIES SMI	593.2	2	20.1	32	3.4	2.6	8.6	9.4	10	4	-4	757	4.06
WESTPOINT STEVENS WXS	447.8	1	15.6	0	3.5	3.5	14.8	NM	10	NA	29	961	1.88
10 METALS & MINING													
INDUSTRY COMPOSITE	22878.4	21	815.3	74	3.6	2.5	6.2	7.8	26	9	3	56662	1.08
(A) ALUMINUM													
GROUP COMPOSITE	7043.3	16	441.2	55	6.3	4.7	11.0	16.4	22	9	16	28935	2.57
ALCOA AA	4631.0	14	355.0	61	7.8	5.5	16.1	20.0	21	10	15	24109	3.17
KAISER ALUMINUM KLU	565.7	18	11.7	NM	2.1	NM	NM	-5.4	NM	31	NA	347	-0.95
MAXXAM MXM	627.6	15	3.5	-97	0.6	20.6	NM	NM	NM	NA	25	193	-4.42
REYNOLDS METALS RLM	1319.0**	24	71.0	NM	5.4	NM	7.4	9.3	21	3	-2	4266	3.19
(B) STEEL													
GROUP COMPOSITE	10588.8	20	238.9	365	2.3	0.6	4.0	4.3	25	10	-4	14166	0.68
AK STEEL HOLDING AKS	1139.8	11	26.5	-36	2.3	4.0	5.1	4.9	22	20	-31	1189	0.48
BETHLEHEM STEEL BS	1106.8	15	3.1	NM	0.3	NM	NM	-15.5	NM	4	NA	708	-1.49
CARPENTER TECHNOLOGY CRS [8]	298.1	10	11.9	892	4.0	0.4	5.9	7.1	10	26	-2	442	-2.01
COMMERCIAL METALS CMC [4]	637.8	16	10.4	24	1.6	1.5	8.8	11.3	9	10	10	402	3.32
CONSIDINE TECHNOLOGIES CDD	662.8	4	37.6	-20	5.7	7.4	13.2	19.0	14	17	29	2077	4.13
LTV LTV	1325.0	34	-16.0	NM	NM	NM	NM	-13.7	NM	4	NA	367	-2.03
NUCOR NUE	1199.6	34	81.5	189	6.8	3.2	10.3	13.2	13	15	1	3881	3.42
ROUGE INDUSTRIES ROU	314.6	35	-12.9	NM	NM	NM	NM	-12.4	NM	6	NA	115	-2.22
RYERSON TULL RT	786.3	14	11.0	12	1.4	1.4	5.4	5.6	8	1	-8	297	1.58
TEXAS INDUSTRIES TXI [7]	314.3	24	13.9	37	4.4	4.0	6.6	10.4	10	14	30	666	3.15

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH			
	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 %	1ST QUARTER 1999 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-27	COMMON EQUITY %	EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-27 $ MIL	12 MONTHS' EARNINGS PER SHARE
USX-U.S. STEEL GROUP X	1547.0	28	43.0	NM	2.8	NM	2.9	4.6	23	NA	-18	2193	1.06
WALTER INDUSTRIES WLT [7]	452.7	9	5.1	NM	1.1	NM	5.3	12.4	6	2	NA	497	1.22
WEIRTON STEEL WS	317.7	20	0.7	NM	0.2	NM	18.8	38.7	5	-4	NA	291	1.40
WORTHINGTON INDUSTRIES WOR [3]	486.6	16	23.2	22	4.8	4.5	11.1	15.0	11	7	-4	1061	1.12
(C) OTHER METALS													
GROUP COMPOSITE	5246.2	30	135.2	3	2.6	3.3	4.7	4.2	46	8	-6	13561	0.42
COMMONWEALTH INDUSTRIES CMIN	312.8	31	1.3	-42	0.4	0.9	5.1	3.0	12	10	-66	124	0.62
ENGELHARD EC	1165.1**	9	68.0	43	5.0	3.9	22.0	28.1	10	5	6	2147	1.94
FREEPORT-McMORAN COPPER & GOLD FCX	467.6	12	18.7	-28	4.0	6.4	7.9	NM	16	NA	4	1904	0.56
GENERAL CABLE BGC	716.8	173	-0.0	NM	NM	3.1	6.4	9.6	16	13	33	260	0.47
INTERMET INMI	307.4	25	9.5	-22	3.1	4.9	6.4	13.9	5	29	6	184	1.32
MUELLER INDUSTRIES MLI	302.4**	5	26.6	23	8.8	7.5	15.7	18.1	12	19	29	1118	2.65
NEWMONT MINING NEM	359.6	10	6.6	-33	1.8	3.0	9.8	1.5	NM	20	-30	3996	0.13
PHELPS DODGE PD	1119.7	89	15.4	NM	1.7	0.1	NM	-7.7	NM	3	NA	3581	-1.89
SUPERIOR TELECOM SUT	495.0	-2	4.1	-60	0.8	2.1	6.8	25.4	9	26	38	249	1.39
17 NONBANK FINANCIAL													
INDUSTRY COMPOSITE	168157.5	20	18133.8	17	10.8	11.1	18.2	18.8	17	21	16	1045282	3.16
(A) FINANCIAL SERVICES													
GROUP COMPOSITE	110977.6	25	12987.2	31	11.7	11.1	20.8	23.1	18	25	17	737233	3.27
AMERICAN EXPRESS AXP	5657.0	14	656.0	14	11.6	11.6	17.3	25.3	28	9	15	68624	5.60
ASSOCIATES FIRST CAPITAL AFS	2057.9	4	299.7	-27	9.8	12.9	9.6	14.8	17	28	18	16240	1.99
BEAR STEARNS BSC [1]	2686.0	27	278.2	21	10.3	10.9	16.1	20.5	7	19	25	4854	5.78
BLOCK (H&R) HRB [4]	512.8	76	7.3	NM	NM	NM	21.2	22.6	21	12	7	4198	2.66
CAPITAL ONE FINANCIAL COF	1170.5	33	106.7	30	9.1	9.4	8.9	25.0	25	27	30	9088	1.84
CIT GROUP CIT	1467.0	142	143.9	57	9.8	16.2	6.5	7.8	6	22	NA	4517	2.20
CITIGROUP C	23708.0	16	3590.0	44	15.1	12.1	28.8	22.9	19	47	24	207103	3.19
CONCORD EFS CEFT	257.8	45	37.6	NM	14.6	NM	18.7	20.2	33	60	41	4620	0.67
COUNTRYWIDE CREDIT INDUSTRIES CCR [10]	775.2	18	99.8	-2	12.9	10.7	7.5	14.2	8	25	21	3170	3.52
DAIN RAUSCHER DRC	371.6	66	40.0	77	10.8	10.2	13.5	21.5	10	15	1	770	6.10
DUN & BRADSTREET DNB	495.7	1	57.8	12	11.7	12.3	NA	NM	19	NA	-15	4892	1.62
E*TRADE GROUP EGRP [3]	555.3	163	-23.2	NM	NM	4.3	NM	-4.1	NM	206	NA	6337	-0.33
EDWARDS (A.G.) AGE [10]	817.1	37	100.8	33	12.3	12.8	22.6	22.0	9	16	17	3334	4.08
EQUIFAX EFX	451.1	7	42.2	-4	9.4	10.4	20.5	99.3	16	-1	13	3501	1.66
FANNIE MAE FNM	10308.1**	19	1062.4	14	10.3	10.8	NA	24.3	16	12	15	64095	3.87
FINOVA GROUP FNV	400.2	34	10.4	-79	2.6	10.8	6.7	10.6	6	16	10	796	2.75
FIRST AMERICAN FINANCIAL FAF	646.2**	-12	1.0	-96	0.2	3.8	7.9	8.1	16	25	59	978	0.93
FRANKLIN RESOURCES BEN [2]	612.5**	11	143.4	40	23.4	18.5	17.7	19.7	15	24	15	7989	2.14
FREDDIE MAC FRE	6930.0	23	608.0	17	8.8	9.2	8.3	24.7	16	11	17	33582	3.07
GOLDMAN SACHS GROUP GS [1]	7984.0	38	887.0	-12	11.1	17.2	NM	23.3	18	NA	NA	42024	5.27
HELLER FINANCIAL HF	466.0	28	75.0	32	16.1	15.7	9.7	14.1	7	10	NA	1849	2.89
HOUSEHOLD INTERNATIONAL HI	2759.7	22	372.8	18	13.5	14.2	NA	23.7	12	27	12	19652	3.30
KNIGHT/TRIMARK GROUP NITE	513.1**	162	136.5	100	26.6	23.1	42.5	42.0	18	159	-79	4304	2.15
LANDAMERICA FINANCIAL GROUP LFG	406.6	-17	-2.1	NM	NM	3.9	4.8	5.4	9	25	33	228	1.95
LEHMAN BROTHERS HOLDINGS LEH [1]	6340.0	38	541.0	156	8.5	4.6	37.8	24.5	8	16	55	10193	10.27
MARSH & McLENNAN MMC	2665.0	13	337.0	21	12.6	11.9	14.1	18.8	36	26	11	26798	2.78
MERRILL LYNCH MER	11026.0	29	1037.0	70	9.4	7.1	20.4	24.4	15	20	20	38525	7.11
METRIS MXT	330.3	90	53.4	147	16.7	12.1	18.6	35.4	NM	29	NA	1462	0.16
MORGAN STANLEY DEAN WITTER MWD [1]	11614.0	34	1544.0	49	13.3	12.0	30.8	32.1	18	39	44	86923	4.56
PAINEWEBBER GROUP PWJ	2405.1**	25	176.3	10	7.3	8.4	31.0	21.5	12	15	75	6145	3.71
PRICE (T. ROWE) ASSOCIATES TROW	316.3**	29	75.0	40	23.7	21.7	32.6	31.0	19	30	33	4519	2.02
RAYMOND JAMES FINANCIAL RJF [3]	456.2	52	38.2	75	8.4	7.3	30.5	19.8	8	21	19	899	2.33
SCHWAB (CHARLES) SCH	1571.9	65	284.2	98	18.1	15.0	29.0	32.1	53	36	31	38093	0.86
SLM HOLDING SLM	995.3	38	153.6	35	15.4	15.8	34.3	71.7	10	-11	19	4982	3.30
TUCKER ANTHONY SUTRO TA	259.2	100	20.4	200	7.9	5.2	21.7	14.2	8	56	NA	345	1.96
(B) INSURANCE													
GROUP COMPOSITE	49290.3	12	4155.2	-11	8.4	10.7	9.8	12.6	18	17	15	275760	3.00
AETNA AET	7890.3**	39	189.4	0	2.1	3.0	6.6	6.5	12	14	9	8469	4.82
AFLAC AFL	2398.0	17	156.0	-20	6.5	9.6	8.8	13.7	26	19	18	12888	1.93
ALLSTATE ALL	7286.0	2	561.0	-46	7.7	15.2	12.0	13.5	8	14	39	18222	2.84
AMERICAN INTERNATIONAL GROUP AIG	10071.0**	10	1346.1	12	13.4	13.3	10.7	15.6	37	14	15	171178	3.32
AMERICAN NATIONAL INSURANCE ANAT	484.9	-10	62.6	-44	12.9	20.7	6.8	7.1	6	8	3	1347	8.23
BERKLEY (W.R.) BKLY	423.3	4	4.3	76	1.0	0.6	NM	-5.4	NM	-1	NA	538	-1.24
CINCINNATI FINANCIAL CINF	571.3	6	79.4	23	13.9	12.0	3.9	5.0	24	25	6	6366	1.62
CONSECO CNC	2205.9	11	77.4	-73	3.5	14.5	5.0	7.3	6	NA	3	2294	3.14
EVEREST RE GROUP RE	339.8	16	48.6	18	14.3	14.0	12.5	12.0	8	13	137	1329	3.49
HARTFORD FINANCIAL SERVICES GRP HIG	3498.0	6	238.0	0	6.8	7.2	10.8	15.8	13	12	12	10848	3.85
HARTFORD LIFE HLI	1446.0	8	150.0	42	10.4	7.9	17.4	22.2	13	22	140	6777	3.64
LIBERTY FINANCIAL L	323.4**	4	29.7	8	9.2	8.8	5.5	8.5	9	13	11	812	2.11
LINCOLN NATIONAL LNC	1669.2	0	170.2	37	10.2	8.7	10.4	11.4	13	9	-3	6060	2.46

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES		PROFITS				RETURN			5-YEAR GROWTH			
					MARGINS								
	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 %	1ST QUARTER 1999 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P/E 4-27	COMMON EQUITY %	EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-27 $ MIL.	12 MONTHS EARNINGS PER SHARE
MGIC INVESTMENT MTG	261.8	6	127.2	27	48.6	40.7	21.7	25.7	10	15	25	4902	4.58
NATIONWIDE FINANCIAL SERVICES NFS	795.7**	21	104.8	19	13.2	13.4	13.9	15.5	9	6	21	3405	3.10
OLD REPUBLIC INTERNATIONAL ORI	493.2	-9	55.3	-25	11.2	13.8	8.2	8.5	5	13	11	1712	1.66
PROGRESSIVE PGR	1601.5	14	46.6	NM	NM	7.5	9.6	5.7	33	21	9	4660	1.91
PROTECTIVE LIFE PL	449.3	18	42.0	18	9.6	9.7	13.2	18.4	6	25	18	1371	2.41
SAFECO SAFC	1795.8	-7	29.8	-33	1.7	2.1	6.2	3.8	11	10	-6	2500	1.79
ST. PAUL SPC	2252.7	18	352.1	64	16.3	10.3	11.2	14.6	8	19	-37	7029	3.92
TRANSATLANTIC HOLDINGS TRH	482.7	8	56.4	-24	12.2	17.3	10.3	10.3	17	17	16	2371	4.85
TRAVELERS PROPERTY CASUALTY EAP	2569.8	0	330.6	-1	12.9	13.0	14.9	15.7	NA	24	36		0.74
(C) SAVINGS & LOAN													
GROUP COMPOSITE	7889.6	12	991.4	9	12.6	13.0	NA	17.8	9	18	18	32289	2.78
ASTORIA FINANCIAL ASFC	395.4	5	55.5	4	14.0	14.2	NA	18.5	6	22	8	1415	4.49
BANK UNITED BANKU [5]	246.0	28	32.8	29	9.5	9.4	NA	14.4	9	12	-1	1958	3.48
CHARTER ONE FINANCIAL CF	416.2	4	111.7	9	18.3	17.4	NA	14.6	13	42	20	4164	1.58
DIME BANCORP DIME	521.2	8	65.3	11	12.4	12.3	NA	15.9	6	19	19	2094	2.24
GOLDEN STATE BANCORP GSB	1076.0	6	83.8	18	7.8	7.1	NA	20.4	6	NA	NA	1865	2.39
GOLDEN WEST FINANCIAL GDW	826.0	12	125.9	5	16.2	16.5	NA	15.2	12	18	20	6423	2.05
GREENPOINT FINANCIAL GPT	375.8	4	57.9	65	15.4	9.7	NA	11.8	6	5	16	1960	2.49
WASHINGTON MUTUAL WM	3726.7	16	458.5	3	12.3	13.9	NA	21.0	8	NA	16	14334	3.21
18 OFFICE EQUIPMENT & COMPUTERS													
INDUSTRY COMPOSITE	121884.5	10	11734.3	36	9.6	7.8	17.3	20.1	60	18	19	2404567	1.08
(A) BUSINESS MACHINES & SERVICES													
GROUP COMPOSITE	12560.2	9	342.3	-16	2.7	3.5	13.9	19.8	15	12	14	28563	1.75
COMPUCOM SYSTEMS CMPC	567.4	15	-10.3	NM	NM	NM	8.2	1.3	68	21	-10	163	0.06
DELUXE DLX	404.4	-2	44.3	-8	11.0	11.6	35.4	47.9	10	-11	9	1948	2.65
DIEBOLD DBD	344.6	22	31.3	7	9.1	10.3	15.2	15.5	16	12	11	2077	1.87
HON INDUSTRIES HNI	428.6	13	24.5	112	5.1	2.7	13.3	18.2	15	24	17	1402	1.66
MICROAGE MCAG [6]	1112.9	-23	-48.3	NM	NM	0.1	NM	NM	NM	2	NA		-10.63
MILLER (HERMAN) MLHR [7]	478.2	13	31.8	6	6.7	7.1	38.4	50.0	18	-7	68	2037	1.72
NCR NCR	1755.0	-6	-5.0	NM	NM	0.2	NM	20.6	12	5	NA	3645	3.33
PITNEY BOWES PBI	1302.0	5	151.6	9	11.6	13.2	16.0	45.1	16	-4	17	16943	2.49
REYNOLDS & REYNOLDS REY [8]	427.2	9	33.0	8	7.7	7.8	15.2	27.3	15	9	13	1826	1.60
STANDARD REGISTER SR	314.2	4	-1.9	NM	NM	4.2	6.2	7.4	9	7	6	300	1.43
STEELCASE SCS [10]	911.4	34	44.0	-7	4.8	7.0	10.5	11.8	10	-1	78	1771	1.21
TECH DATA TECD [11]	4779.6	24	37.1	-2	0.8	0.9	19.8	12.4	18	27	33	2183	2.24
WALLACE COMPUTER SERVICES WCS [5]	384.2	2	10.3	-46	2.7	5.0	8.1	12.1	6	7	11	428	1.64
(B) COMPUTERS & PERIPHERALS													
GROUP COMPOSITE	69802.6	6	4511.8	1	6.5	6.8	16.7	21.0	52	11	15	955283	1.35
APPLE COMPUTER AAPL [3]	1945.0	27	233.0	73	12.0	8.8	13.5	18.0	31	-4	4	20620	4.14
COMPAQ COMPUTER CPQ	9613.0	1	325.0	16	3.4	3.0	4.7	4.1	60	27	-8	50303	0.37
DELL COMPUTER DELL [11]	6801.0	31	436.0	3	6.4	8.2	34.6	31.4	85	32	73	123258	0.81
EMC EMC	1822.6	20	332.0	49	18.2	15.0	19.9	19.3	NM	49	29	168099	1.66
GATEWAY GTW	2337.9	11	106.0	37	5.6	4.7	29.0	28.0	39	39	29	17641	1.42
HEWLETT-PACKARD HWP [2]	11673.0	14	794.0	10	6.8	8.6	15.2	16.6	48	13	13	137800	2.89
INTERNATIONAL BUSINESS MACHINES IBM	19348.0	-5	1519.0	3	7.9	7.2	22.9	38.2	26	-3	26	202959	4.17
IOMEGA IOM	344.9	-11	51.8	NM	15.0	0.1	NM	-13.9	NM	55	NA	992	-0.19
LEXMARK INTERNATIONAL GROUP LXK	891.7	13	80.2	18	9.0	8.6	42.2	19.1	47	16	62	14666	2.43
MAXTOR MXTR	601.3	1	27.6	52	4.0	2.5	NM	10.4	NM	NA	NA	1223	-0.42
MICRON ELECTRONICS MUEI [1]	333.8	-11	5.7	-17	1.7	1.1	8.1	8.6	26	13	-12	1018	0.40
PALM PALM [7]	272.3	118	11.0	66	4.0	5.2	NA	NM	NM	NA	NA	14398	0.07
QUANTUM DLT & STORAGE SYSTEMS DSS [9]	165.2	-6	22.3	-61	6.1	14.8	18.0	24.6	14	NA	NA	1897	0.66
QUANTUM HARD DISK DRIVE GROUP HDD [9]	901.9	-2	17.0	NM	1.9	NM	NM	-14.8	NM	NA	NA	986	-1.26
SEAGATE TECHNOLOGY SEG [6]	1573.0	-13	136.0	66	8.6	4.5	23.5	38.1	10	23	28	10551	4.77
SILICON GRAPHICS SGI [6]	563.7	-9	18.1	NM	NM	NM	NM	4.4	NM	8	-25	347	-0.28
SUN MICROSYSTEMS SUNW [6]	4004.7	35	508.1	94	12.7	8.9	29.8	25.8	NM	23	38	162468	0.92
SYMBOL TECHNOLOGIES SBL	320.0	23	33.7	30	8.9	9.4	16.4	15.5	52	15	28	7168	0.87
UNISYS UIS	1668.7	-8	106.5	-3	6.4	6.0	22.6	24.2	14	2	NA	7313	1.66
XEROX XRX	4431.0	3	243.0	NM	NM	8.0	7.5	10.3	26	5	3	18020	1.10
(C) COMPUTER SOFTWARE & SERVICES													
GROUP COMPOSITE	39521.7	18	6880.3	83	17.4	11.2	18.4	19.4	72	33	27	1420721	0.89
ADOBE SYSTEMS ADBE [1]	282.2	24	64.6	60	22.9	16.9	39.2	41.5	60	-1	73	14779	2.05
AFFILIATED COMPUTER SERVICES ACS [4]	510.4	17	27.8	24	5.5	5.1	10.6	15.2	17	65	25	1516	1.96
AMERICA ONLINE AOL [4]	1836.0	47	439.0	7	23.9	32.6	13.3	10.5	NM	71	114	137762	0.41
AMERICAN MANAGEMENT SYSTEMS AMSY	311.1	7	15.3	-3	4.9	5.4	15.9	17.0	32	18	20	1745	1.32
AUTOMATIC DATA PROCESSING AUD [5]	1719.7**	14	271.3	20	15.8	14.9	17.8	18.7	43	18	14	34192	1.26
BMC SOFTWARE BMCS [4]	475.4	23	98.0	-4	20.6	26.4	15.3	13.6	31	39	39	11095	1.48
CABLETRON SYSTEMS CS [10]	381.8	11	421.2	NM	NM	NM	17.8	21.6	10	22	20	4301	2.46
CADENCE DESIGN SYSTEMS CDN	257.5	-23	-11.8	NM	NM	15.8	NM	-8.0	NM	52	NA	4121	-0.31

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH		MARKET VALUE SHARES OUTSTANDING 4/27 $ MIL.	12 MONTHS' EARNINGS PER SHARE
	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 %	1ST QUARTER 1999 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4/27	COMMON EQUITY %	EARNINGS PER SHARE %		
CERIDIAN CEN	361.8	13	16.8	-60	4.6	13.0	9.9	14.3	25	44	6	3094	0.65
CISCO SYSTEMS CSCO [1]	4350.0	53	825.0	193	19.0	8.9	14.4	16.3	NM	60	37	475410	0.37
COMDISCO CDO [2]	1013.0**	6	43.0	NM	4.2	NM	8.7	12.3	32	11	9	4625	0.94
DST SYSTEMS DST	340.4	14	56.2	67	16.5	11.3	8.3	11.0	29	47	21	4585	2.48
ELECTRONIC DATA SYSTEMS EDS	4530.4	5	288.9	NM	6.4	NM	11.0	15.9	49	3	-10	33869	1.49
FIRST DATA FDC	1317.8**	4	165.0	17	12.5	11.1	26.9	31.3	18	23	16	20957	2.83
FISERV FISV	396.4	18	43.2	29	10.9	9.9	10.8	12.6	39	27	22	5648	1.17
GALILEO INTERNATIONAL GLC	440.1	9	47.4	-39	10.8	18.3	24.0	38.7	11	NA	10	1991	1.98
GTECH HOLDINGS GTK [10]	267.2	5	30.1	37	11.3	8.6	16.8	31.6	8	7	12	705	2.58
INACTIVE IVIN	328.8	-4	20.5	496	6.2	1.0	8.3	9.4	17	-6	NA	1002	1.59
INGRAM MICRO IM	7796.4	18	94.0	144	1.2	0.6	9.1	17.0	17	52	21	2818	1.59
INTUIT INTU [3]	425.5	14	57.3	-38	13.5	24.9	15.9	15.9	24	53	NA	8044	1.68
MICROSOFT MSFT [4]	5656.0	23	2385.0	24	42.2	41.7	26.6	23.1	42	44	46	363366	1.67
NOVELL NOVL [5]	336.0	11	44.8	65	14.2	10.1	12.8	32.8	32	-2	-8	6288	0.60
ORACLE ORCL [7]	2449.4	18	763.2	160	31.2	14.1	43.7	48.0	NM	37	33	219446	0.64
PEOPLESOFT PSFT	375.4	7	16.8	NM	4.5	NM	1.3	1.3	NM	55	NA	3809	0.05
PRICELINE.COM PCLN	313.8	535	-13.6	NM	NM	NM	NM	NM	NM	NA	NA	9509	-7.71
SABRE HOLDINGS TSG	645.0**	1	66.0	29	10.2	14.6	25.0	24.2	15	30	21	4445	2.31
SEBEL SYSTEMS SEBL	309.4	119	49.3	113	14.9	16.4	15.1	18.2	NM	164	272	23620	0.63
SOFTWARE SPECTRUM SSPE [8]	313.1	20	2.2	3	0.7	0.8	7.6	7.4	17	6	-8	63	1.40
SUNGARD DATA SYSTEMS SDS	384.7	9	41.5	NM	10.8	NM	13.1	12.3	40	26	6	4486	0.87
3COM COMP. [7]	1416.0	0	506.3	464	35.8	6.4	27.6	22.4	15	63	-NI	13167	2.54
19 PAPER & FOREST PRODUCTS													
INDUSTRY COMPOSITE	28914.6	20	1774.8	88	6.1	3.9	8.7	13.4	17	3	-4	97249	2.54
(A) FOREST PRODUCTS													
GROUP COMPOSITE	6753.1	51	293.3	100	4.3	3.3	10.1	19.7	8	-18	-11	9214	3.56
GEORGIA-PACIFIC GROUP GP	5383.0	60	194.0	96	3.6	3.0	11.0	21.6	8	NA	-5	6381	4.62
LOUISIANA-PACIFIC LPX	776.9	29	57.7	112	7.4	4.5	8.8	18.2	9	7	NA	1338	2.33
RAYONIER RYN	269.1	28	35.5	135	12.3	6.7	6.8	13.6	14	-2	-5	1248	3.17
UNIVERSAL FOREST PRODUCTS UFPI	304.1	1	6.1	13	2.0	1.8	10.9	14.7	9	26	10	287	1.53
(B) PAPER													
GROUP COMPOSITE	22161.6	13	1481.5	85	6.7	4.1	8.4	12.4	19	6	-4	88035	2.37
BOISE CASCADE BCC	1945.3	21	39.6	145	2.0	1.0	8.6	13.8	9	9	NA	1883	3.44
BOWATER BOW	520.5	-9	17.2	-84	3.3	18.6	-0.2	-0.6	NM	20	-32	2758	-0.18
CHAMPION INTERNATIONAL CHA	1368.0	7	98.0	133	7.2	3.3	6.9	9.2	22	-1	7	6401	3.04
CONSOLIDATED PAPERS CDP	483.5	5	25.3	81	5.2	3.0	4.2	5.7	41	6	-11	3437	0.66
FORT JAMES FJ	1676.6	0	96.4	-18	5.8	7.0	9.2	31.9	16	-11	23	5228	1.52
INTERNATIONAL PAPER IP	6400.0	7	378.0	NM	5.9	0.5	4.7	5.3	29	8	28	15477	1.31
KIMBERLY-CLARK KMB	3387.2	8	470.2	26	13.9	12.0	24.1	34.6	18	11	45	31829	3.26
MEAD MEA	915.8	6	25.1	10	2.7	2.7	NA	8.6	17	2	7	3546	2.01
POTLATCH PCH	438.6	5	2.4	290	0.6	0.2	3.8	4.8	27	0	-12	1140	1.47
WEYERHAEUSER WY	3911.0	47	244.0	495	6.2	1.1	7.7	11.4	14	8	-8	12066	3.81
WILLAMETTE INDUSTRIES WLL	1114.3	21	85.3	170	7.7	3.4	9.1	14.3	14	8	-12	4292	2.81
20 PUBLISHING & BROADCASTING													
INDUSTRY COMPOSITE	22629.0	17	2692.8	158	11.9	5.4	8.0	13.7	31	36	20	383971	1.88
(A) BROADCASTING													
GROUP COMPOSITE	6539.0	44	1943.1	NM	29.7	1.5	6.3	9.7	31	88	54	187383	1.72
CBS CBS	2403.0	36	-40.0	NM	NM	1.4	0.8	0.6	NM	61	NA	44545	0.13
CLEAR CHANNEL COMMUNICATIONS CCU	782.5	108	-39.4	NM	NM	NM	0.7	0.8	NM	158	9	23610	0.19
COX COMMUNICATIONS COX	779.9	56	1067.5	325	NM	50.4	9.2	13.5	15	56	NA	25782	2.80
ECHOSTAR COMMUNICATIONS DISH	565.7	63	-185.1	NM	NM	NM	NM	NM	NM	NA	NA	26236	-1.38
MEDIAONE GROUP UMG	706.0	6	1158.0	NM	NM	NM	14.6	26.5	10	NA	65	49442	7.31
TV GUIDE TVGIA	299.1	48	0.9	-93	0.3	5.3	0.8	-0.5	NM	68	-16	8129	-0.04
USA NETWORKS USAI	1002.8	38	-18.9	NM	NM	1.0	2.0	-2.0	NM	341	NA	7822	-0.16
(B) PUBLISHING													
GROUP COMPOSITE	16090.0	9	749.8	-23	4.7	6.6	10.6	22.0	32	12	17	196588	2.05
BELO (A.H.) BLC	364.5	12	15.4	22	4.2	3.9	7.0	12.9	11	38	3	1928	1.52
DOW JONES DJ	579.6	25	88.7	22	15.3	11.2	44.2	56.9	19	23	-19	5863	3.41
GANNETT GCI	1364.4	15	203.0	19	14.9	14.3	13.4	20.6	19	21	18	17701	3.39
HARCOURT GENERAL H [2]	402.9	4	-33.4	NM	NM	NM	NA	NA	22	-7	2	2618	1.66
KNIGHT-RIDDER KRI	807.7	5	160.9	156	19.9	8.2	15.2	23.8	11	10	25	3861	4.58
McCLATCHY MNI	288.6	3	15.6	16	5.6	5.3	6.3	9.6	11	16	11	1439	1.88
McGRAW-HILL MHP	802.5	12	57.6	136	7.2	3.4	22.2	27.1	22	13	14	10478	2.31
MEREDITH MDP [6]	286.9	8	24.8	12	8.6	8.3	11.7	24.2	18	8	29	1394	1.23
NEW YORK TIMES NYT	843.2	14	83.1	35	9.9	8.3	16.6	22.9	22	-1	19	7148	1.86
PRIMEDIA PRM	494.6	2	39.4	NM	NM	NM	NM	NM	NM	NA	NA	3104	-1.13
READER'S DIGEST ASSOCIATION RDA [6]	620.4	3	25.1	0	4.0	4.1	40.3	45.8	21	-18	-27	3308	1.49
SCHOLASTIC SCHL [7]	312.8	17	2.0	NM	0.6	0.1	7.9	10.5	19	11	-14	765	2.50

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH			
	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 %	1ST QUARTER 1999 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E (4-2)	COMMON EQUITY %	EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-22 $ MIL.	12 MONTHS EARNINGS PER SHARE
SCRIPPS (E.W.) SSP	410.9	9	33.6	5	8.2	8.5	10.0	12.8	24	0	6	3999	1.89
TIME WARNER TWX	6549.0	8	-91.0	NM	NM	2.3	7.9	17.4	71	46	NA	113747	1.25
TIMES MIRROR TMC	745.3	7	113.3	126	15.2	7.2	15.5	NM	21	NA	18	5798	4.52
TRIBUNE TRB	762.6	9	71.2	-39	9.3	17.3	17.3	36.0	8	23	42	9222	4.58
WASHINGTON POST WPO	546.8	5	24.1	-47	4.4	8.1	11.6	14.9	24	5	15	4597	20.39
21. SERVICE INDUSTRIES													
INDUSTRY COMPOSITE	69250.6	29	1895.0	22	2.7	2.9	8.0	11.4	31	25	9	195793	1.03
(A) CONSTRUCTION & ENGINEERING													
GROUP COMPOSITE	6802.3	4	112.8	9	1.7	1.6	4.1	4.7	46	9	1	7011	0.61
EMCOR GROUP EMCG	741.5	37	4.9	140	0.7	0.4	12.8	17.2	9	NA	NA	235	2.41
FLUOR FLR [7]	2996.5	11	52.3	2	1.7	1.5	6.4	6.5	24	4	-8	2535	1.38
FOSTER WHEELER FWC	822.0	-18	8.4	-46	1.0	1.5	NM	-40.1	NM	-4	NA	382	-3.70
HADDES ENGINEERING GROUP JEC [7]	881.8	13	18.1	12	2.1	2.1	8.6	10.5	16	17	25	804	1.25
MASTEC MTZ	272.7	32	11.5	164	4.2	2.1	13.2	20.2	47	44	36	2372	1.79
MORRISON KNUDSEN MK [1]	577.8	36	9.0	2	1.6	2.3	10.3	11.9	10	33	90	484	0.91
URS URS [1]	512.9	158	6.6	52	1.7	2.8	6.6	15.8	8	48	30	199	2.03
(B) INDUSTRIAL DISTRIBUTION													
GROUP COMPOSITE	33962.6	47	785.7	31	2.3	2.6	9.5	13.0	31	18	7	81177	1.60
AAR AIR [7]	256.8	13	13.0	7	4.3	4.5	10.7	13.8	10	13	34	418	1.61
APPLIED INDUSTRIAL TECHNOLOGIES AFZ [7]	413.2	7	8.3	-30	2.0	1.6	8.5	9.5	12	18	3	352	1.36
ARROW ELECTRONICS ARW	2769.4	26	63.1	123	2.3	1.3	7.3	9.5	27	31	-2	4218	1.64
AUDIOVOX VOXX [1]	340.2	62	5.3	78	1.6	1.4	8.9	9.3	23	10	-27	243	1.48
AVNET AVT [7]	2586.2	66	43.0	60	1.5	1.6	7.7	10.1	15	4	14	3346	4.02
BELL MICROPRODUCTS BELM	388.3	67	3.2	11	0.9	0.9	2.1	10.2	14	11	4	142	1.09
BOISE CASCADE OFFICE PRODUCTS BOP	941.8	11	19.0	3	2.0	2.2	9.1	11.9	NA	21	8		1.15
CAMERON ASHLEY BUILDING PRODS. CAB [7]	235.8	14	-1.2	NM	NM	NM	7.6	12.0	10	21	8	150	1.60
CELLSTAR CLST [7]	589.9	14	8.4	-39	1.6	3.0	16.7	24.7	6	28	19	346	1.03
DYNEGY DYN	5348.3	78	69.0	146	1.3	0.9	9.8	33.6	41	34	37	7010	1.50
ENRON ENE	13145.0	72	238.0	34	2.6	3.3	9.0	12.1	54	28	1	51402	1.33
GENUINE PARTS GPC	2078.0	9	91.7	7	4.4	4.5	13.5	17.6	12	7	6	4808	2.15
GRAINGER (W.W.) GWW	1195.2	10	41.2	-27	3.4	5.2	10.7	11.2	25	5	10	4027	1.76
HUGHES SUPPLY HUG [11]	722.3	20	11.4	4	1.6	1.8	8.0	12.8	5	42	19	357	2.60
KAMAN KAMNA	260.0**	4	8.6	18	3.3	2.9	7.1	8.3	10	20	6	248	1.11
PATTERSON DENTAL PDCO [7]	266.2	13	17.2	25	6.6	6.0	19.3	19.4	27	32	20	1682	1.80
RELIANCE STEEL & ALUMINUM RS	430.8	16	16.1	15	3.7	3.8	9.9	14.4	11	24	22	634	2.14
UNITED STATIONERS USTR	979.4	19	23.9	28	2.4	2.3	12.9	20.6	13	37	67	1162	2.59
WESCO INTERNATIONAL WCC	923.4	19	9.2	217	1.0	0.4	11.9	35.3	10	NA	NA	356	0.88
(C) POLLUTION CONTROL													
GROUP COMPOSITE	818.6	23	55.0	12	6.7	7.4	9.0	13.6	11	72	0	2484	1.18
IT GROUP ITX	317.1	23	4.8	-16	1.5	2.2	8.3	12.4	6	6	NA	159	1.17
REPUBLIC SERVICES RSG	501.5	23	50.2	16	10.0	10.6	9.2	13.8	11	NA	NA	2325	1.18
(D) PRINTING & ADVERTISING													
GROUP COMPOSITE	3936.8	14	266.6	46	6.8	5.3	19.0	27.5	28	6	16	35329	1.82
ADVO AD [7]	262.4	4	8.4	37	3.2	2.4	38.3	NM	15	NA	12	621	2.04
DONNELLEY (R.R.) DNY	757.8	1	48.1	2	6.3	6.1	17.3	27.6	9	-12	5	2627	2.49
INTERPUBLIC GROUP IPG	1089.6	20	36.3	-19	3.3	4.9	14.6	19.3	36	20	20	11722	1.08
OMNICOM GROUP OMC	1379.0	20	143.5	119	10.4	5.7	20.1	28.4	38	24	22	16902	2.42
YOUNG & RUBICAM YNR	448.3	17	31.6	60	7.0	5.1	34.3	42.2	24	NA	NA	3857	2.16
(E) OTHER SERVICES													
GROUP COMPOSITE	23730.3	18	674.9	9	2.8	3.1	4.9	7.5	34	46	17	69792	0.61
ABM INDUSTRIES ABM [2]	426.6**	9	7.5	8	1.8	1.8	13.2	14.3	15	18	17	564	1.68
ACNIELSEN ART	374.0	6	0.2	-97	0.1	1.7	12.7	13.6	18	5	67	1269	1.19
AUTONATION AN	5230.2	15	64.7	-11	1.2	1.3	NM	-0.5	NM	125	NA	1238	-0.02
CARMAX GROUP KMX [5]	504.2	35	-1.7	NM	NM	NM	1.6	0.3	NM	NA	NA	56	0.01
CASEY'S GENERAL STORES CASY [8]	403.3*	38	5.2	-41	1.3	3.0	8.9	12.1	15	14	15	573	0.74
CDI CDI	621.4	8	11.8	1	2.6	3.0	14.5	15.3	8	17	17	417	2.60
CENDANT CD	1128.0**	-14	-127.0	-25	11.3	12.8	NM	-12.3	56	53	NA	11360	0.27
CINTAS CTAS [1]	473.9	9	49.1	27	10.4	8.9	12.9	15.7	45	23	19	6990	0.88
CONVERGYS CVG	513.6	28	44.4	37	8.6	8.1	19.7	15.4	47	NA	14	6971	0.96
HANDLEMAN HDL [8]	343.2	18	14.7	160	4.3	1.9	17.9	18.6	8	-5	NA	319	1.33
IMS HEALTH RX	352.5	13	82.9	89	23.5	14.0	47.3	58.8	19	-15	25	5148	0.82
KELLY SERVICES KELYA	1080.3	5	18.1	8	1.5	1.5	14.6	14.8	10	6	8	750	2.39
LITHIA MOTORS LAD	395.6	78	5.0	64	1.3	1.4	13.4	14.1	10	220	25	192	1.68
MANPOWER MMS	2972.5	19	25.6	24	0.9	0.8	18.6	23.8	18	22	3	2726	1.98
PANTRY PTRY [7]	584.1*	62	-2.5	NM	NM	0.0	6.3	7.9	17	NA	NA	200	0.67
PAYCHEX PAYX	366.2	26	49.6	31	12.9	11.8	33.4	33.4	76	32	35	13180	0.70
PITTSTON PZB	1019.1	7	10.5	-17	1.0	1.3	5.4	8.5	25	NA	-1	1139	0.64
QUINTILES TRANSNATIONAL QTRN	414.8	15	-37.2	NM	NM	0.9	3.6	2.6	50	63	43	1612	0.26

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES: 1ST QUARTER 2000 $ MIL.	SALES: CHANGE FROM 1999 %	PROFITS: 1ST QUARTER 2000 $ MIL.	PROFITS: CHANGE FROM 1999 %	MARGINS: 1ST QUARTER 2000 %	MARGINS: 1ST QUARTER 1999 %	RETURN: ON INVESTED CAPITAL %	RETURN: ON COMMON EQUITY %	P-E 4-27	5-YEAR GROWTH: COMMON EQUITY %	5-YEAR GROWTH: EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-27 $ MIL.	12 MONTHS' EARNINGS PER SHARE
REGIS RGIS *	288.1	15	11.6	46	4.0	3.2	10.7	14.8	12	33	24	474	0.94
ROBERT HALF INTERNATIONAL RHI	632.8	30	43.4	23	6.9	7.3	24.9	26.0	36	28	41	5209	1.62
SERVICE CORP. INTERNATIONAL SRV	869.5	-4	58.2	63	7.8	4.8	-0.1	-0.2	NM	22	NA	1377	-0.02
SERVICEMASTER SVM	1346.5	21	38.0	10	2.9	3.2	8.5	14.8	24	NA	0	4004	0.56
SONIC AUTOMOTIVE SAH	1464.4	147	17.4	160	1.2	1.1	10.7	14.7	8	130	90	454	1.42
STAFF LEASING SFF	231.3	13	-0.9	NM	NM	0.9	19.3	19.3	5	NA	NA	77	0.70
STAFFMARK STAF	294.3	5	1.9	-70	0.7	2.3	6.2	8.9	8	67	25	213	0.87
UNITED RENTALS URI	579.0	48	17.4	7	3.0	4.1	6.3	10.2	9	NA	NA	895	1.14
VOLT INFORMATION SCIENCES VOL [2]	500.1	2	3.6	41	0.7	0.5	11.1	12.8	17	22	17	515	1.96
22 TELECOMMUNICATIONS													
INDUSTRY COMPOSITE	86434.1	12	8909.1	26	10.3	9.1	8.3	12.9	34	29	9	1250464	1.56
(A) EQUIPMENT & SERVICES													
GROUP COMPOSITE	47280.5	16	3974.4	98	8.4	4.9	4.8	7.0	50	42	22	786333	1.08
ADC TELECOMMUNICATIONS ADCT [2]	544.6	35	56.3	NM	10.3	NM	10.9	11.0	NM	32	16	19018	0.50
AT&T T	15836.0	12	1741.0	62	11.0	7.8	3.4	5.3	25	28	32	214159	1.89
CENTURYTEL CTL	275.9	-4	49.3	-19	17.8	21.2	8.0	12.4	18	22	20	4101	1.62
IDT IDTC [3]	275.5	71	103.0	NM	37.4	1.3	18.7	26.3	11	284	NA	1045	2.70
LUCENT TECHNOLOGIES LU [3]	19256.0	17	754.0	41	7.4	6.1	24.7	23.0	55	69	124	204795	1.16
MCI WORLDCOM WCOM	9578.0	9	1301.0	78	13.0	8.9	6.8	8.8	29	109	NA	129000	1.55
NEXTEL COMMUNICATIONS NXTL	1079.0	60	-279.0	NM	NM	NM	NM	-157.3	NM	6	NA	36758	-3.81
PANAMSAT SPOT	299.1	68	56.6	86	18.9	15.7	3.6	5.2	44	69	61	6622	1.00
QWEST COMMUNICATIONS INTL. Q	1216.8	39	12.8	163	1.0	0.5	5.1	6.6	70	824	NA	32383	0.61
SCIENTIFIC-ATLANTA SFA *	449.7	38	38.3	93	8.6	6.5	18.0	18.0	71	12	26	9839	0.88
SPRINT FON GROUP FON	4397.0	7	445.0	3	10.1	10.6	11.2	15.5	31	NA	9	48315	1.86
SPRINT PCS GROUP PCS	3177.0	85	-610.0	NM	NM	NM	NM	-87.6	NM	NA	NA	47661	-2.54
TELEPHONE & DATA SYSTEMS TDS	504.3	11	39.4	19	7.8	7.3	10.0	13.9	20	10	19	5590	5.13
TELLABS TLAB	639.5	38	120.1	19	18.8	21.5	25.7	25.8	38	46	50	21727	1.41
U.S. CELLULAR USM	360.1	10	47.1	69	13.1	8.5	10.5	13.9	18	15	59	3340	3.48
(B) TELEPHONE COMPANIES													
GROUP COMPOSITE	39153.6	7	4934.6	-2	12.6	13.8	14.3	27.1	23	14	7	464131	2.29
ALLTEL AT	1603.4	6	216.0	16	13.5	12.6	12.2	19.3	28	20	10	20612	2.16
BELL ATLANTIC BEL	8534.0	7	731.0	-26	8.6	14.3	11.8	23.9	25	23	6	93167	1.40
BELLSOUTH BLS	6487.0	9	1001.0	63	15.4	10.3	16.8	24.5	25	4	16	94446	2.01
BROADWING BRW	470.2	94	-55.4	NM	NM	10.2	NM	-2.2	NM	8	-14	5424	-0.22
GTE GTE	6100.0	4	816.0	-11	13.4	15.5	16.5	36.6	17	3	7	67783	4.06
SBC COMMUNICATIONS SBC	12582.0	6	1822.0	3	14.5	15.0	16.1	27.2	22	27	5	146850	1.98
U S WEST USW	3377.0	7	404.0	3	12.0	12.4	11.9	88.4	33	NA	-1	35849	2.17
23 TRANSPORTATION													
INDUSTRY COMPOSITE	56227.5	11	2002.2	2	3.6	3.9	7.2	12.4	20	20	17	175201	1.86
(A) AIRLINES													
GROUP COMPOSITE	23456.4	11	361.5	-34	1.5	2.6	9.7	18.2	10	45	27	33431	2.85
ALASKA AIR GROUP ALK	492.5	7	-7.5	NM	NM	4.4	8.4	11.4	7	43	35	759	4.02
AMERICA WEST HOLDINGS AWA	562.9	6	14.6	-44	2.6	5.0	13.1	15.1	5	NA	NA	512	2.80
AMR AMR	4577.0	14	89.0	424	1.9	0.4	6.4	9.5	7	17	28	5013	4.63
AMTRAN AMER	321.4	16	-2.0	NM	NM	6.0	7.0	19.8	6	13	67	203	2.13
CONTINENTAL AIRLINES CAL	2277.0	12	14.0	-84	0.6	4.2	10.7	28.0	7	68	17	2474	5.72
DELTA AIR LINES DAL [4]	3960.0	13	223.0	3	5.6	6.2	14.1	25.7	6	26	61	7010	8.99
NORTHWEST AIRLINES NWAC	2570.0	13	3.0	NM	0.1	NM	9.6	NM	7	NA	6	2011	3.65
SOUTHWEST AIRLINES LUV	1242.8	18	95.6	0	7.7	8.9	11.7	16.9	24	18	25	10488	0.89
TRANS WORLD AIRLINES TWA	809.0	6	-63.3	NM	NM	NM	NM	NM	NM	NA	NA	131	-6.13
UAL UAL	4546.0	9	110.0	41	2.4	1.9	13.2	22.1	6	59	110	2929	10.15
US AIRWAYS GROUP U	2098.0	1	-115.0	NM	NM	2.2	5.7	NM	79	NA	48	1901	0.36
(B) RAILROADS													
GROUP COMPOSITE	8793.0	4	409.0	-26	4.7	6.5	4.5	7.5	16	12	-9	32839	1.58
BURLINGTON NORTHERN SANTA FE BNI	2238.0	3	243.0	3	10.9	10.8	7.0	14.7	10	28	22	10881	2.49
CSX CSX	2147.0	-16	29.0	-61	1.4	3.0	2.0	0.1	NM	10	-32	4563	0.02
NORFOLK SOUTHERN NSC	1495.0**	45	-48.0	NM	NM	10.9	2.7	1.3	84	6	-14	6769	0.21
UNION PACIFIC UNP	2913.0	6	185.0	43	6.4	4.7	5.3	10.5	17	8	-8	10696	3.34
(C) TRANSPORTATION SERVICES													
GROUP COMPOSITE	11502.3	15	318.6	21	2.8	2.6	8.0	14.9	14	17	10	22810	2.18
AVIS GROUP HOLDINGS AVI	1013.0	79	19.6	29	1.9	2.7	5.3	12.6	8	22	30	623	2.62
CNF TRANSPORTATION CNF	1462.8	17	39.3	-7	2.7	3.4	12.4	18.5	9	7	30	1061	3.30
FEDEX FDX [7]	4518.1	10	113.1	45	2.5	1.9	10.7	14.3	17	20	16	11000	2.22
FRITZ FRTZ [7]	382.0	20	-1.4	NM	NM	NM	NA	5.4	23	41	-22	243	0.40
GATX GMT	445.1	3	40.6	4	9.1	9.1	6.3	18.2	12	3	9	1740	3.05
HERTZ HRZ	1135.2	10	56.3	15	5.0	4.7	10.7	20.5	10	51	NA	3384	3.17

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES		PROFITS		MARGINS		RETURN			5-YEAR GROWTH			
	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 %	1ST QUARTER 1999 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-27	COMMON EQUITY %	EARNINGS PER SHARE %	MARKET VALUE SHARES OUTSTANDING 4-27 $ MIL.	12 MONTHS' EARNINGS PER SHARE
HUB GROUP HUBG	328.6	7	-0.3	NM	NM	0.6	6.3	6.5	10	34	-2	77	1.11
ROBINSON (C.H.) WORLDWIDE CHRW	650.1	28	15.2	41	2.3	2.1	21.4	23.4	35	14	17	2082	1.39
RYDER SYSTEM R	1308.6	13	19.8	82	1.5	0.9	4.6	5.9	18	0	-7	1335	1.24
WABTEC WAB	258.9	-19	18.4	-19	8.3	6.6	8.0	23.1	14	NA	2	564	0.78
(D) TRUCKING & SHIPPING													
GROUP COMPOSITE	12475.8	14	913.0	55	7.3	5.4	8.4	10.7	50	16	0	88121	1.13
ALLIED HOLDINGS AHI	282.9	8	-1.0	NM	NM	NM	5.2	6.9	13	7	-27	58	0.58
AMERICAN FREIGHTWAYS AFWY	325.2	23	13.4	97	4.1	2.6	10.0	17.6	11	11	17	513	1.67
ARKANSAS BEST ABFS	443.0	12	13.2	76	3.0	1.9	15.6	23.8	5	0	22	256	2.37
CONSOLIDATED FREIGHTWAYS CFWY	593.6	6	-3.0	NM	NM	1.2	NM	-2.7	NM	7	NM	141	-0.32
HUNT (J.B.) TRANSPORT SERVICES JBHT	533.6	13	6.0	-53	0.9	2.3	5.3	6.6	22	1	-1	575	0.74
LANDSTAR SYSTEM LSTR	327.0	5	8.3	12	2.5	2.4	23.9	44.5	13	-1	15	539	4.73
ROADWAY EXPRESS ROAD	677.3	17	10.4	31	1.5	1.3	16.6	16.6	9	4	24	451	2.52
SWIFT TRANSPORTATION SWFT	291.5	24	10.7	-12	3.7	5.2	10.8	16.6	19	30	24	3187	1.00
UNITED PARCEL SERVICE UPS	7220.0	14	813.0	63	11.3	7.9	7.8	9.6	66	19	-4	75631	1.60
USFREIGHTWAYS USF	608.2	18	22.3	27	3.7	3.4	15.4	19.5	11	23	22	1139	1.95
WERNER ENTERPRISES WERN	291.4	21	10.3	-16	3.5	5.2	8.4	11.7	15	12	12	844	1.21
YELLOW YELL	882.1	21	10.5	119	5.2	0.7	8.7	13.8	9	-2	NA	467	2.24
24 UTILITIES													
INDUSTRY COMPOSITE	81964.4	21	6064.7	33	7.4	6.7	6.8	12.6	14	4	3	295439	2.38
(A) ELECTRIC, WATER & COGENERATION													
GROUP COMPOSITE	70199.1	21	5005.0	28	7.1	6.7	6.9	12.9	13	3	3	257433	2.49
AES AES	1476.0	131	161.0	NM	12.3	NM	9.0	16.6	36	49	20	17427	2.15
ALLEGHENY ENERGY AYE	866.8	26	67.7	-12	10.1	14.5	8.0	16.2	13	-3	6	3396	3.42
ALLIANT ENERGY LNT	620.9	14	21.0	-52	3.4	7.0	6.3	8.1	14	16	-3	2431	2.21
AMEREN AEE	825.4	12	64.6	12	7.8	7.8	6.8	12.7	14	3	-1	5111	2.76
AMERICAN ELECTRIC POWER AEP	1746.0	-3	104.0	-31	6.0	8.9	9.6	9.4	16	1	0	7400	2.43
AVISTA AVA	1352.0	14	10.5	-46	0.8	1.6	2.9	5.3	NM	-15	-28	1412	-0.50
CAROLINA POWER & LIGHT CPL	877.1	15	86.0	-7	9.8	12.1	5.9	10.9	17	5	4	5986	2.24
CENTRAL & SOUTH WEST CSR	1799.0	6	38.0	-15	2.9	3.8	7.3	12.5	10	4	1	4811	2.38
CINERGY CIN	1583.1	13	139.8	9	8.8	9.2	8.2	15.6	10	1	6	4311	2.60
CMP GROUP CTP	259.4	-3	29.3	14	10.9	12.4	10.0	9.2	19	1	-14	930	1.54
CONECTIV CV	989.5	5	37.7	-30	3.8	5.7	5.6	8.0	13	12	-2	1677	1.43
CONSOLIDATED EDISON ED	2318.6	31	191.5	6	8.3	10.1	7.6	12.8	11	4	1	7356	3.30
CONSTELLATION ENERGY GROUP CEG	992.2	1	75.4	-13	7.6	8.8	7.0	10.5	20	2	2	5076	1.67
DOMINION RESOURCES D	2605.0	55	141.6	NM	7.0	NM	6.6	11.8	11	7	1	8477	4.05
DPL DPL	386.6	1	50.1	-33	13.0	18.9	7.4	12.5	19	5	5	3649	1.22
DTE ENERGY DTE	1387.8	15	117.6	2	9.9	11.2	7.8	12.4	10	3	5	4764	3.35
DUKE ENERGY DUK	7236.0	74	333.0	28	5.4	7.4	6.1	10.1	24	17	-4	21561	2.47
EDISON INTERNATIONAL EIX	2723.3	30	115.2	-23	4.2	7.1	5.2	11.3	11	-5	4	6684	1.70
ENTERGY ETR	1811.5	10	108.4	-49	6.0	4.4	5.3	8.3	16	2	1	6238	1.63
FIRSTENERGY FE	1607.9	13	159.4	1	9.9	11.0	7.0	12.6	10	16	3	5978	2.53
FLORIDA PROGRESS FPC	950.1	16	76.9	12	8.1	8.3	9.2	16.1	15	NA	2	4917	3.29
FPL GROUP FPL	1468.0	4	124.0	-42	8.4	15.1	7.6	11.3	14	5	1	6110	3.19
GPU GPU	1464.5	37	133.4	-31	9.1	18.2	5.5	11.5	9	6	13	3486	3.25
HAWAIIAN ELECTRIC INDUSTRIES HE	401.9	14	29.5	28	7.3	6.1	5.2	11.9	12	4	3	1192	3.13
IGI&E ENERGY LGE†	625.4	4	31.0	-46	5.0	9.7	8.1	15.9	14	9	5	2999	1.61
MINNESOTA POWER MPL	289.1	14	30.4	45	10.5	8.2	6.5	8.9	17	8	2	1377	1.10
MONTANA POWER MTP	364.9	11	31.3	-8	8.6	10.5	10.5	14.3	24	NA	16	4723	1.33
NEW CENTURY ENERGIES NCE	908.1	3	105.2	4	11.2	11.1	8.2	12.8	11	20	3	3843	2.88
NISOURCE NI	1067.5	20	81.7	4	7.7	8.6	5.9	12.0	15	7	7	2345	1.27
NORTHEAST UTILITIES NU	1382.3	32	19.8	221	3.8	2.3	3.2	4.3	32	-3	-31	2471	0.67
NORTHERN STATES POWER NSP	793.0	7	48.6	-8	6.1	7.0	5.6	6.4	22	6	-4	3402	1.02
OGE ENERGY OGE	581.6	54	0.6	-97	0.1	2.9	7.7	13.8	11	3	1	1552	1.61
PECO ENERGY PE	1343.0	7	165.0	5	12.3	12.6	8.3	35.1	14	-16	6	8001	3.10
PG&E PCG	5008.0	-2	280.0	68	5.6	3.3	3.7	2.0	65	-4	-41	10438	0.42
PINNACLE WEST CAPITAL PNW	488.1	11	54.1	71	11.1	7.2	7.0	13.3	9	4	3	2839	3.78
POTOMAC ELECTRIC POWER POM	529.2	3	9.7	-61	1.8	5.1	5.5	11.6	12	-1	-	2615	1.88
PPL PPL	1413.0	32	148.0	23	10.5	11.2	10.5	28.6	10	-9	13	3494	2.54
PUBLIC SERVICE CO. OF NEW MEXICO PNM	121.3	38	22.6	5	6.8	6.5	6.9	8.6	9	7	4	605	1.92
PUBLIC SERVICE ENTERPRISE GROUP PEG	1924.0	7	270.0	44	14.0	10.5	9.1	20.1	9	-5	3	7967	4.17
PUGET SOUND ENERGY PSD	647.2	12	78.2	12	12.1	12.1	7.4	13.7	11	3	-1	2666	2.17
RELIANT ENERGY REI	4234.1	60	133.2	NM	3.1	NM	17.3	37.9	4	8	27	8030	7.03
RGS ENERGY GROUP RGS	385.9	18	39.3	6	10.2	11.4	6.8	11.9	9	1	7	854	2.54
SCANA SCG	822.0	102	106.0	172	12.9	9.8	7.3	11.7	11	7	3	2574	2.37
SOUTHERN SO	2573.0	5	249.3	9	9.7	9.4	7.9	14.1	11	3	1	17311	2.41

CORPORATE SCOREBOARD

COMPANY SYMBOL	SALES		PROFITS				RETURN			5-YEAR GROWTH		MARKET VALUE	
					MARGINS								
	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 $ MIL.	CHANGE FROM 1999 %	1ST QUARTER 2000 %	1ST QUARTER 1999 %	ON INVESTED CAPITAL %	ON COMMON EQUITY %	P-E 4-27	COMMON EQUITY %	EARNINGS PER SHARE %	SHARES OUTSTANDING 4-27 $ MIL.	12 MONTHS EARNINGS PER SHARE
TECO ENERGY TE	524.5	18	53.5	8	10.2	11.1	8.6	13.5	14	9	4	2896	1.58
TEXAS UTILITIES TXU	4720.0	7	197.0	6	4.1	4.2	6.2	12.0	10	7	6	9498	3.59
UNICOM UCM	1858.0	8	196.0	100	11.6	6.4	6.8	13.0	12	NA	5	8798	3.35
WISCONSIN ENERGY WEC	527.6	13	50.9	-6	8.3	9.1	6.6	10.4	12	3	-11	2621	1.76
WPS RESOURCES WPS	396.8	21	30.0	28	7.5	7.1	7.1	12.3	12	4	-2	813	2.46
(B) GAS, OIL & TRANSMISSION													
GROUP COMPOSITE	11765.3	20	1059.7	59	9.0	6.8	5.9	10.7	21	15	16	38006	1.57
COLUMBIA ENERGY GROUP CG	1264.8	-1	149.7	-7	11.9	12.4	14.6	23.4	15	11	6	6097	4.20
EASTERN ENTERPRISES EFU	433.7	25	41.0	27	9.5	9.4	5.6	8.1	25	14	0	1654	2.35
EL PASO ENERGY EPG	2106.0	36	171.0	NM	5.5	NM	NM	-5.0	NM	35	NA	9673	-0.74
EQUITABLE RESOURCES EQT	279.1	-9	79.1	51	10.3	7.3	NA	12.0	29	1	NA	1544	2.35
KEYSPAN KSE	1316.6	37	172.2	20	13.1	14.0	6.3	9.4	16	25	NA	3991	1.90
KINDER MORGAN KMI	480.6	12	48.1	93	9.6	5.6	5.4	13.2	38	23	19	2193	1.68
MDU RESOURCES GROUP MDU	372.0	44	11.4	-6	3.6	4.8	7.3	12.5	15	16	5	1267	1.82
NATIONAL FUEL GAS NFG [2]	517.8	7	71.1	-16	13.7	12.6	9.1	13.7	14	4	-3	1071	2.35
NEW JERSEY RESOURCES NJR [1]	369.0	13	31.8	5	8.6	9.2	8.6	15.7	15	4	6	694	2.50
NICOR GAS	659.3	14	38.8	-1	5.9	6.8	10.6	15.7	13	3	6	1571	2.63
NUI NUI [3]	279.9	10	17.7	0	6.3	7.0	4.3	10.3	14	12	11	348	1.96
PEOPLES ENERGY PGL [2]	525.2	8	57.4	-13	10.9	13.4	7.1	11.5	12	4	5	1115	2.92
PIEDMONT NATURAL GAS PNY [1]	268.6	5	44.1	-9	16.4	15.9	6.0	11.6	14	10	8	808	1.97
QUESTAR STR	336.7	21	50.2	16	14.9	15.8	7.6	11.4	14	7	10	1497	1.29
SEMPRA ENERGY SRE	1466.6	22	116.0	14	7.9	8.6	8.5	13.7	10	22	2	4303	1.13

ALPHABETICAL LIST OF COMPANIES

The number following each company name identifies the Scoreboard category under which it is listed.

A

A&P 18c
AAR 21b
Abbott Laboratories 12b
Abercrombie & Fitch 8
ABM Industries 21e
ACNielsen 21e
ACT Technologies 7b
ADC Telecomm. 22a
Adobe Systems 19c
Advanced Micro 9d
AENO 21d
AES 24a
Aetna 17b
Affiliated Computer Svcs. 14c
AFLAC 17b
AGCO 11c
Agilent Technologies 9c
Agribrands International 10b
Air Products & Chemicals 4
Air Span Holding 16b
Alaska Air Group 23a
Alberto-Culver 8
Albertson's 18c
Alcoa 16a
Allegheny Energy 24a
Allegheny Tech. 5
Allergan 12b
Alliant Energy 24a
Allied Holdings 22d
Allstate 17b
Allted 22b
Altria 9d
Amazon.com 8
Ameradio Hess 11a
Ameren 24a
America Online 18c
America West Holdings 23a
American Axle & Mfg. 7b
American Eagle Outfitters 8
American Electric 24a
American Express 17a
American Freightways 23d
American Greetings 14d
American Home 12b
American Int. Group 17b
American Mgmt. Systems 18c
American National 17b
American National Can 7a
American Standard 13a
AmerisourceHealth 12a
Ames Dept. Stores 8
Amgen 12b
Amphenol 9d
AMR 23a
Anadarko 23a
Analog Devices 9d
Anheuser-Busch 6c
Anixter International 5
Ann Taylor Stores 8
Anthem 11a
Apartment Investment 13b
Apple Computer 19b
Applied Industrial Tech. 21b
Applied Materials 13c
Applied Power 15a
Arch Coal 11a
Archer Daniels 10b
Arkansas Best 23d
Armstrong World 6b
Arrow Electronics 21b
Avnet Industries 2b
Ashland 11a
Associated Banc-Corp 3a
Associates First Capital 17a
Astoria Financial 17c
AT&T 22A
Atmel 9d
Autozone 21b
Autoliv 7b
Automatic Data 18c
AutoNation 21a
AutoZone 8
Avery Dennison 15a
Avis Group 23c
Avista 24a
Avnet 21b
Avon Products 6d
AVX 9d

B

Baker Hughes 11b
Ball 7a
Banc West 3d
Bank of America 3c
Bank of New York 3a
Bank One 3b
Bank United 17c
Bard (C.R.) 12e
Barnes & Noble 8
Barnes & Noble 12d
Bausch & Lomb 12d
Baxter International 12d
BB&T 3c
Bear Stearns 17a
Beaver Homes USA 13b
Becton, Dickinson 12d
Bed Bath & Beyond 8b
Bell Atlantic 22b
Bell Microproducts 21b
Bell South 22b
Belo (A.H.) 20b
Benas 7b
Benchmark Electronics 9d
Bergen Brunswig 12a
Berkley (W.R.) 17b
Best Buy 8b
Beth Israel 10b
Bethlehem Steel 16b
Bindley Western Inds. 12a
BJ Services 11b
BJ's Wholesale Club 8
Black & Decker 15b
Block (H&R) 17a
Blockbuster 14b
Blyth Industries 15a
BMC Software 19c
Boeing 1
Boise Cascade 19b
Boise Cascade Office 21b
Borders Group 8
Boston Scientific 12d
Bowater 19b
Boyd Gaming 14b
Brazilian 8
Briggs & Stratton 15c
Brinker International 14a
Bristol-Myers Squibb 12b
Broadwing 22b
Brown Shoe 6a
Brown Forman 6c
Brunswick 14d
Burlington Coat Factory 8
Burlington Industries 15d
Burlington Northern Santa Fe 22b
Burlington Resources 11a

C

Cabletron Systems 19c
Cabot 4
Cadence Design Systems 19c
Cameron Ashley 21b
Campbell Soup 10b
Canandaigua Brands 6c
Capital One Financial 17a
Cardinal Health 12a
Carlisle 15a
CarMax Group 21e
Carnival 14d
Carolina Power 24a
Carpenter Tech. 16b
Casey's General Stores 21e
Caterpillar 15c
CBRL Group 14a
CBS 20a
CCB 21e
CDW Computer Centers 8
CelBar 21b
Centerior 21e
Centex 13b
Central & South West 24a
Centurie Banks 3c
Century Tel 22a
CenSoft 19c
Champion Enterprises 13b
Champion Intl. 16b
Charming Shoppes 8
Charter One Financial 17c
Chase Manhattan 3a
Chevron 11a
Chiquita Brands Intl 10b
Cincinnati Financial 17b
Citicorp 24a
Citrus 21e
Circuit City Group 8b
Cisco Systems 19c
CIT Group 17a
Citigroup 17a
CK Witco 4
CKE Restaurants 14a
Claire's Stores 8
Clayton Homes 13b
Clear Channel Communs. 20a
Clorox 6d
CMP Group 24a
CNF Transportation 23c
Coastal 11a
Coca-Cola 6c
Coca-Cola Enterprises 6c
Cole National 8
Colgate-Palmolive 6d
Collins & Aikman 15d
Columbia Energy Group 24b
Columbia/HCA Healthcare 12c
Comdisco 19c
Comerica 3b
Commercial Metals 16b
Commonwealth Inds. 15c
Compaq Computer 19b
Compuserve Interactive 3c
CompuCom Systems 19a
Conagra 10b
Concord EFS 17a
Conecto 24a
Connect Systems 9d
Conoco 11a
Cons. Freightways 23d
Contact 17b
Consol Energy 11a
Consolidated Edison 24a
Consolidated Papers 16b
Consolidated Stores 8
Consolidation Energy 24a
Continental Airlines 23a
Convergys 21e
Cooper Cameron 11b
Cooper Industries 8a
Cooper Tire & Rubber 2c
Coors (Adolph) 6c
Cordant Technologies 18b
Corn Products Intl. 10b
Corning 15a
Costco Wholesale 8
Countrywide Credit 17a
Cox Communications 20a
Crane 15a
Crown Cork & Seal 7a
CSK Auto 8
CSX 23b
Cummins Engine 15c
Cypress Semiconductor 9d
Cytec Industries 4

D

DAP Healthcare Resources 12a
Dain Rauscher 17a
Dana 2b
Danaher 8c
Darden Restaurants 14a
Dean Foods 10b
Deere 15c
Delco Realty International 15a
Delhaize America 10c
Dell Computer 19b
Delphi Automotive 2b
Delta Air Lines 23a
Deluxe 18a
Detroit Diesel 2b
Devon Energy 11a
Dexter 15d
Dial 6d
Diebold 18a
Gilbarco 8
Dime Bancorp 17c
Dollar Tree Stores 8
Dominion Resources 24a
Donaldson 15c
Donnelley (R.R.) 21d
Dover 15c
Dow Chemical 4
Dow Jones 20b
DPL 24a
DST Systems 19c
DTE Energy 24a
Duke Energy 24a
Dun & Bradstreet 17a
Duferco 4
Duna Automotive Systems 2b
Dynegy 21b

E

E*Trade Group 17a
Eastern Enterprises 24b
Eastman Chemical 4
Eastman Kodak 14d
Eaton 9a
EchoStar Communications 20a
Ecolab 6d
Edison International 24a
Edwards (A.G.) 17a
El Paso Energy 24b
Electronic Data Systems 18c
Electronics Boutique 8
EMC 18b
Emcor Group 21a
Engelhard 16a
Enron 21b
Entergy 24a
Equifax 17a
Equitable Resources 24b
Estée Lauder 6d
Everest Re Group 17b
Express Scripts 17c
Exxon Mobil 11a

F

Family Dollar Stores 8
Fannie Mae 17a
Federal Signal 15a
Federal-Mogul 2b
Federated Dept. Stores 8
FedEx 23c
Ferro 4
Fifth Third Bancorp 3b
Finlay Enterprises 8
Firstar Group 17a
First American Fnl. 17a
First Data 18c
First Security 3d
First Tennessee Nat. 3c
First Union 3c
Fisher 3b
First Energy 24a
Fluor 18c
FleetBoston Financial 3a
Fleetwood Ents. 13b
Florida Progress 24a
Flowserve 15a
Foot 21a
FMC 15c
Footstar 8
Ford Motor 2a
Fort James 15b
Fortune Brands 15a
Foster Wheeler 21b
FPL Group 24a
Franklin Resources 17a
Freddie Mac 17a
Freeport-McMoRan O&G 16c
Fritz 23c
Fuller (H.B.) 4
Furniture Brands 8b

G

Galileo Intl. 18c
Gannett 20b
Gap 8
Gateway 19b
GATX 23c
Gaylord Containers 7b
Genesco 13b
General Cable 16c
General Dynamics 1
General Electric 5
General Mills 10b
General Motors 2a
Genuine Parts 21b
Georgia-Pacific Group 19a
Gillette 6d
Golden State Bancorp 17c
Golden West 17c
Goldman Sachs Group 17a
Goodrich (B.F.) 1