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IS MARKET CONCENTRATION IN THE U.S. PETROLEUM INDUSTRY HARMING CONSUMERS?

HEARING

BEFORE THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

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IS MARKET CONCENTRATION IN THE U.S. PETROLEUM INDUSTRY HARMING CONSUMERS?

WEDNESDAY, MAY 23, 2007

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC

The Committee met at 10:10 a.m., in room 216 of the Hart Senate Office Building, the Honorable Charles E. Schumer, Chairman of the Committee, presiding.

Senators present: Bingaman, Brownback, Casey, Klobuchar, and Webb.

Representatives present: Cummings, Hinchey, Maloney, and Saxton.

Staff present: Christina Baumgardner, Katie Beirne, Ted Boll, Chris Frenze, Nan Gibson, Colleen Healy, Brian Higginbotham, Michael Laskawy, Matthew Salomon, Jeff Schlagenhauf, Annabelle Tamerjan, and Robert Weingart.

OPENING STATEMENT OF HON. CHARLES E. SCHUMER, CHAIRMAN, A U.S. SENATOR FROM NEW YORK

Chairman Schumer. The hearing will come to order, and I want to thank everyone for being here. It's a critical hearing on the state of competition in the market for U.S. petroleum. We have a lot of business to cover today, so I am going to ask that Ranking Member Saxton and Vice Chairman Maloney offer their opening statements; and contrary to the usual practice we've had here, I'm going to ask our fellow Members to submit their opening statements for the record so we can get right to it.

Now, after a wage of mergers in the industry over the past two decades, we have an elite group of five very large, integrated oil companies dominating our domestic petroleum market, and there has been very little analysis of the impact of those mergers, since many of them have occurred recently.

The looming question hanging over us that we will strive to answer today is whether lack of competition in this market is harming consumers, and should we begin a serious exploration of whether or not to undo some of these mergers that occurred in the last two decades?

To answer this question, we need to explore three areas: price manipulation, refining capacity, and barriers to entry for renewable energy alternatives:

On prices: Are oil companies exploiting their market control prices? If this market is, as some say it is, an oligopoly, then oil companies don't have to meet behind closed doors to set the price of oil; one company can take the lead, and the rest can all follow and sort of wink at each other. Economists call this "price leadership" and the more concentrated the oligopoly, the more market power they have to set prices above competitive levels.

It's common sense that if there were 15 large companies, the chances of two or three saying "I'm going to break the mold, increase market share, even if I don't increase price" would be more likely.

Refining capacity. Are oil companies strategically under-investing in refinery capacity and maintenance in order to constrict supply, drive up prices and maximize profits? Again, the more competition, the less likely that everyone would follow the same pattern of behavior.

Barriers for renewables. And are oil companies using their market power to block the availability of alternative energy choices, such as E-85, at the pump?

The goal of this hearing is to examine in depth whether the oil industry's market structure is to blame for the sky-high gas prices, lack of adequate refining capacity, and lack of alternative fuels at the pump that are harming consumers today.

And frankly, I can't imagine a more appropriate time to have this hearing—the national average gasoline price reached $3.22 a gallon last week—that's the highest level on record. As you can see in the chart right here—well, I hope people can see it. Can the audience see it, too? Nope.

I don't know how we do this so that everybody can see it.

Well, in any case—thank you.

[Chart entitled "Gas Prices Continue to Rise, Setting New Records" appears in the Submissions for the Record on page 44.]

That's the highest level on record.

We are here today because the American people suspect that the high prices they are paying at the pump go straight to oil companies' profits. They're concerned that these profits are not going towards renewable energy alternatives or curbing the cost of gasoline at the pump.

We are here today because, in the words of Teddy Roosevelt, "We demand that big business give people a square deal." A square deal means passing along efficiencies achieved through mergers to consumers, investing in new production and refinery capacity, and ensuring reliability of supply so that gas prices don't shoot up by over $1 a gallon in a matter of months. Today, American families are getting a raw deal, while oil companies make out like the robber barons of Roosevelt's time.

And finally, we are here today because competition in the petroleum industry is critically important to the health of the economy of this Nation—an economy that has been dragging its feet in recent months. And the Federal Government has an important role to play in ensuring that this market is competitive.

Scanning the landscape of the U.S. petroleum market, it isn't clear that we have anything that can remotely be called competition.

Since the late 1990s—mergers between the giant oil companies like Exxon and Mobil in 1999, Chevron and Texaco in 2001 and Conoco and Phillips in 2002—have left us with only five major domestic oil companies controlling the majority of our domestic refining capacity.

In 1993, the largest five oil refiners controlled one-third of the market, while the largest 10 had 56 percent. Look at the difference. And that's just in 12 years (1993–2005).

By 2005, the largest five controlled 55 percent of the market, and the largest 10 dominate the market with over 80 percent of market share. There's been huge consolidation since the mid-1990s in the refining industry. And again, I don't think anyone has seriously examined the effects of that; and the consumer may be well receiving, unfortunately, the effects.

Despite ever-increasing petroleum prices, our major oil companies don't feel they need to compete to create new domestic gasoline supply. All things being equal, high gas prices should be an incentive for increased refining capacity. But we haven't had a new refinery built in 30 years, forcing refineries to operate longer and harder, and at capacity levels that are overtaxing the system.

The oil companies tell us that instead of building new refineries, they are focused on upgrading existing refineries to keep up with increasing demand. Yet it isn't clear how much they are really investing in their existing refining plants when "unexpected" refinery accidents and unplanned maintenance closings have become a regular occurrence, choking off supply and causing steep price surges at the pump in recent months.

The rust and neglect has crept into the pipelines as well. Just yesterday, BP announced it would shut down 100,000 barrels a day in capacity "for a few days" because of a pipeline leak. And that's just the latest in a series of missteps for BP in their production and distribution systems.

Look at this chart. This chart looks at unexpected refinery outages and pipeline problems fueling the price surge in gasoline in just the last 4 months, 3½ months.

[Chart entitled "'Unexpected' Refinery Outages and Pipeline Problems Fueling Price Surge in Gasoline" appears in the Submissions for the Record on page 45.]

Meanwhile, even as oil prices are dropping, gas prices are going through the roof! That's the anomaly now. The actual price of crude goes down a little, but gasoline prices go up. Right now, crude oil prices are lower than they were last year at the onset of the summer driving season. But gas prices this morning, at $3.22 a gallon, are 34 cents higher than they were a year ago. The Department of Energy is predicting that crude oil prices will average about $66 a barrel this summer, versus $70 a barrel last summer. But the agency is predicting gasoline will average about $2.95 a gallon this summer, up from $2.84.

As a result, with capacity as tight as it is, and the spread between oil and gas prices widening, refining profit margins are at historical highs. ConocoPhillips, the largest U.S. oil refiner, posted its biggest quarterly profit since its merger in 2002. Exxon-Mobile, the second largest just reported its highest first quarter earnings

in 13 years; and Valero, which is No. 3, tripled its profits during the first quarter of this year.

I don't understand how an industry that makes tens of billions per year can still have rusty refining plants that constantly break down. I don't know of any other business where the ratio of profits to infrastructure breakdowns is as high. And I don't know any other industry where an equipment breakdown in one company benefits every other oil company by raising prices.

On the surface, it seems that Big Oil is pumping cash rather than petrol, strengthening profits rather than rusty pipes, and they're using their dominant market position to buy back their own stock rather than meet the growing demand for fuel in this country.

One example. Exxon-Mobile, the world's most profitable company, dolled out $29 billion, that's 60 percent of its cash flow, on stock buybacks last year alone. This was more than any other company in the S&P 500. This was $9 billion more than Exxon invested back in its own business. More money for stock buybacks than to either maintain production or increase production.

Meanwhile, as news reports show, Exxon's overall production "barely budged" since its 1999 merger.

Exxon-Mobile is not alone. Overall, the oil industry spent $52 billion on buybacks last year, nearly double the amount in 2005. And like Exxon-Mobile, production levels at the Big 5 have been flat. The question looms:

If there was more competition in this market, wouldn't these companies be investing in new production rather than sending their oligopolistic profits back to their shareholders? Wouldn't they have the incentive to take more risks in and innovate to get ahead on the renewable energy curve?

This is a long overdue debate, and my instinct tells me that a reconsideration of oil company mergers in the last two decades may well be in order.

When markets have been distorted from lack of competition in the past, the Federal Government has taken action. Standard Oil, U.S. Steel, and AT&T come to mind.

It's no coincidence that I again quote Teddy Roosevelt, a Republican and a New Yorker, who had a lot to do with restoring competition in markets that had been lost, when he once said "Rhetoric is a poor substitute for action, and we have trusted only to rhetoric. If we are ready to be a great Nation, we must not merely talk, we must act big.

It's time to consider acting big.

We're looking forward to learning from our witnesses today what's going on in the market so we can best figure out how to proceed here. I will now turn the podium over to our Ranking Minority Member, Jim Saxton.

[The prepared statement of Chairman Charles E. Schumer appears in the Submissions for the Record on page 41.]

STATEMENT OF HON. JIM SAXTON, A U.S. REPRESENTATIVE FROM NEW JERSEY

Representative Saxton. Thank you, Mr. Chairman. You're right, this is an extremely important subject for a lot of reasons. I would like to thank you for calling this hearing.

I'd also like to join in welcoming our witnesses, testifying before the Committee today. Obviously, we all share the concern about the current level of oil and gasoline prices that hits the entire American population. A few years ago, no one would have imagined pulling up to the gas pump and spending $40 or $50 or $60 to fill up.

There are many possible factors that can influence oil and gasoline prices. For example, we can examine the impact of the oil industry mergers as certainly an important subject of this hearing today.

The GAO, as a matter of fact, has performed econometric modeling on a number of such mergers, most of which occurred, during the last half of the 1990s. I would point to Ultramar Diamond Shamrock (UDS)-Total, Tosco-Unocal, Marathon-Ashland, Shell-Texaco, BP-Amoco, Exxon-Mobil and Marathon-Ashland Petroleum (MAP)-UDS, all of which occurred in the second half of the 1990s.

So whatever can be said, as you so articulately pointed out, Mr. Chairman, about the impact of such mergers, the large mergers modeled by GAO reflect the antitrust policies that have been in place for many, many years, going back into the 1990s when these large mergers occurred.

Let me suggest that, as you pointed out correctly also, Mr. Chairman, that this is a very important debate, and in my view should be widened beyond domestic oil companies. Crude oil and its refined products are traded in a global market, and OPEC dominates that market at the source with control of 70 to 80 percent of the known conventional oil reserves. Seventy to 80 percent, depending on how one counts.

Any analysis of gasoline prices or other refined product prices therefore ought to start with OPEC and the gross distortions it has wrought in the petroleum industry. Consider this: OPEC's cost of crude oil production is less than $5 a barrel in the Persian Gulf, and less than $9 a barrel outside the Persian Gulf. The cartel systematically curtails production in each of its member states by imposing production quotas. Despite its enormous reserves and low cost of oil, the cartel's share of world production today is about 40 percent, while controlling 70 to 80 percent.

By colluding to throttle the rates of oil output, the cartel members are artificially increasing oil scarcity in the world market and causing buyers to bid up the price of oil far above the resource's true scarcity and far above the cost of production.

Large increases in oil demand from Asia in the last few years have raised the question of whether OPEC has encountered short-run output limitations, and the incremental demand is pushing the price up higher than OPEC intended. However, there is no doubt that OPEC is opportunistically exploiting the Asian demand.

Since last fall, when the price was $50 to $60 per barrel, and trending down, the cartel decided to cut its output quotas on two separate occasions by a total of 1.7 million barrels per day. Now

with the price at $60, it has refused to raise production again. The cartel officially abandoned its price target range of $22 to $28 per barrel at the start of 2005 in favor of higher prices, and it has not indicated how much higher it wants the price to rise.

Consider this: From 2002 to 2006, OPEC's estimated annual oil revenue increased by 200 percent, more than tripling, from $183 billion to $580 billion, while the rate of oil output increased by a mere 17 percent.

OPEC's restrictive output policy discourages oil field development by its members. Many oil fields require substantial investment to increase production rates or reverse declines. While some investment is taking place, the cartel has made no commitment to raise output and has not indicated what market share or price would satisfy it in the long run. Uncertainty and even higher prices may prevail.

OPEC causes enormous volatility as Persian Gulf countries alone sit on 730 billion barrels of oil with the price up 15 times more than the cost of production. OPEC has severed the normal connection between the cost of production and the price it receives in the marketplace, and has driven its profit margin to staggering heights.

So Mr. Chairman, I'm pleased that we're here today to discuss this wide range of issues, and I look forward to hearing from our witnesses.

[The prepared statement of Representative Jim Saxton appears in the Submissions for the Record on page 46.]

Chairman Schumer. Thank you. And I wanted to acknowledge—he had left, I was going to ask him if he wanted to say a few words; a Member of our Committee, but also Chairman of the Energy Committee, Jeff Bingaman was here, and we thank him for coming.

And now we'll hear from Congresswoman Maloney.

OPENING STATEMENT OF HON. CAROLYN B. MALONEY, VICE CHAIR, A U.S. REPRESENTATIVE FROM NEW YORK

Representative Maloney. Thank you, Mr. Chairman. This is a very timely hearing because the price of gasoline is rising just as the summer travel season is upon us.

Is it coincidence or corruption? Either way, it's a hard blow to the American consumer. The average weekly price of gasoline hit $3.22 a gallon just this week, the highest price on record. That means families are spending about $55 on average every time they fill up their car, an astonishing $30 more per tank since President Bush took office.

Rising gas prices are forcing American families to cut back on other spending, putting our economic growth at risk. The current run-up in gas prices underscores the urgent need for a better national energy policy. But instead we see stubborn inaction and complicity on the part of this Administration.

The Administration's priority has been to give tax breaks to oil and gas companies even as their profits have soared to new heights. The Big 5 oil companies that dominate the market enjoyed eye-popping profits, of $120 billion last year.

Instead of using those profits to expand refinery capacity or make serious investments in renewable energy, the Big Oil companies are buying back their own stock to enhance prices for their shareholders.

Oil companies seem to be working hard to prevent gasoline alternatives such as ethanol-based products from being pumped at their branded gas stations. The administration has also turned a blind eye to oversight of the oil and gas industry in general, but especially mergers. The president has approved mergers at such a breakneck speed that by 2005 the top 10 refiners controlled 81 percent of the market, up from 56 percent since 1993. That is an astonishing gain.

This concentration of refiners has restricted production capacity, causing American consumers to pay more at the pump than they would with more market competition. The lack of competition is hurting consumers now, and will hurt our economy in the future.

But elsewhere at home and around the globe, leaders are recognizing the need to invest in clean and renewable energy sources and technologies. Just yesterday it was announced in my home district that New York City cabs are going green. The mayor plans to replace the City's fleet with hybrid cars by 2012.

Democrats in Congress are working on legislation to protect consumers, increase our energy independence by investing in renewable energy sources, reduce global warming emissions, and strengthen the economy.

Chairman Schumer, I thank you for holding this important hearing, and I look forward to the testimony.

[The prepared statement of Vice Chair Carolyn B. Maloney appears in the Submissions for the Record on page 47.]

Chairman Schumer. Thank you. And I think now we'll get on to the—do you have a statement, Senator Brownback?

Senator Brownback. Thanks, Mr. Chairman. I'll put it in the record so we can get to the panels. I do hope they can testify to us what it is that the Congress can and should be doing to get at this energy price, supply, demand, refinery capacity. I would hope the witnesses would be as specific. We all want to try to do something to get these prices down, and help us in what we can move forward with.

I thank the Chairman for holding the hearing.

[The prepared statement of Senator Sam Brownback appears in the Submissions for the Record on page 47.]

Chairman Schumer. OK, let's get on to our panel, and I thank our witnesses for being here. We're going to hear from, two different points of view on the effects of competition.

First, Thomas McCool, the Director of the Center for Economics in the GAO's Applied Research and Method Groups. He's been at the GAO for 20 years, beginning in the Tax Policy and Administration Group. In 1994 he joined the Financial Institutions and Market Group as associate director, and later director.

Before joining GAO, Dr. McCool taught economics at Vassar College and Georgetown University. He has a B.A. in economics from St. Joseph's University, a Ph.D. in economics from Columbia.

Dr. Michael Salinger is Director of the Bureau of Economics at the Federal Trade Commission. Since July 2005, he's on leave from

the Boston University School of Management, where he is professor of economics and chair of the department of finance and economics. He's published articles on a wide variety of antitrust topics; most notably tie-in, vertical mergers, and the competitive effects of market structure. He has a B.A. in economics from Yale University and a Ph.D. in economics from M.I.T.

We're first going to hear from Dr. McCool, and then from Dr. Salinger. You may begin, and your entire statements will be read into the record.

STATEMENT OF THOMAS MCCOOL, DIRECTOR, CENTER FOR ECONOMICS, APPLIED RESEARCH AND METHOD GROUPS, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Dr. McCool. Mr. Chairman and Members of the Joint Economic Committee, we are pleased to participate in today's hearing to discuss the factors that influence the price of gasoline.

Few issues generate more attention and anxiety among American consumers than the price of gasoline. Price increases are accompanied by high levels of media attention and consumers questioning the causes of those higher prices. The most current upsurge is clearly no exception.

For the average person, understanding the complex interactions of the oil industry, consumers and the Government can be quite daunting. Given the importance of gasoline for our economy, it is essential to understand the market for gasoline and what factors influence the price that consumers pay.

In this context, my testimony addresses the following questions: What key factors affect the price of gasoline, and what effects have mergers had on market concentration and wholesale gasoline prices.

Let me sum up by making the following observations. First of all, over the long term, one of the primary determinants of the price of gasoline is the price of crude oil. These prices have tracked one another pretty closely—again, over the long term, with some individual short-term divergences.

A number of other factors also affect gasoline prices, including first of all the increasing demand for gasoline; even though again demand has fluctuated over the long period of 35 years that we looked at. In fact, effectively it's grown pretty much consistently about 1.6 percent per year. The demand has been increasing.

At the same time, refinery capacity has not expanded at the same pace as the demand for gasoline, and in particular in recent years, which coupled with high refinery capacity utilization rates, reduces refiners' ability to sufficiently respond to supply disruptions.

A third factor is that gasoline inventories maintained by refiners and marketers of gasoline have seen a general downward trend in recent years. This is in keeping with similar aspects of other industries; just in time inventory processes and delivery processes that reduce the cost of inventory holdings in a lot of industries; but it is true that the average stock of gasoline that's held in inventory has fallen from about 40 days of consumption in the 1980s to about 23 days in 2006.

And lastly, regulatory factors such as national air quality standards have also had an effect on the price of gasoline, because they have induced some states to switch to special gasoline blends; they have been linked to higher gasoline prices.

And finally, consolidation in the industry can also play a role in determining gasoline prices. For example, mergers raise concerns about potential anti-competitive effects because mergers can result in greater market power. However, they can also lead to greater efficiency, enabling the merged companies to lower prices.

Let me turn to our work on mergers. The 1990s saw a wave of merger activity in which mergers occurred in all segments of the U.S. petroleum industry. This wave of mergers contributed to increases in market concentration in the refining and marketing segments of the U.S. petroleum industry. For example, the Index of Market Concentration in Refining increased all over the country during the 1990s; and changed, for example, from moderately to highly concentrated in the East Coast.

In addition, in 1994, about 27 states had moderate to high levels of concentration in the wholesale side of the industry, and in 2002, it was up to about 46 states.

In addition, qualitative evidence suggests that mergers may also have affected other factors that can impact competition, such as vertical integration and barriers to entry. Some of the mergers that we examined in particular, involved fully or partially integrated firms, or previous independents who have become more integrated as a result.

Now the econometric modeling that Congressman Saxton referred to earlier we performed on eight majors. That chart here has eight mergers—the eight we looked at plus some subsequent mergers. We performed our analysis on eight mergers involving major integrated oil companies in the 1990s, and the analyses show that after controlling for other factors including crude oil prices, refinery capacity utilization, inventories, and supply shocks, that the majority of these eight mergers resulted in wholesale gasoline increases, most in the range of a penny or two, but one in particular up to 7 cents a gallon.

Now additional mergers since 2000 are likely to have increased the level of industry concentration. However, because we've not performed modeling of these mergers, we cannot comment on potential effects on gasoline prices at this time. We are in the process of updating our previous study and planning to look at more recent mergers.

Now in conclusion, Mr. Chairman, Members of this Committee, I would also like to say that one of the things that we believe comes out of our study is to show the importance of doing what we call retrospective analyses. That is to say, looking at the effect of mergers, the state of competition, after the mergers have taken place, in addition to doing them prospectively when mergers are being approved. And I think the FTC is tending to agree with us, and we're glad about that; we think it's a good idea to use the retro prospective analyses, both as an oversight tool of what's going on in the industry, and also as a way of trying to inform your own prospective analysis going forward.

Mr. Chairman, that completes my prepared statement. I'd be happy to respond to any questions.

[The prepared statement of Thomas McCool appears in the Submissions for the Record on page 48.]

Chairman Schumer. Thank you, Dr. McCool.

Dr. Salinger.

Dr. Salinger. Thank you.

Chairman Schumer. Your entire statement will be read in the record as well.

STATEMENT OF DR. MICHAEL A. SALINGER, DIRECTOR, BUREAU OF ECONOMICS, FEDERAL TRADE COMMISSION

Dr. Salinger. Mr. Chairman and Members of the Committee, I am Michael Salinger, Director of the Bureau of Economics of the Federal Trade Commission.

I'm pleased to appear before you to present the Commission's testimony on FTC initiatives to protect competitive markets in the production, distribution, and sale of gasoline in our vigilant and comprehensive merger program.

My written statement represents the views of the Federal Trade Commission. My oral presentation and responses to questions are my own, and do not necessarily represent the views of the Commission or any commissioner.

Recently, gasoline prices have been rising. Over the past 3 months, retail gasoline prices have increased between 95 cents and 115 cents per gallon, depending on location. The national average price of gasoline has risen from approximately $2.20 per gallon in early February to over $3.22 per gallon as of May 21.

The lion's share of the recent increase in gasoline prices appears to be attributable to three factors: Refinery outages, increased demand for gasoline, and decreased gasoline imports.

Based on substantial Commission investigations and research into the petroleum industry over many years, we do not believe that consolidation in this industry has been a major factor in higher prices.

Although the FTC does not regulate energy market sectors, the agency plays a key role in maintaining competition and protecting consumers in energy markets. The Commission has been particularly vigilant regarding mergers in the oil industry that could harm competition.

It examines any merger and any course of conduct in the industry that has the potential to decrease competition and thus harm consumers of gasoline and other petroleum products. A review at least 4 months ago concerning horizontal merger investigations and enforcement actions from fiscal year 1996 to fiscal year 2005 shows that the Commission has brought more merger cases at lower levels of concentration in the petroleum industry than in any other industry.

Indeed, unlike in other industries, the Commission has brought enforcement actions in petroleum markets with levels of concentration characterized, in the Department of Justice and Federal Trade Commission merger guidelines, as moderate.

Although we analyze each petroleum merger according to numerous market factors surrounding the transaction, an overall analysis

of merger policy in the petroleum industry necessarily takes a longer and broader view.

Over the past 25 years, the Commission's merger policy has been consistent across administrations. Applying sound principles of economics, it has been designed and focused to prevent the accumulation and use of market power to the detriment of consumers. Since 1981, the Commission has filed complaints against 21 petroleum mergers and achieved significant divestitures or other relief in 17 of those cases. The other four mergers were abandoned after the Commission challenged them.

Over the past two decades, the petroleum industry has undergone a structural upheaval, punctuated by a burst of large mergers in the late 1990s. The driving forces behind these mergers were technological, economic and regulatory factors that led toward reliance on a smaller number of larger, more sophisticated refineries that can process different kinds of crude oil more efficiently.

The development of crude oil spot and futures markets have reduced the risks of acquiring crude oil through market transactions, thus contributing to a decline in vertical integration between the crude oil production and the refining stages among the major oil companies.

The number of major integrated firms have restructured to concentrate on one or more segments of the industry, and a number of unintegrated refiners or retailers have entered. Domestic crude oil production has fallen, and foreign sources have supplied an increasing share of the crude oil refined in the United States, thus enhancing the importance of competition in the world market for crude oil.

That competition has intensified over the last decade, with a dramatic increase in crude oil demand from newly industrializing countries.

Despite these structural changes, most levels of the petroleum industry remain only low or moderately concentrated. The industry exhibits many economic indicators of strong and effective competition. Nonetheless, the FTC will remain vigilant and will challenge any merger or course of conduct which threatens this competition.

I look forward to the Committee's questions.

[The prepared statement of Dr. Michael Salinger appears in the Submissions for the Record on page 54.]

Chairman Schumer. Thank you, Dr. Salinger. And we're going to try to stick strictly to the 5 minutes, because I know both sides have votes coming up, and we have another panel after this as well.

So my question is to actually both Dr. Salinger and Dr. McCool. We've heard repeatedly that the high price of gasoline is tied tightly to the price of crude oil; crude oil goes up, gas prices are supposed to go up. While gas prices are about to hit record highs no, crude oil are below where they were last year at this time.

And this chart—which is coming right up—shows it pretty clearly. I'm not going to repeat the numbers, but the bottom line is, while the price of crude is going down the price of gasoline is going up.

My question is: How do you explain this recent acceleration in gasoline prices that by far exceeds changes in the price of crude oil.

Doesn't that divergence suggest the presence of severe problems in the refining and distribution end of gasoline production, regardless of what's happening in the crude oil scene?

So Dr. McCool, you want to go first? And then Dr. Salinger.

Dr. McCool. Well, as I said, I think over the long term, gasoline prices and crude oil prices tend to track themselves, track one another fairly closely. There are, however, divergences, and this indicates divergences in both directions. You get times when the gap expands to the advantage of the refiners, and at times may shrink to the disadvantage of refiners.

Recently, it's been in the former direction, but——

Chairman Schumer. And why do you think that has happened?

Dr. McCool. Well, again, I don't really know exactly what's happened, all the details of what's happened in the recent past; but I think some of these—again, I'll put it in quotes, "unexpected disruptions" of either breakdowns at refineries, the fact that inventories started out substantially below what they normally would be this time of year, and the fact that foreign gasoline supplies haven't been as available as they had been in previous years—are obviously confounding factors.

Whether there's a long term trend toward increased refining margins that we would expect to lead to much more increases in refined capacity, that's again a hard thing to disentangle between short-term blips and sort of long-term trends.

Chairman Schumer. Dr. Salinger.

Dr. Salinger. Well, you're quite right, of course. That is what has been different about recent months, and also true of last summer; that gasoline prices have gone up more than can be explained just by crude prices alone. That in my opinion is because refining capacity is tighter relative to demand than it had been in the past.

I'll make two points about that. First, you can't look at the gasoline spreads at a single point in time; you'd have to look first of all over the entire year, and also over many years. Because investment in refining capacity is a long investment; and the second point I make is you want to ask the question——

Chairman Schumer. What about upgrading and maintaining as opposed to building new refineries? We've had a lot of breakdowns lately.

Dr. Salinger. We have. But the other point I would make is that the question I want to ask: Is there any evidence that the level of refining capacity is below competitive levels? And that's a complicated question that we've been asking ourselves about, but we have not seen any evidence of that.

Chairman Schumer. Let me ask you this, and this really goes to Dr. Salinger.

From 2000 to 2005, the oil industry reported about $383 billion in profits. They invested $1.2 billion in clean, renewable energy sources.

Again, how can we argue this has been better for consumers; then if there were more competitors in the marketplace, it seems to me that it's just logic that if you had the number of competitors say we had in 1980, a few of those companies would venture out into alternative energy. They have the ability, the muscle, the know-how and the distribution capacity to do it.

Do you find those numbers confounding?

Dr. Salinger. I don't find the profit numbers confounding, when you look at the scale of the industry and what's happened to prices, I would question the competence of the companies if they weren't making profits at those prices.

As for the investments, the question you want to ask is whether they are passing up profitable investments. And we've not seen evidence of that.

Chairman Schumer. Do you agree, Dr. McCool?

Dr. McCool. Well, again, I haven't been able to look at this particularly, very closely. I guess my thoughts would be that one would expect that they see investments as being profitable, or you would think they wouldn't put resources in them. But again you also have to ask yourself the question, how long do you need to see these margins as higher than historically——

Chairman Schumer. I just am utterly amazed that they're using——

Dr. McCool [continuing]. The norm, to make that decision.

Chairman Schumer [continuing]. I'm just utterly amazed that they're using all this money to buy back their stocks at a time when we're facing an energy crisis in the country. It says something is wrong. Maybe we'll have different prescriptions, but something is really the matter, as prices keep going through the roof, energy shortages occur, and a vast majority of their money is to buy back their stocks. Something is wrong there.

Congressman Saxton.

Representative Saxton. Dr. Salinger, in its 2005 report, titled: "Gasoline Price Changes: The Dynamics of Supply, Demand, and Competition," the FTC states:

> To understand U.S. gasoline prices over the past three decades, including why gasoline prices rose so high and so sharply in 2004 and 2005, we must begin with crude oil. The world price of crude oil is the most important factor in the price of gasoline, the report states:
>
> Over the last 20 years, changes in crude oil prices have explained 85 percent of the changes in the price of gasoline in the U.S.

Unquote.

Accordingly, I would like you to begin with questions about the world price of crude oil. The OPEC cartel, as I pointed out in my opening statement, holds an enormous amount of known crude oil reserves. Nine hundred and two billion barrels, to be exact about the estimates, which represents up to 80 percent of the world total percent of crude.

The cost of producing this oil is extremely low. Again, as I pointed out in my opening statement, less than $5 per barrel in the Persian Gulf.

Would you please explain the effect on price of OPEC's restrictive output practices over the decades, and how it has constricted its oil field development, and that it explicitly limits the oil production rates in its member states on an ongoing basis.

Dr. Salinger. I'll do the best I can. It's certainly true that when OPEC successfully succeeds in cutting output, that that raises prices. And that that's something that if it were done by private companies would be viewed as being illegal.

Representative Saxton. And the restriction on production would affect prices at any given time, but the restriction on production over time would have a cumulative effect, would it not?

Dr. Salinger. What you'd want to look at is the supply—you want to look at prices at any particular point in time, that would be based on supply at that point in time; and to the extent that their investment decisions have had long run supply effects, they would have a long run effect on prices.

Representative Saxton. As OPEC makes its decision on production, which they do from time to time, actions taken today on the restriction of production and lack of investment on their part to produce, would it have effects down the road as well, would they not?

Dr. Salinger. Congressman, I don't know how long it would take OPEC to expand production, if they chose to do so.

Representative Saxton. In its investigation of post-Katrina gasoline prices, the FTC found that OPEC is a functioning cartel whose activities, as you just pointed out, would be illegal if undertaken by private companies.

Is that a fair characteristic; characterization of what it says.

Can you briefly explain why that is?

Dr. Salinger. Sure. Under the antitrust laws, companies are not allowed to agree to raise prices. And in order for companies successfully to raise prices, they'd have to agree to cut output.

So when the OPEC countries get together and have discussions about production, and agree to limit production, that is exactly what the Sherman Act makes illegal.

Dr. McCool. I would just point out, Mr. Chairman, that we are questioning whether something like that may be happening with oil companies that are listed on the chart here, or others; and certainly Dr. Salinger is correct, that if what OPEC practices were done by the oil companies that we're examining, we would consider it to be illegal, under our statutes.

The FTC has stated especially, quote: "Especially, when demand surges unexpectedly, as in 2004, OPEC decisions on whether to increase supply to meet demand can have a significant impact on world oil prices.

Dr. Salinger, can you comment on the effect of OPEC's supply manipulation on the price of crude oil and its products in the past several years?

Dr. Salinger. Well, if you look at the last several years, crude prices have gone up quite a bit, and that would not have happened without OPEC supply restrictions.

Chairman Schumer. OK, thank you, Congressman Saxton.

Now Congresswoman Maloney.

Representative Maloney. Thank you, Mr. Chairman.

We all get questions from our constituents about the sky rocketing cost of gasoline prices. And both of you touched on it in your testimony, but I would like you to each respond in the simplest terms possible, why are gas prices so high? Just simply. I mean, $55, that's now an astonishing $30 more per tank since the President took office. Why are they so high?

Dr. McCool.

Dr. McCool. Well, again, I think that some of the factors we've already touched on; the fact is that the demand-supply balance is very tight to begin with, in the best of times, especially since refinery capacity has not kept up with increases in demand; and that tightness means that any small sort of movement in particular on the supply side is what seems to be the recent case, where again either inventories are unexpectedly low or you have these breakdowns or malfunctions in refineries and/or—again, a less availability of imports.

The smallest kind of shock to the supply because of the inelasticity of demand, which is to say the fact that demand doesn't respond very quickly to price, generally leads to fairly large changes in price.

Now the hope is that they're short-term and that the supply starts to increase, and maybe demand falls back a little bit, and that can restore prices to a more reasonable level. But it seems to me that's the only way I can conceive of it right now.

Representative Maloney. Dr. Salinger?

Dr. Salinger. Well, they are high compared to what they used to be. And I know this is a very tough sell, but I don't think people realize how fortunate we were to have prices as low as they were for as long as they were.

I started studying oil markets in the seventies, when prices went through the roof, and we were taught in economics programs then, that they would continue to go up. In real terms, in 2002 they were below what they were below the first oil shock. But since then we've seen the supply and demand balance shift.

Representative Maloney. Dr. Salinger, is there hard evidence that the oil industry mergers have in fact created greater efficiencies?

Dr. Salinger. Yes, there is.

Representative Maloney. And if there are greater efficiencies, what benefits have come to consumers because of these efficiencies?

Dr. Salinger. The decline in prices in real terms that we saw over several decades, starting at the end of the second oil crisis, were due in part to increased efficiency in the industry.

Representative Maloney. But have gas prices gone down now because of efficiencies?

Dr. Salinger. Well, the question you want to ask is whether they're lower than they otherwise would be. And of course it's very hard to know, over a long period of time, what would have happened otherwise. But I believe they are.

Representative Maloney. I'd like to ask Dr. McCool, have oil industry mergers increased barriers to entry, barriers that serve to deter new competitors from entering the market?

Dr. McCool. Well, some of the majors probably have enhanced certain barriers to entry, and in particular to the extent that we again have firms that are somewhat more vertically integrated, it does become a little bit harder for a new entrant to come in; when you have to come in at a number of different levels.

Again, whether those barriers, which were based in some ways on sort of the economics of the industry, whether they lead to a situation such that there's not still effective competition, that's a harder question to answer.

Representative Maloney. That doesn't help consumers, does it?

Dr. McCool. Well, again, there's this question about whether the vertical integration and the potential benefits that generates in terms of lower cost does or doesn't offset any market power effects.

Representative Maloney. What are the potential impacts on consumers of increased barriers to entry to the refining and distribution segment of the oil industry?

Dr. McCool. Again, it's really sort of a similar question. It's a question of whether the cost savings do or do not pass through compared with any kind of increases in market power that may lead to higher prices. And it's that balance; it's hard to determine before the fact.

Representative Maloney. My time is up. Thank you.

Chairman Schumer. Congressman Hinchey.

Representative Hinchey. Thank you very much, Chairman Schumer. And thank you, gentlemen, for your very interesting testimony.

Dr. Salinger, if I heard you correctly, you said that two of the actions that affect prices are refinery outages and the importation of petroleum. And there was another one which I didn't get.

Dr. Salinger. An increase in demand.

Representative Hinchey. Increase in demand, OK. Well, increase in demand is pretty clear, where that comes from; and the fluctuation in prices that we've seen in the past, particularly in the 1970s, were concentrated in the oil producing countries; OPEC caused those jumps in 1973 and 1979.

But based upon the information that we have now, we find that OPEC is less responsible for the increases in refined product, and the oil companies seem to be much more responsible for them. The mergers that we've seen over the course of the last 10 or 15 years are really amazing.

The fact that now the oil companies dominate close to 90 percent of the refining industry is also something that is quite spectacular.

So if the core of the imports, of the effective prices or the effective demand, and then the other two refinery outages and the importation of petroleum, it seems to me that those two factors are in direct control by the oil companies themselves. They can manage the refinery outages, they can allow them to happen or not allow them to happen, and they can determine how much oil is imported.

So if that's true, then isn't it true that the oil companies are determining the price of the refined product, the price of gasoline on the market right now?

Dr. Salinger. Well, I don't agree that the largest oil companies can prevent the importation of oil——

Representative Hinchey. If they're the principal marketers of oil, why isn't it that they can't determine the price? Because they're going to determine how much oil comes in, and therefore how much they sell. How much they refine and how much they sell.

Dr. Salinger. Well, the markets remain structurally competitive by the standards that we generally use in the antitrust enforcement.

Representative Hinchey. What are those standards? How can they remain competitive when you have these oil companies that

have engaged in so much merger activity, and now control close to 90 percent of the refining capacity?

Another aspect of the way in which the oil companies operate around the country is this: You can travel across the country and you see that there are certain oil companies that sell oil in some parts of a State but not in other parts. You obviously have an agreement between the oil companies as to where they're going to market, in addition to how much they're going to charge.

Dr. Salinger. Well, I wouldn't agree that because some oil companies are selling one place and others are selling another place that that means that there's been an agreement. I mean, that happens in other markets; there are grocery stores that sell in one part of the country and not in others; they haven't divided up the country.

And you asked about outages. The question you want to ask is whether, when a company has an outage, it personally benefits—the company benefits from those outages. And the evidence we've seen is that when companies have outages, they do everything they can to try to bring the refinery back.

Because at current prices, selling gasoline is very profitable.

Representative Hinchey. Well, of course it's profitable, because they control the price. And if they can control what's on the market and the amount of that product that's on the market, then they can control the price much more effectively.

And by regulating the refineries, since your oil companies control at least 90 percent of them across the country, and regulating the amount of crude product they bring in, then they can impact the price. And I'm quite surprised that the FTC hasn't looked at that much more carefully.

You say that mergers are not affecting prices. That just surprises me. How can it be that mergers are not affecting prices? It's pretty clear that the mergers are affecting prices, if you just look at it roughly. As mergers have increased, as the oil companies have become more consolidated, the prices have gone up. That gives them that power to jack the price up on the basis of those mergers.

The Sherman Antitrust Act, why are you not enforcing that Act in this particular case?

Dr. Salinger. In my opinion, the Commission is enforcing the antitrust laws quite vigorously. We are currently in District Court bringing action against a merger between Giant and Western.

If you look at our enforcement statistics with respect to the oil industry, the data are clear that we are more aggressive in this industry than with any other industry. And I would just disagree with your characterization that it's the merger of——

Representative Hinchey. Well, I would disagree with your statement that you're more aggressive in this industry; because we don't see an example of that.

One of the interesting things you said in response to a question that was asked a little while ago is that OPEC is restricting production on the market. If they were a private company, that would be illegal based on the Sherman Antitrust Act. But if the oil companies are restricting the amount of product on the market, that doesn't seem to be, in the view of the FTC, to be illegal. Because you're not doing anything about it.

Dr. Salinger. They were agreeing, the companies were getting together and agreeing to restrict output. I am quite confident——

Chairman Schumer. You mean to tell me, you don't think the oil companies are getting together to agree on output?

Dr. Salinger. Yes. I mean to tell you that.

Representative Hinchey. That's amazing.

Dr. Salinger. I understand you disagree, but that's my opinion.

Chairman Schumer. Time's up, but they don't have to get in a room and agree, and they can do price leadership or quantity leadership; and when there are very few of them, the can play the same game and have the same effect. To me, that's always been a fundamental weakness of antitrust law.

Senator Webb.

Senator Webb. Thank you, Mr. Chairman, and you can count me among the cynics that believe market forces are the determinant in what we are examining right now; I would associate myself with a lot of Congressman Hinchey's comments.

I'm going to start by reading out again what you said: The five largest oil companies had $120 billion in profits last year alone. If this were simply market forces, there wouldn't be—going into the profits that are being plowed back into stock options.

I can recall from the campaign last year—let's remember, oil was $24 a barrel when we went into Iraq. It went up to $73 a barrel during the campaign, and then miraculously, the last month or so of the campaign, oil jumped to $50 a barrel; prices were going down and I was being asked on the campaign trail how long was this going to last. My general answer was: "Well, probably until Thanksgiving." Now we're back up, to $67 a barrel.

So when you look at the facts that Chairman Schumer and others have pointed out and others, gas prices have more than doubled in the last 5 years. We haven't seen new refineries being constructed since 1976, although the capacity of these refiners has grown. Are we finding margins at all time highs? The first quarter of 2007, profits increased 36 percent over the last year. You know I can't see that there are market forces at play.

And that goes to a question: What is a windfall profit? And what should we do about windfalls? Why don't we define a windfall? Well, the windfall is when external conditions allow you to make money but don't have to work any harder.

When you look at the fact that the price of a barrel of oil tripled since the time we went into Iraq, because of external forces, because of oil being bought based on the predictability of international conditions and these sorts of things, I would say that's a windfall.

When the price of a barrel of oil goes up, whether it's being bought out of that region or anywhere else, I would say that's a windfall.

What American companies do when they have this kind of a windfall? Well, you don't always, to get to the other gentleman's question—if OPEC is colluding, it doesn't mean that all companies have to decide what they're going to charge earlier, at this higher price.

This argument of "We can't help ourselves," doesn't particularly work, in my opinion. You can't expect a company to do any more

than meet a profit line, so then the question becomes: What do your responsible Government leaders do? What are we supposed to do? Allow this to continue? I think that we have a responsibility, as Government leaders, to create conditions where we're not having to operate at the mercy of international instability. I think that's what we'd have to do.

If companies will not turn around and invest in either alternate energy programs or in greater refining capabilities and these sorts of things, if they can't help themselves, maybe we have an obligation to try to figure out a way to do that.

Senator Casey has a bill that addresses some of those issues. I would hope that we could get a clear vote in the United States Senate on this issue, without having it become part of one of these omnibus bills where it's harder to address such a significant issue.

But I would like to ask both of you to characterize this if it's not windfall profit. Dr. McCool?

Dr. McCool. Senator, again I'm not sure—I think it's a problem I have, it's just often hard to define what you mean by "windfall".

Senator Webb. Windfall is when external conditions allow you to make money without working hard. I think that's a windfall.

Dr. McCool. The problem is, there's lots of cases we have of windfalls, where we don't necessarily try to tax it away. So the question is—and also, what the effect of that tax would be.

So I think—and again, this is outside the area of my current expertise, that putting in place a windfall profits tax, it's hard to sometimes keep that from having an effect on costs, and defining it correctly is very difficult.

Senator Webb. Maybe it's a bad term to use; maybe we could figure out a way to call it something else. But when a portion of corporate America is making these humongous profits, and is not reinvesting it in a way that we can solve a national problem, truly a national problem, what do you call that?

Dr. McCool. Well, what we call that is sort of the capital markets at work, I guess. If capital markets don't believe that investing in more refining capacity is worth the alternative uses of those funds——

Senator Webb. When it's affecting national security and the economic health of our working people, perhaps there is a point where the Government has to help—solve a larger problem.

Dr. McCool [continuing]. Policy.

Chairman Schumer. Senator Klobuchar.

Senator Klobuchar. Thank you, Mr. Chairman. I want to follow up a little with what Senator Webb is talking about.

In my State, they see that Exxon's profit last year was $39.5 billion, a record profit year; while you have people in St. Cloud, Minnesota that are filling up their tanks only half full because, they're middle class people and they can't afford to buy more. There is a major issue here.

When I look at all this money that Congress has given to the oil companies based on the idea that it's supposed to produce more oil, and be better for consumers. I see that it just hasn't happened.

I specifically want to ask, Dr. Salinger, about the March of 2001 FTC report about the Midwest Gasoline Price Investigation. In that report it was noted that by withholding supply, the industry was

able to drive prices up and thereby maximize its profits. What I want to know is what has the FTC been doing to deal with the bottleneck issues in the refining sector, and to penalize the companies that have been engaging in this market manipulation.

Dr. Salinger. Senator, I'm not sure that how you characterize the conclusions of the Midwest Gas report is correct. In terms of what we're doing to address bottleneck issues, what the Commission does is it reviews mergers, and it takes actions when it's presented with mergers that create a risk of harming competition.

Senator Klobuchar. Do you go back and look at these mergers after you've approved them to see if you think they've actually been good?

Dr. Salinger. We do. We have an active program doing merger retrospectives; we've had a lot of dealings with Dr. McCool over this. We did a major retrospective of the Marathon-Ashland joint venture, we did a major retrospective of the Marathon, Ashland, Ultramar Diamond Shamrock——

Senator Klobuchar. Can I just ask one more thing? I know one of the remedies that you've called for is to divest itself of downstream assets in the merger. One example may be cited during the Chevron Texaco merger in 2001. There, the FTC proposed that Texaco be required to divest all of its interest in two joint ventures. But Texaco's partner in the joint ventures was Shell Oil.

What really happened was that Shell Oil then scooped up these assets. The purported divestiture of Chevron Texaco did nothing to encourage competition, because then Shell just took over these refineries as downstream assets.

My question is, have you looked at that and its effect on consumers?

Dr. Salinger. I don't know that we have done a specific retrospective on that one, but the divestiture that the Commission sought in that case was to make the very specific markets involved in that merger competitive.

Senator Klobuchar. Do you think that we've made more unbranded, cheaper gasoline available? Or, do you think that it's harder to find than it was in the early nineties?

Dr. Salinger. My understanding is that there has been a movement towards branded gasoline. Consumers—many consumers, when given a choice between branded gasoline and unbranded gasoline, as is the case with other products, choose branded gasoline.

Senator Klobuchar. OK, Dr. Salinger. Others have said gas is up at $3.22, I can tell you some of my consumers are willing to go to unbranded gasoline, if they had the choice. The other issue right now that I'm going to explore with the next panel is we've been trying to get E-85 pumps and ethanol pumps throughout the country. There's only about 1,020 of them now nationwide out of the 170,000 gas stations. Three hundred are in my State, and we have cheaper prices for that type of product. I think it will get even cheaper as time goes on, if there's not a bottleneck and people aren't prevented from getting that.

I'm just concerned about the effect that these mergers have had on the availability of not only unbranded gasoline, but also other alternatives that aren't owned by the oil companies.

Dr. McCool, my final question is, do you see any reduction in unbranded, cheaper gasoline in your studies with GAO?

Dr. McCool. Again, we looked at it, in our work in 2004 we saw some indications; but again, it's hard to get good numbers on branded versus unbranded. But we really saw some indication that the unbranded was shrinking relative to branded.

Chairman Schumer. Congressman Cummings.

Representative Cummings. Thank you very much, Mr. Chairman.

I share the other Members of this panel's concerns about the cost of gasoline and the problems it is causing for my constituents, just to get to work and back.

Dr. Salinger, you said at the end of your testimony that, we see evidence of effective competition. And the big, unresolved question is, if that is true, then why is the price of gas so high? You say we have effective competition, but what is the problem?

Dr. Salinger. Well, the price of gasoline is higher than it was. And the difference between the price of gasoline and the price of crude is higher than it was, but we do have to ask the question: Is there any evidence that the supply of gasoline is being held below competitive levels? And we have not seen such evidence.

Representative Cummings. Going back to some questions asked earlier, how would you recommend that the FTC merger review process be made more rigorous? Or do you think it should be made more rigorous.

Dr. Salinger. Well, we are constantly reevaluating what we do. And we do merger retrospectives, as Senator Klobuchar asked about, and which I just testified to.

So it's important that we keep doing that. But I do believe that our review of mergers is quite rigorous.

Representative Cummings. I guess the thing that concerns me, are you all, either one of you, saying to the American people that we, the Members of the Congress, and of the Senate, have no ability—is there anything that we can do to make a difference?

Because see that is the bottom line. All these questions that they are asking are nice, but when I go back to Baltimore tonight, and I'm standing at the gas pump, and there is a guy filling up his tank, and now it costs him $30 more than it did a few months ago, he wants to know what are you doing and what can you do?

And that is what I want to know: Are there things that we can do to make a difference? And if we can not, if you think that we can not, tell us. Both of you.

Dr. McCool. I'm not sure that I can come up with a policy prescription for solving this particular problem in the short term; I do think it's important to conduct these kind of hearings and to do oversight, and to keep the light on the topic; and also to see whether, for example, these refinery margins do lead to what they should lead to, which is increased capacity, substantially increased capacity. If they don't, then that might be a symptom that something else needs to be done.

Representative Cummings. Increasing capacity, is that you are saying?

Dr. McCool. Eventually. Refining capacity.

Representative Cummings. How long do you think we—what indicators must we have before we——

Dr. McCool. Again, as Dr. Salinger stated earlier, these are very long-term investments; they take time to get up and running; but I think it's something that needs to be monitored. And I think Congress has—I'm sure FTC will do it as well, but I think Congress probably should be in the game as well.

Representative Cummings. Dr. Salinger?

Dr. Salinger. Congressman, the only way we're going to bring down prices is to increase supply or curb demand. So for any policy that you are considering, I would ask the question: Is this policy going to increase supply or is it going to reduce demand? Because a lot of the things that are being proposed are going to have exactly the wrong effect.

In terms of what can you do, I would go back to the late seventies where we had another crisis with energy prices, and then we had two decades of declining prices in real terms. And I would ask the question, how did we get that long stretch of real price declines?

I would argue that the main thing we did was we let the market work. I know that's a very tough sell, but that's my answer.

Representative Cummings. When you reviewed the proposed merger of Exxon and Shell, the Federal Trade Commission, knowing that the big oil companies often set prices based on their competitor's prices rather than their annual cost is part of the so-called zone pricing schemes at the retail level, what is the Federal Trade Commission's current thinking on the impact of zone pricing.

Dr. Salinger?

Dr. Salinger. Well it's a complicated question. But our thinking is that it would be a mistake to interfere with zone pricing.

Representative Cummings. Why is that?

Dr. Salinger. Well, because the incentive to invest in additional retailing assets to take advantage of areas where you can get a somewhat higher price might require that you allow companies to do zone pricing.

Representative Cummings. I see my time is up.

Thank you, Mr. Chairman.

Chairman Schumer. Senator Casey.

Senator Casey. Thank you, Mr. Chairman. Thank you for calling this hearing. I might be even less than five, because I have to preside, which is one of our important duties. I want to thank both of you for your testimony. I just have a few, and some of this will be by way of review.

The first thing, in terms of something I think the Congress can do, in talking about taking affirmative steps to deal with this crisis—there's no other way to describe it—in the minds and the lives of Americans, this is a gas crisis.

One thing to do would be to pass the legislation that I sponsored, and Senator Webb is a cosponsor; and other Members of the Senate I think are taking a look at this, which is to do two things. One is, and there are disagreements about both aspects of this; but the first thing is, I think that there should be an excise tax on the amount of dollars beyond the price of oil going above $50 a barrel; it's been above that for a long time now, $15 or more dollars above

that. Fifty percent of that should be used, to be targeted to a fund for low-income Americans, especially those trying to pay for mass transit costs, paying the bus fare and paying for the gasoline in their cars. That's one way to provide some relief at this time.

Secondly, and this probably has even broader support, is to repeal a lot of the royalty giveaways and tax breaks and credits, really, that were embedded into the 2005 Energy Policy Act, which I think even of themselves didn't make a lot of sense; but now they add up to billions of dollars, if not tens of billions, which I think should be dedicated to a separate fund for research and development.

So that's the bill, and I think it's an affirmative way to deal with this. But let me ask you a couple of basic questions. One is—and I don't know if the staff can get the chart—I know Senator Schumer may have referred to this earlier—but this is the pie chart. I don't know if you guys have that there. I have a darker copy.

This will not be a very complicated question, but I just think graphically this chart really tells a story. When you go from 1993, 10 companies holding 56 percent of refining market share; now to 2005, 10 companies holding 81 percent of the share.

Just in a very broad way, I realize we've got to stock within the confines of your report; you've got responsibilities to the FTC, you can't expound and give personal opinions. We're frustrated by that at this hearing, but we understand your restrictions.

Which chart is preferable to the American consumer and to the American economy?

Dr. Salinger. This pie chart that you have here, representing the structure of the industry now, that implies a degree of concentration which, under the DOJ-FCC guidelines, remains unconcentrated.

The increase in concentration we're finding that, as there's been technical change in the industry that has made it desirable to have larger refiners than used to be the case.

So the answer to your question is, the second; this one on the right, in my view, is preferable today.

Senator Casey. Dr. McCool?

Dr. McCool. Senator Casey, again it comes back to this, to me this question about the fact that it is probably true that the second, this chart on the right, reflects a lot of economies of scale and potentially lower cost, than this chart on the left for refining, but it's also potentially reflective of an increase in market power. These are the kind of offsetting effects that need to be analyzed, and that's my answer.

Senator Casey. And I realize, you guys have to deal with your own limitations here, but in the real world when someone opens up the newspaper and they see Exxon-Mobile with more than $9 billion profit in one quarter, and you heard the aggregate numbers for all the companies; and then they go to fill up their gas tank—we've all done it. I've been driving, too. It takes a lot longer to fill your tank when you're watching the number go up.

People just see a real—they see a connect and a disconnect. A disconnect from what you just said but a connect in the sense, a nexus between what's happening in this market with concentra-

tion, what's happening when we see these tax breaks and big profits, and what they see at the gas pump.

So they are frustrated, they want us to do something about it. I hope this hearing does that. I have to run. But I would urge, Dr. Salinger I'd urge you, and I'd urge the FTC, if you have the, not just the opportunity, but if you take the initiative to do further work in this area, and I realize that you've outlined a lot of the work that you've done already; but I would hope that if you delve into this in the next couple of weeks or months that you expedite the process so that American consumers can have the benefit from each and any FTC investigation or review; because this reality for people is stark, and it's profound, and it doesn't help any of us just to be able to say "Well, there's nothing we can do, and this degree of concentration doesn't rise to some threshold level."

So if there's any way the FTC can not only take a harder look at this but expedite the conclusions that you reach, I think that would help the American people.

Chairman Schumer. Thank you, Senator Casey.

And thank you both, Dr. McCool and Dr. Salinger, and we may have some written questions to submit to you, which we'd appreciate your responding to.

And now we'll call up our second panel. Would they please come forward.

Welcome, everybody. I guess this is not the order that I have.

Dr. Diana Moss is the vice president of the American Antitrust Institute. She's an economist, has expertise in antitrust issues across a wide range of industries including: electricity, oil and gas, appliances, and agricultural biotechnology.

Mr. Dennis DeCota is the executive director of the California Service Station and Automotive Repair Association. In addition, he himself is a service station owner.

Ms. Samantha Slater is director of the Congressional and Regulatory Affairs at the Renewable Fuels Association.

Dr. James Smith is chair of Oil and Gas Management at Southern Methodist University in Dallas, specializes in both economics and energy.

And Red Cavaney is the president and CEO of the American Petroleum Institute.

We're going to ask each witness to submit their entire statement for the record, because this is a large panel, and we're going to ask that you limit your testimony to 5 minutes.

Thank you. Dr. Moss, you may begin.

STATEMENT OF DR. DIANA L. MOSS, VICE PRESIDENT AND SENIOR RESEARCH FELLOW, AMERICAN ANTITRUST INSTITUTE

Dr. Moss. Thank you, Chairman Schumer and the Members of the Committee for holding this hearing. I appreciate the opportunity to appear here today.

The American Antitrust Institute is a nonprofit education, research, and advocacy organization. Our mission is to increase the role of competition in the economy, assure that competition works in the interests of consumers, and to sustain the vitality of the antitrust laws.

The response to high gasoline prices has been a number of policy initiatives, including State anti-price gouging laws, divorcement statutes to limit integrated ownership, a Government-owned and operated strategic refinery reserve, and unbundling of gasoline from branded outlets.

I hope to shed some light on questions associated with the underlying determinants of high gasoline prices. Undoubtedly, conservation and adoption of alternative fuels can best deal with price effects relating to depletion, environmental restrictions, low sensitivity of demand, and supply shocks. But I believe it is also appropriate to look to the changed structure of the downstream industry for behavioral incentives that can produce anti-competitive product.

Let me highlight some of these changes. The FTC reports over 1,000 mergers in the U.S. industry between 1985 and 2003. The average size of a petroleum merger was three times larger than the average plain vanilla merger.

Billion-dollar mergers accounted for about 86 percent of all large transactions; and while only 13 percent of transactions involved downstream refining and marketing, most of the billion dollar deals were in these markets.

Moreover, while the share of refining capacity owned by the majors fell by 18 percent over the 1990s, the independents tripled their share of capacity, largely by buying up what the majors divested. The independents, therefore, are now significantly vertically integrated in downstream markets.

It's true that consolidation in refining and marketing has generated a relatively higher level of scrutiny by the antitrust agencies. On average, about 13 percent of petroleum and marketing transactions were challenged by the antitrust agencies, compared to roughly 2 percent of all transactions. However, in most cases the FTC put forward a horizontal theory of harm, and in very few cases a vertical theory of harm. Data show that refining concentration in most U.S. PADDs has increased over the last 20 years; but data from FTC enforcement actions also indicates that two-thirds of refining markets were highly concentrated, with HHIs ranging from 1,800 to almost 7,000.

High levels of concentration in refining raise concerns because it is a production bottleneck; the number of operating refineries has declined by 44 percent; no new refineries have been added since 1975. Refiners have developed high capacity, technologically advanced facilities that account for a good portion of U.S. refining capacity, and utilization rates are at an all-time high.

Like the structure of refining markets, wholesale markets have also changed; the number of terminals has decreased by 50 percent over the eighties and nineties, and PADD-based concentration has increased. Again, merger enforcement data indicates that concentration in terminalling and marketing is also high, with HHIs ranging from 1,600 to almost 5,000.

Brand concentration in retail markets has increased over time. Sales of generic gasoline have decreased, and there are a smaller number of retail outlets operating today.

I think it is reasonable, against this backdrop, to expect that the foregoing developments raise questions regarding the availability of competitive alternatives available to jobbers and distributors that

purchase at the rack, independent gasoline retailers that potentially face the prospect of dealing more and more with integrated refiner-marketers, and ultimately consumers in obtaining supplies of competitively-priced gasoline.

Economic research has attempted to answer many of these questions by evaluating whether there is oligopolistic coordination at the retail level, explained by price asymmetry between crude oil and retail prices, by looking at the price cost effects of divorcement policies in various states, and by evaluating the price effects of mergers.

The merger research appears to support the notion that merger activity in the 1990s involving refiner-marketers has increased prices; but at the same time this research has been met by resistance and controversy, largely over the validity of assumptions underlying methodologies for estimating price increase.

In conclusion, there are two major implications of the foregoing: One is that policymakers should pay very close attention to: (a) the bottleneck nature of the refining industry; and (b) incentives to restrict capacity additions. They should find policies that fix that problem.

Fewer high capacity refineries operating at high utilization rates mean that the strategic manipulation of even small amounts of refining capacity can produce sizeable increases. We need not look far to find a good analogy, in the electric power industry, where transmission has been a long-recognized bottleneck, and policies that have been long pursued to incent the construction of new transmission need to de-bottleneck and reduce market power.

The second implication of the foregoing is the importance of rigorous scrutiny of the incremental accretion of market power. Theories of harm should consider traditional horizontal problems, but merger investigations should also focus closely on how vertical integration can create powerful incentives and abilities for integrated foreign firms to foreclose rivals.

I think it's safe to say that antitrust enforcement in the U.S. has given a good deal of deference to vertical efficiencies that flow from integration. Perhaps it is time to rebalance this equation, and to scrutinize vertical integration.

That concludes my testimony. Thank you again, and I look forward to questions.

[The prepared statement of Dr. Diana L. Moss appears in the Submissions for the Record on page 64.]

Chairman Schumer. Thank you, Dr. Moss.

Mr. DeCota.

STATEMENT OF DENNIS DECOTA, EXECUTIVE DIRECTOR, CALIFORNIA SERVICE STATION AND AUTOMOTIVE REPAIR ASSOCIATION

Mr. DeCota. Chairman Schumer and Honorable Members, it's a privilege to be here today to testify before you.

The question at hand is, is market concentration in the U.S. petroleum industry harming consumers? As a petroleum retailer for the past 28 years, I can assure you that it is. I counsel service station dealers throughout the State of California on these issues all the time.

My name is Dennis DeCota. I am the executive director of the California Service Station and Automotive Repair Association, a 34-year-old trade association; at one time the largest in the United States. Today we boast a membership of 200 members. We had 2,200 15 years ago.

I'm currently a ConocoPhillips dealer, although at one time in the same station I was a Union Oil Company dealer, and franchisee, and then a Tosco franchisee, then a Phillips franchisee, and now a ConocoPhillips franchisee.

We have seen the mergers and acquisitions that have occurred over the many years condense and basically consolidate our industry to a point to where there is very little competition.

The manipulation and lack of consumer choice has all but wiped out any competitive ability for the consumer to seek independent branded supply of gasoline.

Industry consolidation, again, mostly throughout the nineties, the major oil companies have merged and consolidated to a point where they no longer compete against one another for volume or market share. When I was a young retail rep with the oil company, I would go in and I would solicit a competitive account of another brand, and have to submit it to the home office to see if I could get approval in order to meet the demand and the price that I was competing against.

That's not done anymore. The oil companies pool their product together and then only brand it once they sell it to the retail branded station. So you have to understand, ever since they started pooling product, they don't really compete with one another for market share. It stopped. And I think that's very important to understand; it stifled competition.

The oil companies' retail competition, the independent refiners, due to mergers and acquisitions plus environmental compliance requirements, have all been wiped out in California. The competition between branded stations and independent stations is all but gone. They stopped franchising newly constructed stations back in the mid-nineties.

One of the most glaring examples is the recent acquisition of the Exxon-Mobile refinery by Valero, and Valero's later acquisition of United Diamond Shamrock. That combination of acquisitions and mergers destroyed the independent market in California. Now we experience a situation where branded refiners supply over 98 percent of all produced gasoline. In the second largest gasoline market in the world, only second to the U.S. as a whole.

Valero, once one of the largest independent refiners is now a major oil company, pricing like a major oil company. My recent letter to the Federal Trade Commission—by the way, their answers are much the same as they gave to you today—CSSARA informed the FTC, opposing the sale of Shell's southern California refinery to Tesoro, and Tesoro's planned acquisition of the State's largest independent—that being USA Petroleum, who is the only large independent left—will further reduce competition in our State, and the last low price leader will be gone in the same manor that Valero/UDS has done.

Gas price manipulation. Dealers must compete with proprietary company-operated stations at margins that simply won't sustain

their economic viability. As dealers are forced out of their stations and replaced by company operations or commissioned agents who simply raise the price in that community, once the competition, the retailer is gone.

A lack of consumer choice due to major oil companies' ability to drive out competition and control retail pricing, consumers are put at a tremendous disadvantage when it comes to their ability to find competitively priced fuel. The majors further reduce the free market by insisting that their franchise dealers, who excise rights under the PMPA—the Petroleum Marketing Practices Act—which are the statutes that created us to be captives in our relationship with the oil companies are governed by—simply we are forced into signing supply agreements and contracts of adhesion—2 weeks ago today, my company, ConocoPhillips, invited me to a marketing meeting where they told me, after 28 years, and investing over $500,000 in my station, I must pay $1.6 million for the land and improvements my station sits on or they would then put it up for bid. If I don't buy, I also forfeit my business value.

These are the type of problems they are exerting today to control the marketplace. And that's what we don't understand. Our antitrust laws are not being enforced as intended, and they are insufficient as far as protection. We need your help drastically.

The majors are in lock step with one another as it relates to wholesale pricing, with the exception of ARCO/BP in our State. The industry is so controlled that any unplanned glitch such as, believe it or not, a raccoon chewing on a wire, raises the price in California 7 cents a gallon. That is the honest to God truth.

When you look at this and you say, what's that constitute? Multiply a billion and a half gallons of retail gas sales a month, times 7 cents. You can do the math.

In conclusion, I thank you, and I would be more than happy to answer questions.

I did have two attachments. One is my price today. My price today, my margin, my profit margin at $3.39 a gallon—this was on the 18th, was 0.0707 a gallon; not even 8 cents a gallon.

If I made 30 percent gross profit, which my supplier is currently making in just the refining margin alone—but if I made 30 percent gross profit, as most retailers do today, I would be making $1.17 a gallon, and you would be paying $4.589 cents per gallon.

[The prepared statement of Dennis DeCota (with attachments) appears in the Submissions for the Record on page 69.]

Chairman Schumer. Thank you.

Ms. Slater.

STATEMENT OF SAMANTHA SLATER, DIRECTOR, CONGRESSIONAL AND REGULATORY AFFAIRS, RENEWABLE FUELS ASSOCIATION

Ms. Slater. Thank you. Good morning, Chairman Schumer and Members of the Committee. My name is Samantha Slater and I am director of Congressional and Regulatory Affairs for the Renewable Fuels Association, which is the national trade association representing the U.S. ethanol industry.

I'm pleased to be here today to discuss the ethanol industry's perspective on the effects the increased concentration in the petroleum industry has had on the availability of E-85 at the pump.

Ethanol today is largely a blend component of gasoline. Of the 5.4 billion gallons of ethanol blended in the U.S. last year, only about 15 million gallons were used for E-85. But the time when ethanol will saturate the blend market is on the horizon and the industry is looking forward to new market opportunities, including E-85.

Today there are approximately E-85 pumps at service stations across the country. That number has more than doubled since the passage of the Energy Policy Act of 2005. However, that number remains insignificant considering the 170,000 service stations nationwide. The majority of these stations are not owned by the major oil companies; but they are franchised from those same companies.

The Gasohol Competition Act of 1980 put the day's discrimination against and unreasonable limitations on the sale of gasohol behind us. However, in recent years, the efforts of many gasoline retailers to sell E-85 with their stations have been thwarted by the major suppliers. Since E-85 has reached the same level of quality and acceptability as gasohol had in 1980, such actions are plainly illegal under the Gasohol Competition Act, and yet the interference still occurs.

Oil companies today do not generally sell E-85, so they lose a sale when a driver pulls into a service station bearing their name and purchases E-85 instead of the gasoline the oil companies supply to the service station. It is not in their best interest financially, then, to permit E-85 to be sold at these service stations.

ConocoPhillips, in a letter to Senators Harkin and Lugar on February 14, 2006 plainly stated that E-85 "is not currently sold as a ConocoPhillips branded product." And one of the key reasons is that "E-85 predominantly originates and is manufactured by other producers." I would note that there are no restrictions in place today that would prohibit oil companies from selling their own brand of biofuels.

If an oil company, however, was to grant an exemption and allow a franchise service station to buy E-85 from an outside supplier, the service station would then be required to follow restrictive rules put in place by the oil companies. It is not unusual to find clauses in oil company contracts with franchisees that require service stations to dispense E-85 from its own unit and not as part of the existing multi-hose dispenser, as service stations are required to sell all three grades of the supplier's gasoline. This necessitates station owners to install new pumps and tanks at their own expense. It is also common practice for oil companies to disallow the sale of E-85 on the primary island, under its canopy; and franchisees must therefore find another location on the property to install a new pump—and then, even if the franchisee is able to jump through all of those hoops, it is likely that the oil companies would prohibit the service station from advertising the availability and price of E-85 on their primary signs listing fuel prices.

How can these service station owners hope to recoup their expenses if they can't advertise? The reason this interference con-

tinues is simple. Enforcement of the Gasohol Competition Act relies primarily on the willingness of marketers to face economic ruin. To bring a private action under the Gasohol Competition Act the plaintiff must have suffered antitrust injuries. For a marketer, that would mean that he could not sue unless his contract with the supplier has been terminated. Short of that, the marketer would be unable to demonstrate any antitrust injuries, so there would be no remedy available for the wrongful conduct of the supplier.

In the face of these barriers, many retailers are taking action to bring fuel choice to their customers. Regional chains like Kroger have taken the initiative to install E-85 pumps at their stores, and national chains like Wal-Mart are also showing an interest in installing E-85 pumps at their stations. Even State legislatures are taking steps to end the restrictive policies put in place by the oil companies.

In 2006, New York State enacted legislation that bars oil companies from requiring stations to buy all their fuel from those oil companies, and now two E-85 pumps are now in operation in Albany.

RFA urges Congress to consider augmenting the existing enforcement mechanisms under the Gasohol Competition Act through the creation of a regulatory enforcement regime. Assigning responsibility to an appropriate regulatory agency would ensure that marketers eager to give their customers the option of using home grown, American made renewable fuels in place of imported oil have a realistic opportunity to do so.

RFA looks forward to working with on these important issues, and thank you.

[The prepared statement of Samantha Slater appears in the Submissions for the Record on page 110.]

Chairman Schumer. Thank you, Ms. Slater.

Mr. Cavaney.

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

Mr. Cavaney. Thank you, Mr. Chairman and Members of the Committee. I appreciate the opportunity, and request your permission to submit a more detailed statement following today's hearing.

Chairman Schumer. Without objection.

Mr. Cavaney. Industry mergers are not a cause of higher gasoline prices. In fact, mergers contribute to production efficiencies that benefit consumers. As with all industries, mergers have occurred only after careful Federal Trade Commission scrutiny to ensure the competitiveness of markets. The FTC reviews all proposed mergers and acquisitions in the oil and natural gas industry. It has required divestitures, challenged mergers in the industry at lower levels of concentration than in any other industry and has stated that, and I quote: "despite some increases over time, concentrations for most levels of the petroleum industry has remained low to moderate."

Those who allege that mergers cause gasoline price increases fail to recognize that there is no shortage of competitors today, and market power is not concentrated. The eight largest refiners in the United States account for 66 percent of the market, a level of concentration that is exceeded by 15 other consumer product indus-

tries. In fact, in eight other major industries, the top eight companies, on average, account for 85 percent or more of their respective markets, according to U.S. Department of Commerce 2006 data.

In the United States there are 55 refining companies, 142 operating refineries, and a few more than 165,000 retail motor fuel outlets. In the case of the latter, as was said before, all but a small percentage are owned and operated by independent businessmen and women, not refiners.

According to the FTC, the share of U.S. refining capacity owned by independent refiners with no production or exploration operations, rose from 8 percent in 1990 to over 25 percent in 2006.

In part, as a result of the mergers, the industry has become more efficient and has reduced costs to consumers, with gasoline prices dropping to all-time record lows in the late 1990s. Sharp increases in crude oil prices and costly investments made to reduce emissions have masked this benefit, obviously, in later years.

Recent price increases reflect supply and demand. The same is true for past price increases, which have been thoroughly investigated by Government agencies who would have taken the industry to task if illegal or improper activity had been found. Invariably, these agencies have explained price spikes by supply and demand conditions that had nothing to do with manipulation of supplies or illegal agreements among companies.

Moreover, a 2006 investigation by the U.S. Federal Trade Commission found, and I quote: "no evidence indicating that refiners make market output decisions to affect the market price of gasoline. Instead, the evidence indicated that refiners responded to market prices by trying to produce as much higher-valued products as possible . . . The evidence collected in this investigation indicated that firms behave competitively." Unquote.

Those who persist in suspecting that the industry is holding back supplies overlook the fact that over the past 10 years, existing refineries have expanded capacity equivalent to building 10 new refineries and, based on public announcements of current refinery expansions, projected to add the capacity equivalent of an additional eight new refineries through 2011.

We recognize that today's higher prices are a burden to people and a threat to the economy. The cause of higher prices is an imbalance between supply and demand, worsened in part by policy shortcomings.

So far in 2007, total U.S. gasoline demand has set a record. Total production and total demand, both. However, because of maintenance at European refineries, where we import a significant amount of our product, an extended port workers strike in France, refinery problems in Venezuela and refining disruptions in Nigeria, less imported gasoline has been available to contribute to the traditional seasonal build in inventories.

Oil company mergers and acquisitions have, in of themselves, not caused higher gasoline prices. The consumer would be best served if we focus on the factors shaping higher prices, and not be misled by claims that have been repeatedly disproved, have no basis in fact, and mask root causes.

Thank you very much. I look forward to your questions.

[The prepared statement of Red Cavaney (with attachments) appears in the Submissions for the Record on page 113.]

Chairman Schumer. Thank you, Mr. Cavaney.

Dr. Smith.

STATEMENT OF DR. JAMES L. SMITH, CARY M. MAGUIRE CHAIR IN OIL & GAS MANAGEMENT, EDWIN L. COX SCHOOL OF BUSINESS, SOUTHERN METHODIST UNIVERSITY

Dr. Smith. Thank you, Mr. Chairman, and distinguished Members. It's a pleasure to be here today.

Many factors contribute to the high level of gasoline prices that we currently see, and to the continuing volatility in prices keeps us wondering what to expect next. The No. 1 factor is the tight link that connects crude oil prices to gasoline prices, crude oil feedstock and gasoline.

Over the past 15 years, 95 percent of month-to-month gasoline price fluctuations we've seen are directly accounted for by changes in the cost of the crude oil feedstock. We've heard a reference to a previous FTC study that found 85 percent—I've updated that work, and in recent years, it's climbed to 95 percent.

Dependence on the cost of crude oil feedstock is not the only factor responsible for changes in the price of gasoline, I know that; but its impact is so predominant that it usually overwhelms all other factors. We cannot easily attain any desirable outcomes for American motorists without keeping this dependence on crude oil prices in clear focus.

Crude oil prices themselves are not determined within a U.S. market. Rather, crude prices are determined in a global market, one that's dominated by non-U.S. players. The models and assumptions of the world oil market that we might have relied on 40 years ago, indeed the market that we all grew up with, those are no longer relevant. The structure of the world oil market has changed in fundamental ways. The biggest change, one that we are still learning to grapple with, is the replacement of multinational oil companies, the so-called Seven Sisters, by national oil companies which are quasi-political and economic organizations that control access to the resource base and determine the supply of oil in most major oil producing countries of the world.

The Seven Sisters, or what remains of them, provide only about one-sixth of the world's supply of crude oil. The national oil companies provide more than half the total supply, and that's after having shut in some production to support prices.

The crude oil market is not competitive, and this is no secret. The members of OPEC, which now number 12 countries, deliberately attempt to manipulate the price of crude oil for their benefit, not ours. And sometimes they succeed. The national oil companies of those countries are the instruments by which control is exercised.

OPEC members do not share with or cede control of the price mechanism to the multinational oil companies. The multinationals themselves do not have enough crude oil reserves or production to influence the market price.

If you wish to deal with gasoline prices in a manner that addresses the long-run interests of American motorists, then you need to deal with OPEC. OPEC is the problem.

What are the options for dealing with OPEC? Precious few. First, legal challenges have been discussed here today, and previously; you can try to win in court. Personally, I believe that's a tough road. The OPEC members are sovereign nations, in the first instance, so you have fewer tools on your side. On the other hand, they also have economies that are highly specialized; keyed and dependent upon oil. They have even more at stake than we do to win that battle.

Second, you can encourage the development in growth of alternative supplies of oil and other forms of energy. This will directly diminish OPEC's ability to control oil prices, and it would instill greater competition.

Finally, you can discourage oil consumption. However, the impact on OPEC of reduced consumption is less direct, and probably less potent than developing alternate supplies. That's because OPEC reserves are low-cost reserves of oil. When demand slackens and prices fall, it's the high-cost producers, the high-cost production flows, that are backed out of the market, not OPEC. OPEC is the last man standing.

We could actually see our dependence on OPEC rise as consumption falls, unless other concurrent changes are not made to stimulate alternative supplies of oil and energy.

In summary, gasoline prices are driven by crude oil prices. The volatility we see at the gas pump is a mere reflection of the underlying volatility that characterizes the world crude oil market. Any new policy initiative, to be effective and sustainable must be framed in the context of the world oil market and judged by its ability to tame the factors that are driving that market. Thank you.

[The prepared statement of Dr. James L. Smith appears in the Submissions for the Record on page 129.]

Chairman Schumer. Thank you, Dr. Smith.

I want to thank all five of you for your testimony, and again we have votes coming up, so I'll get right to the questions.

First, just a contrast. When I hear Mr. DeCota and Ms. Slater talk, they're in the real world, trying to get things done. They see competition squeezing off.

You hear the two economists, and they're talking at a very rarefied level in terms of "Oh, there's, you know, plenty of competition going on," the people we heard in the previous panel.

But Mr. DeCota, you've been doing it for 30 years and you see less competition, less unbranded gasoline, fewer independents, and the price goes up. Is that a fair statement?

Mr. DeCota. It is.

Chairman Schumer. And Ms. Slater, you see that it's not just the market at work, it's a real attempt by those who have dominant power, to prevent a competitive fuel to get on the market. Is that true?

Ms. Slater. That's absolutely true.

Chairman Schumer. So do the two of you see any—what do you think when you hear these economists, particularly previously Dr. Salinger, the FTC, who should have more say over this than

anyone say "Well, there's plenty of competition, and the chart with 81 percent"—and do you agree with that, Dr. Moss, this chart on the right is best for America, having fewer refiners?

That's what the previous panel had——

Dr. Moss. No, I disagree with that.

Chairman Schumer. Yes. I would think so.

So how do you feel about that? Just re-face a dichotomy here: What seems to be plain common sense, less competition means higher prices.

There is OPEC. I know my colleague has talked about it; so has Dr. Smith. But first of all, my guess is that the Big Oil companies are very happy with OPEC because they just add their profit margin on top of it. They haven't suffered since OPEC has started; they've actually gained.

And so somebody who wants to find a way around OPEC, which is in the national interest, which might be with an alternative fuel, which might be maybe encouraging more production in non-OPEC places, is not going to be one of the big oil companies, because they're tied into OPEC and they do very well.

So would Ms. Slater and Mr. DeCota comment on just the dichotomy we seem to see here from the people on the ground, who are there day-to-day and minute-to-minute, and the theorists who seem to be quite up there in the stratosphere.

Ms. Slater. The ethanol industry is in a bit of an interesting situation in that our biggest customer, certainly as a blend component, is also our biggest competitor; as an alternative fuel. So it puts the ethanol producers, and certainly those who are trying to market E-85, in a very interesting position as they try and move forward and increase the availability of E-85 nationwide.

And it is a very big difference between what's happening at the high level and what's happening on the ground. If you have an opportunity to go out to the real world with E-85 marketers and travel around the highways as they look for appropriate spots to place their E-85 pumps, and I'm just talking about the competition issue and looking at those figures. I just wanted to note as well that for the ethanol industry, the top eight companies represent about 50 percent of our market share.

Chairman Schumer. Thank you.

Mr. DeCota?

You were quite lucid in your testimony, in terms of how competition has decreased and prices go up—your price that you pay for gasoline goes up. You see a direct correlation.

Mr. DeCota. I do. Let me give you one example. It's fresh, it's one of my members.

He sold—at his service station, a van came in, the van filled up, the credit card, as mandated by the oil company, pays at the pump, it shuts off at $75. He has to re-do that sale. The total sale was $150 for this van. My dealer lost $3 on the sale.

The reason is zone pricing. In San Francisco as it is throughout the U.S., these oil companies strategically plan out how they're going to compete with one another to the tune of these zones. Where there's a non-growth community, they rip them—I'm sorry, I mean, that's the truth.

Chairman Schumer. Understood.

Just a question for Mr. Cavaney and Dr. Smith. How in God's name does having $60 billion, or whatever the number is, of buyback of stock from these companies making record profits, serve our national interest, rather than them putting that money into increasing—building new refineries, increasing refinery capacity, finding new oil—even assuming that so many of the leaders of the oil industry say they don't believe in alternative fuels.

That's what Mr. Tillerson told us in the Judiciary Committee a year ago. He said, "We don't believe in alternative fuels."

How does buying back the stock, how is that a preferential outcome for national happiness, security in every way?

Mr. Cavaney.

Mr. Cavaney. I'd like to comment that it's well known to anybody who reads the literature, on major construction projects worldwide, there is a shortage of engineering talent, companies to handle it, and people to do them. We are committing, as an industry, indefinite numbers—in the hundreds of billions of dollars, which exceed anything we've ever done before—but at some point you can't get people to do the work; so you're either left with sitting on the dollars or returning them to shareholders in the interim—giving them back.

And that's the method that's used not just by the oil industry; huge companies like Microsoft, GE and others, do the very same thing. It's a way to enhance the shareholders, and therefore keep the investment going.

Chairman Schumer. Dr. Smith.

Dr. Smith. Well, I think it's a good question and a fair question. Let me just add two points that haven't been raised. One of course is that the oil companies would love to invest in any number of basins around the world, outside of the U.S. and inside of the U.S.; that's where the most productive exploration investments are being made, in new provinces.

Unfortunately, a lot of those are closed, either under the influence of the nationalized oil companies or governmental controls of some sort.

The second issue really is what the companies may view as the sustainable long run oil price. I don't know of any company now that's budgeting capital expenditures on the presumption that $60 oil is going to be prevailing in 5 years. I do know companies that expect it to be $30, $35. So they're gauging their investments relative to a standard that might look low compared to the current market, but it's a very long-lived investment, and that's their decision.

Chairman Schumer. Thank you.

Congressman Saxton.

Representative Saxton. Thank you. I'd like to also thank each of you for being here to share your information with us, and Ms. Slater, I'd particularly like to thank you for coming to shine light on E-85; it's a project that I've been involved in for some years, and I didn't realize until I heard you say the problems that the dealers have instituting E-85, or including E-85 pumps at their stations, and we thank you for that.

Dr. Smith, thank you for being here, too. You are a professor at Southern Methodist University, Cox School of Business, where you specialize in oil and gas management. Is that correct?

Dr. Smith. Yes, it is.

Representative Saxton. So you come from the world of academia.

Dr. Smith. I do.

Representative Saxton. So I would just like to think that perhaps you have an objective view of this; and I guess I've made the point several times, as the Chairman has pointed out, that you believe that OPEC is a major player, and it's left to us to determine—what the significance is of the role that OPEC plays in creating the problem that we're here to face.

I want to ask you several questions, Dr. Smith. Would you agree that the cost of producing a barrel of oil in the Persian Gulf can be as little as $5?

Dr. Smith. A little less than $5 in some cases, yes.

Representative Saxton. Less than $5.

Dr. Smith. Yes.

Representative Saxton. In your testimony you noted that OPEC has attempted to manipulate world oil prices during the last 35 years. Do you have much doubt that OPEC's activities would be subject to antitrust laws if they were subject to—they would be in violation of antitrust laws if they were subject to U.S. antitrust laws?

Dr. Smith. They would be in clear violation if they were U.S. corporate entities.

Representative Saxton. You also note that when oil prices rise, the impact of oil production from non-OPEC sources is limited. Can you please expand on this point?

Dr. Smith. Well, it goes back to the point of not having geologically prospective areas. There's only so much more oil, even at high cost, that we can find in the mature basins of the U.S. and some of these other producing areas.

The real expansion potential is in the Middle East; it's in the Persian Gulf. It's in Russia, it's in places where we have limited access.

Representative Saxton. In coming decades, unless current trends change, will world energy demand become more dependent on oil produced by OPEC?

Dr. Smith. Seems likely, yes.

Representative Saxton. How do trends in OPEC oil production over the last 30 years or so contrast with the amount of OPEC oil reserves? Doesn't the discrepancy between the OPEC oil production and growing reserves indicate, as you suggest, that OPEC has been up to something; namely, underproduction of oil?

Dr. Smith. Clearly that's so. During the 1980s when OPEC oil reserves were growing very rapidly, OPEC production was actually decreased. Only in the last year has OPEC production level regained the level of the 1970s. So they were suppressing production while shoring up their own reserves.

Representative Saxton. And isn't it true that in 2004 and 2005—I believe those were the years when the price of oil dropped

to around $50 a barrel, that OPEC curtailed production, on two occasions?

Dr. Smith. I believe that's correct. They deliberately reduced the quota production levels for the members.

Representative Saxton. And didn't that more recently increase the cost of oil per barrel to over $60? In fact I believe today it's $67 a barrel.

Dr. Smith. It's very close to that, yes.

Representative Saxton. And would you attribute that to the underproduction of oil, deliberately brought about by OPEC decisionmaking?

Dr. Smith. Yes, I do.

Representative Saxton. The old OPEC price band was $22 to $28 per barrel. That was up until early 2005. Now with oil at roughly twice that price, OPEC doesn't seem interested in the old price band, but seems quite comfortable with oil over $60 a barrel. Has OPEC effectively changed its price band but is failing to acknowledge this?

Dr. Smith. I don't know that there's a consensus on a new price band, as there was an explicit agreement on the old one; but a number of OPEC ministers have personally indicated support for a much higher price band. I don't think there's been an official adoption of one.

Representative Saxton. My train of thought was interrupted by my Blackberry.

Dr. Smith. That's the problem with those things.

Representative Saxton. In any event, a little while ago somebody said to me—a little while ago here on this panel somebody said to me, one of my colleagues said to me, "You're right, Jim, but we can't do anything about OPEC."

I would just suggest that through our diplomatic sources and through other leverages that we may have at our disposal, if OPEC is in fact the problem, then we have to find a way to deal with it. And you pointed out that increasing product availability, of different types of product, as Ms. Slater suggested, would be one of the things that we could do to affect petroleum prices.

Is that correct?

Dr. Smith. Yes. Additional oil supplies and alternatives to oil supplies.

Representative Saxton. OK, my time has expired, but I want to thank all of you for being here today. I know the American public as well as Members of Congress are vitally interested in this subject and perhaps I, even for a different reason than most have realized at this point, sometime ago I took part in a press conference on the other side of the Capitol where my colleagues and I described oil as a potential weapon against our economy. And I believe that is true, and I believe that people all around the world recognize that that is true.

So thank you all for being here to discuss this important issue.

Representative Maloney. Thank you. And I thank all the panelists and my colleagues.

I'd like to ask Mr. Cavaney: This year we heard repeatedly about the impact of refinery outages on the price of gasoline. In other

words, gas prices are going up because refineries require maintenance or have accidents.

Just yesterday BP reported that they're reducing production at an Alaskan refinery by 100,000 barrels because of a water pipeline leak. How, in an industry where they are making so much profit, $120 billion last year, are there so many maintenance problems that Mr. DeCota explained earlier are driving up prices dramatically for consumers. Why are there so many maintenance problems?

Mr. Cavaney. Well, there's a number of things that have gone on and are going on that relate to this. First of all, in the Katrina and Rita period, when we lost 30 percent of our production, as soon as we could bring those refineries back on, they were brought back on and ran hard.

We also were able, as a result of the price increase, to attract production from elsewhere in the world, to bring it in to make up that gap until the refineries got going.

Once they got going, we had to keep them going, oftentimes at periods longer than might otherwise have been the case, because we were still short fuel for the American consumer, and yet we continued to provide that to them.

You can't run refineries unlimited amounts of time; you have to take downtime, both for preventive maintenance, for safety, and also for what we call turnarounds; we change the fuel to go to winter fuel or you change it to go to summer grade fuel.

There are also incidents that occur; for example, as mentioned earlier, the squirrel that chewed into the wire. Well, it chewed into the wire that provided the electricity to the refinery; and a refinery can't run without electricity.

So there's a whole series of things. Right now, just this morning, for the third week in a row, the key factors that have made the market really tight, which is reduced imports coming in, production being able to increase a fair amount and inventories being up, have all headed in the right direction; and just before I stepped up here, the futures market is reacting with decreased prices.

So what we're seeing now is regular market forces coming back; and if these patterns continue as they have historically, what you'll see after that is more supplies available, and you'll likely see relief on prices.

Representative Maloney. Well, instead of using the $120 billion in profits to expand refining capacity or make investments in renewable energy, I'd say investing in maintaining the pipelines and maintaining the access—they're using that money to buy back their own stock to enhance profits for their shareholders.

Now I can see that they're under pressure by their shareholders to make profits. So do you think it might be a good idea if the Government required that a certain percentage of these profits go back into maintaining the distribution to consumers so the prices don't go back up dramatically? That's one thing we could do that would help the country; or maybe Government should require that they invest in some new refineries in our country? Instead of just taking all of this profit out.

I know that in my district there was an electricity outage last year; there are six electricity plants in my district. And it was out

for 10 days. People died; they were not without electricity, but they were not maintaining what they had.

So we have suggested that they invest in maintaining the production, the distribution—and I think maybe we should do the same thing with the oil companies; require them to maintain their distribution rights better.

I tell you, there is something wrong when the prices are going up so dramatically. We saw it with the oil that was being extracted from federally-owned land, this Government was giving them subsidies. That's just plain wrong, and we are trying to stop that.

But I'd like to ask Mr. DeCota and Ms. Slater, who are out in the field working with this problem: What can Government do? You mentioned earlier, Ms. Slater, that the E-85, the ethanol, is not even available at branded sites. Here these companies are in many cases subsidized by billions of dollars. Should Government require that they allow other alternatives to be sold at these sites? What can we do to help address this in our own country?

Ms. Slater. Absolutely. And as I mentioned in my concluding remarks, that we have the Gasohol Competition Act of 1980 in place, and we need a regulatory agency to enforce it, and to make sure that regime is in place so that the law that is already on the books can be enforced; and essentially, it's that simple, to enforce the regulation as it is supposed to be.

Representative Maloney. What would you say, Mr. DeCota? What could we do?

Mr. DeCota. Let's look at the issues of these contracts of adhesion that are entered into. You know, me as a retailer, I cannot sell E-85 in my service station; my contract will prohibit. I will have to buy that station within the next 60 days, without an improvement. I have to sign a supply agreement that's between 13 and 20 years in length.

I still will not have the right to do that. Not only that, the major oil company will put a penalty on me if I don't hit my demanded annual volume on the sale of their product. So what's going to happen here, Congresswoman, is they're going to take—and if E-85 catches hold, they're going to raise the cost of E-85 to the consumer by raising my cost, on my cost of fuel, petroleum product.

We need to interject oversight by Government on contracts of adhesion that don't make sense. And that zone pricing, and their ability to take and set prices by zone have completely wiped out competition in the retail marketplace, and it's going to stymie the growth of our alternative fuels if we don't get Government engaged. Because no one can stand up to the strength of a major oil company; their legal power.

Representative Maloney. Well, I thank everybody for their testimony; and my time is up, and thank you, and we will be following up.

[Whereupon, at 12:20 p.m., Wednesday, May 23, 2007, the hearing adjourned.]

Submissions for the Record

JOINT ECONOMIC COMMITTEE
SENATOR CHARLES E. SCHUMER, CHAIRMAN
REPRESENTATIVE CAROLYN B. MALONEY, VICE CHAIR

PREPARED STATEMENT OF SENATOR CHARLES E. SCHUMER, CHAIRMAN

SHOULD WE BEGIN TO EXAMINE THE RASH OF OIL COMPANY MERGERS IN THE LAST 20 YEARS? CONSOLIDATION RAISES SERIOUS ECONOMIC, CONSUMER, AND ENERGY SECURITY QUESTIONS

HAS U.S. POLICY ON OIL COMPANY MERGERS HURT REFINING CAPACITY, ALTERNATIVE ENERGY DEVELOPMENT AND RAISED GAS PRICES FOR CONSUMERS?

Congressional Joint Economic Committee Begins Overdue Debate on Consolidation in U.S. Oil Industry and its Impact on Consumers and Energy Security

Thank you all for coming to today's critical hearing on the state of competition in the market for U.S. petroleum. We have a lot of business to cover today, so I am going to ask that Ranking Member Saxton and Vice Chairman Maloney offer their opening statements, and our fellow Members to please submit their opening statements for the record so we can get right to it.

After a wave of mergers in the industry over the past two decades, we have an elite group of five very large, integrated oil companies dominating our domestic petroleum market, and there has been very little analysis on the impact of those mergers.

The looming question hanging over us that we will strive to answer today is whether the lack of competition in this market is harming consumers: Should we begin a serious exploration of whether or not to undo some of these mergers?

To answer this question, we need to explore three areas—price-manipulation, refining capacity, and barriers to entry for renewable energy alternatives:

1. PRICES: Are oil companies exploiting their market control prices? If this market is, as some say it is, an oligopoly, then the oil companies don't have to meet behind closed doors to set the price of oil—one company can take the lead, and the rest can all wink at each other. Economists call this "price leadership," and the more concentrated the oligopoly, the more market power they have to set prices above competitive levels.

2. REFINING CAPACITY: Are oil companies strategically under-investing in refinery capacity and maintenance in order to constrict supply, drive up prices and maximize profits?

3. BARRIERS FOR RENEWABLES: And third, are oil companies using their market power to block the availability of alternative energy choices, such as E-85, at the pump?

The goal of this hearing is to examine in depth whether the oil industry's market structure is to blame for the sky-high gas prices, lack of adequate refining capacity, and lack of alternative fuels at the pump that are harming consumers today.

And frankly, I can't imagine a more appropriate time to have this hearing—the national average gasoline price reached $3.22 a gallon last week—the highest level on record.

We are here today because the American people suspect that the high prices they are paying at the pump go straight to oil companies' profits. They're concerned that these profits are not going toward renewable energy alternatives or curbing the cost of gasoline at the pump.

We are here today because, in the words of Teddy Roosevelt, "We demand that big business give people a square deal." A square deal means passing along efficiencies achieved through mergers to consumers, investing in new production and refinery capacity, and ensuring reliability of supply so that gas prices don't shoot up by over $1 a gallon in a matter of months. Today, American families are getting a raw deal, while oil companies make out like the robber barons of Roosevelt's time.

And finally, we are here today because competition in the petroleum industry is critically important to the health of the economy of this nation—an economy that has been dragging its feet in recent months. And the Federal Government has an important role to play in ensuring that this market is competitive.

Scanning the landscape of the U.S. petroleum market, it isn't clear that we have anything that can remotely be called competition:

Since the late 1990s—mergers between the giant oil companies, like Exxon and Mobil in 1999, Chevron and Texaco in 2001 and Conoco and Phillips in 2002—have left us with only five major domestic oil companies controlling the majority of our domestic refining capacity.

In 1993, the largest five oil refiners controlled one-third of the U.S. market, while the largest 10 had 56 percent. By 2005, the largest five controlled 55 percent of the market, and the largest 10 refiners dominate the market with over 80 percent market share.

Despite ever-increasing petroleum prices, our major oil companies don't feel they need to compete to create new domestic gasoline supply. All things being equal, high gas prices should be an incentive for increased refining capacity. But we haven't had a new refinery built in 30 years, forcing refineries to operate longer and harder, and at capacity levels that are overtaxing the system.

The oil companies tell us that instead of building new refineries, they are focused on upgrading existing refineries to keep up with increasing demand. Yet it isn't clear how much they are really investing in their existing refining plants when "unexpected" refinery accidents and unplanned maintenance closings have become a regular occurrence, choking off supply and causing steep price surges at the pump in recent months.

The rust and neglect has crept into the pipelines as well. Just yesterday, BP announced that it would shut down 100,000 barrels a day in capacity "for a few days" because of a pipeline leak. Just the latest in a series of missteps for BP in their production and distribution systems.

Meanwhile, even as oil prices are dropping, gas prices are going through the roof! Right now, crude oil prices are lower than they were last year at the onset of the summer driving season. But gas prices this morning, at $3.21 a gallon, are 34 cents higher than they were a year ago. The Department of Energy is predicting that crude oil prices will average about $66 a barrel this summer, versus $70 a barrel last summer. But the agency is predicting that gasoline will average about $2.95 a gallon this summer, up from an average of $2.84 last summer.

As a result, with capacity as tight as it is, and the spread between oil and gas prices widening, refining profit margins are at historical highs—ConocoPhillips, the largest U.S. oil refiner, posted its biggest quarterly profit since its merger in 2002. ExxonMobil, the second-largest U.S. refiner, just reported its highest first-quarter refining earnings in 13 years, and Valero, #3, nearly tripled its profits during the first quarter of this year.

I don't understand how an industry that makes tens of billions per year can still have rusty refining plants that constantly break down. I don't know of any other business where the ratio of profits to infrastructure breakdowns is as high. And I don't know any other industry where an equipment break down in one company benefits every other company by raising prices.

On the surface, it seems that Big Oil is pumping cash rather than petrol, strengthening profits rather than fixing rusty pipes, and they're using their dominant market positions to buy back their own stock rather than meet the growing demand for fuel in this country.

Here's just one example. ExxonMobil—the world's most profitable company—dolled out $29 billion (or 60 percent of its cash-flow)—on stock buybacks last year alone. This was more than any other company in the S&P 500. And this was $9 billion much more than Exxon invested back into its business. Meanwhile, according to news reports, Exxon's overall production as "barely budged" since its 1999 merger.

ExxonMobil is not alone. Overall, the oil industry spent $52.4 billion on buybacks last year, nearly double the amount in 2005. And like ExxonMobil, production levels at the rest of the Big 5 have been flat.

If there was more competition in this market, wouldn't these companies be investing in new production rather than sending their oligopolistic profits back to share-

holders? Wouldn't they have the incentive to take more risks in and innovate to get ahead on the renewable energy curve?

This is a long overdue debate, and my instinct tells me that a reconsideration of oil company mergers in the last two decades may be in order.

When markets have been distorted from lack of competition in the past, the Federal Government has taken action. Standard Oil, U.S. Steel, and AT&T come to mind.

It's no coincidence that I again quote Teddy Roosevelt, a great New Yorker, who had a lot to do with restoring competition in markets that had been lost, once said "Rhetoric is a poor substitute for action, and we have trusted only to rhetoric. If we are really to be a great Nation, we must not merely talk; we must act big."

It's time to consider acting big.

We're looking forward to learning from our witnesses today more about what is going on in the market so we can best figure out how to proceed from here. I will first introduce our witnesses before we proceed to my colleagues opening statements.

On our first panel we welcome:

Mr. Thomas McCool from the Government Accountability Office, who is the Director of their Center for Economics in the Applied Research and Methods Group. He has been at GAO for 20 years.

Dr. Michael Salinger is the Director of the Federal Trade Commission's Bureau of Economics. He previously taught at the business schools at Columbia and MIT, and is currently on leave from Boston University.

On our second panel we today we will have:

Dr. Diana Moss who is the Vice President of the American Antitrust Institute. She is an economist, and has expertise in antitrust issues across a wide range of industries, including: electricity, oil and gas, appliances, and agricultural biotechnology.

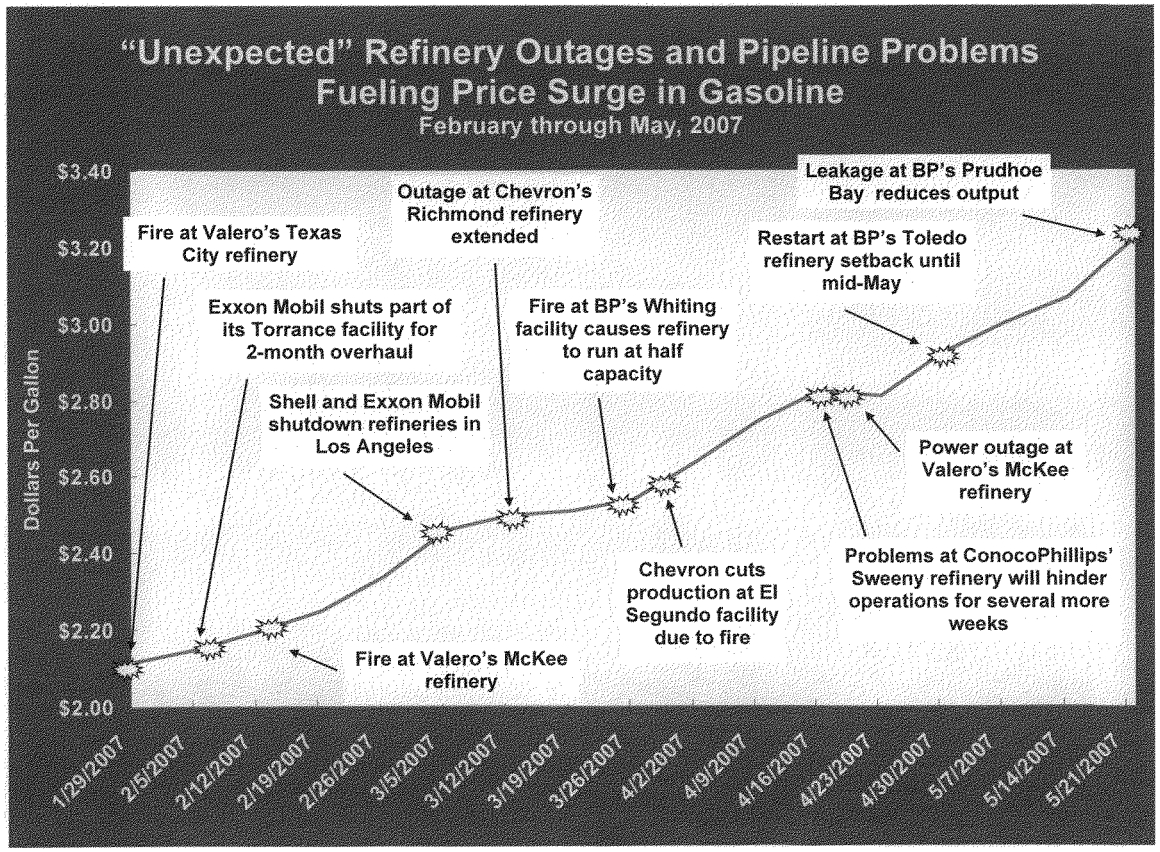
Mr. Dennis DeCota, who is the Executive Director of the California Service Station and Automotive Repair Association. In addition, Mr. DeCota is himself a service-station owner.

Ms. Samantha Slater is the Director of Congressional and Regulatory Affairs at the Renewable Fuels Association.

Dr. James Smith is the Chair of Oil and Gas Management at Southern Methodist University in Dallas, Texas, and specializes in both economics and energy. Dr. Smith is an expert energy economics and policy.

Now let's get down to business.

Gas Prices Continue to Rise, Setting New Records
Nationwide Average Retail Gasoline Price, Regular Unleaded
New Record High
Gas Price of
$3.22/Gallon Set on
May 21st
Dollars per gallon
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
1995
1997
1999
2001
2003
2005
2007
Source: Energy Information Administration, U.S. Department of Energy


"Unexpected" Refinery Outages and Pipeline Problems Fueling Price Surge in Gasoline
February through May, 2007
Dollars Per Gallon
$3.40
$3.20
$3.00
$2.80
$2.60
$2.40
$2.20
$2.00
1/29/2007
2/5/2007
2/12/2007
2/19/2007
2/26/2007
3/5/2007
3/12/2007
3/19/2007
3/26/2007
4/2/2007
4/9/2007
4/16/2007
4/23/2007
4/30/2007
5/7/2007
5/14/2007
5/21/2007
Fire at Valero's Texas City refinery
Exxon Mobil shuts part of its Torrance facility for 2-month overhaul
Shell and Exxon Mobil shutdown refineries in Los Angeles
Fire at Valero's McKee refinery
Outage at Chevron's Richmond refinery extended
Fire at BP's Whiting facility causes refinery to run at half capacity
Chevron cuts production at El Segundo facility due to fire
Restart at BP's Toledo refinery setback until mid-May
Power outage at Valero's McKee refinery
Problems at ConocoPhillips' Sweeny refinery will hinder operations for several more weeks
Leakage at BP's Prudhoe Bay reduces output

CONGRESS OF THE UNITED STATES

JOINT ECONOMIC COMMITTEE

Congressman Jim Saxton
Ranking Republican Member

PRESS RELEASE

For Immediate Release
May 23, 2007

Press Release #110-14
Contact Christopher Frenze
Republican Staff Director
(202) 225-3923

STATEMENT OF CONGRESSMAN JIM SAXTON
Ranking Republican Member

Oil and Gasoline Prices

I would like to join in welcoming the witnesses testifying before the Committee today. Obviously, we all share a concern about the current level of oil and gasoline prices.

There are many possible factors that can influence oil and gasoline prices. For example, we can examine the impact of oil industry mergers. GAO has performed econometric modeling of a number of such mergers, all of which occurred in the last half of the 1990s. Whatever can be said of the impact of such mergers, the large mergers modeled by GAO reflect the antitrust policies in place during the late 1990s when they occurred.

Another approach is to recognize that the oil market is global in scope, and that most oil reserves and oil production are outside of the United States. Unfortunately, huge reserves of low-cost oil are under the control of members of the OPEC cartel. As the Federal Trade Commission has noted, "OPEC is a functioning cartel whose activities would be illegal if undertaken by private companies." The FTC has also stated that OPEC "plays a significant role in the pricing of crude oil and, accordingly, in the pricing of gasoline."

OPEC accounts for nearly 70 percent of known world oil reserves, but accounts for only about 40 percent of annual world oil production. Restrictive OPEC practices, in the face of rising demand for oil, go a long way to explaining why oil prices are high. OPEC collusion and production quotas, combined with a bias against adequate development of its existing oil resources, have made a major contribution to the current situation.

The bottom line is that production costs for much of the oil in the Persian Gulf can be less than $5 per barrel, but largely due to OPEC the price of oil is many times that amount. There are issues such as refinery capacity, but these cannot explain the huge discrepancy between the production cost of crude oil and its price. As respected energy economist M.A. Adelman has noted, "the real problem" is a "strong but clumsy monopoly of mostly Middle Eastern exporters cooperating as OPEC."

The machinations of this cartel lead to higher consumer prices as well as destabilizing swings in market conditions. OPEC also has made us much more vulnerable to the potential impact of other factors such as production disruptions and terrorism. The cost of the cartel to American consumers has been huge, estimated at a minimum of $1 trillion according to one study cited by *The Economist*.

The OPEC cartel's collusion is reflected in its lack of transparency. Basic information about oil production is treated as secret by the cartel of member governments. The fact that these governments score very poorly on Transparency International's corruption index is not surprising.

It is alarming that these governments control such a large proportion of world oil reserves. Much more transparency in OPEC oil production is needed, as noted by the International Energy Agency and others. Obviously, the U.S. must reduce its reliance on the OPEC cartel as a source of oil.

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433 Cannon House Office Building • Washington, DC 20515 • (202) 226-3234 Fax (202) 226-3950 • www.house.gov/jec/

PREPARED STATEMENT OF REPRESENTATIVE CAROLYN B. MALONEY, VICE CHAIR

Thank you, Chairman Schumer. This is a very timely hearing because the price of gasoline is rising precipitously just as the summer travel season upon us. Is it coincidence or corruption? Either way, it's a hard blow to American consumers.

The average weekly price of gasoline hit $3.22 a gallon this week, the highest price on record. That means families are spending about $55, on average, every time they fill up their car—an astonishing $30 more per tank since the President took office. Rising gas prices are forcing American families to cut back on other spending, putting our economic growth at risk.

The current run-up in gas prices underscores the urgent need for a better national energy policy, but instead we see stubborn inaction and complicity on the part of the Administration.

The President's priority has been to give tax breaks to oil and gas companies even as their profits have soared to new heights. The Big 5 oil companies enjoyed eye-popping profits of $120 billion last year. Instead of using those profits to expand refining capacity or make serious investments in renewable energy, the big oil companies are buying back their own stock to enhance prices for their shareholders. Moreover, oil companies seem to be working hard to prevent gasoline alternatives, such as ethanol-based products, from being pumped at their branded gas stations.

The Administration has also turned a blind eye to oversight of the oil and gas industry in general, but especially mergers. The President has approved mergers at such a break neck speed that by 2005 the top 10 refiners controlled 81 percent of the market, up from 56 percent since 1993. This concentration of refiners has restricted production capacity, causing American consumers to pay more at the pump than they would with more market competition. The lack of competition is hurting consumers now and will hurt our economy in the future.

But elsewhere at home and around the globe, leaders are recognizing the need to invest in clean, renewable energy sources and technologies.

Just yesterday it was announced in my home district that New York City cabs are going green, as the Mayor plans to replace the city's fleet with hybrid cars by 2012.

And Democrats in Congress are working on legislation to protect consumers, increase our energy independence by investing in renewable energy sources, reduce global warming emissions, and strengthen the economy.

Mr. Chairman, thank you for holding this important hearing and I look forward to the testimony of our witnesses.

[News Release]

BROWNBACK: THE GOVERNMENT TAKES MORE IN GAS TAXES THAN THE OIL COMPANIES MAKE IN PROFITS

A WINDFALL PROFIT TAX ON OIL COMPANIES WOULD RAISE PRICES AND HURT CONSUMERS

WASHINGTON, D.C.—U.S. Senator Sam Brownback today argued that windfall profit and price-gouging taxes on oil companies are based on a deeply flawed understanding of the factors that determine gas prices and would harm consumers by increasing prices.

"The government already makes more off gas prices than the oil companies," said Brownback. "In the past 30 years, Federal and state governments have collected more than twice as much in gasoline taxes as the major American oil companies have earned in profits. Politicians looking at high gas prices might be tempted to punish oil companies, but this approach is out of sync with economic reality. A windfall profit tax on oil companies would hurt consumers by raising prices, limiting supply and discouraging investment in new technology."

At a hearing of the Joint Economic Committee, Brownback cast doubt on the premise that high gas prices result from price gouging and argued that a windfall profit tax would worsen the very problem it intends to solve. Key points included:

Oil Companies Have Little Control Over Gas Prices

Crude oil prices, as determined by worldwide energy markets, play the largest role by far in determining the price of gas at the pump.

A Windfall Profit Tax Would Raise Consumer Prices by Limiting Supply

A windfall profit tax on oil companies would remove much of their profit motive and likely lead to supply reductions by making it less profitable to look for oil in locations with higher extraction costs.

Unless the government resorted to Soviet-style price controls, by simply raising prices, the oil companies could recoup some of the revenue they would lose to a windfall profit tax.

The net effect would increase costs for consumers while discouraging further U.S. exploration, production and investment in new technologies and energy sources.

BROWNBACK ON HIGH GAS PRICES

Gas Prices Have Declined as a Share of Consumption and GDP

The relative cost of a gallon of gasoline, as a portion of household consumption, declined 38 percent between 1981 and 2005.

As a portion of per capita GDP (a good proxy for average income), the relative cost of gasoline declined 45 percent from 1981 to 2005.

Price Increases Result from Worldwide Changes, Not Oil Company Greed

Rising demand, especially from China and India, is a driving force behind the recent rise in crude oil prices.

Additional factors include limited refining capacity in the U.S. and the requirement of a diverse mix of fuel blends to meet air pollution standards.

Oil Companies Experience Frequent Downturns

A comparison of the difference between return on investment for U.S. oil companies and all other manufacturing companies reveals that oil companies have experienced inferior returns almost as frequently as they have experienced above-average returns.

Mergers Help Consumers by Increasing Efficiency and Capacity

Consolidation and mergers in the oil industry have led to larger refineries and improved innovation and efficiency, which benefits consumers through increased supply and lower production costs.

It is remarkable that despite growing demand, and the fact that no new refineries have been built in the U.S. since 1976, gas prices have actually decreased as a portion of household consumption and per capita GDP.

Brownback is the Senior Republican Senator on the Joint Economic Committee.

PREPARED STATEMENT OF THOMAS MCCOOL, DIRECTOR, APPLIED RESEARCH AND METHODS, GAO

ENERGY MARKETS: MERGERS AND OTHER FACTORS THAT INFLUENCE GASOLINE PRICES

Mr. Chairman and Members of the Committee:

We are pleased to participate in the Joint Economic Committee's hearing to discuss the factors that influence the price of gasoline, including oil industry mergers. Few issues generate more attention and anxiety among American consumers than the price of gasoline. Periods of price increases are accompanied by high levels of media attention and consumers questioning the causes of higher prices. The most current upsurge in prices is no exception. Anybody who has filled up lately has felt the pinch of rising gasoline prices. Over the last few years, our Nation has seen a significant run up in the prices that consumers pay for gasoline. According to data from the Energy Information Administration (EIA), the average retail price of regular unleaded gasoline in the United States reached $3.21 per gallon the week of May 21, 2007, breaking the previous record of $3.06 in September of 2005 following Hurricane Katrina. This year, from January 29th to the present, gasoline prices have increased almost every week, and during this time the average U.S. price for regular unleaded gasoline jumped $1.05 per gallon, adding about $23 billion to consumers' total gasoline bill, or about $167 for each passenger car in the United States. Spending billions more on gasoline constrains consumers' budgets, leaving less money available for other purchases.

However, for the average person understanding the complex interactions of the oil industry, consumers and the government can be daunting. For example, gasoline prices are affected by the decisions of the industry regarding refining capacity and utilization, gasoline inventories, as well as changes in industry structure such as consolidations; by consumers' decisions regarding the kinds of automobiles they purchase; and by government's regulatory standards. These are some of the key factors affecting gasoline prices that we will discuss today.

Given the importance of gasoline for our economy, it is essential to understand the market for gasoline and what factors influence the prices that consumers pay. You expressed particular interest in the role consolidation in the U.S. petroleum industry may have played. In this context, this testimony addresses the following questions: (1) What key factors affect the prices of gasoline? (2) What effects have mergers had on market concentration and wholesale gasoline prices?

To address these questions, we relied on information developed for a previous GAO report on mergers in the U.S. petroleum industry, the GAO primer on gasoline markets, and a previous testimony on gasoline prices and other aspects of the petroleum industry.[1] We also reviewed reports and other documents by the Federal Trade Commission (FTC) on the U.S. petroleum industry.[2] In addition, we obtained updated data from EIA. This work was performed in accordance with generally accepted government auditing standards.

In summary, we make the following observations:

• The price of crude oil is a major determinant of gasoline prices. A number of other factors also affect gasoline prices including (1) increasing demand for gasoline; (2) refinery capacity in the United States that has not expanded at the same pace as demand for gasoline in recent years, which coupled with high refinery capacity utilization rates, reduces refiners' ability to sufficiently respond to supply disruptions; (3) gasoline inventories maintained by refiners or marketers of gasoline that have seen a general downward trend in recent years; and (4) regulatory factors, such as national air quality standards, that have induced some states to switch to special gasoline blends that have been linked to higher gasoline prices. Finally, consolidation in the petroleum industry plays a role in determining gasoline prices. For example, mergers raise concerns about potential anticompetitive effects because mergers could result in greater market power for the merged companies, potentially allowing them to increase and sustain prices above competitive levels; on the other hand, these mergers could lead to efficiency effects enabling the merged companies to lower prices.

• The 1990s saw a wave of merger activity in which over 2,600 mergers occurred in all segments of the U.S. petroleum industry. Almost 85 percent of the mergers occurred in the upstream segment (exploration and production), while the downstream segment (refining and marketing of petroleum) accounted for 13 percent, and the midstream (transportation) accounted for about 2 percent. This wave of mergers contributed to increases in market concentration in the refining and marketing segments of the U.S. petroleum industry. Anecdotal evidence suggests that mergers may also have affected other factors that impact competition, such as vertical integration and barriers to entry. Econometric modeling we performed of eight mergers involving major integrated oil companies that occurred in the 1990s showed that, after controlling for other factors including crude oil prices, the majority resulted in wholesale gasoline price increases—generally between about 1 and 7 cents per gallon. While these price increases seem small, they are not trivial because according to FTC's standards for merger review in the petroleum industry, a 1-cent increase is considered to be significant. Additional mergers since 2000 are expected to increase the level of industry concentration. However, because we have not performed modeling on these mergers, we cannot comment on any potential effect on gasoline prices at this time.

CRUDE OIL PRICES AND OTHER FACTORS AFFECT GASOLINE PRICES

Crude oil prices are a major determinant of gasoline prices. As figure 1 shows, crude oil and gasoline prices have generally followed a similar path over the past three decades and have risen considerably over the past few years.

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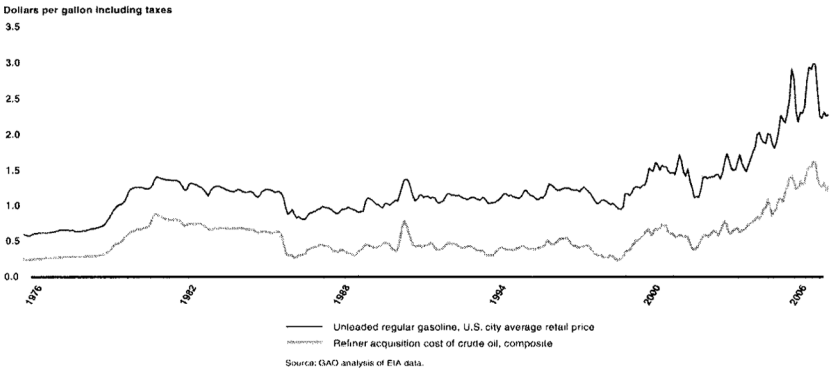
[1] GAO, *Energy Markets: Effects of Mergers and Market Concentration in the U.S. Petroleum Industry*, GAO–04–96 (Washington, D.C.: May 17, 2004); GAO, *Motor Fuels: Understanding the Factors That Influence the Retail Price of Gasoline*, GAO–05–525SP (Washington, D.C.: May 2005); GAO, *Energy Markets: Factors Contributing to Higher Gasoline Prices*, GAO–06–412T (Washington D.C.: February 1, 2006).

[2] See, for example, *FTC, The Petroleum Industry: Mergers, Structural Change, and Antitrust Enforcement*, An FTC Staff Study, August 2004.

Figure 1: Gasoline and Crude Oil Prices—1976-2006 (Not adjusted for inflation)



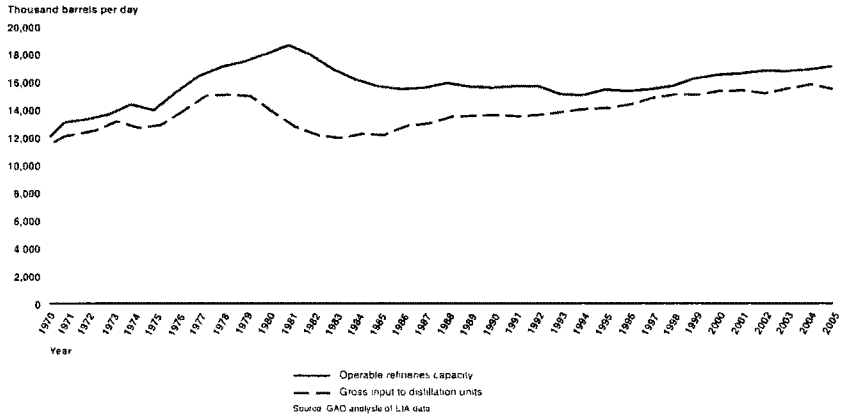
Also, as is the case for most goods and services, changes in the demand for gasoline relative to changes in supply affect the price that consumers pay. In other words, if the demand for gasoline increases faster than the ability to supply it, the price of gasoline will most likely increase. In 2006, the United States consumed an average of 387 million gallons of gasoline per day. This consumption is 59 percent more than the 1970 average per day consumption of 243 million gallons—an average increase of about 1.6 percent per year for the last 36 years. As we have shown in a previous GAO report, most of the increased U.S. gasoline consumption over the last two decades has been due to consumer preference for larger, less-fuel efficient vehicles such as vans, pickups, and SUVs, which have become a growing part of the automotive fleet.[3]

Refining capacity and utilization rates also play a role in determining gasoline prices. Refinery capacity in the United States has not expanded at the same pace as demand for gasoline and other petroleum products in recent years. U.S. refineries have been running at very high rates of utilization averaging 92 percent since the 1990s, compared to about an average of 78 percent in the 1980s.[4] Figure 2 shows that since 1970 utilization has been approaching the limits of U.S. refining capacity. Although the average capacity of existing refineries has increased, refiners have limited ability to increase production as demand increases. While the lack of spare refinery capacity may contribute to higher refinery margins, it also increases the vulnerability of gasoline markets to short-term supply disruptions that could result in price spikes for consumers at the pump. Although imported gasoline could mitigate short-term disruptions in domestic supply, the fact that imported gasoline comes from farther away than domestic supply means that when supply disruptions occur in the United States it might take longer to get replacement gasoline than if we had spare refining capacity in the United States. This could mean that gasoline prices remain high until the imported supplies can reach the market.

[3] GAO, *Motor Fuels: Understanding the Factors That Influence the Retail Price of Gasoline*, GAO–05–525SP, (Washington, D.C.: May 2005).

[4] The ratio of input to capacity measures the rate of utilization.

Figure 2: U.S. Refinery Capacity and Capacity Utilization, 1970 to 2005



Further, gasoline inventories maintained by refiners or marketers of gasoline can also have an impact on prices. As have a number of other industries, the petroleum industry has adopted so-called "just-in-time" delivery processes to reduce costs leading to a downward trend in the level of gasoline inventories in the United States. For example, in the early 1980s U.S. oil companies held stocks of gasoline of about 40 days of average U.S. consumption, while in 2006 these stocks had decreased to 23 days of consumption. While lower costs of holding inventories may reduce gasoline prices, lower levels of inventories may also cause prices to be more volatile because when a supply disruption occurs, there are fewer stocks of readily available gasoline to draw from, putting upward pressure on prices.

Regulatory factors play a role as well. For example, in order to meet national air quality standards under the Clean Air Act, as amended, many states have adopted the use of special gasoline blends—so-called "boutique fuels." As we reported in a recent study, there is a general consensus that higher costs associated with supplying special gasoline blends contribute to higher gasoline prices, either because of more frequent or more severe supply disruptions, or because higher costs are likely passed on, at least in part, to consumers. Furthermore, changes in regulatory standards generally make it difficult for firms to arbitrage across markets because gasoline produced according to one set of specifications may not meet another area's specifications.

Finally, market consolidation in the U.S. petroleum industry through mergers can influence the prices of gasoline. Mergers raise concerns about potential anticompetitive effects because mergers could result in greater market power for the merged companies, either through unilateral actions of the merged companies or coordinated interaction with other companies, potentially allowing them to increase and maintain prices above competitive levels.[5] On the other hand, mergers could also yield cost savings and efficiency gains, which could be passed on to consumers through lower prices. Ultimately, the impact depends on whether the market power or the efficiency effects dominate.

MERGERS IN THE 1990S INCREASED MARKET CONCENTRATION AND LED TO SMALL BUT SIGNIFICANT INCREASES IN WHOLESALE GASOLINE PRICES; HOWEVER THE IMPACT OF MORE RECENT MERGERS IS UNKNOWN

During the 1990s, the U.S. petroleum industry experienced a wave of mergers, acquisitions, and joint ventures, several of them between large oil companies that had previously competed with each other for the sale of petroleum products.[6] More than 2,600 merger transactions occurred from 1991 to 2000 involving all segments of the U.S. petroleum industry. These mergers contributed to increases in market con-

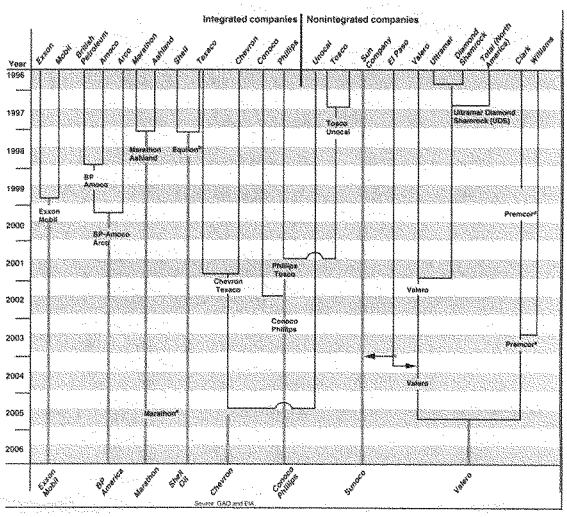
[5] Federal Trade Commission and Department of Justice have defined market power for a seller as the ability profitably to maintain prices above competitive levels for a significant period of time.

[6] We refer to all of these transactions as mergers.

centration in the refining and marketing segments of the U.S. petroleum industry. Econometric modeling we performed of eight mergers involving major integrated oil companies that occurred in the 1990s showed that the majority resulted in small but significant increases in wholesale gasoline prices. The effects of some of the mergers were inconclusive, especially for boutique fuels sold in the East Coast and Gulf Coast regions and in California. While we have not performed modeling on mergers that occurred since 2000, and thus cannot comment on any potential effect on wholesale gasoline prices at this time, these mergers would further increase market concentration nationwide since there are now fewer oil companies.

Some of the mergers involved large partially or fully vertically integrated companies that previously competed with each other. For example, as shown in figure 3, in 1998 British Petroleum (BP) and Amoco merged to form BPAmoco, which later merged with ARCO, and in 1999 Exxon, the largest U.S. oil company merged with Mobil, the second largest. Since 2000, we found that at least 8 large mergers have occurred. Some of these mergers have involved major integrated oil companies, such as the Chevron-Texaco merger, announced in 2000, to form ChevronTexaco, which went on to acquire Unocal in 2005. In addition, Phillips and Tosco announced a merger in 2001 and the resulting company, Phillips, then merged with Conoco to become ConocoPhillips. To illustrate the extent of consolidations in the U.S. oil industry, figure 3 shows that there were 12 integrated and 9 non-integrated oil companies, but these companies have dwindled to only 8.

Figure 3: Selected Mergers in the U.S. Petroleum Industry, 1996-2006



[7] See footnotes a-e.

[7] a. Marathon and Ashland formed a joint venture called Marathon Ashland Petroleum that was primarily owned by Marathon Oil (62 percent), which was a wholly owned affiliate of USX Corporation at the time the joint venture was created. Ashland sold its 38 percent ownership of the joint venture to Marathon on June 30, 2005.

b. Equilon Enterprises was a 56/44 venture between Shell Oil and Texaco, respectively, that sold motor gasoline and petroleum products under both the Shell Texaco brand names. Although not depicted in the graphic, Motiva Enterprises was a joint venture between Star Enterprise and Shell Oil that sold gasoline and petroleum products under both the Shell and Texaco brand names. Motiva is now a 50/50 joint venture between Saudi Refining and Shell Oil after Texaco sold its ownership to its partners as a precondition of the U.S. Federal Trade Commission approving the merger of Chevron and Texaco.

c. El Paso Corporation sold its 16,700-barrels-per-day Chickasaw, Alabama refinery to Trigeant EP Ltd, in August 2003. El Paso's remaining refineries were sold to publicly traded companies at the times indicated (Sun Company on 01/04 and Valero on 03/04).

d. Clark Refining divested its marketing operations (including the "Clark" brandname) and renamed itself Premcor in July 1999.

e. Williams Companies sold its Memphis, Tennessee 180,000-barrels-per-day refinery to Premcor in March 2003.

Independent oil companies have also been involved in mergers. For example, Devon Energy and Ocean Energy, two independent oil producers, announced a merger in 2003 to become the largest independent oil and gas producer in the United States at that time. Petroleum industry officials and experts we contacted cited several reasons for the industry's wave of mergers since the 1990s, including increasing growth, diversifying assets, and reducing costs. Economic literature indicates that enhancing market power is also sometimes a motive for mergers, which could reduce competition and lead to higher prices. Ultimately, these reasons mostly relate to companies' desire to maximize profits or stock values.

Proposed mergers in all industries are generally reviewed by Federal antitrust authorities—including the Federal Trade Commission (FTC) and the Department of Justice (DOJ)—to assess the potential impact on market competition and consumer prices. According to FTC officials, FTC generally reviews proposed mergers involving the petroleum industry because of the agency's expertise in that industry. To help determine the potential effect of a merger on market competition, FTC evaluates, among other factors, how the merger would change the level of market concentration. Conceptually, when market concentration is higher, the market is less competitive and it is more likely that firms can exert control over prices.

DOJ and FTC have jointly issued guidelines to measure market concentration. The scale is divided into three separate categories: unconcentrated, moderately concentrated, and highly concentrated. The index of market concentration in refining increased all over the country during the 1990s, and changed from moderately to highly concentrated on the East Coast. In wholesale gasoline markets, market concentration increased throughout the United States between 1994 and 2002. Specifically, 46 states and the District of Columbia had moderately or highly concentrated markets by 2002, compared to 27 in 1994.

Evidence from various sources indicates that, in addition to increasing market concentration, mergers also contributed to changes in other aspects of market structure in the U.S. petroleum industry that affect competition—specifically, vertical integration and barriers to entry. However, we could not quantify the extent of these changes because of a lack of relevant data and lack of consensus on how to appropriately measure them.

Vertical integration can conceptually have both pro- and anticompetitive effects. Based on anecdotal evidence and economic analyses by some industry experts, we determined that a number of mergers that have occurred since the 1990s have led to greater vertical integration in the U.S. petroleum industry, especially in the refining and marketing segment. For example, we identified eight mergers that occurred between 1995 and 2001 that might have enhanced the degree of vertical integration, particularly in the downstream segment. Furthermore, mergers involving integrated companies are likely to result in increased vertical integration because FTC review, which is based on horizontal merger guidelines, does not focus on vertical integration.

Concerning barriers to entry, our interviews with petroleum industry officials and experts at the time we did our study provided evidence that mergers had some impact on the U.S. petroleum industry. Barriers to entry could have implications for market competition because companies that operate in concentrated industries with high barriers to entry are more likely to possess market power. Industry officials pointed out that large capital requirements and environmental regulations constitute barriers for potential new entrants into the U.S. refining business. For example, the officials indicated that a typical refinery could cost billions of dollars to build and that it may be difficult to obtain the necessary permits from the relevant state or local authorities. Furthermore, the FTC has recently indicated that barriers to entry in the form of high sunk costs and environmental regulations have become more formidable since the 1980s, as refineries have become more capital-intensive and the regulations more restrictive. According to FTC, no new refinery still in operation has been built in the U.S. since 1976.

To estimate the effect of mergers on wholesale gasoline prices, we performed econometric modeling on eight mergers that occurred during the 1990s: Ultramar Diamond Shamrock (UDS)-Total, Tosco-Unocal, Marathon-Ashland, Shell-Texaco I (Equilon), Shell-Texaco II (Motiva), BP-Amoco, Exxon-Mobil, and Marathon Ashland Petroleum (MAP)-UDS.

- For the seven mergers that we modeled for conventional gasoline, five led to increased prices, especially the MAP-UDS and Exxon-Mobil mergers, where the increases generally exceeded 2 cents per gallon, on average.
- For the four mergers that we modeled for reformulated gasoline, two—Exxon-Mobil and Marathon-Ashland—led to increased prices of about 1 cent per gallon, on

average. In contrast, the Shell-Texaco II (Motiva) merger led to price decreases of less than one-half cent per gallon, on average, for branded gasoline only.[8]

• For the two mergers—Tosco-Unocal and Shell-Texaco I (Equilon)—that we modeled for gasoline used in California, known as California Air Resources Board (CARB) gasoline, only the Tosco-Unocal merger led to price increases. The increases were for branded gasoline only and were about 7 cents per gallon, on average.

Our analysis shows that wholesale gasoline prices were also affected by other factors included in the econometric models, including gasoline inventories relative to demand, supply disruptions in some parts of the Midwest and the West Coast, and refinery capacity utilization rates.

CONCLUDING OBSERVATIONS

Our past work has shown that, the price of crude oil is a major determinant of gasoline prices along with changes in demand for gasoline. Limited refinery capacity and the lack of spare capacity due to high refinery capacity utilization rates, decreasing gasoline inventory levels and the high cost and changes in regulatory standards also play important roles. In addition, merger activity can influence gasoline prices. During the 1990s, mergers decreased the number of oil companies and refiners and our findings suggest that these changes in the state of competition in the industry caused wholesale prices to rise. The impact of more recent mergers is unknown. While we have not performed modeling on mergers that occurred since 2000, and thus cannot comment on any potential effect on wholesale gasoline prices at this time, these mergers would further increase market concentration nationwide since there are now fewer oil companies.

We are currently in the process of studying the effects of the mergers that have occurred since 2000 on gasoline prices as a follow up to our previous report on mergers in the 1990s. Also, we are working on a separate study on issues related to petroleum inventories, refining, and fuel prices. With these and other related work, we will continue to provide Congress the information needed to make informed decisions on gasoline prices that will have far-reaching effects on our economy and our way of life.

Our analysis of mergers during the 1990s differs from the approach taken by the FTC in reviewing potential mergers because our analysis was retrospective in nature—looking at actual prices and estimating the impacts of individual mergers on those prices—while FTC's review of mergers takes place necessarily before the mergers, which is prospective. Going forward, we believe that, in light of our findings, both prospective and retrospective analyses of the effects of mergers on gasoline prices are necessary to ensure that consumers are protected from anticompetitive forces. In addition, we welcome this hearing as an opportunity for continuing public scrutiny and discourse on this and the other issues that we have raised here today. We encourage future independent analysis by the FTC or other parties, and see value in oversight of the regulatory agencies in carrying out their responsibilities.

Mr. Chairman, this completes my prepared statement. I would be happy to respond to any questions you or the other Members of the Committee may have at this time.

PREPARED STATEMENT OF DR. MICHAEL A. SALINGER, DIRECTOR, BUREAU OF ECONOMICS, FEDERAL TRADE COMMISSION

PETROLEUM INDUSTRY CONSOLIDATION

I. INTRODUCTION

Mr. Chairman and members of the Committee, I am Michael A. Salinger, Director of the Bureau of Economics of the Federal Trade Commission. I am pleased to appear before you to present the Commission's testimony on FTC initiatives to protect competitive markets in the production, distribution, and sale of gasoline through our vigilant and comprehensive merger program.[1]

The petroleum industry plays a crucial role in our economy. Indeed, few issues are more important to American consumers and businesses than the decisions being

[8] Unbranded (generic) gasoline is generally priced lower than branded gasoline, which is marketed under the refiner's trademark.

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

made about current and future energy production and use. Not only do changes in gasoline prices affect consumers directly, but the price and availability of gasoline also influence many other economic sectors. No other industry's performance is more deeply felt, and no other industry is more carefully scrutinized by the FTC. For example, just last month the Commission challenged a merger between Western Refining and Giant Industries because it believes the merger will lead to the reduced supply of bulk light petroleum products in Northern New Mexico.

Although the FTC does not regulate energy market sectors, the agency plays a key role in maintaining competition and protecting consumers in energy markets. The Commission has been particularly vigilant regarding mergers in the oil industry that could harm competition. It examines any merger and any course of conduct in the industry that has the potential to decrease competition and thus harm consumers of gasoline and other petroleum products. A review released in January of this year of horizontal merger investigations and enforcement actions from fiscal year 1996 to fiscal year 2005 shows that the Commission has brought more merger cases at lower levels of market concentration in the petroleum industry than in any other industry.[2] Unlike in other industries, the Commission has brought enforcement actions (and obtained merger relief in many cases) in petroleum markets that are only moderately concentrated.[3]

Although we analyze each petroleum merger according to numerous market facts surrounding the transaction, an overall analysis of merger policy in the petroleum industry necessarily takes a longer and broader view. Over the past 20 years, the Commission's merger policy has been consistent across administrations. Applying sound principles of law and of economics, this policy has been designed and focused to prevent the accumulation and use of market power to the detriment of consumers.

Over the past two decades, the petroleum industry has undergone a structural upheaval, punctuated by a burst of large mergers in the late 1990s. A number of other industries also saw a large number of mergers in that time frame. Certain forces unique to producing and distributing petroleum products, however, have spurred the transformation of that industry. Technological, economic, and regulatory factors have led toward reliance on a smaller number of larger, more sophisticated refineries that can process different kinds of crude oil more efficiently. The development of crude oil spot and futures markets has reduced the risks of acquiring crude oil through market transactions—as opposed to owning crude oil extraction and production assets—thus contributing to a decline in vertical integration between crude oil production and refining among the major oil companies. A number of major integrated firms have restructured to concentrate on one or more segments of the industry, and a number of unintegrated refiners or retailers have entered. Domestic crude oil production has fallen, and foreign sources have supplied an increasing share of the crude oil refined in the United States, thus enhancing the importance of competition in the world market for crude oil. That competition has intensified over the last decade with the dramatic increase in crude oil demand from newly industrializing countries.

II. THE FTC'S EXPERTISE IN THE PETROLEUM INDUSTRY

Since the early 1980s, the FTC has been the Federal antitrust agency primarily responsible for addressing petroleum industry competition issues. The Commission has closely scrutinized prices and examined any merger and nonmerger activity in the gasoline industry that had the potential to decrease competition and thus harm consumers. The Commission and its staff have developed expertise in the industry

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[2] The Horizontal Merger Guidelines that serve as a guide to merger enforcement by the FTC and the Department of Justice categorize market concentration, as measured by the Herfindahl-Hirschman Index ("HHI"), into three concentration zones. (The HHI is computed by squaring each firm's market share and summing the squares.) A market with an HHI below 1,000 is considered "unconcentrated." A market with an HHI between 1,000 and 1,800 is "moderately concentrated," while a market with an HHI over 1,800 is classified as "highly concentrated." The likelihood of enforcement agency interest in a merger or acquisition generally increases as HHI levels rise, although concentration levels are only a starting point for the searching analysis of potential competitive effects that is necessary to understand a transaction's potential effects. U.S. Dep't of Justice and Fed. Trade Comm'n, *1992 Horizontal Merger Guidelines* (Section 4 on Efficiencies revised April 8, 1997), *reprinted in* 4 Trade Reg. Rep. (CCH) Paragraph 13,104 ("Merger Guidelines").

[3] Federal Trade Commission Horizontal Merger Investigation Data, Fiscal Years 1996–2005 (Jan. 25, 2007), Table 3.1, et seq., *available at* http://www.ftc.gov/os/2007/01/P035603horizmergerinvestigationdata1996-2005.pdf; FTC Horizontal Merger Investigations Post-Merger HHI and Change in HHI for Oil Markets, FY 1996 through FY 2003 (May 27, 2004), *available at* http://www.ftc.gov/opa/2004/05/040527petrolactionsHHIdeltachart.pdf.

through years of investigation and research, pursuant to our primary function as a law enforcement agency tasked with preventing "unfair methods of competition,"[4] as well as mergers or acquisitions whose effect "may be substantially to lessen competition, or tend to create a monopoly."[5] Under Section 5 of the FTC Act and Section 7 of the Clayton Act, the agency has carefully examined proposed mergers and has blocked or required revisions[6] of any that have threatened to harm consumers by reducing competition.

The FTC has challenged, or obtained modifications of, numerous other mergers and acquisitions. Indeed, statistics on FTC merger enforcement in the petroleum industry show that, from 1981 to 2007, the agency filed complaints against 21 petroleum mergers. In 13 of these cases, the FTC obtained significant divestitures.[7] Of the eight other matters, the parties in four cases abandoned the transactions altogether after agency antitrust challenges; one case resulted in a remedy requiring the acquiring firm to provide the Commission with advance notice of its intent to acquire or merge with another entity; another case (Aloha/Trustreet) was resolved with the announcement of a throughput agreement to preserve competition;[8] yet another case (Chevron/Unocal) was resolved with the parties' agreement not to enforce certain patents on California's CARB gasoline; and the order in a final case (Carlyle/Riverstone) required certain ownership interests to be made passive and prohibited exchanges of competitively sensitive information.

In 2004, the FTC staff also published a study reviewing the petroleum industry's mergers and structural changes as well as the antitrust enforcement actions that the agency has taken in the industry over the past 20 years.[9] This was the Commission's third such report since 1982.[10] Like its predecessors, the 2004 report had two basic goals: to inform public policy concerning competition in the petroleum industry, and to make more transparent how the Commission analyzes mergers and other competitive phenomena in this sector.

Several themes emerged from the Commission's study of changes in the petroleum industry over the past two decades:

- Mergers of private oil companies have not significantly affected worldwide concentration in crude oil. This fact is important, because crude oil prices historically have been the chief determinant of gasoline prices.
- Despite some increases over time, concentration for most levels of the United States petroleum industry has remained low to moderate.

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[4] Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45.

[5] Section 7 of the Clayton Act, 15 U.S.C. § 18.

[6] FTC enforcement action has played an important role in the restructuring of the petroleum industry over the past 20 years. The Commission has not challenged mergers when the overall transaction was efficient and procompetitive but has required divestitures to remedy the anticompetitive effects that might have arisen in particular relevant markets. These FTC orders permitted the merging firms to achieve the economic benefits of the transaction while curing the potential anticompetitive effects through divestiture to a third party.

[7] *See, e.g., Chevron Corp.*, FTC Docket No. C-4023 (Jan. 2, 2002) (consent order), *at* http://www.ftc.gov/os/2002/01/chevronorder.pdf; *Valero Energy Corp.*, FTC Docket No. C-4031 (Feb. 19, 2002) (consent order), *at* http://www.ftc.gov/os/2002/02/valerodo.pdf; *Conoco Inc. and Phillips Petroleum Corp.*, FTC Docket No. C-4058 (Aug. 30, 2002) (Analysis of Proposed Consent Order to Aid Public Comment), *at* http://www.ftc.gov/os/2002/08/conocophillipsan.htm. Not all oil industry merger activity raises competitive concerns, however. In 2003, the Commission closed its investigation of Sunoco's acquisition of the Coastal Eagle Point refinery in the Philadelphia area without requiring relief. The Commission noted that the acquisition would have no anticompetitive effects and seemed likely to yield substantial efficiencies that would benefit consumers. Sunoco Inc./Coastal Eagle Point Oil Co., FTC File No. 031 0139 (Dec. 29, 2003) (Statement of the Commission), *at* http://www.ftc.gov/os/caselist/0310139/031229stmt0310139.pdf. The FTC also considered the likely competitive effects of Phillips Petroleum's proposed acquisition of Tosco. After careful scrutiny, the Commission declined to challenge the acquisition. A statement issued in connection with the closing of the investigation set forth the FTC's reasoning in detail. *Phillips Petroleum Corp.*, FTC File No. 011 0095 (Sept. 17, 2001) (Statement of the Commission), *at* http://www.ftc.gov/os/2001/09/phillipstoscostmt.htm.

[8] BUREAU OF ECONOMICS, FEDERAL TRADE COMMISSION, THE PETROLEUM INDUSTRY: MERGERS, STRUCTURAL CHANGE, AND ANTITRUST ENFORCEMENT (2004), *available at* http://www.ftc.gov/os/2004/08/040813mergersinpetrolberpt.pdf.

[9] BUREAU OF ECONOMICS, FEDERAL TRADE COMMISSION, THE PETROLEUM INDUSTRY: MERGERS, STRUCTURAL CHANGE, AND ANTITRUST ENFORCEMENT (2004), *available at* http://www.ftc.gov/os/2004/08/040813mergersinpetrolberpt.pdf.

[10] *See* Federal Trade Commission, *Mergers in the Petroleum Industry* (Sept. 1982), *available at* http://www.ftc.gov/os/2004/08/040813mergersinpetro182.pdf; Staff Report of the Bureau of Economics, Federal Trade Commission, *Mergers in the U.S. Petroleum Industry 1971–1984: An Updated Comparative Analysis* (May 1989), *available at* http://www.ftc.gov/os/2004/08/040813mergersinpetrol84.pdf.

• Intensive, thorough FTC merger investigations and enforcement have helped prevent further increases in petroleum industry concentration and avoid potentially anticompetitive problems and higher prices for consumers.

• Economies of scale have become increasingly significant in shaping the petroleum industry. The United States has fewer refineries than it had 20 years ago, but the average size and efficiency of refineries have increased, along with the total output of refined products.

• Industry developments have lessened the incentive to vertically integrate throughout all or most levels of production, distribution, and marketing. Several significant refiners have no crude oil production, and integrated petroleum companies today tend to depend less on their own crude oil production. In addition, a number of independent retailers purchase refined products on the open market.

• Some significant independent refiners have built market share by acquiring refineries that were divested from integrated majors pursuant to FTC enforcement orders.[11]

III. MERGER ENFORCEMENT IN THE PETROLEUM INDUSTRY

The Commission has gained much of its antitrust enforcement experience in the petroleum industry by analyzing proposed mergers and challenging transactions that likely would reduce competition, thus resulting in higher prices. For more than 20 years, the FTC has been the Federal antitrust agency primarily responsible for reviewing conduct in the petroleum industry to assess whether it is likely to reduce competition and harm consumer welfare. In this role, the FTC has devoted substantial resources to investigating and studying the industry. For example, during the period of large oil industry mergers in the late 1990s, the Bureau of Competition spent almost one-fourth of its enforcement budget on investigations in energy industries.

The Commission investigates every substantial petroleum industry merger. Many transactions, particularly smaller ones, raised no competitive concerns and required no enforcement intervention. A case-by-case analysis is necessary to find the relevant markets in which competition might be lessened, to assess the likelihood and significance of possible competitive harm, and to fashion remedies to ensure that competition is not reduced in those relevant markets and consumers consequently are not harmed.[12] It is important to note that mergers can be, and often are, efficiency-enhancing and procompetitive.

The FTC's analysis of petroleum mergers follows the same Department of Justice/Federal Trade Commission Horizontal Merger Guidelines that the agencies use to analyze mergers in other industries. Although merger analysis begins with concentration data, the Commission analyzes qualitative factors—consistent with advances in economic learning and case law developments—that indicate whether a merger will increase the ability of the merging parties to exercise market power in one or more properly defined relevant markets[13] by curbing output unilaterally or by coordinating their behavior with rival suppliers.

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[11] In 2005, the Commission issued a report on the various factors that influence the price of gasoline and other refined petroleum products. *See* Federal Trade Commission, *Gasoline Price Changes: The Dynamic of Supply, Demand, and Competition* (2005), *available at* http://www.ftc.gov/reports/gasprices05/050705gaspricesrpt.pdf. A key lesson of this report is that worldwide supply, demand, and competition for crude oil are the most important factors in the national average price of gasoline in the United States. Other important factors affecting retail gasoline prices include retail station density, new retail formats, environmental factors, state and local tax rates, and state and local regulations.

[12] In May 2004, the Government Accountability Office released a report that purported to analyze how eight petroleum industry mergers or joint ventures carried out during the late 1990s affected gasoline prices. GAO, *Energy Markets: Effects of Mergers and Market Concentration in the U.S. Petroleum Industry* (May 2004). The Commission regards evaluations of past enforcement decisions as valuable elements of responsible antitrust policymaking, and is supportive of the goal of the GAO inquiry—to evaluate the consequences of past decisions by the Federal antitrust agencies. The Commission believes, however, that the GAO report suffered from a number of significant deficiencies. *See* Prepared Statement of the Federal Trade Commission Before the Committee on Energy and Commerce, Subcommittee on Energy and Air Quality, U.S. House of Representatives, *Market Forces, Anticompetitive Activity and Gasoline Prices—FTC Initiatives to Protect Competitive Markets* (July 15, 2004), *available at* http://www.ftc.gov/os/2004/07/040715gaspricetestimony.pdf.

[13] The correct definition of a market in merger review is a detailed, fact-intensive inquiry that involves both product and geographic components. We must ascertain for which product (or products) the transaction may harm competition, and we also must determine the geographic area over which any anticompetitive effects will be felt. In our analysis of petroleum mergers, national, state, or PADD-wide "markets" rarely correspond to properly defined geographic mar-

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Despite increases in concentration at some production levels over the last two decades, particularly since the mid-1990s, most sectors of the petroleum industry generally remain unconcentrated or moderately concentrated. In addition, the growth of independent marketers and hypermarkets has increased competition at the wholesale and retail levels in many areas.

Some mergers have led to increased concentration. An increase in concentration from a merger, however, is not by itself a sufficient basis for finding that a merger is anticompetitive. Where concentration changes raise concerns about potential competitive harm, the FTC conducts a more detailed investigation. When it has concluded that a merger is likely to reduce competition, the FTC has required divestitures or sought preliminary injunctions. Many of the mergers the FTC challenged would have lessened competition significantly if they had proceeded as originally planned. Our antitrust remedies prevented those increases: through carefully crafted divestitures and other remedial provisions, the Commission has mandated the elimination of competitively problematic overlaps between the merging parties while allowing the competitively unobjectionable—or even efficiency-enhancing—portion of a transaction to proceed.

Collectively, mergers have raised competitive concerns at all of the various levels of the petroleum industry, but the majority of FTC actions have targeted downstream activities, i.e., refining, refined products pipelines, terminals, and marketing. The competitive concern generally has been that the merger would enable the merged firm to raise prices in a market for products that it sells to the next level of the industry (e.g., refined products sold to wholesalers, or wholesale products sold to retailers) through either unilateral or coordinated behavior. A key element in assessing the potential for adverse competitive effects is to determine the alternatives available to customers, including whether more distant suppliers are viable options. Some enforcement actions have been based on a potential competition theory; some on competitive problems involving market power held by a buyer or a group of buyers; and some on vertical concerns relating to the ability of a single firm or a coordinating group of firms to raise the costs of other firms in the industry, to the injury of consumers.

Most recently, the Commission filed for a preliminary injunction in Federal court and issued an administrative complaint against a petroleum industry transaction—Western Refining's proposed acquisition of Giant Industries. On April 12, 2007, the Commission filed its complaint in the U.S. District Court for the District of New Mexico, alleging that the proposed acquisition would lead to reduced competition for the bulk supply of light petroleum products to northern New Mexico.[14] In the complaint, as amended, we allege that Western and Giant are two of only a small number of firms capable of responding to higher prices or quantity decreases in the bulk supply of gasoline to northern New Mexico, and that Giant would have increased its supply of gasoline to that area absent its acquisition by Western.[15] Following the district court's April 13, 2007, issuance of a temporary restraining order against consummation of the transaction, the trial of the preliminary injunction action took place last week, and the court is expected to rule soon on the Commission's request for an injunction. The FTC issued an administrative complaint against the merger on May 3, 2007.[16]

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kets. ("PADD" stands for "Petroleum Administration for Defense District." PADD I consists of the East Coast. PADD II consists of the Midwest. PADD III includes the Gulf Coast. PADD IV consists of the Rocky Mountain region. PADD V is made up of the West Coast plus Alaska and Hawaii.)

[14] *Federal Trade Commission v. Paul L. Foster, Western Refining, Inc., and Giant Industries, Inc.*, Civil Action No. 07cv352 JH/ACT (D.N.M. Apr. 12, 2007), *available at* http://www.ftc.gov/os/caselist/0610259/index.shtm.

[15] *See* http://www.ftc.gov/os/caselist/0610259/070430weterngiantfirstamndcmplt.pdf.

[16] Two other recent FTC law enforcement actions also involve the energy sector, although not the petroleum industry. The Commission issued an administrative complaint on March 14, 2007, challenging Equitable Resources' proposed acquisition of The Peoples Natural Gas Company from Dominion Resources. According to the FTC's complaint, the acquisition would result in a monopoly in the distribution of natural gas to nonresidential customers in certain areas of Allegheny County, Pennsylvania, including Pittsburgh. *See* http://www.ftc.gov/os/adjpro/d9322/0703admincmp.pdf. Following the Pennsylvania Public Utility Commission's approval of the merger, the FTC also filed an action in the Federal district court in Pittsburgh, seeking a preliminary injunction against the transaction. On May 14, 2007, the court granted defendants' motion to dismiss on state action grounds; the Commission has requested an injunction pending appeal.

In addition, in November 2006, the FTC challenged EPCO's proposed $1.1 billion acquisition of TEPPCO's natural gas liquids storage businesses. The FTC approved a consent order that allowed the acquisition to be completed only if TEPPCO first divested its interests in the world's largest natural gas liquids storage facility in Mont Belvieu, Texas, to an FTC-approved buyer.

Also, on March 14, 2007, the FTC challenged the acquisition of energy transportation, storage, and distribution firm Kinder Morgan by Kinder Morgan management and a group of investment firms, including private equity funds managed and controlled by The Carlyle Group and Riverstone Holdings. Because the proposed transaction threatened competition between Kinder Morgan and Magellan Midstream—a major competitor of Kinder Morgan in terminalling and distributing gasoline and other light petroleum products in the southeastern United States—the Commission ordered the parties in effect to turn Carlyle's and Riverstone's interest in Magellan Midstream into a passive investment.[17]

In November 2006, Chevron and USA Petroleum abandoned a transaction in which Chevron would have acquired most of the retail gasoline stations owned by USA Petroleum, the largest remaining chain of service stations in California not controlled by a refiner. USA Petroleum's president acknowledged that the parties abandoned the transaction because of resistance from the FTC.[18]

The Commission filed a complaint on July 27, 2005, in Federal district court in Hawaii, alleging that Aloha Petroleum's proposed acquisition of Trustreet Properties' half interest in an import-capable terminal and retail gasoline assets on the island of Oahu would reduce the number of gasoline marketers from 5 to 4 and could lead to higher gasoline prices for Hawaii consumers.[19] The case was resolved through the parties' execution of a 20-year throughput agreement that will preserve the competition that we believe was threatened by the acquisition.[20]

In June 2005, the FTC challenged the acquisition of Kaneb Services and Kaneb Pipe Line Partners—companies that engaged in petroleum transportation and terminalling in a number of markets—by Valero L.P., the largest petroleum terminal operator and second largest operator of liquid petroleum pipelines in the United States.[21] The complaint alleged that the acquisition had the potential to increase prices in bulk gasoline and diesel markets.[22] The FTC's consent order required the parties to divest assets sufficient to maintain premerger competition, including certain Kaneb Philadelphia-area terminals, Kaneb's West pipeline system in Colorado's Front Range, and Kaneb's Martinez and Richmond terminals in Northern California.[23] In addition, the order forbids Valero L.P. from discriminating in favor of or otherwise preferring its Valero Energy affiliate in bulk ethanol terminalling services, and requires Valero to maintain customer confidentiality at the Selby and Stockton terminals in Northern California. The order succeeds in maintaining import possibilities for wholesale customers in Northern California, Denver, and greater Philadelphia and precludes the merging parties from undertaking an anticompetitive price increase.

In the past few years, the Commission has brought a number of other important merger cases. One of these challenged the merger of Chevron and Texaco,[24] which combined assets located throughout the United States. Following an investigation in which 12 states participated, the Commission issued a consent order against the merging parties requiring numerous divestitures to maintain competition in particular relevant markets, primarily in the western and southern United States.

Another petroleum industry transaction that the Commission challenged successfully was the $6 billion merger between Valero Energy Corp. ("Valero") and Ultramar Diamond Shamrock Corp. ("Ultramar").[25] Both Valero and Ultramar were leading refiners and marketers of gasoline that met the specifications of the California Air Resources Board ("CARB"), and they were the only significant suppliers to independent stations in California. The Commission's complaint alleged competi-

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EPCO, Inc., and TEPPCO Partners, L.P., FTC Docket No. C-4173 (Oct. 31, 2006) (consent order), *available at* http://www.ftc.gov/os/caselist/0510108/0510108c4173do061103.pdf.

[17] *TC Group L.L.C., et al.*, FTC Docket No. C-4183 (Mar. 14, 2007) (consent order), *available at* http://www.ftc.gov/os/caselist/0610197/index.shtm.

[18] *See* Elizabeth Douglass, *Chevron Ends Bid to Buy Stations*, L.A. TIMES, Nov. 18, 2006, *available at* http://www.latimes.com/business/la-fichevron18nov18,1,7256145.story?coll=la-headlines-business&ctrack=l&cset=true.

[19] *Aloha Petroleum Ltd.*, FTC File No. 051 0131 (July 27, 2005) (complaint), *at* http://www.ftc.gov/os/caselist/1510131/050728comp1510131.pdf.

[20] FTC Press Release, *FTC Resolves Aloha Petroleum Litigation* (Sept. 6, 2005), *available at* http://www.ftc.gov/opa/2005/09/alohapetrol.htm.

[21] *Valero L.P.*, FTC Docket No. C-4141 (June 14, 2005) (complaint), *at* http://www.ftc.gov/os/caselist/0510022/050615comp0510022.pdf.

[22] *Id.*

[23] *Valero L.P.*, FTC Docket No. C-4141 (July 22, 2005) (consent order), *at* http://www.ftc.gov/os/caselist/0510022/050726do0510022.pdf.

[24] *Chevron Corp.*, FTC Docket No. C-4023 (Jan. 2, 2002) (consent order), *at* http://www.ftc.gov/os/2002/01/chevronorder.pdf.

[25] *Valero Energy Corp.*, FTC Docket No. C-4031 (Feb. 19, 2002) (consent order), *at* http://www.ftc.gov/os/2002/02/valerodo.pdf.

tive concerns in both the refining and the bulk supply of CARB gasoline in two separate geographic markets—Northern California and the entire state of California—and the Commission contended that the merger could raise the cost to California consumers by at least $150 million annually for every 1-cent-per-gallon price increase at retail.[26] To remedy the alleged violations, the consent order settling the case required Valero to divest (1) an Ultramar refinery in Avon, California; (2) all bulk gasoline supply contracts associated with that refinery; and (3) 70 Ultramar retail stations in Northern California.[27]

An additional example is the Commission's 2002 challenge to the merger of Phillips Petroleum Company and Conoco Inc., alleging that the transaction would harm competition in the Midwest and Rocky Mountain regions of the United States. To resolve that challenge, the Commission required the divestiture of (1) the Phillips refinery in Woods Cross, Utah, and all of the Phillips-related marketing assets served by that refinery; (2) Conoco's refinery in Commerce City, Colorado (near Denver), and all of the Phillips marketing assets in Eastern Colorado; and (3) the Phillips light petroleum products terminal in Spokane, Washington.[28] The Commission's order ensured that competition would not be lost and that gasoline prices would not increase as a result of the merger.

To sum up structural changes and merger enforcement policy in the last two decades, mergers have contributed to the restructuring of the petroleum industry but have had only a limited impact on industry concentration. The FTC has investigated all major petroleum mergers and required relief when it had reason to believe that a merger was likely to lead to competitive harm. The FTC has required divestitures in moderately concentrated markets as well as in highly concentrated markets.

IV. OTHER FTC ACTIVITIES IN THE PETROLEUM INDUSTRY

In addition, beyond investigating mergers and acquisitions, the FTC also is very active in other antitrust enforcement work in this industry. For example, in a program unique to the petroleum industry, the Commission actively and continuously monitors retail and wholesale prices of gasoline and diesel fuel.[29] FTC staff monitors gasoline and diesel prices to identify "unusual" price movements[30] and then examines whether any such movements might result from anticompetitive conduct that violates Section 5 of the FTC Act. FTC economists developed a statistical model for identifying such movements. The agency's economists regularly scrutinize price movements in 20 wholesale regions and approximately 360 retail areas across the country. In no other industry does the Commission so closely monitor prices.

The staff reviews daily data from the Oil Price Information Service, a private data collection agency, and receives information weekly from the public gasoline price hotline maintained by the U.S. Department of Energy ("DOE"). The staff monitoring team uses an econometric model to determine whether current retail and wholesale prices are anomalous in comparison to the historical price relationships among cities. When there are unusual changes in gasoline or diesel prices, the project alerts

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[26] *Valero Energy Corp.*, FTC Docket No. C-4031 (Dec. 18, 2001) (complaint), *at* http://www.ftc.gov/os/2001/12/valerocmp.pdf.

[27] *Valero Energy Corp.*, *supra* note 25.

[28] *Conoco Inc. and Phillips Petroleum Corp.*, FTC Docket No. C-4058 (Aug. 30, 2002) (Analysis of Proposed Consent Order to Aid Public Comment), *at* http://www.ftc.gov/os/2002/08/conocophillipsan.htm. Not all oil industry merger activity raises competitive concerns. For example, in 2003, the Commission closed its investigation of Sunoco's acquisition of the Coastal Eagle Point refinery in the Philadelphia area without requiring relief. The Commission noted that the acquisition would have no anticompetitive effects and seemed likely to yield substantial efficiencies that would benefit consumers. *Sunoco Inc./Coastal Eagle Point Oil Co.*, FTC File No. 031 0139 (Dec. 29, 2003) (Statement of the Commission), *at* http://www.ftc.gov/os/caselist/0310139/031229stmt0310139.pdf. The FTC also considered the likely competitive effects of Phillips Petroleum's proposed acquisition of Tosco. After careful scrutiny, the Commission declined to challenge the acquisition. A statement issued in connection with the closing of the investigation set forth the FTC's reasoning in detail. *Phillips Petroleum Corp.*, FTC File No. 011 0095 (Sept. 17, 2001) (Statement of the Commission), *at* http://www.ftc.gov/os/2001/09/phillipstoscostmt.htm.

Acquisitions of firms operating mainly in oil or natural gas exploration and production are unlikely to raise antitrust concerns, because that segment of the industry is generally unconcentrated. Acquisitions involving firms with de minimis market shares, or with production capacity or operations that do not overlap geographically, also are unlikely to raise antitrust concerns.

[29] *See* FTC, *Oil and Gas Industry Initiatives*, at http://www.ftc.gov/ftc/oilgas/index.html.

[30] An "unusual" price movement in a given area is a price that is significantly out of line with the historical relationship between the price of gasoline in that area and the gasoline prices prevailing in other areas.

the staff to those anomalies so that we can make further inquiries into the situation.

This gasoline and diesel monitoring and investigation initiative, which focuses on the timely identification of unusual movements in prices (compared to historical trends), is one of the tools that the FTC uses to determine whether a law enforcement investigation is warranted. If the FTC staff detects unusual price movements in an area, it researches the possible causes, including, where appropriate, through consultation with the state attorneys general, state energy agencies, and the EIA. In addition to monitoring DOE's gasoline price hotline complaints and the OPIS data, this project includes scrutiny of gasoline price complaints received by the Commission's Consumer Response Center and of any similar information provided to the FTC by state and local officials. If the staff concludes that an unusual price movement likely results from a business-related cause (i.e., a cause unrelated to anticompetitive conduct), it continues to monitor but—absent indications of potentially anticompetitive conduct—it does not investigate further.[31] The Commission's experience from its past investigations and from the current monitoring program indicates that unusual movements in gasoline prices typically have a business-related cause. FTC staff further investigates unusual price movements that do not appear to be explained by business-related causes to determine whether anticompetitive conduct may underlie the pricing anomaly.[32] Cooperation with state law enforcement officials is an important element of such investigations.

In addition to its law enforcement investigations and its price monitoring project, the Commission spends significant resources examining and analyzing issues of importance to consumers in the petroleum industry. An important recent development in this regard was the public conference on "Energy Markets in the 21st Century: Competition Policy in Perspective" that the FTC hosted for 3 days last month. The conference brought together leading experts from the government, industries in the energy sector, consumer groups, and academia to exchange information and ideas about critical issues related to energy development, transportation, marketing, and use. Speakers at the conference addressed such topics as "Savvy Consumers in the Energy Marketplace," "New Frontiers of Energy," "The Current Implications of the World Energy Situation for United States Energy Supplies," and "How Do Energy Markets Work Within the Framework of Government Policy Choices?" The conference website contains numerous presentations by the panelists and a number of informative background papers.[33] The Commission expects to release a written report presenting findings from the conference.

In May 2006, the Commission completed an extensive, Congressionally-mandated investigation[34] to determine whether gasoline prices were being affected by manipulation[35] and to determine whether "price gouging" occurred following Hurricane Katrina.[36] The investigation included the full-time commitment of a significant number of attorneys, economists, financial analysts, and other personnel with specialized expertise in the petroleum industry. Based on our knowledge and expertise from previous investigations and studies, and the concerns raised by knowledgeable observers and market participants about competition in this industry, the Commission and its staff focused substantially on levels of the industry and parts of the

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[31] Business-related causes include movements in crude oil prices, supply outages (*e.g.*, from refinery fires or pipeline disruptions), or changes in and/or transitions to new fuel requirements imposed by air quality standards.

[32] For example, following up on observations of anomalous pricing patterns affecting multiple cities over the past year, staff currently is examining bulk supply and demand conditions and practices for gasoline and diesel in the Pacific Northwest.

[33] *See* http://www.ftc.gov/bcp/workshops/energymarkets/index.shtml.

[34] FEDERAL TRADE COMMISSION, INVESTIGATION OF GASOLINE PRICE MANIPULATION AND POST-KATRINA GASOLINE PRICE INCREASES (Spring 2006), *available at* http://www.ftc.gov/reports/060518PublicGasolinePricesInvestigationReportFinal.pdf.

[35] "Price manipulation" is not a defined legal or economic term. As used in the Commission's report, the term "price manipulation" included (1) all transactions and practices that are prohibited by the antitrust laws (including the Federal Trade Commission Act) and (2) all other transactions and practices, irrespective of their legality under the antitrust laws, that tend to increase prices relative to costs and to reduce output.

[36] No Federal statute identifies a legal violation of "price gouging," and state laws prohibiting price gouging have not adopted a common definition or standard to describe the practice. The statute mandating the post-Katrina pricing investigation effectively defined price gouging, for purposes of the investigation, as an average price of gasoline available for sale to the public following the hurricane that exceeded its average price in the area for the month before the hurricane, unless the increase was substantially attributable to additional costs in connection with the production, transportation, delivery, and sale of gasoline in that area or to national or international market trends. Accordingly, for the report we analyzed whether specific post-Katrina price increases were attributable either to increased costs or to national or international trends.

country where problematic behavior was most likely to have occurred and to have had an effect on consumers.[37]

The Commission's investigation did not uncover any evidence of manipulation to increase prices aside from limited instances of price gouging as defined by the statute mandating the post-Katrina pricing investigation.[38] Evidence indicated that the price of crude oil, the largest cost component of gasoline, contributed to most of the gasoline price increases that occurred from early 2002 until just before Hurricane Katrina struck the United States. Higher refining margins caused some of the remaining increase.[39]

The Commission analyzed various aspects of refinery operations to determine whether refiners manipulated, or tried to manipulate, gasoline prices. Staff investigated whether refiners manipulate prices in the short run by operating their refineries below full productive capacity in order to restrict supply, by altering their product output to produce less gasoline, or by diverting gasoline from markets in the United States to less lucrative foreign markets. Staff also investigated allegations that companies refused to invest sufficiently in new refineries for the purpose of tightening supply and raising prices in the long run. Staff found no evidence to suggest that refiners manipulated prices through any of these means. Instead, the evidence indicated that refiners responded to market prices by trying to produce as much higher-valued products as possible, taking into account crude oil costs and physical characteristics. The evidence also indicated that refiners did not reject profitable capacity expansion opportunities in order to raise prices.

The Commission also examined the extent to which infrastructure constraints gave pipelines the ability or incentive to manipulate gasoline prices, or limited the ability of marketers to move additional supply to specific markets when an unexpected need arose. The evidence obtained during that investigation did not suggest that pipeline companies made rate or expansion decisions to manipulate gasoline prices. Similarly, the Commission found no evidence suggesting anticompetitive activity involving refined product terminals.

Inventory levels have declined since at least the early 1980s, covering periods when the real price of gasoline was declining and increasing. The investigation, however, did not produce evidence that oil companies reduced inventory in order to manipulate prices or exacerbate the effects of price spikes due to supply disruptions. Maintaining inventories is costly, both in terms of the value of assets held and in terms of the actual costs of storing the product. The decline in inventory levels reflects a trend that is not limited to the petroleum industry. As in many other major industries, lower inventory holdings likely allowed oil companies to free up capital to invest in other areas and save storage costs. Low inventories, however, provide little cushion for gasoline supplies when there is an unexpected disruption.

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[37] The FTC undertook another major nonmerger investigation during 1998–2001, examining the major oil refiners' marketing and distribution practices in Arizona, California, Nevada, Oregon, and Washington (the "Western States" investigation). FTC Press Release, *FTC Closes Western States Gasoline Investigation* (May 7, 2001), *available at* http://www.ftc.gov/opa/2001/05/westerngas.htm. The agency initiated the Western States investigation out of concern that differences in gasoline prices in Los Angeles, San Francisco, and San Diego might be due partly to anticompetitive activities. The investigation uncovered no basis to allege an antitrust violation, and the Commission closed the investigation in May 2001.

In addition, the Commission conducted a 9-month investigation into the causes of gasoline price spikes in local markets in the Midwest in the spring and early summer of 2000. As explained in a 2001 report, the Commission found that a variety of factors contributed in different degrees to the price spikes. Midwest Gasoline Price Investigation, Final Report of the Federal Trade Commission (Mar. 29, 2001), *available at* http://www.ftc.gov/os/2001/03/mwgasrpt.htm; *see also* Remarks of Jeremy Bulow, Director, Bureau of Economics, Federal Trade Commission, *The Midwest Gasoline Investigation*, *available at* http://www.ftc.gov/speeches/other/midwestgas.htm. Primary factors included refinery production problems (*e.g.*, refinery breakdowns and unexpected difficulties in producing the new summer-grade RFG gasoline required for use in Chicago and Milwaukee), pipeline disruptions, and low inventories. Secondary factors included high crude oil prices that contributed to low inventory levels, the unavailability of substitutes for certain environmentally required gasoline formulations, increased demand for gasoline in the Midwest, and ad valorem taxes in certain states. The industry responded quickly to the price spike. Within 3 or 4 weeks, an increased supply of product had been delivered to the Midwest areas suffering from the supply disruption. By mid-July 2000, prices had receded to pre-spike or even lower levels.

[38] *But see* Concurring Statement of Commissioner Jon Leibowitz (concluding that the behavior of many market participants leaves much to be desired and that price gouging statutes, which almost invariably require a declared state of emergency or other triggering event, may serve a salutary purpose of discouraging profiteering in the aftermath of a disaster), *available at* http://www.ftc.gov/speeches/leibowitz/060518LeibowitzStatementReGasolineInvestigation.pdf.

[39] Margins in any competitive market can be expected to increase, at least in the short run, during periods of strong demand.

Hurricanes Katrina and Rita caused substantial damage to the Nation's petroleum infrastructure. In the week after Hurricane Katrina—which caused the immediate loss of 27 percent of the Nation's crude oil production and 13 percent of national refining capacity—the average price of gasoline increased by about 50 cents per gallon in six representative cities. About 35 cents per gallon of the post-Katrina price increase dissipated by the time Hurricane Rita hit. Rita damaged another 8 percent of crude production and, even accounting for the refineries affected by Katrina and back online, 14 percent of domestic refining capacity was lost.

In light of the amount of crude oil production and refining capacity knocked out by Katrina and Rita, the sizes of the post-hurricane price increases were approximately what would be predicted by the standard supply and demand paradigm that presumes a market is performing competitively. Thus the regions of the country that experienced the largest price increases were those that normally receive supply from areas affected by the hurricanes.

Evidence gathered during our investigation indicated that the conduct of firms in response to the supply shocks caused by the hurricanes was consistent with competition. After both hurricanes, companies with unaffected assets increased output and diverted supplies to high-priced areas. This is what we would expect in competitive markets and what the affected consumers needed. Refiners deferred scheduled maintenance in order to keep refineries operating. Imports increased and companies drew down existing inventories to help meet the shortfall in supply.

The Commission's assessment of potential price gouging as defined in the relevant legislation revealed that the average gasoline price charged by 8 of 30 refiners analyzed increased 5 or more cents per gallon more than the national average price trend for this period. Once geographic locations of sales and channels of distribution were taken into account, however, individual refiners' price increases appeared comparable to local market trends in almost every instance.[40]

Based on an analysis of retail pricing data and retailer interviews, the Commission concluded that some "price gouging" by individual retailers, as defined by the relevant statute, did occur to a limited extent. Local or regional market trends, however, explained the price increases in all but one case. Exceptionally high prices on the part of individual retailers generally were very short-lived. Interviews with retailers that charged exceptionally high prices indicated that at least some were responding to station-level supply shortages and to imprecise and changing perceptions of market conditions.

The Commission's spring 2006 report to Congress, as well as testimony delivered to the Senate Commerce Committee the day after we released the report, addressed a number of important policy issues arising from the investigation, including the important role of prices in a market-based economy and the misallocation of resources that can stem from attempts to cap or control prices. Underscoring the crucial role of the antitrust laws in ensuring that consumers are offered competitive market prices for gasoline, the report and testimony pointed out the problems that price gouging legislation can engender, including interference with the market's pricing mechanism that is likely to lead to even worse shortages and more harm to consumers. The Commission advised Congress that if it enacts a price gouging statute despite these considerations, it will be important to make the law as clear to businesses and easy to enforce as possible. In addition, the Commission urged Congress to include important mitigating factors in any price gouging statute, including allowance for market factors of supply and demand and the maintenance of incentives for firms to increase supply into a disaster-affected area.

V. CONCLUSION

The Federal Trade Commission has an aggressive program to enforce the antitrust laws in the petroleum industry. The agency has taken action whenever a merger or nonmerger conduct has violated the law and threatened the welfare of consumers or competition in the industry. The Commission continues to search for appropriate targets of antitrust law enforcement, to analyze and bring cases against any merger that is potentially anticompetitive, and to study this industry in detail.

Thank you for this opportunity to present the FTC's views on this important topic. I look forward to answering your questions.

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[40] *But see* Concurring Statement of Commissioner Jon Leibowitz at 1–2, *available at* http://www.ftc.gov/speeches/leibowitz/060518LeibowitzStatementReGasolineInvestigation.pdf.

PREPARED STATEMENT OF DR. DIANA L. MOSS, VICE PRESIDENT AND SENIOR RESEARCH FELLOW, AAI

I. INTRODUCTION

I would like to thank Chairman Schumer, Ranking Member Saxton, and the members of the Senate Joint Economic Committee for holding this hearing on concentration in the U.S. petroleum industry and its affects on the American consumer. I appreciate the opportunity to appear here today.[1] The American Antitrust Institute is a non-profit education, research, and advocacy organization. Our mission is to increase the role of competition in the economy, assure that competition works in the interests of consumers, and sustain the vitality of the antitrust laws.

II. BACKGROUND

"High" petroleum product prices continue to raise public policy concerns in the U.S. A number of factors have attracted particular attention to current gasoline price levels. Retail prices are approaching 25-year highs. The intensity of the most recent price run-up rivals that experienced during the energy crisis of the late 1970s. And while real gasoline prices have actually declined slightly since the early part of the 1900s, the rate of that decrease has fallen off. Together, these factors compound fears that the long-predicted effects of depletion on global supply sources are at last being felt or that other forces such as market power are at work.

The response to high petroleum product prices includes a number of disparate initiatives that directly target high prices or address the underlying structure of the domestic downstream industry that could be driving them. For example, there have been proposals to variously enact, authorize, or implement:

- the U.S. Department of Justice (DOJ) to enforce the Sherman Act against OPEC
- state anti-price gouging laws
- divorcement statutes to limit integrated ownership
- "open supply" regulations enabling lessee-dealer gasoline retailers to purchase supplies from sources other than the lessor-refiner
- unbundling the sale of gasoline at wholesale from the marketing of branded products, thus allowing retailers to "shop" for the commodity
- petroleum-specific extensions or amendments to state and Federal antitrust statutes, including merger enforcement
- creation of a government-owned and operated strategic refinery reserve

Most initiatives that target high gasoline prices implicitly acknowledge that crude oil prices, which made up just over 50 percent of retail gasoline prices in 2006, are determined by OPEC—outside the scope of the domestic industry. Thus, most proposals are directed at the downstream segment of the industry controlled by domestic firms. This includes refining, distribution of refined products to storage terminals, and wholesale and retail marketing. These activities collectively make up 30 percent of the retail gasoline price while taxes account for the remaining 20 percent. The forgoing proposals raise a number of important questions.

First, each policy approach purports to have identified the appropriate policy response but it is not clear that there is any consensus on the underlying determinants of high gasoline prices. For example, petroleum commodity prices reflect, to some extent, the effects of resource depletion, technological advances, environmental restrictions (e.g., requirements for reformulated gasoline), low demand and income elasticities, and natural disasters that can result in adverse supply shocks. These factors comprise market forces that can drive price dynamics.

At the same time, however, it is appropriate to look to the structure of downstream petroleum markets for changes in behavioral incentives that could produce anticompetitive conduct resulting in higher prices. For almost 60 years, economists have probed into this possibility. For example, Alfred Kahn and Joel Dirlam in 1952 noted the antitrust agencies' concern over potentially exclusionary conduct in gasoline marketing. The concept of "conscious parallelism" was also applied to gasoline pricing in the 1950s to encourage the Federal Trade Commission (FTC) to recognize that anticompetitive coordination did not necessarily take the form of a conspiracy. The price run-ups of the 1970s generated significant debate on the merits of vertical and/or horizontal divestiture. Finally, refusals to deal and the potential incentives to foreclose rivals associated with integrated refining-marketing have been the subject of earlier analysis, as have entry barriers at the refining level.[2]

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[1] Diana Moss is Vice President and Senior Fellow, American Antitrust Institute (www.antitrustinstitute.org).

[2] See, e.g., for discussion of various competitive issues: J. B. Dirlam and A. E. Kahn, "Leadership and Conflict in the Pricing of Gasoline," *Yale L. J.* 61, 1952, pp. 818–855; B. Turner, "Con-

Second, policy proposals highlight the tension between competition policy and broader-based public policy. Competition policy would view domestic petroleum refining and marketing much like any other commodity markets. Antitrust analysis would therefore use accepted methodologies and economic tools to evaluate whether mergers or firm conduct are likely to harm (or harmed) competition and/or consumers. Public policy, on the other hand, is more likely to view high gasoline prices as a societal problem. In addition to traditional consumer welfare and economic efficiency concerns, public policy would also consider quality of life, equity, economic growth, and national security as key factors in crafting approaches. Given these concerns, public policy could view petroleum markets as candidates for special rules or treatment that would not be considered in the realm of competition policy.

Third, if implemented together or in a haphazard manner, various proposals targeting the domestic petroleum industry could open a "Pandora's Box" of competing and potentially conflicting objectives, stakeholder agendas, and effects on economic efficiency and consumer welfare. It is thus important that approaches attempt to identify the underlying source(s) of high petroleum product prices and chose the appropriate policy instruments for dealing with them. Consolidation and concentration in the domestic petroleum refining and marketing industry should receive a good deal of scrutiny in making this assessment.

III. CONCENTRATION IN DOMESTIC PETROLEUM REFINING AND MARKETING

One of the most important features of the domestic petroleum industry has been the significant level of consolidation at the refining and marketing level over the last 20 years. The FTC reports 1,165 mergers in the domestic petroleum industry between 1985 and 2003, at an estimated total value (for transactions of $10 million or more) of about $500 billion dollars.[3] The Government Accountability Office (GAO), however, cites a much higher figure over a shorter period of time—2,600 transactions from 1991 to 2000.[4]

A number of features of recent petroleum merger activity stand out. First, this activity has shadowed the wave-like, economy-wide pattern in consolidation over the last two decades. Second, the average size of a petroleum merger was three times larger than the average merger deal. Moreover, billion-dollar mergers accounted for about 86 percent of the total $500 billion in larger transactions.

Third, merger transactions have been disproportionately allocated over various segments of the industry. For example, GAO estimates that 85 percent of mergers proposed during the 1990s were in upstream exploration and production. Two percent of mergers occurred in midstream pipeline transportation and 13 percent of transactions involved downstream refining and markets.[5] Despite the intensity of merger activity in the upstream segment of the industry, about two-thirds of billion-dollar petroleum mergers in the U.S. involved downstream, integrated assets. Data on mergers enforced by the FTC confirm this observation. For example, of the 72 relevant markets defined by the agency in 15 petroleum merger enforcement actions in the 1980s and 1990s, 36 percent were related to refining and 33 percent involved marketing.[6] Several transactions (beginning in the mid-1990s) were sizable combinations involving integrated "majors" such as BP-Amoco and Exxon-Mobil and the unintegrated "independents" such as Ultramar Diamond Shamrock-Total.

Third, consolidation in refining and marketing generated a relatively higher level of antitrust scrutiny. On average, about 13 percent of petroleum and marketing transactions that were cleared for investigation by either FTC or DOJ were challenged, as compared to roughly 2 percent of all transactions. These challenges include transactions in which one of the agencies filed a complaint, requested injunc-

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scious Parallelism in the Pricing of Gasoline," *Rocky Mntn. L. Rev.* 32, 1959–1960, pp. 206–222. W. Adams, "Vertical Divestiture of the Petroleum Majors: An Affirmative Case," *Vand. L. Rev.* 30(6), 1977. pp. 1115–1147; J. W. Markham and A. Hourihan, "Horizontal Divestiture in the Petroleum Industry," *Vand. L. Rev.* 31(2), 1978, pp. 237–247; W. L. Novotny, "The Gasoline Marketing Structure and Refusals to Deal with Independent Dealers: A Sherman Act Approach," *Ariz. L. Rev.* 16, 1974, pp. 465–488; and E. V. Rostow and A. S. Sachs, "Entry into the Oil Refining Business: Vertical Integration Re-examined," *Yale L. J.* 61, 1952, pp. 856–914.

[3] Federal Trade Commission (August 2004). *The Petroleum Industry: Mergers, Structural Change, and Antitrust Enforcement*, Tables 4–6 and 4–11.

[4] Government Accountability Office (July 15, 2004). *Mergers and Other Factors That Affect the U.S. Refining Industry*, p. 0.

[5] Jim Wells (September 21, 2005). *Factors Contributing to Higher Gasoline Prices*, Testimony of the Director, Natural Resources and Environment, Government Accountability Office, p. 2.

[6] Data are for the 1980s and 1990s. Enforcement actions are those cases in which the FTC required divestiture or other remedial conditions to address competitive concerns. See Federal Trade Commission (undated). "FTC Enforcement Actions in the Petroleum Industry, 1981–2002."

tive relief, or settled the case through consent decree. In the majority of merger enforcement actions in downstream petroleum, the FTC has posited horizontal theories of harm in which the merged firm could unilaterally withhold capacity to drive up price or achieve the same result through coordinated interaction. It is not clear, however, if vertical theories of harm have played a substantive role in petroleum merger analysis. These include, for example, the foreclosure of rival gasoline retailers by vertically integrated refiner-marketers in order to increase profits in retail markets. Enforcement statistics for all industries indicate that in only about 9 percent of merger cases did the agencies propose a vertical theory of harm.[7]

IV. THE ROLE OF REFINING

Refining is a major feature that defines the landscape of the domestic downstream petroleum industry. Much like electricity transmission, refining is arguably a production "bottleneck," or a level through which all inputs produced in complementary markets must flow to ultimately reach the consumer. Control of bottleneck facilities—particularly with integrated ownership—has long raised concerns over market power, via: (1) unilateral withholding of output or restricted investment in capacity; (2) leverage of market power from the bottleneck level to a complementary level; or (3) the possibility of oligopolistic coordination involving production or capacity investment decisions.

Several major features of refining highlight its bottleneck characteristics. For example, the number of operating refineries declined by 44 percent from the mid-1970s through early 2000s with no new refinery additions. This apparent tightening of refining capacity in the U.S. should be considered in light of several developments. The phase-out of crude oil price controls in 1981 reduced incentives to operate small, inefficient facilities so the decline in refinery numbers over time may reflect the work-off of obsolete inefficient capacity. Since the early 1980s, refiners have also developed higher capacity and more technologically advanced facilities through increased computerization, employment of advanced catalysts, additional processing units at existing facilities, networking of refinery facilities, and other improvements that allow refiners (among other things) to process more sulfurous crudes as inputs and net greater volumes of more valuable refined products. A 15 percent increase in crude oil distillation capacity at U.S. refineries over the last 20 years, however, should considered with care.[8] For example, the majority of refining capacity resides in large facilities that account for the bulk of operating distillation capacity.[9] Utilization rates at this smaller number of larger refineries have also increased over time[10] rising from a low of almost 70 percent in 1981 to around 95 percent in the late 1990s and early 2000s.

Concentration in U.S. refining markets should carefully scrutinized against the backdrop of fewer, larger and more sophisticated refineries operating at very high utilization rates. At the broadest level, refining markets have become more concentrated over the last 20 years.[11] Concentration in most PADD districts has increased since 1985, in some cases by over 100 percent. By the DOJ/FTC Horizontal Merger Guidelines (Guidelines) standards, concentration in PADD II, III, IV, and V was moderate (between around 1,000 and 1,200 HHI) and high in PADD I (around 1,900 HHI) by the early 2000s.

PADD-based refining concentration statistics, however, do not reflect the actual geographic dimensions of markets. For example, PADD boundaries are likely to encompass far broader areas than what consumers would consider in searching out alternative sources of supplies. Those areas—determined by pipeline constraints and production cost differentials—are likely to be much smaller and more concentrated than PADD-based markets.

Data on relevant antitrust markets is helpful for developing a more accurate picture of refining concentration. For example, concentration statistics are available for about 20 relevant downstream petroleum markets defined by the FTC in 15 enforcement actions in the 1980s and 1990s. About two-thirds of these markets would be considered highly concentrated on a pre-merger basis, with HHIs ranging from

[7] FTC, *Horizontal Merger Investigation Data, Fiscal Years* 1996–2005, Table 1.
[8] See http://tonto.eia.doe.gov/dnav/pet/hist/mocggu2A.htm.
[9] FTC (2004), Table 7–4.
[10] Among other things, higher utilization minimizes the opportunity cost of holding excess capacity. See FTC (2004) at 7.
[11] How refining capacity is measured raises a number of important issues. Most quoted figures use distillation capacity, but alternative measures could be based on type of refined product and sources of crude inputs.

1,800 to as high as 6,700.[12] The remaining one-third of relevant markets are unconcentrated to moderately concentrated. These statistics are significantly higher than PADD-based concentration figures.

V. THE ROLE OF MARKETING

Another important feature of the domestic petroleum industry is how refined products—particularly gasoline—are marketed. Much like refining, the structure of wholesale markets has changed significantly. For example the number of terminals in the U.S. decreased by almost 50 percent over the 1980s to 1990s.[13] By the late 1990s, PADD V was highly concentrated (around 2,000 HHI) and the remaining PADDS were moderately concentrated (between around 1,100 and 1,600 HHI). Increases in concentration are the most pronounced in PADDs I, II and III.

Much like refining, broad regional concentration statistics may not accurately reflect wholesale market structures. Terminal networks are likely to be defined around smaller, metropolitan areas which encompass a consumer's universe of economic alternatives. We turn again to merger data to sharpen the picture. For example, about eight relevant markets identified by the FTC in the 15 enforcement actions discussed earlier involve terminalling and marketing. Over one-half of these markets are highly concentrated (1,565 to 4,600 HHI) and the remaining are moderately concentrated. As in the case of refining, merger-specific wholesale concentration statistics are significantly higher than regional PADD-based statistics.

Brand concentration in retail markets has also increased over time. The GAO observes, for example, that one of the major changes in gasoline marketing has been a decrease in sales of unbranded (generic) gasoline relative to branded gasoline. For example, brand concentration increased by 25 percent and 36 percent in PADD III and PADD IV, respectively, during the 1990s to early 2000s.[14] Accompanying an increase in brand concentration is a smaller number of retail outlets (e.g., a 16 percent decrease overall and a 63 percent decrease in outlets owned by the majors).[15] Some of the decrease in numbers of retail outlets is likely due to the increasing capital intensity of gasoline marketing. Growth of the convenience store/gasoline distribution channel reflects the rise of higher-volume outlets owned by independents such as Sheetz and RaceTrac. Hypermarkets such as Costco, Wal-Mart, and club warehouses are also accounting for an increasing percentage of retail outlet share.[16]

VI. WHAT ECONOMIC ANALYSIS TELLS US

There is a sizable body of research on competitive issues involving the domestic downstream petroleum industry, much of which has arisen from the debate over high and/or volatile gasoline prices. The research addresses three major topics that relate to the competitive implications of downstream petroleum market structures and behavioral incentives facing firms: (1) "asymmetry" between upstream and downstream petroleum prices; (2) effects of divorcement and open supply regulation; and (3) merger-related price effects.

The first type of analysis attempts to determine the statistical significance of the tendency for downstream petroleum prices to increase faster than upstream prices when upstream prices are on the rise, but to fall more slowly when upstream prices are on the decline. Such "asymmetry" or the so-called "rockets and feathers" effect occurs most often between wholesale and retail gasoline prices, followed by crude oil-retail gasoline prices and spot gasoline-crude oil prices. There are various theories that could explain asymmetry, including oligopolistic coordination (e.g., signaling adherence to a collusive agreement at the refining or retail levels), consumer search costs, and inventory adjustment costs. However, no single theory emerges as a prevailing explanation.

A second category of analysis responds to various proposals to limit integration between refiners and gasoline retailers (i.e., "divorcement" legislation). Other proposals would allow lessee-dealer retailers to purchase gasoline supplies from sources other than the lessor-refiner—otherwise know as "open supply" regulation. Here, the research appears to show that forced deintegration of refiners and retailers is associated with higher costs and/or consumer prices. Such policies are therefore not likely to be the most effective in dealing with vertical competitive concerns unless it

[12] Merger-related increases in concentration in many of these markets are as high as 1,600 HHI points.

[13] FTC (2004), Table 9–1.

[14] FTC (2004), Table 9–7.

[15] See EIA (August 19, 2004) and FTC (2004), Table 9–3.

[16] FTC (2004) at 11. The GAO reports (July 2004 at 0) that refiners deal more with large distributors and retailers than in the past.

can be determined that such integration creates incentives for anticompetitive conduct.

A third class of studies evaluates the effect of mergers on wholesale and retail gasoline prices. These assessments range over the price effects of increased market concentration, to the role of independent gasoline retailers in disciplining retail gasoline prices, to incentives for exclusionary conduct associated with vertical integration. The research appears to at least support the notion that merger activity in the U.S. since the mid-1990s involving refiner-marketer combinations has increased wholesale and, sometimes, retail prices. However, petroleum merger studies have generated a good deal of technical controversy inside the economic community.

VII. SYNTHESIS AND RECOMMENDATIONS

The industry trends discussed above sketch out a picture of an industry that has undergone significant change in the last decade. A number of observations are worth making. First, the bulk of merger activity has been concentrated in very large transactions that involve downstream, integrated refining and marketing assets. Moreover, while the share of refining capacity owned by the majors fell from 72 percent in 1990 to 54 percent in 1998, the independents (e.g., Citgo/PDV America, Ultramar Diamond Shamrock, and Valero Energy) tripled their share of capacity from 8 to 23 percent—largely by buying the divested assets of the majors.[17] These independents are now vertically integrated downstream to a significant degree.

Higher levels of concentration in refining, at wholesale, and at the retail level, are not particularly surprising in light of this activity. Indeed, it should raise significant questions regarding the availability of competitive alternatives available to: (1) jobbers and other distributors that purchase at the rack, (2) independent gasoline retailers that potentially face the prospect of dealing more and more with integrated refiner-markets, and (4) consumers in obtaining supplies of competitively priced gasoline.

Second, the transformation of the U.S. refining industry emphasizes the increasingly bottlenecked nature of the segment. High sunk costs, environmental regulations, and the declining availability of domestic crude inputs collectively act to discourage new entry that could inject additional competition into refining. Moreover, technological change and the phase-out of price controls have driven the movement to fewer, higher-capacity refineries that operate at high utilization rates. And while efficiency in the refining sector has likely increased, it is also the case that operation of bottlenecks at high utilization levels can create unique opportunities for the exercise of market power.

Third, economists have made valiant attempts to estimate the price effects of both horizontal and vertical domestic petroleum mergers. At the same time, this research has been met with considerable resistance, largely over the robustness of findings to different econometric specifications. For example, the FTC—in critiquing the GAO's studies—convened a panel of experts that called for additional research in order to "test the validity of assumptions that underlie existing methodologies used to estimate merger price effects."[18] This debate reveals an often observed tension in economic analysis involving controversial policy issues. Thus, the results of petroleum merger studies (which appear to show, on balance, merger-induced increases in wholesale and retail prices) should probably motivate even more rigorous antitrust scrutiny.[19]

Merger review could probably be improved within the existing framework of the antitrust agency Guidelines. Rigorous approaches to market definition should clearly identify refining bottlenecks. Theories of competitive harm should consider how a merger affects the firm's ability and incentive to adversely affect prices or output. Here, it is particularly important to consider not only horizontal theories of harm, but vertical ones, including the possibility of vertical foreclosure. It may be the case—as in electricity markets—for example, that manipulation of even small amounts of strategic refining capacity may result in very profitable anticompetitive price increases. Thus, small market shares may not necessarily mean small market

[17] EIA (August 19, 2004). All other domestic refiners maintained stable market shares from 1990 to 1998.

[18] FTC Staff Technical Report (December 21, 2004). "Robustness of the Results in GAO's 2004 Report Concerning Price Effects of Mergers and Concentration Changes in the Petroleum Industry," p. 2. L. M. Froeb, et all, (2005). "Economics at the FTC: Cases and Research, with a Focus on Petroleum" *Review of Industrial Organization* 27, pp. 237.

[19] Not all studies evaluate the net effect of mergers on retail prices, which would provide some sense of the consumer welfare impact of mergers. While the magnitude of estimated price increases described by various studies may seem small, they can translate into a significant loss of welfare in a market that amounts to billions of dollars in annual retail gasoline sales.

power. Simulation models are also useful for evaluating unilateral price effects under alternative scenarios. Finally, evaluation of joint ventures and alliances should focus on the ways that such coordination may reduce the intensity of competition without necessarily being reflected in concentration statistics.[20]

PREPARED STATEMENT OF DENNIS C. DECOTA, EXECUTIVE DIRECTOR, CSSARA

Chairman Schumer and honorable members it is a privilege to be here to give testimony before you today. I and the thousands of other petroleum retailers across our Nation thank you for your attention to this very serious issue: "Is market concentration in the U.S. petroleum industry harming consumers?" As a petroleum retailer, I assure you that it has.

My name is Dennis DeCota. I am the Executive Director of the California Service Station and Automotive Repair Association (CSSARA).

CSSARA is a 34-year-old trade association representing both branded and unbranded service station dealers throughout the state of California. I have been the Executive Director for the past 16 years and in that position I have had the privilege of consulting with dealers of all major brands on issues related to petroleum retailing.

I am currently a ConocoPhillips dealer and have been in my station the past 28-plus years and have operated seven other branded locations. I have also served two terms as vice president of Service Station Dealers of America, our national trade association during the mid-1980s. I have been designated as an expert witness in several different petroleum related litigation suits.

My testimony will focus on the following topics: industry consolidation, retail competition, gas price manipulation, lack of consumer choice and, last but not least, today's collective price gouging.

INDUSTRY CONSOLIDATION

Mostly throughout the nineties the major oil companies merged and consolidated to a point where they no longer compete against one another for volume or market share. In other words, through these mergers and acquisitions they eliminated their competition while at the same time they grew their own proprietary gasoline volume sales through key locations that became company operated stations. In the case of Shell, this was done through multiple site operators, known as MSO franchise dealers, which are nothing more than commissioned agents for Shell. MSO operators operate under a non-petroleum marketing practices act (PMPA) franchise. PMPA is Federal statute that deals with issues relating to a franchisee and franchisor's relationship. The PMPA's main purpose is to address protection for dealers as it relates to termination or non-renewal of their franchise agreement. Shell controls the retail price at the MSO stations. This would not be the case if these MSO dealers were governed by a PMPA lease agreement. As the oil companies consolidated they closed or sold off most of their less desirable locations, reducing competition amongst branded and unbranded stations, gaining a stronger grip over the retail market place. Collectively, they also implemented zone pricing throughout the Nation. This one tactic allowed the majors to control the retail street price of gasoline more then any other strategy. It stymied true competition and allowed the majors to gain market power. This along with their increase of proprietary gallons and the simple fact they stopped franchising newly constructed stations in the mid-nineties, has all but wiped out competition at the retail level.

RETAIL COMPETITION

Independent refiners due to mergers and acquisitions plus environmental compliance requirements have all but been wiped out in California. The competition between branded stations and independent stations is all but gone. They stopped franchising newly constructed stations. One of the most glaring examples is the recent acquisition of the Exxon-Mobil refinery in California by Valero, and Valero's later acquisition of United Diamond Shamrock. The combination of these acquisition and merger destroyed the independent market in California. Now we experience a situation where branded product is frequently cheaper than unbranded product at wholesale rack pricing.

Valero, once one of the largest independent refiners is now a major oil company pricing like a major. My recent letter to the FTC opposing the sale of Shell's southern California refinery to Tesoro and Tesoro's planned acquisition of the state's last

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[20] See, e.g., threshold issues litigated in *Texaco v. Dagher*, 126 S. Ct. 1276 (2006).

large independent USA Petroleum will only further reduce competition in our state. I believe that Tesoro will emulate what Valero has already done.

GAS PRICE MANIPULATION

Dealers must compete with proprietary company operated stations at margins that simply won't sustain there economic viability. As dealers are forced out of their stations they are replaced by company operations and or commissioned agents who simply raise the price to that community once the competition is gone so they can obtain their desired profit goals.

LACK OF CONSUMER CHOICE

Due to the major oil companies' ability to drive out competition and control retail pricing, consumers are put at a tremendous disadvantage when it comes to their ability to find competitively priced fuel. The majors further reduce the free market by insisting that their franchise dealers who exercise their right under the PMPA to purchase their land and improvements are forced into entering long term supply agreements. This impedes station owners from seeking a more competitively priced supplier.

TODAY'S COLLECTIVE PRICE GOUGING

In California the majors are in lock step with one another as it relates to wholesale pricing, with the exception of ARCO/BP. The industry is so controlled that any unplanned refinery glitch or supply issue impacts the entire state's retail pricing as all majors increase price to curtail volume demand. The pooling of refined product by the majors has created a noncompetitive market place and consumers are paying the price.

In conclusion, the only power that can stop the oil companies from harming the consumers of the United States is our government. Government must realize the control big oil has over the consuming public. To reinstate competition in the market place, government needs to stop zone pricing, curtail the ability of the majors to demand long term supply agreements and force them out of company operations.

Attachments are as follows:

1. Break down of cost and margins of 87 grade regular at my station in San Anselmo, CA on May 18, 2007.
2. The second attachment is a hypothetical description of what a gallon of gas at my station would cost if I was to make a 30 percent gross profit.
3. Why Californians Pay More at the Pump.

ATTACHMENT 1

CALIFORNIA REGULAR GRADE 87 ETH. 5.7 PERCENT BRD.

RETAIL PRICE PER GALLON AS OF 5/18/2007

CASH PRICE

$3.399

• Cost per gallon	$2.731600
• Dealers profit p/g	.070715
• Fed oil spill fee	.001130
• Fed excise tax	.184000
• Fed tax credit (ethanol)	(.029070)
• CA state fuel tax	.180000
• CA environ. fee	.000960
• CA oil fee reimbursement	.001190
• CA UST fee	.014000
• CA state sales tax @ retail price	.244475
	$ 3.399

DEALERS GROSS PROFIT PER GALLON

0.0258 PERCENT NOT EVEN 3 PERCENT PER GALLON

The majors control retail margins through three forms of price controls, zone pricing, long term supply agreements, and propriety company operations!

ATTACHMENT 2

CALIFORNIA REGULAR GRADE 87 ETH. 5.7 PERCENT BRD.

RETAIL PRICE PER GALLON AS OF 5/18/2007

CASH PRICE

$4.589

If I was to make 30 percent gross profit, this would be how it would breakout.

• Cost per gallon	$2.731600
• Dealers profit p/g	1.174588
• Fed oil spill fee	.001130
• Fed excise tax	.184000
• Fed tax credit (ethanol)	(.029070)
• CA state fuel tax	.180000
• CA environ. fee	.000960
• CA oil fee reimbursement	.001190
• CA UST fee	.014000
• CA state sales tax @ retail price	.330067
	$4.589

HYPOTHETICALLY DEALERS GROSS PROFIT PER GALLON

Today the major oil companies refining margins are at an all time high arguable they are realizing more then 30 percent gross profit return on just the refinery margins. This example exemplifies the major gouging that is currently taking place as the majors tighten their grip on their ability to exert market power.

ATTACHMENT 3

THE CALIFORNIA GASOLINE CRISIS:

Why Californians Pay More at the Pump And How True Reforms Will Help

California Service Station and Automotive Repair Association
1202 Grant Avenue, Suite B-1
Novato, California 94945
(415) 892-1243
www.CSSARA.org

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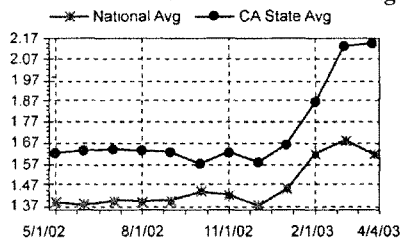
Executive Summary

A Gallon of Gas in California
Costs 30-40 Cents More than US Average



Source: American Automobile Association, 4-4-03.

Oil companies would like Californians to believe gasoline price spikes are due exclusively to world events, prices will eventually fall to earth, and reforms are unwarranted.

The oil companies are wrong.

California consumers and businesses pay too much for gasoline compared to the rest of the United States – year in and year out, whether crude oil prices or rising or falling.

This has been the case for the past eight years.

- Until the mid-1990s, gasoline prices in California were within a few cents of the national average and in some years, were actually lower than the national average;
- Since 1995, Californians have paid more than the national average in 381 out of 433 weeks;
- In 2002, California drivers paid an average of 12 cents more per gallon for gasoline, adjusted for taxes, than drivers in other states, according to U.S. Department of Energy (Energy Information Administration);
- Since June 2000, California motorists have paid a combined $5.8 billion more for gasoline than other areas that use reformulated gasoline;
- Businesses, which consume approximately one-third of the gasoline in California each year according to the California Energy Commission, pay an annual premium of $638 million for gasoline each year compared to the rest of the country; and
- In 11 California cities in April 2003, gasoline was more expensive than in Honolulu.

California Market a Cash Cow for Oil Companies

What explains this persistent problem? Lack of competition.

California's gasoline market is less competitive than in most of the nation, according to a comprehensive analysis by California Attorney General Bill Lockyer.

Major refiners control 97 percent of the wholesale market for gasoline in California, compared with control of slightly more than half the market in Texas – where six out of the seven top refiners are headquartered.

In just the past eight years:

- Ten significant independent oil refiners have closed;
- The major oil companies' share of the California gasoline market have climbed from a dominant 80% in 1995 to an overwhelming 97% today;
- West Coast Oil company profits have surged – to become the highest in the nation, according to Bloomberg; and
- Refinery margins, always high, are now the highest in the U.S., according to the Energy Information Administration and the California Energy Commission.

Large oil refiners have effectively shut out independent gasoline marketers from the retail market in California's urban areas, the Attorney General found, reducing competition and keeping prices high. Independent marketers supply more than 50 percent of the gasoline to stations in Texas, compared to less than 10 percent in California.

In addition, 85 percent of the gasoline sold in California is sold through stations that are locked into contracts with oil companies and have no ability to shop for less expensive gasoline, according to the Attorney General's report on gasoline prices. The Attorney General concluded: "Freedom of California retailers and jobbers to seek the lowest priced gasoline is now hampered by a web of restrictive agreements imposed by refiners."

"The root causes of our problem relate to the vertical integration of major oil companies controlling California refining capacity and their collusive behavior in supply arrangements and instantaneous information sharing," concluded San Diego Supervisor Bill Horn.

"Evidence suggests that the wholesale gasoline pricing and distribution system is not purely a 'free market' in the San Francisco area," the independent Legislative Analyst for the City and County of San Francisco found. "It appears that there is no price competition within the wholesale market for branded gasoline."

What is to be done?

Changes are needed to make California's gasoline market more competitive, increase supply, and conserve fuel. Bipartisan consensus is emerging on the following four steps California can take:

- **Introduce wholesale and retail gasoline competition.** "Freedom of California retailers and jobbers to seek the lowest priced gasoline is now hampered by a web of restrictive agreements imposed by refiners," the Attorney General has concluded. He has proposed allowing dealers to purchase branded gasoline from any source.

- **Preserve checks and balances by introducing franchise contract reforms.** California's major oil companies are engaged in a systematic effort to undermine their own dealers, despite their assurances to the contrary. A strong dealer presence in the market is essential to provide a competitive check on the major oil companies.

- **Restrict market control by oil companies**. California should restrict the ability of major oil companies to set retail prices by virtue of various forms of market control, such as exclusive supply agreements.

- **Add instate refining capacity.** The Attorney General has said there may be opportunities to streamline state environmental impact and other permitting reviews, and has proposed a task force of stakeholders to investigate options.

Currently, five states have divorcement laws and eleven other states have fair petroleum marketing laws. But California's laws have remained essentially unchanged since July 1974, and are antiquated and ineffective. Action is long overdue, and needed now.

> *"California's businesses and consumers regularly pay among the highest gasoline prices in the nation. . . These high prices erode the competitiveness of California's industries and reduce the real income of our citizens. The confluence of factors that support high gasoline prices has been a long time in the making, and it is unrealistic to suggest there is a quick fix to our problem. Even so, it is important to begin taking the steps necessary to increase competitiveness in California gasoline markets, increase gasoline supplies, and further conserve fuel."*
>
> Attorney General Bill Lockyer,
> *Report on Gasoline Pricing in California*,
> May 2000, p. 39.

I. HOW THE CALIFORNIA MARKET OPERATES TODAY

Why do Californians pay more for gasoline than the rest of the U.S.? There are two characteristics that define the California gasoline market:

1. An increasingly concentrated, noncompetitive market for refining gasoline; and
2. A complex system for distributing gasoline to independent stations and branded dealers, governed by exclusive supply agreements, that keeps the price of gasoline high.

These two factors combine to keep California prices high compared to the rest of the nation, and make California operations a cash cow for the primarily Texas-headquartered oil companies.

Reduced Competition Due to Mergers

California Attorney General Bill Lockyer has produced the most comprehensive and objective assessment of the problems with California's retail gasoline market today. In a report released in May 2000, he concluded:

> *"After reviewing the facts and arguments put forth by the Task Force, the Attorney General believes that the structure of California's gasoline industry is less competitive than in most of the nation."*
>
> Attorney General Bill Lockyer,
> *Report on Gasoline Pricing in California*,
> May 2000, p. 59.

California lacks the significant independent refining[1] presence that would provide an important competitive influence in other markets. The Attorney General points to the closure of several independent refiners in California in 1997, followed closely by corporate mergers including:

03/04/97:	ARCO purchased Thrifty Oil and its 260 retail stations – at the time one of California's largest independent marketers of gasoline;
04/01/97:	Tosco bought Unocal's marketing and refining assets.
05/26/99:	Exxon and Mobil merge to form ExxonMobil;
04/13/00:	BP Amoco and Arco merged to form British Petroleum;
04/11/01:	Tosco acquired by Phillips Petroleum which became fully integrated;
10/09/01:	Chevron and Texaco merged to form ChevronTexaco;
12/31/01:	Valero merged with Ultramar Diamond Shamrock to become Valero Energy; and also became fully integrated; and
08/30/02:	Conoco and Phillips Petroleum merge to become ConocoPhillips (76 in California).

[1] Independent refiners are refining companies that do not own their own crude oil supply.

Table 1-1
California Independent Refinery Closures (1995 to Present)

Company	Refinery
Anchor Refining Company	McKittrick
Tricor Refining LLC	Bakersfield
Greka Energy Corp	Santa Maria
Paramount Petroleum Corp.	Paramount
Ten By Inc.	Oxnard
World Oil Company	South Gate
Golden Bear Oil Specialties	Oildale
Huntway Refining Company	Benicia/Wilmington
Pacific Refining Company	Hercules
Powerine Oil Company	Santa Fe Springs

Source: *Worldwide Refining Surveys 1994 to 2002,* Oil & Gas Journal.

These corporate moves comprised "a dramatic change in the competitive structure of the gasoline industry," the Attorney General found. In 2000, the Attorney General found just six refiners control more than 90 percent of refining capacity in California. Chevron and ConocoPhillips-76 control nearly half of California's refining capacity. (In contrast, the largest six refiners control less than 60 percent of the refining capacity in Texas.)

Since then, the problem has only gotten worse. The major oil companies have increased their market power in California and now control 97% of the state's CARB gasoline refining capacity:

Table 1-2
Refinery Market Share and Annual Revenue for Major Oil Companies in California

Company	Headquarters (U.S.)	Refinery Market Share	Annual Revenue
Chevron-Texaco	California	25%	$92,043,000,000
Shell USA	Texas	16%	$64,320,000,000
British Petroleum	Texas	14%	$178,720,000,000
ConocoPhillips (76)	Texas	13%	$57,220,000,000
Valero	Texas	12%	$26,976,300,000
Tesoro	Texas	9%	$7,120,000,000
Exxon-Mobil	Texas	8%	$182,466,000,000
TOTAL		**97%**	$608,865,300,000

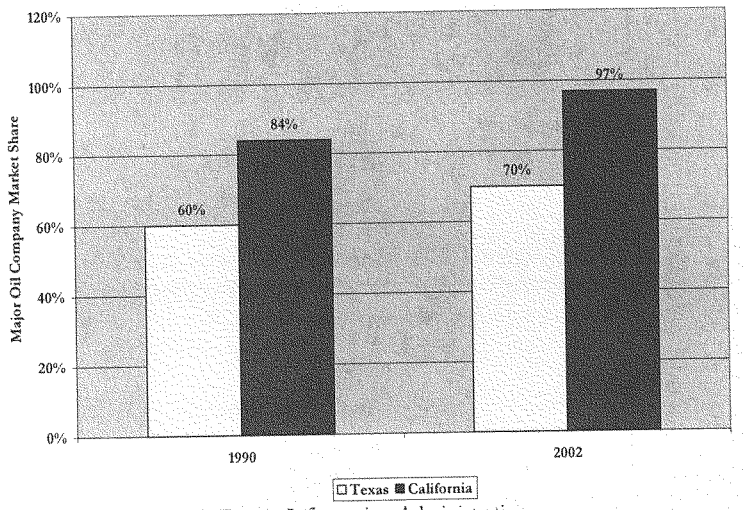
Source: California Energy Commission, Oil & Gas Journal, Company Annual Reports.

By 2002, major oil companies controlled 97% of refinery capacity in California up from 84% in 1990; Chevron Texaco controls 25% of the market. In Texas, major oil companies controlled 70% of refinery capacity in 2002, up from 60% in 1990; ExxonMobil controls 19% of the market (see Figure 1-1).

And as independent refiners became less of a factor in the California market, prices for gasoline increased significantly (see Figure 1-2).

Figure 1-1

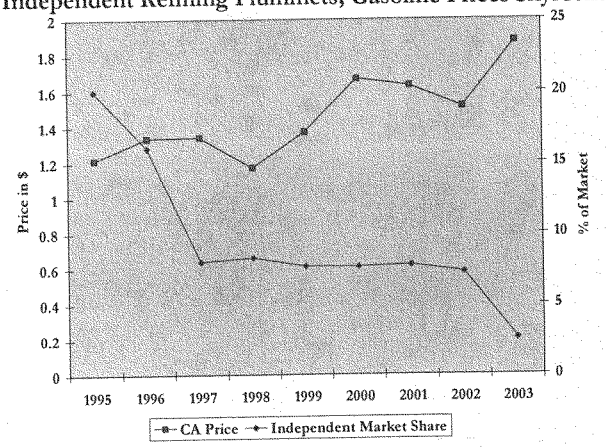
California Refiners Exercise More Market Control in California than in Texas (1990 & 2002)



Source: U.S. Energy Information Administration.

Figure 1-2

As Independent Refining Plummets, Gasoline Prices Skyrocket



Source: U.S. Energy Information Administration, California Energy Commission.

How Prices Are Set at the Retail Level

At the wholesale level, gasoline is offered for sale to dealers and jobbers at several different price levels, including:

Dealer Tank Wagon price (DTW): This is the price paid, pursuant to contract, by those dealers serviced directly by a major oil company for branded gasoline delivered to their outlets. DTW prices are less volatile and normally are higher than spot and rack prices (Permanent Subcommittee on Investigations, Government Affairs Committee, p. 300, Hearing: "Gas Prices: How Are They Really Set," May 2, 2002). According to the Attorney General's report on gasoline prices, 85 percent of the gasoline sold in California is sold through stations that are required to pay the DTW price (*Report on Gasoline Pricing in California*, California Attorney General Bill Lockyer, May 2000, p. 25).

Rack price: This refers to the price of gasoline charged by wholesalers at their refineries or company terminals to jobbers or independent dealers. The rack price is not available to dealers who are supplied directly by an oil company. There are two types of rack prices – branded and unbranded. The branded rack price is the price paid by jobbers or independent dealers for gasoline purchased using the trademark of a major oil company such as Shell or ExxonMobil. The unbranded rack price is the price paid for gasoline that does not carry a trademark name purchased from branded or independent refiners (Permanent Subcommittee on Investigations, Government Affairs Committee, p. 296, Hearing: "Gas Prices: How Are They Really Set," May 2, 2002).

Spot price: This is the price paid on the open market for gasoline. It is used by wholesalers to purchase gasoline not covered by contracts or exchange agreements. The spot market provides a readily available channel to sell and buy gasoline for immediate delivery in response to the prevailing demand and supply (Permanent Subcommittee on Investigations, Government Affairs Committee, p. 293, Hearing: "Gas Prices: How Are They Really Set," May 2, 2002).

Lack of Wholesale Competition

Industry changes have eliminated wholesale competition at the refinery level, and West Coast refiners have the highest margins in the United States. This results in higher pump prices for California motorists.

- California's gasoline market is the most concentrated and vertically integrated gasoline market of the key refining areas in the United States, according to the California Attorney General (*Report on Gasoline Pricing in California*, California Attorney General Bill Lockyer, May 2000, p. 23).
- R. Preston McAfee, an advisor to the Federal Trade Commission on mergers and a professor of economics at the University of Texas-Austin, has testified that West Coast gasoline refining and retailing is controlled by an "oligopoly" of seven firms: ChevronTexaco, Shell-Saudi Aramco, BP-Amoco-Arco, ConocoPhillips (formerly Tosco), Valero, Exxon-Mobil, and Tesoro.

- The lack of competition in gasoline refining and retailing (the high-level of market concentration) means that gasoline is more expensive in California than any region in the United States, according to the Department of Energy's Energy Information Agency.
- As further evidence that lack of competition harms consumers, while San Francisco area refiners actually export gasoline to Southern California, lack of competition in local markets allows refiners to charge higher prices to service station dealers, which results in higher prices to San Francisco consumers(*Report on Gasoline Pricing in California*, California Attorney General Bill Lockyer, May 2000, p. 27).
- Independent marketers operating in California are too small to import gasoline, and they are all but excluded from major metropolitan markets because of restrictions imposed by the large oil refiners. The Attorney General's task force reported independent marketers supply less than 10 percent of the gasoline consumed in California, compared with more than 50 percent in Texas (*Report on Gasoline Pricing in California*, California Attorney General Bill Lockyer, May 2000, p. 42).
- "Freedom of California retailers and jobbers to seek the lowest price gasoline is now hampered by a web of restrictive agreements imposed by refiners. These exclusive supply agreements make it impossible for market forces to eliminate regional disparities in gasoline prices" (*Report on Gasoline Pricing in California*, California Attorney General Bill Lockyer, May 2000, p. 40).
- The Attorney General's task force reported that in major metropolitan areas, the vast majority of lessee-dealers cannot receive supply from a branded jobber because they have an exclusive supply agreement with refiners. The task force reported that 85 percent of gasoline sold in California is governed by wholesale price agreements that prevent dealers from purchasing gasoline from any source other than the refiner from which they bought their franchise (*Report on Gasoline Pricing in California*, California Attorney General Bill Lockyer, May 2000, p. 25).

In less than a decade, the independent marketer[2] has all but disappeared, according to Attorney General Bill Lockyer's report on gasoline pricing:

> *"Independent marketers of gasoline account for less than an estimated 10 percent of gasoline sales in California. This is in sharp contrast with many other large states. For example, independent marketers account for more than 50 percent of retail gasoline outlets in Texas."*
>
> Attorney General Bill Lockyer,
> *Report on Gasoline Pricing in California*,
> May 2000, p. 42.

[2] Independent gasoline marketers are those individuals that own and operate gasoline stations that are not branded by any of the integrated oil companies. Examples include Rotten Robbie and USA Gas Stations.

The lack of independent marketers in California has resulted in higher gasoline prices.

> *"In some areas of the country such as California, the independent marketer has all but disappeared. This increase in vertical integration and consequent impacts on retail pricing cannot be overlooked. Considerable economic research over the years has demonstrated the competitive importance of maintaining a viable, strong independent, unbranded segment of the market, yet it is rapidly disappearing and may be one reason for increased price volatility and lack of price discipline in retail markets."*
>
> Peter K. Ashton (President, Innovation & Information Consultants, Inc, Concord, MA), Permanent Subcommittee on Investigations, Government Affairs Committee, *Gas Prices: How Are They Really Set*, 5-2-2002, p. 4.

According to Jon L. Ballesteros, the San Francisco Legislative Analyst, the market for gasoline in San Francisco is not competitive:

> *"Evidence suggests that the wholesale gasoline pricing and distribution system in not a purely "free market" in the San Francisco area. It appears that there is no price competition within the wholesale market for branded gasoline."*

And according to former San Francisco Supervisor Michael Yaki, gas prices in San Francisco are not higher than anywhere else in California simply because of an inefficient market. The told the Association of Bay Area Governments that:

> *"Gas prices are being manipulated; the oil companies do it because they know they can get away with it."*

Oil Company Supply Contracts Harm Consumers

The major oil companies are mistreating their own dealers in California, and the specifics are alarming.

> In a 1998 ruling, a Florida judge noted that *"Exxon secretly divided its dealers into "keepers' and "non-keepers' and internally recognized that its pricing practices were driving the "non-keepers' out of business."*
>
> *Paying the Price*, Houston Press, 10-26-00

"I worked with Shell for 35 years, the rent just kept going up and up and up - until I couldn't do it anymore."
Barry Simpson former Shell Dealer
Boston Herald, 3-6-00

In the last ten years, the major oil companies have created business conditions for their lessee dealers which have resulted in higher prices for consumers. Consider the conditions these dealers are forced to operate under:

- Over the past decade branded dealers have experienced tremendous rent increases. The average rent in 1990 was $3,000.00 per month. Today it is $11,000.00 per month, as most majors have implemented fair market value rent programs.

- All majors, with the exception of BP "Arco", have or intend to drop their incentive rent or price allowance programs, which were developed to help dealers compete with lower priced competition.

- Micro Zone pricing is prevalent by all major brands throughout the metropolitan areas of California. Zones are as small as a given corner. A dealer of the same brand, just three blocks away, can easily have an 8 cent per gallon price differential.

- Company operated stations have increased at alarming rates. Chevron, Shell, ConocoPhillips (76), BP "Arco", Valero and Mobil all have company operated stations selling at prices well below margins needed to run a successful dealer franchise in the same market areas.

- Dealers have been burdened with operating expenses by the majors over the past fifteen years. Every conceivable expense is passed directly to the franchise dealer as follows: Hazmat Plan annual fee, Pump calibration fee, Underground storage tank assessments, and credit card fees which average $5000 per month.

- Maintenance responsibilities have increased and expenses associated with maintaining nozzle, hoses, air conditioning, refrigeration, planter, water systems, and even bathroom fixtures are now the dealer's responsibility, just to mention a few.

- Dealers seldom see any company representatives as most majors have significantly reduced dealer support programs, including employee training, merchandising proprietary branded tires, batteries and accessories. Business counseling and true franchise support programs are all but gone.

- All majors have implemented electronic funds transfer ("EFT") on gasoline, rent, credit card fees and other fees such as royalty charges. Dealers who experience drafting errors must wait for their company's credit department to correct an improper draft, sometimes holding dealer's funds for days or weeks. A dealer who

refuses a disputed draft will be placed on C.O.D. and is subject to extra charges for each fuel order.

In short, these actions undermine the free market for gasoline in California forcing consumers to pay higher prices.

Dealers are Forced into Signing Constrictive Contracts

- The typical California service station dealer who sells a major brand of gasoline operates his or her station under contract with a major oil company. The contracts, typically 75 pages in length, are virtually non-negotiable. The contracts guarantee large profits to oil companies and restrict the ability of dealers to pass along savings to drivers by finding and purchasing lower-cost fuel when available.
- Service station dealers who own their own stations, and who are located within metropolitan markets, pay the highest wholesale price for fuel. This is the Dealer Tank Wagon ("DTW") price and it is set by the oil companies in "zones."
- Dealers who lease a station from an oil company do so under contracts that typically require the following:
  - Rental: Both base rent plus facility rent: The oil company may raise rents every twelve months with a minimum of the CPI index or maximum 100 percent of the previous year.
  - Electronic Point of Sale: Dealers using the company's credit card system pay additional rent.
  - Services, Uses:
    - Minimum gallonage requirements of 80% of previous quarter, regardless of competitive pricing.
- The newest tactic being implemented to drive out dealers is to notify the dealer of record that his/her station is being put up for sale. This may occur while the dealer is in the middle of his/her lease. The oil company sets the price of land and improvements. If the dealer is not able to purchase the station or disagrees with the price, the oil company puts this station up for bid at the asking price offered to the lessee dealer. If another party bids on the station the dealer is given one more opportunity to match the bid price which contains no goodwill or "blue sky" for the dealer of record; effectively circumventing both the federal and state laws that allow good will or "blue sky". Both Chevron and ConocoPhillips (76) are currently using this method to remove dealers.
- Shell is currently implementing a different approach of reducing its dealers. Shell has been, and is, the highest priced major. It has raised its dealers' rents by 200 to 300 percent since 1998, while at the same time taking away any volume incentive programs and having the highest Dealer Tank Wagon prices. Dealers' costs of operation have soared, pushing dealers toward bankruptcy and forcing them to close or sell back their state and federal franchises to Shell which then offers them a thirty-day contract as a commission agent. Shell then sets the retail price of gasoline, often

five to ten cents below its own branded dealers a few blocks away. The commission dealer's income averages $2,500 per month. He has no rights to sell the station. There is no good will, no blue sky, and no ability to compete!

- Dealers who purchase their land and improvements in metropolitan markets must sign long-term supply agreements for ten to fifteen years and are forced to give the oil companies the first right of refusal if they choose to sell.

The constrictive nature of these contracts distorts the market for gasoline in California and as a result consumers are forced to pay higher prices.

CARB Pooling

Documents obtained by U.S. Senator Ron Wyden (D-OR), prove that not only does CARB not adversely affect gasoline prices, but that the integrated oil companies effectively fixed the price of CARB through sharing agreements.

> *"major oil and gas companies supplying CARB gas to the California market entered into 44 supply-sharing agreements. These agreements were generated to control the quantity of CARB gas on the market, reduce efforts to expand CARB refining capacity, limit imports of CARB gas and discourage excess CARB gas from being sold on the spot market to independent purchasers. Exxon, ARCO, Chevron, Shell, Texaco, Tosco and Unocal all entered into such supply-sharing agreements with at least one of their competitors."*
>
> *The Oil Industry,*
> *Gas Supply and Refinery Capacity:*
> *More Than Meets the Eye,*
> Senator Ron Wyden, D-OR, 6-14-01.

Wyden further concluded that these agreements undermined the competitive structure of the gasoline market in California, saying:

> *"Because such agreements benefited the major suppliers and excluded independent operations from the process, significant questions are raised about whether these agreements had the effect of forcing independent refiners to close down – further decreasing overall gasoline supply."*
>
> *The Oil Industry,*
> *Gas Supply and Refinery Capacity:*
> *More Than Meets the Eye,*
> Senator Ron Wyden, D-OR, 6-14-01.

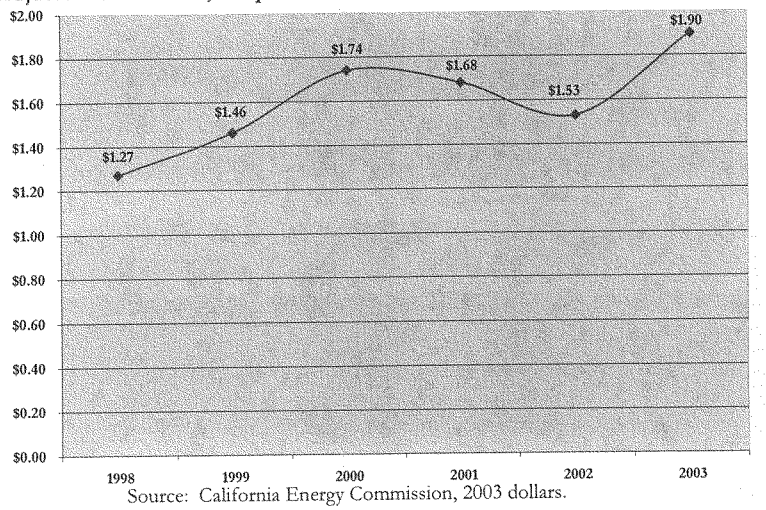
The bottom line is that these factors all combine to keep California prices – and oil company profits – high.

II. COST TO CONSUMERS AND BUSINESSES

Adjusted for inflation, gasoline prices in California have increased by 150% since 1998, according to the California Energy Commission (see Figure 2-1).

Figure 2-1

Adjusted for Inflation, the price of Gasoline in California is up 150% since 1998



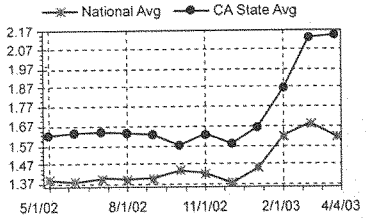
Source: California Energy Commission, 2003 dollars.

California v. National Average

By nearly any measure, Californians pay more for gasoline than other states. We pay 30-40 cents more than the national average (See Figure 2-2):

Figure 2-2

A Gallon of Gas in California Costs 30-40 Cents More than US Average



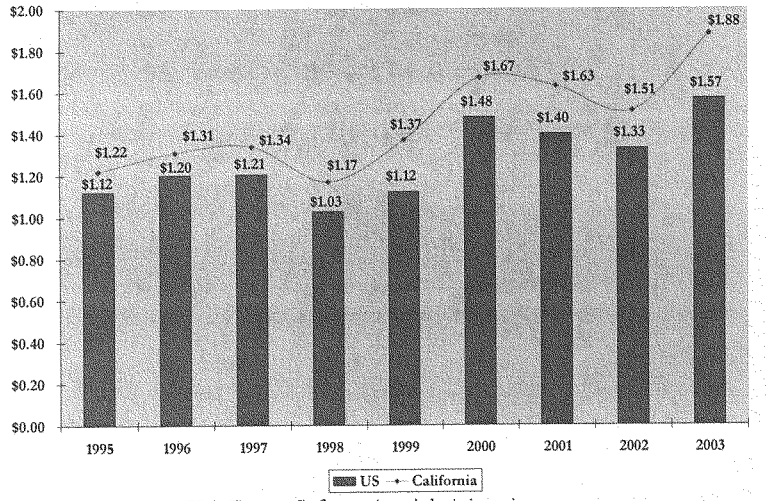
Source: American Automobile Association, 4-4-03.

California v. Other States (National Average Excluding CA)

California gasoline is more expensive than anywhere in the country, and averaged $0.20 higher than the national average (excluding California) between 2000 and 2002. In the first 14 weeks of 2003, the price of gasoline in California has averaged $0.31 higher than the national average (excluding California).

Figure 2-3

Gasoline Prices 1995 to Present – California Average vs. US Average (non-CA)



Source: U.S. Energy Information Administration.

Table 2-1

The Difference between Gas Prices in California and the National Average (including and excluding California)

Area	2000	2001	2002	2003 (to 4/7/03)
California	$1.67	$1.63	$1.51	$1.88
National Avg	$1.52	$1.46	$1.39	$1.64
Difference	**$0.15**	**$0.17**	**$0.12**	**$0.24**
National (non-CA)	$1.48	$1.40	$1.33	$1.57
Difference (non-CA)	**$0.19**	**$0.23**	**$0.18**	**$0.31**

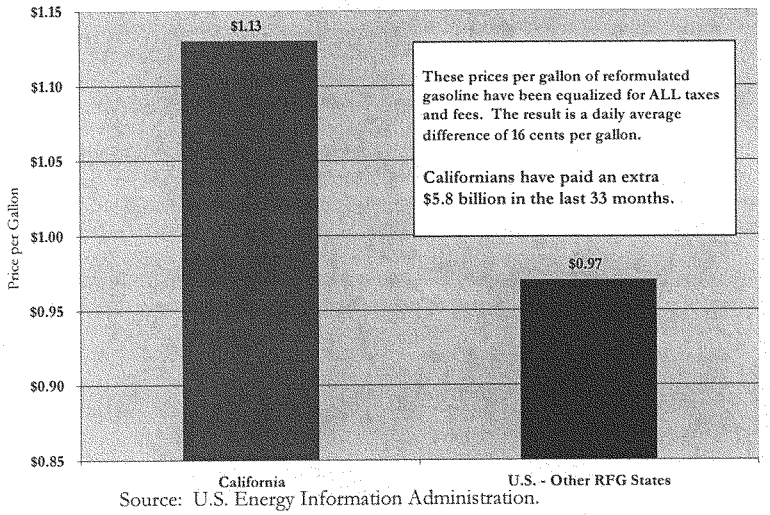
Source: U.S. Energy Information Administration.

California v. Other RFG States

The U.S. Environmental Protection Agency requires that areas that do not meet the standards of the Clean Air Act (primary and secondary air quality standards for pollutants, such as carbon monoxide and ozone) utilize reformulated gasoline (RFG). In addition to California, the states/areas that utilize RFG gasoline include Arizona, Connecticut, Delaware, the District of Columbia, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Missouri, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Texas, Virginia and Wisconsin. From June 2000 through March 2003, Californians paid an average of 16 cents more per gallon than other RFG states, adjusted for federal and state taxes paid on gasoline of $0.50 per gallon in California and $0.42 nationwide, according to the Energy Information Administration (see Figure 2-4).

Figure 2-4

Price of Gasoline in California v. Other RFG States (Adjusted for Taxes)

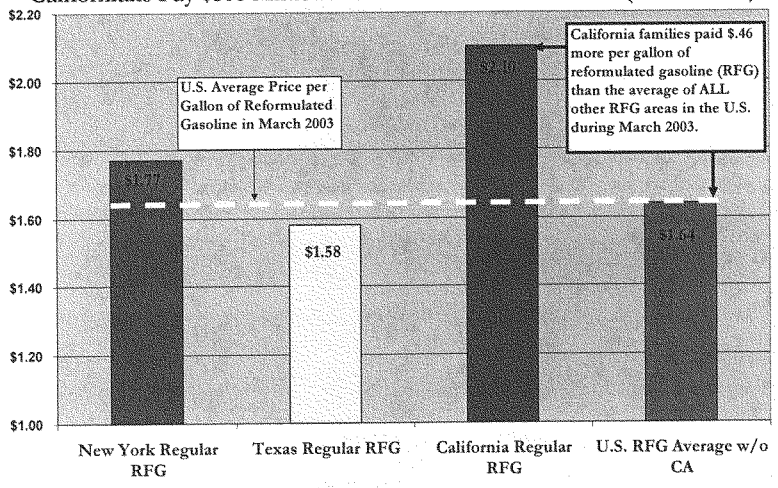


Source: U.S. Energy Information Administration.

In March 2003, Californians paid an average of $0.46 more per gallon than the average of all other RFG states, $0.52 more per gallon than Texas and $0.33 more than New York according to the Energy Information Administration (see Figure 2-5).

Figure 2-5

Californians Pay $506 Million More than Other RFG States (March 2003)



Source: U.S. Energy Information Administration.

Los Angeles v. Houston

From June 2000 to December 2001, gasoline prices in Los Angeles were on average five cents per gallon higher than gas prices in Houston, adjusted for taxes (see Table 2-2, U.S. Energy Information Administration). The price gap narrowed in 2002 to an average difference of 2 cents per gallon (see Table 2-2). However, from January 2003 to April 7, 2003 gas prices in Los Angeles have been on average 22 cents per gallon higher than gas prices in Houston, (see Table 2-2, U.S. Energy Information Administration).

Table 2-2

The Difference between Gas Prices in Houston, TX and Los Angeles, CA (Adjusted for Taxes)

City	2000 (06/00 to 12/00)	2001	2002	2003 (to 4/7/03)
Houston, TX	$1.07	$1.01	$0.95	$1.13
Los Angeles, CA	$1.12	$1.06	$0.97	$1.35
Difference	$0.05	$0.05	$0.02	$0.22

Source: U.S. Energy Information Administration.

California Cities v. Honolulu

The Attorney General's report also concluded that in some months during 1999 and 2000, San Franciscans paid more for gasoline than any other city in the nation, surpassing even Honolulu. In April 2003, gasoline prices in San Francisco exceeded those in Honolulu by 28 cents per gallon (see Figure 2-6; *Daily Fuel Gage Report*, AAA, 4-8-2003).

Table 2-3

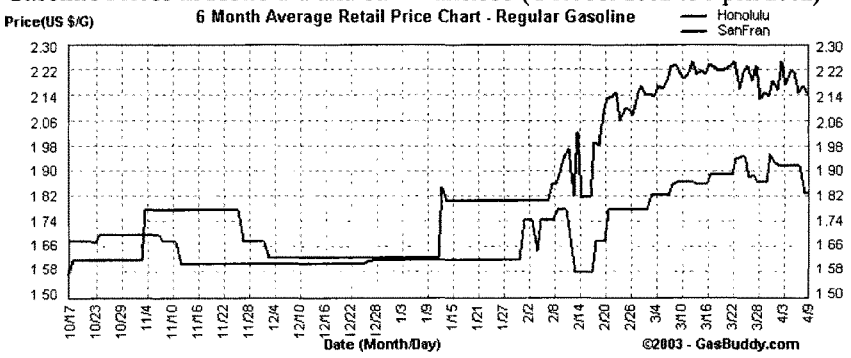
Gasoline Prices in California Compared to Honolulu and the National Average

Location	Price
San Francisco	**$2.25**
San Diego	$2.18
Orange County	$2.16
Oakland	$2.14
Los Angeles	**$2.14**
Sacramento	$2.13
Bakersfield	$2.13
Modesto	$2.11
Merced	$2.10
Fresno	$2.09
Chico	$2.05
Honolulu	**$1.97**
National Average	$1.62

Source: American Automobile Association, April 2003.

Figure 2-6

Gasoline Prices in Honolulu and San Francisco (October 2002 to April 2002)



And Californians can plan to continue to pay high prices for gasoline:

> *"In California, motorists will continue to pay about 50 cents more than the national average for a gallon of regular gasoline and will be especially vulnerable to new price hikes in the months ahead, according to the forecast by the Energy Information Administration."*
> Los Angeles Times, 4-9-03

The Economic Burden of High Gasoline Prices in California

> *"Rising gas prices act like a tax; they reduce the income that residents and businesses have to spend on other goods"*
> Stephen Levy, Director,
> Center for Continuing Study of the
> California Economy,
> San Jose Mercury News, 2-27-03.

Since June 2000, California businesses and consumers have paid a combined $5.8 billion more for gasoline, $0.16 more per gallon, than other states that require reformulated gasoline (see Figure 2-4).

In March 2003 alone, this price disparity between the cost of gasoline in California and other states that require reformulated gasoline, $0.46 per gallon, cost California businesses and consumers $506 million.

High gas prices have also had an impact on small business. Consider the following examples:

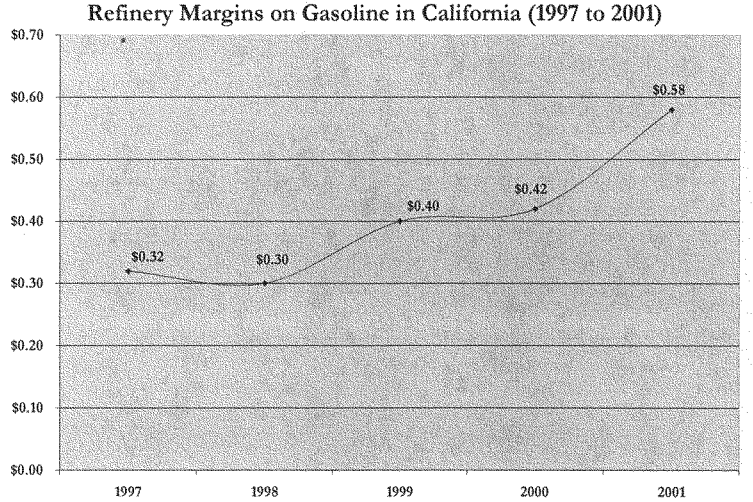
- Like consumers, small businesses have seen an annualized increase of $480 in their fuel bill in the first two months of the 2003 (Los Angeles Daily News, 3-15-2003);
- C.M.I., a company that makes leather, vinyl and other soft interior trim for vehicles and boats, shelved expansion plans in California as it worried that high gas prices would prevent people from purchasing recreational vehicles (Miami Herald, 3-15-2003);
- Los Angeles area florists are referring clients to other florists to avoid deliveries and raising delivery fees (Los Angeles Daily News, 3-5-2003); and
- Some companies have been forced to idle vehicles because of high gas prices (Los Angeles Daily News, 3-15-2003).

III. OIL COMPANY PROFITS

West Coast Refiners Enjoy Hefty Profit Margins

While the oil companies claim that gasoline prices are due to high crude oil prices and CARB requirements the data suggests just the opposite. While crude prices declined from $0.68 per gallon in 2000 to $0.60 per gallon in 2001 gasoline prices increased from $1.66 per gallon in 2000 to $1.71 per gallon in 2001 – at the same time refining margins increased from $0.42 per gallon in 2000 to $0.58 per gallon in 2001 for both branded and unbranded gasoline (see Figures 2-4).

Figure 2-4
Refinery Margins on Gasoline in California (1997 to 2001)

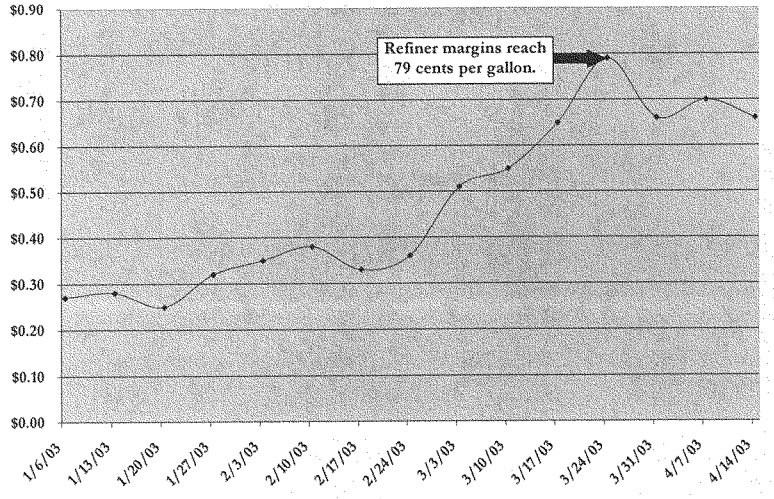


Source: California Energy Commission.

On March 24, 2003 refinery margins reached 79 cents per gallon and since January 2003 refinery margins have increased by 144%, from 27 cents per gallon on January 6 to 66 cents per gallon on April 14, according to the California Energy Commission (see Figure 2-5). Since March 3, 2003 refinery margins have been above 50 cents per gallon, and have averaged 65 cents per gallon, according to the California Energy Commission (see Figure 2-5).

Figure 2-5

Refinery Margins on Gasoline in California (January to April 2003)



Source: California Energy Commission.

According to the California Energy Commission, refinery margins are:

> *"calculated as the difference between the Oil Price Information Service (OPIS) average rack price of gasoline and crude oil cost."*
>
> *Notes on Estimated 2003 Gasoline Price Breakdown & Margins Details*, Note 3, California Energy Commission, 2003.

However, while the California Energy Commission uses the average rack price to compute refiner margins, it concedes:

> *"most branded franchisees purchase gasoline at the Dealer Tank Wagon price (DTW) that is typically higher than the branded rack price."*[3]
>
> *Notes on Estimated 2003 Gasoline Price Breakdown & Margins Details*, Note 4, California Energy Commission, 2003.

According to the Attorney General's report on gasoline prices, 85 percent of the gasoline sold in California is sold through stations that are required to pay the DTW price (*Report on Gasoline Pricing in California*, California Attorney General Bill Lockyer, May 2000, p. 25).

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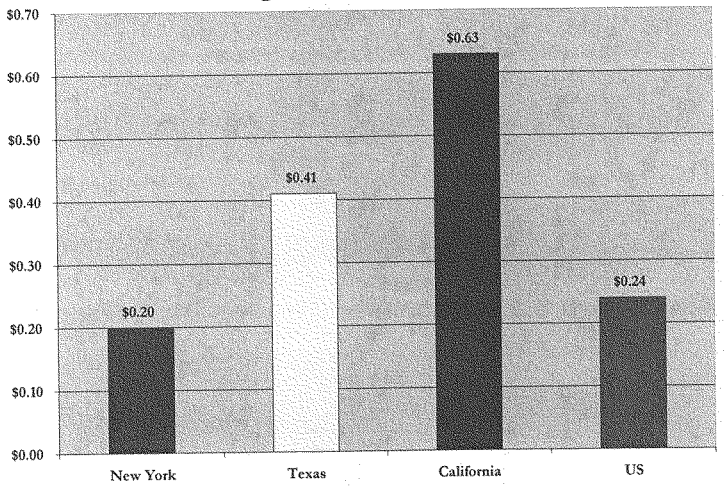
[3] In December 2002, the average DTW price in California was 6 cents per gallon higher than the average rack price, $0.92 and $0.86 respectively, according to the Department of Energy (*Petroleum Marketing Monthly*, Energy Information Administration, April 2003, Table 31, p. 64).

On March 14, 2003, the Los Angeles Times reported that, "refinery margins -- defined as non-crude oil expenses and profit -- are now significantly higher than their five-year average."

In March 2003, California refiners earned margins of $0.63 per gallon, while refiners in Texas earned $0.41 per gallon and refiners in New York earned $0.20 per gallon. The average refining margin in the United States in March 2003 was $0.24 per gallon (see Figure 2-5).

Figure 2-5

California Refiner Margins Well Above TX and NY (March 2003)



Source: California Energy Commission, Oil & Gas Journal data.

Oil company executives admit West Coast margins are integral to corporate performance.

> *"[The Benicia refinery] should contribute significantly to the company's third quarter and second half results due to the favorable outlook for West Coast margins and a full six months of operations."*
>
> Bill Greehey
> Chairman, Valero Energy
> Petroleum Finance Week, 8-28-00

Investment analysts agree California is a cash cow for oil companies operating here.

> *"California is the jewel in the crown. There's no question the West Coast gasoline margins are almost double the East Coast margins."*
>
> Fadel Gheit, Farnestock & Co. Report
> January 1998

"We estimate that [the] Golden Eagle [refinery] could generate more than $170 million and $210 million of operating profit in 2002 and 2003, respectively. However, given our optimistic view of California refining market's long-term outlook, we expect Golden Eagle could generate higher earnings and return than our current assumptions."

P.Y. Cheng, Lehman Brothers Report
February 11, 2002

"U.S. margins are definitely in the black, with California margins at a lofty $15.15/bbl."

Paul Ting,
Salomon Smith Barney Report
August 13, 1999

"Wholesale prices continue to fall across the U.S. except in California, where margins are still strong."

Jay Saunders,
Deutsche Banc Alex Brown,
Octane Week, September 10, 2001

"Company-wide refining margins beat our forecast by 10%. Good, however, the outperformance came from California"

Tyler Dann, Bank of America Report
August 2, 2002

"Sunoco Inc. officials, their company's shares down 34% this year, are wishing they were in California.

Philadelphia-based Sunoco, the third-largest independent U.S. oil refiner, saw earnings sink in each of the last three quarters. Profit margins on fuel sales in Sunoco's East Coast markets fell by as much as half from year-earlier levels.

By contrast, earnings rose for rivals such as Chevron Corp. and Tosco Corp., largely on the strength of fuel sales in California, where margins have been triple those of the rest of the U.S."

Bloomberg Market Report, 2000

"Pump prices in California have soared to more than $2 a gallon on average and have climbed more than in any other region in the country. One reason may be that California refining companies are currently reaping profit margins that are as much as 21% above the average for the past seven years, based on typical industry costs, according to the California Energy Commission."

Gas Prices Hit Record Highs,
Wall Street Journal, 3-7-2003.

Recent news reports support the contention that oil companies are earning high profits.

OIL FIRMS PROFITS GUSH WHEN PRICES RISE
"As oil prices go, so goes the oil industry. And with oil prices surging to their highest levels in at least two years, oil companies are poised to reap rich profits. 'When prices rise, it looks like they're coining money,' said Craig Pirrong, director of energy markets for the University of Houston's Global Energy Management Institute."
Miami Herald, February 25, 2003

ENERGY SECTOR PROFITS HEAT UP
"U.S. energy companies, led by Exxon Mobil and Anadarko Petroleum, had the biggest gains in fourth-quarter profit of any industry group in the Standard & Poor's 500 index, as oil and natural-gas prices surged."
The Seattle Times, February 11, 2003

OIL COMPANIES' PROFITS HUGE
"Oil giant Exxon Mobil Corp. reported the largest quarterly profit in U.S. history Wednesday, as higher prices for crude oil and natural gas fattened its bottom line. Exxon Mobil, the nation's largest oil company, wasn't alone, it led a parade of companies posting fourth-quarter profit increases in double and triple digits."
Cincinnati Enquirer, January 25, 2001

OIL FIRMS' PROFITS GUSH
"As the price of gasoline soars, nearing last summer's record levels, oil companies are raking in huge profits. Just this week, ExxonMobil, Chevron, Unocal and others delighted shareholders by handily beating profit expectations."
Chicago Tribune, April 27, 2001

PUMPING MONEY: MAJOR OIL COMPANIES STRUGGLE TO SPEND HUGE HOARDS OF CASH
"In May, reporting on the first quarter of what may ultimately be its most successful year ever, Royal Dutch/Shell Group said it was pumping out about $1.5 million in profit an hour and sitting on more than $11 billion in the bank."
Wall Street Journal, July 30, 2001

CALIFORNIA OIL COMPANIES POST RECORD PROFITS
East Bay Business Times, April 25, 2001

OIL FIRMS SPILL OVER WITH PROFITS
Economic Times, November 11, 2002

IV. OTHER STATES ARE ACTING

Sixteen states currently have laws on the books to promote or protect competition in their local markets. Five states have laws that limit market control by integrated oil companies, eleven other states have fair petroleum marketing laws, and still other states, like California, are experiencing similar problems and exploring available remedies.

Maryland

In 1974, Maryland passed the first law in the United States that limited market control by integrated oil companies. The major oil companies challenged the constitutionality of the law; however, in 1978 the Supreme Court ruled 8 to 0 (Justice Powell did not participate) that the law was constitutional (*Exxon Corp. v. Governor of Maryland*, 437 U.S. 117, 1978). Subsequent to the ruling by the Supreme Court Maryland began enforcement of the law in 1978.

While the major oil companies and their "hired gun" economists[4] have claimed since 1979 that gasoline prices in Maryland increased as a result of the market control limits placed on integrated oil companies, the law has remained on the books for more than 20 years and survived numerous attempts by the oil industry to get the legislature to overturn the law.

If as the oil companies claim, this law is so bad for consumers why hasn't it been changed?

The answer lies in the fact that the law actually benefits consumers. In fact, a 1987 study commissioned by the Maryland Comptroller's Office found that:

> *"over a seven-year period the total savings enjoyed by Maryland motorists relative to motorists in [non-market limit] cities was over $102 million."*

And while the oil companies now claim that the limits raise the price of gasoline, that hasn't always been their position:

> Market limits have "*had no impact on prices in Baltimore.*"
> WJ Bittles, Jr
> Vice President of Retail Sales, Shell Oil Company
> Senate Judiciary Committee, 10-21-81

[4] The oil companies through the American Petroleum Institute concede that "the authors of these studies received financial or other support from the petroleum industry or its members." These reports include those which are most commonly relied upon to challenge Maryland's divorcement law and include, according to the National Petroleum News, the following reports: P. Sorenson, Florida State University, a statement to the U.S. Senate Committee of the Judiciary, October 1981; and J. Barron and J. Umbeck, Purdue University, "The Effects of Different Contractual Arrangements: The Case of Retail Gasoline Markets," October 1982, among others.

Nevada

In 1987, Nevada passed laws that limited market control by integrated oil companies in response to high gas prices. Since the law was passed, the oil companies have used the same tactics as they have in other states in an attempt to get the law repealed.

Despite significant efforts in 1995 and 1996 to repeal the law, it wasn't until the oil lobby was able to add a 500-page amendment to a bill on electricity deregulation in 1997 that they were successful in changing the law. The Las Vegas Review-Journal called the amendment "an egregious example" of the lack of deliberation on issues in the 1997 Nevada legislative session.

The amendment allows:

> Oil companies to *"move into the state under a phased-in plan by building or acquiring service stations. However they couldn't take over the shops of the lessee dealers and "lessee dealers" and the "contract dealers" will be protected from having their contracts cut by the major refiners."*
>
> Associated Press, 6-28-97

Under the "phase-in" portion of the law oil companies were allowed to establish up to 30 new stations by 2001.

According to Arco's lobbyist:

> *"We didn't get it repealed, but it's a balanced deal. To make a deal you have to give up some things."*
>
> Arco lobbyist George Ross,
> Associated Press, 6-28-97

This statement contradicts WSPA's claims that the law was repealed.

Connecticut

Connecticut Attorney General Richard Blumenthal has worked hard to address the state's high gasoline prices and in 2003, at his request, the Connecticut legislature is considering an expansion of its market control law and a law to prohibit zone pricing (The Rell Report, 2-6-03).

Currently, 16 states have significant gasoline marketing laws, and in 2002 all of these states had gasoline prices lower than those in California, adjusted for taxes (see Table 4-1).

Table 4-1
Significant Gasoline Marketing Laws in the United States

State	Effect of Petroleum Marketing Law	Average Gasoline Price Per Gallon in 2002 (adjusted for taxes)
CALIFORNIA	**NONE**	**$1.00**
Alabama	Forbids predatory pricing designed to drive out competition	**$0.88**
Connecticut	Limits market control by integrated oil companies.	**$0.93**
Delaware	Limits market control by integrated oil companies.	**$0.89**
Florida	Forbids predatory pricing designed to drive out competition	**$0.89**
Maryland	Limits market control by integrated oil companies.	**$0.90**
Massachusetts	Forbids predatory pricing designed to drive out competition	**$0.95**
Missouri	Forbids predatory pricing designed to drive out competition	**$0.91**
Nevada	Limits market control by integrated oil companies.	**$0.98**
New Jersey	Makes it illegal to sell at any price below net cost plus selling expenses and bans the use of lotteries or prizes in connection with sales of motor fuels.	**$0.93**
North Carolina	Forbids predatory pricing designed to drive out competition	**$0.86**
Rhode Island	Forbids predatory pricing designed to drive out competition	**$0.91**
South Carolina	Forbids predatory pricing designed to drive out competition	**$0.87**
Tennessee	Forbids predatory pricing designed to drive out competition	**$0.85**
Utah	Forbids predatory pricing designed to drive out competition	**$0.90**
West Virginia	Limits market control by integrated oil companies.	**$0.91**
Wisconsin	Sets a minimum 6 percent markup on the price of gasoline.	**$0.94**

Source: *Petroleum Marketing Monthly*, Energy Information Administration, January through December 2002; Pacific Business News, 5-31-02.

V. SOLUTIONS FOR CALIFORNIA

Changes are needed to make California's gasoline market more competitive, increase supply, and conserve fuel. Bipartisan consensus is emerging on the following four steps California can take:

- **Introduce wholesale and retail gasoline competition.** "Freedom of California retailers and jobbers to seek the lowest priced gasoline is now hampered by a web of restrictive agreements imposed by refiners," the Attorney General has concluded. He has proposed allowing dealers to purchase branded gasoline from any source.

- **Preserve checks and balances by introducing franchise reforms.** California's major oil companies are engaged in a systematic effort to undermine their own dealers, despite their assurances to the contrary. A strong dealer presence in the market is essential to provide a competitive check on the major oil companies.

- **Restrict market control by oil companies**. California should restrict the ability of major oil companies to set retail prices by virtue of various forms of market control, such as exclusive supply agreements.

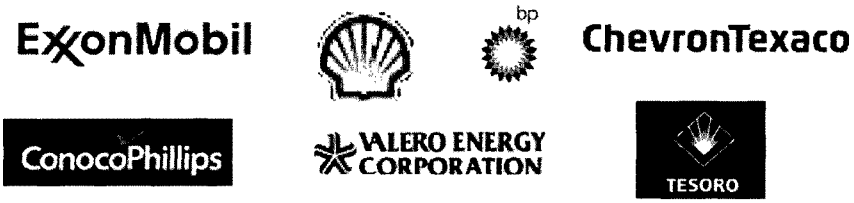
- **Add instate refining capacity.** The Attorney General has said there may be opportunities to streamline state environmental impact and other permitting reviews, and has proposed a task force of stakeholders to investigate options.

The benefits to California consumers and businesses, according to Attorney General Lockyer, of steps to increase competitiveness in California gasoline markets, increase supply, and conserve fuel include:

- More competition in metropolitan areas that are currently the exclusive distribution territory of the major refiners, thereby reducing prices to consumers and businesses;
- Reduced ability of refiners to control prices within zones in cities and other urban areas of California, thereby reducing prices to consumers and businesses; and
- More buying power for jobbers, who could obtain lower prices from refiners and pass along these savings to dealers; thereby reducing prices to consumers and businesses.

VI. OIL COMPANIES OPPOSE REFORM

There are seven obstacles that must be overcome to fix California's broken gasoline market:



With the exception of ChevronTexaco, all of these companies are headquartered in Texas.

Table 6-1
Integrated Oil Companies Operating in California

Company	Headquarters (U.S)
ChevronTexaco	California
Shell USA	Texas
British Petroleum	Texas
ConocoPhillips (76)	Texas
Valero	Texas
Tesoro	Texas
ExxonMobil	Texas

Source: California Energy Commission.

- In 1999 and 2000, Western States Petroleum Association (WSPA) and Big Oil spent more than $1 million lobbying against legislation promoting branded open supply (Peace), divorcement (Speier) and price controls (Wesson) – Source WSPA 2000 Annual Report, California Secretary of State Lobbyist Reports 1999 to 2000.

- Since the 1998 election cycle, major oil companies have made more than $3 million in direct campaign contributions to statewide and state legislative candidates.

Oil Company Lobbying and Campaign Contributions

Through WSPA, major oil companies have worked to undermine every effort to reform the marketing of gasoline in California.

The organization's own publications laud its efforts to defeat legislation which would have been beneficial to consumers. The WSPA 2000 Annual Report claims success in the defeat of the following legislation:

- Branded Open Supply (Peace);
- Divorcement (Speier); and
- Price controls (Wesson).

From 1995 through 2002, oil companies and industry associations spent more than $50 million on lobbying in California, according to the California Secretary of State (see Table 6-2).

Table 6-2

Oil Industry Lobbying Expenses (1995 to 2002)

Entity	1995-1996	1997-1998	1999-2000	2001-2002	Total
WSPA	$3,883,845	$4,591,313	$3,862,287	$4,720,240	**$17,057,685**
Major Oil Companies	$8,080,698	$6,476,815	$6,935,437	$5,413,474	**$26,906,424**
Independent Oil Companies	$748,281	$320,644	$1,406,988	$1,129,380	**$3,605,303**
Other Industry Groups	$487,481	$930,198	$916,262	$424,077	**$2,758,018**
Total	$13,200,305	$12,318,970	$13,120,974	$11,687,171	**$50,327,430**

Source: California Secretary of State.

Since 1997, major oil companies have made more than $3 million in campaign contributions to statewide and state legislative candidates in California according to the California Secretary of State (see Table 6-3).

Table 6-3

Oil Company Aggregate Campaign Contributions by Election Cycle (1997 to 2002)

Company	1998	2000	2002	Total
ChevronTexaco	$623,359	$382,461	$299,726	**$1,305,546**
BP (Arco)	$594,367	$286,499	$334,711	**$1,215,577**
ConocoPhillips (76)	$153,696	$130,247	$90,999	**$374,942**
ExxonMobil	$87,875	$36,000	$15,000	**$138,875**
Valero Energy	N/A	N/A	$51,230	**$51,230**
Total	**$1,459,297**	**$835,207**	**$791,666**	**$3,086,170**

Source: California Secretary of State.

San Francisco

On September 22, 1997, then-Supervisor Michael Yaki proposed a law that would have limited market control by integrated oil companies in San Francisco by January 1, 2000. After an intense lobbying effort by the oil companies Yaki's proposal was effectively stymied when it was rerefered to committee on June 8, 1998.

The oil companies must have been worried that San Francisco's divorcement law would have hurt their bottom line as they spent more than $230,000 to oppose it, according to the San Francisco Ethics Commission:

- From 1997 through 2002, Chevron, later ChevronTexaco, spent $170,666.38 lobbying against the ordinance.
- From 1997 through 2002, Tosco, later ConocoPhillips (76), spent $39,036.98 lobbying against the ordinance.
- From 1997 through 2002, the Western States Petroleum Association spent $33,675.00 lobbying against the ordinance.

In addition to spending more than $170,000 lobbying against the ordinance, Chevron (later ChevronTexaco) made $226,523 in campaign contributions to measures and candidates in San Francisco from 1997 through 2002 according to the San Francisco Ethics Commission.

San Diego County

Despite the usual industry lobbying barrage, the San Diego County Board of Supervisors passed an ordinance in 1998 in response to perceived gas price gouging that limited the market control of integrated oil companies and allowed for open supply contracts.

The Western States Petroleum Association, an industry trade group, sued the board for $50 million, claiming the law violated equal-protection rights guaranteed by the U.S. Constitution. The lawsuit also questioned the authority of the county and cities to regulate activities outside their own jurisdiction. Due to the potential costs of defending against the lawsuit, the Board of Supervisors rescinded the ordinance prior to going to court (the San Diego supervisors initially approved the ordinance on January 13, 1998 by a vote of 5 to 0).

Despite the failure of the ordinance, Supervisor Ron Roberts continued his efforts to decrease gasoline prices.

> *"The fact of the matter is that the oil companies in the state of California are not competitive. There is no competition in the state of California. When the oil companies in California can have a different wholesale price for every gas station on every corner of the city, then something is seriously wrong. And the fact that they are the largest lobbying group in the state of California, the most effective lobbying group at the state level, should tell you why something can't happen on the state level. . . They are costing this community over $100 million per year."*
>
> Republican San Diego Supervisor Ron Roberts, San Diego Mayoral Debate, 4-11-00.

In a memo to his colleagues on the Board, Supervisor Bill Horn said:

> *"The root causes of our problem relate to the vertical integration of major oil companies controlling California refining capacity and their collusive behavior in supply arrangements and instantaneous information sharing. I am an advocate of free enterprise and the market place, and on a business level I have to admire the oil companies' commercial success. However, as an elected representative of San Diego County residents and consumers, I believe we have to seek correction in a market that no longer exhibits any true competition."*
>
> San Diego Supervisor Bill Horn Memo to San Diego Board of Supervisors, *Promoting Competition to Reduce Retail Gas Price Gouging in San Diego County*, 1-7-98.

Supervisor Horn's sentiments were reinforced by a report issued on gasoline prices in San Diego, which concluded:

> *"The activities of the refiners and wholesale distributors of gasoline that have resulted in high prices in San Diego County take place outside the boundaries of the County."*
>
> *Report on Gasoline Prices in San Diego County*, CAO Lawrence Prior III and Counsel John Sansone, 1-13-98.

Appendix A: You Can't Believe Any Claim Made by the Oil Companies

On competitiveness in the market	The Facts
California has a very competitive and efficient gasoline marketing process – one that has consistently delivered gasoline to the consumer reliably and at low prices (Source: Letter from John Geoghegan to Assemblyman Roderick Wright, June 30, 1999).	California's gasoline industry is less competitive than in most of the nation, and large oil refiners have effectively shut out independent marketers in California's urban areas, according to the California Attorney General.
On oil company prices for gasoline	**The Facts**
Company-operated service stations often offer the lowest retail prices. By eliminating company-operated outlets, divorcement laws would eliminate the lowest priced gasoline, thus harming consumers.	In her testimony before a U.S. Senate Subcommittee investigating gas prices Justine Hastings, a professor of economics at Dartmouth University, said that in cities with a high concentration of company-owned stations gas prices are on average $0.05 higher than cities with a large number of independent stations.

On impact of CARB gasoline	The Facts
California's unique, more stringent cleaner-burning gasoline requirements make it more expensive to produce (Source: Tough Questions and Straight Answers About Gasoline Prices, WSPA).	Oil companies chronically overstate these impacts. The Attorney General's Task Force on California Gasoline Prices concluded wholesale price for CARB gasoline has **averaged only four cents per gallon** more than conventional gasoline (Attorney General's Task Force Report, May 2000, p. 5.).

On gasoline taxes	The Facts
Why are California gasoline prices generally higher than in other states? *For one thing, gasoline taxes are higher here than in almost any other state.* (Source: Tough Questions and Straight Answers About Gasoline Prices, WSPA).	Adjusted for state sales and excise taxes, Californians last year paid 8 cents more per gallon than New Yorkers and 13 cents more per gallon than Texans. In March 2003, Californians paid 33 cents more per gallon than New Yorkers and 52 cents more per gallon than Texans.
On so-called Voluntary Contracts	**The Facts**
"Open supply" legislation, as it has been proposed in California, would eliminate voluntary exclusive purchasing agreements between refiners and dealers (Source: WSPA press release, April 3, 2003).	The proposed legislation offers dealers a choice, and California consumers and businesses a chance for lower gasoline prices.
On the views of economists and "others"	**The Facts**
But economists and others agree that open supply would not work, and in fact would be likely to cause supply disruptions and higher retail prices (Source: WSPA press release, April 3, 2003).	Actually, according to Attorney General Bill Lockyer's report on gasoline prices, branded open supply proposals would increase competition in metropolitan areas that currently are the exclusive distribution territory of major-brand refiners, and would reduce the price of gas paid by consumers.

On contracts and supply	The Facts
The existing system of voluntary contracts allows refiners to accurately project how much gas they will need at any given terminal on any given date, and assures dealers that they will have enough gas each day to serve their customers. By doing away with the contract system, it is likely that on any given day, the lowest priced terminals would run out of gas first, with many dealers disappointed when supplies are not adequate to meet their needs. (Source: Facts About Proposed Gasoline Marketing Regulations, WSPA, March 15, 2000).	In Texas, refiners control less than half of the wholesale market and dealers are free to purchase gasoline from multiple sources. And no shortages such as those described by WSPA have ever occurred in Texas.

On dealer greed	The Facts
Even if some dealers realized savings at the wholesale level, there is no guarantee any of these benefits would be passed on to consumers. Any profits from open supply legislation are likely to be enjoyed only by that handful of dealers who sporadically are able to locate and buy their supplies at a lower price now and then (Source: Facts About Proposed Gasoline Marketing Regulations, WSPA, March 15, 2000).	Right now those profits are being retained by the major oil companies. Profits from West Coast refining are the highest in the nation, according to Bloomberg.

On overall supply	The facts
Open supply laws would do nothing to increase the supply of gasoline in California – they would only create market uncertainty.... (Source: Facts About Proposed Gasoline Marketing Regulations, WSPA, March 15, 2000).	A long-term solution includes steps to increase supply – but without market reforms that bring additional competition; these new supplies will not lead to reduced prices for consumers.

On reserves	The Facts
Open supply laws would...cause terminals to increase reserves, effectively reducing available supplies. This would logically result in higher pump prices (Source: Facts About Proposed Gasoline Marketing Regulations, WSPA, March 15, 2000)	Increasing reserves might be a good thing. According to the Attorney General, refiners have cut inventories – which "exacerbate the supply problem created when a refinery experiences an outage."

On Competition with Dealers	The Facts
"The notion that the oil companies would try to undercut their franchisers is hogwash. It doesn't make sense to make war on our own dealers. If prices are higher at franchised stations, it's a function of the profit demand of retailers." (Source: Chevron Spokesman, *Running on Fumes*, SF Bay Guardian, 2-18-98)	In a 1998 ruling, a Florida judge noted that "Exxon secretly divided its dealers into "keepers' and "non-keepers' and internally recognized that its pricing practices were driving the "non-keepers' out of business." Also, Chevron, Shell, ConocoPhillips (76), BP "Arco", Valero and Mobil have company operated stations selling at prices well below margins needed to run a successful dealer franchise in the same market areas.

Appendix B: QUESTIONS AND ANSWERS

This section seeks to anticipate and address common objections to the concerns of California's service station dealers and their proposed remedies, including divorcement and divestiture.

Q: Gasoline in California is a bargain today, especially adjusted for inflation. To borrow a phrase: If it ain't broke, why fix it?

A: *Gas prices in California are the highest in the nation, according to the American Automobile Association.*

Q: Aren't gasoline prices in California higher because of the cost of producing CARB gasoline and higher fuel taxes?

A: *No. Even accounting for the cost or producing CARB gasoline (4 to 6 cents) and higher fuel taxes (8 cents higher than the national average); in March 2003 California consumers and businesses paid 36 cents more per gallon than the national average for reformulated gasoline according to the Energy Information Administration.*

Q: Don't company-owned service stations offer the lowest retail prices?

A: *No. In her testimony before a U.S. Senate Subcommittee investigating gas prices Justine Hastings, a professor of economics at Dartmouth University, said that in cities with a high concentration of company-owned stations gas prices are on average $0.05 higher than cities with a large number of independent stations.*

Q: A branded open supply law will cause an increase in gas prices, won't it?

A: *No. Actually, according to Attorney General Bill Lockyer's report on gasoline prices, branded open supply proposals would increase competition in metropolitan areas that currently are the exclusive distribution territory of major-brand refiners, and would reduce the price of gas paid by consumers.*

Q: Isn't geography the main reason gasoline prices in California are higher than other states?

A: *No. The reason gasoline prices are higher in California is that oil refining capacity in the state has decreased by more than 49 million barrels of oil a year since 1993, according to the California Energy Commission.*

Q: And aren't our environmental laws and sales taxes the major contributors to higher gasoline prices in California, compared to other states?

A: *No. Again, we can place the majority of blame for California's high gas prices squarely at the feet of major oil companies in California. These companies control the amount of oil that is refined in the state and have worked hard to prevent competitors from expanding refining capacity or importing refined gasoline into the state, according to a report issued by the Senate Permanent Subcommittee on Investigations.*

Q: Doesn't the demand for gasoline in California exceed in-state production capabilities?

A: *No. Once again the oil companies have twisted the facts. According to the California Energy Commission, California refineries produce more than 16.5 billion gallons of gasoline annually while Californians consume 14.5 billion gallons of gasoline annually. Also, California exports more than 150,000 barrels of gasoline a day to Arizona, Nevada and Oregon.*

Q: Won't divestiture lead to higher gasoline prices?

A: *Divestiture will only lead to higher gasoline prices if you buy the twisted economic logic offered up by the oil companies. Under divestiture there will be more firms selling gasoline. Any way you look at it this means more competition, not less. Any student of economics will be able to tell you that as competition increases price decreases – that's exactly what will happen if California adopts divorcement.*

Q: The wholesale gasoline market in California is fiercely competitive, isn't it?

A: *According to California Attorney General Bill Lockyer, the wholesale gasoline market in California is one of the least competitive in the United States. Economists frequently refer to the California market, in which 97% of the market is controlled by seven companies, an oligopoly.*

Q: Nevada recently changed its state law to allow major oil companies once again to start operating their own stations. Isn't this evidence that divorcement doesn't work?

A: *No. The Nevada legislature rebuffed direct efforts by the major oil companies to repeal divorcement in 1995 and 1996. In 1997, the oil companies were able to add an 11th hour amendment to an electricity market restructuring measure that allowed them to increase the number of stations they could operate in the state by 30 service stations. This change to Nevada's divorcement law was not an indictment of divorcement, but rather further evidence of Big Oil's lobbying strength. The Las Vegas Review-Journal called the amendment that changed Nevada's divorcement law "an egregious example" of the lack of deliberation during the 1997 session, a situation that was "out of control" according to one observer.*

Q: Isn't it true that oil company divorcement measures will lead to widespread job loss?

A: No. According to a Senate Judiciary Committee investigation into Maryland's gasoline marketing laws, "former managers became the dealers with the same staffs, and by the fact that the average dealer station employs more people than a company-operated location" employment would actually increase.

Q: But aren't Costco and other new entrants into gasoline markets providing price competition? After all Costco plans to expand to 100 stations in California, won't that give major oil companies some competition?

A: *No. The Attorney General's task force noted that Costco has less than 1 percent market share in 1999, compared with 19.3 percent for Chevron. The task force also said these types of gasoline marketers are expected to align with major refiners, not compete with them.*

PREPARED STATEMENT OF SAMANTHA SLATER, DIRECTOR, CONGRESSIONAL AND REGULATORY AFFAIRS, RENEWABLE FUELS ASSOCIATION

Good morning Chairman Schumer and Members of the Committee. My name is Samantha Slater and I am Director of Congressional and Regulatory Affairs for the Renewable Fuels Association (RFA), the national trade association representing the U.S. ethanol industry.

This is an important and timely hearing, and I am pleased to be here to discuss the ethanol industry's perspective of the effects that increased concentration of the petroleum industry has had on availability of E-85 at the pump. When consumers drive into service stations, they should have the option of choosing renewable fuels. The increased availability of E-85 at service stations nationwide would give consumers the opportunity to choose a high-octane fuel that provides superior engine performance, reduces harmful tailpipe and greenhouse gas emissions that contribute to global warming, reduces our dependence on foreign oil, and enhances our energy and economic security.

BACKGROUND

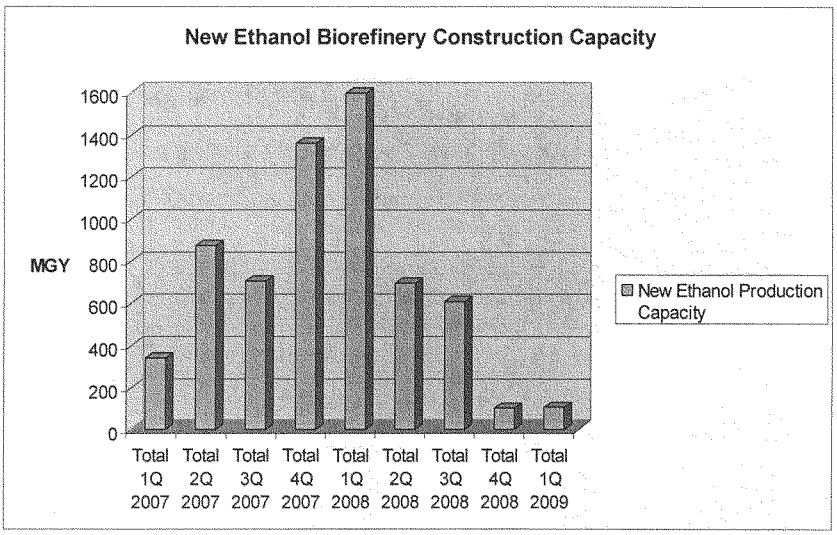
Today's ethanol industry consists of 119 biorefineries located in 19 different states with the capacity to process more than 2 billion bushels of grain into 6.1 billion gallons of high octane, low carbon, clean burning motor fuel, and more than 12 million metric tons of livestock and poultry feed. It is a dynamic and growing industry that is revitalizing rural America, reducing emissions in our Nation's cities, and lowering our dependence on imported petroleum.

Ethanol has become an essential component of the U.S. motor fuel market. Today, ethanol is blended in 50 percent of the Nation's fuel, and is sold virtually from coast to coast and border to border. The almost 5 billion gallons of ethanol produced and sold in the U.S. last year contributed significantly to the Nation's economic, environmental and energy security. According to an analysis completed for the RFA[1], the approximately 5 billion gallons of ethanol produced in 2006 resulted in the following impacts:

- Added $41.1 billion to gross output;
- Created 160,231 jobs in all sectors of the economy;
- Increased economic activity and new jobs from ethanol increased household income by $6.7 billion, money that flows directly into consumers' pockets;
- Contributed $2.7 billion of tax revenue for the Federal Government and $2.3 billion for State and Local governments; and,
- Reduced oil imports by 170 million barrels of oil, valued at $11.2 billion.

There are currently 79 biorefineries under construction. With eight existing biorefineries expanding, the industry expects more than 6.4 billion gallons of new production capacity to be in operation by the end of 2009. The following is our best estimate of when this new production will come online.

[1] Contribution of the Ethanol In States, Dr. John Urbanchuk, Director, LECG, LLC, December, 2006.



Ethanol today is largely a blend component with gasoline, adding octane, displacing toxics and helping refiners meet Clean Air Act specifications. Of the 5.4 billion gallons of ethanol blended in the U.S. last year, only about 50 million gallons were used for E-85. But the time when ethanol will saturate the blend market is on the horizon, and the industry is looking forward to new market opportunities. As rapidly as ethanol production is expanding, it is likely the industry will saturate the existing blend market before a meaningful E-85 market develops.

Today there are more than 230 million cars on American roads today capable of running on an up to 10 percent blend of ethanol. Of these, only 6 million are flexible fuel vehicles (FFV), capable of using up to an 85 percent blend of ethanol. America's automakers have realized the benefits of ethanol, particularly E-85, and have joined with the ethanol industry to aggressively develop the infrastructure and provide the vehicle fleet necessary to grow the E-85 market. Ford, General Motors and DaimlerChrysler pledged to increase production of FFVs to half of all new vehicles by 2012, or about 4 million new FFVs a year. General Motors has been a leader in promoting the use of ethanol. Its campaign, "Live Green, Go Yellow," which focuses on the yellow gas caps that now come standard with all GM flex-fuel vehicles, has helped to raise public awareness of ethanol and especially E-85.

Enhancing incentives to gasoline marketers to install E-85 refueling pumps at service stations will continue to be essential. There are now more than 1,200 E-85 pumps at service stations across the country, more than doubling in number since the passage of the Energy Policy Act of 2005. However, that number remains insignificant considering the 170,000 service stations nationwide. The majority of those service stations are not owned by the major oil companies, but franchised from those same companies, or independent.

BARRIERS TO THE INCREASED USE OF RENEWABLE FUEL USE

The greatest challenge the ethanol industry faces to increasing E-85 refueling pumps nationwide remains the resistance from the major oil companies to allow service stations to sell E-85. In 1980, the U.S. Congress amended the Clayton Act through enactment of the Gasohol Competition Act, to make it unlawful for any person "to impose any condition [or] restriction . . . that . . . unreasonably discriminates against or unreasonably limits the sale, resale, or transfer of gasohol or other synthetic motor fuel of equivalent usability . . . ." Congress decided to take this action when several major suppliers refused to permit their pumps and tanks to be used for the sale of gasohol, threatening to terminate their franchisees' contracts if they did so. The Senate Report language on the legislation that became the Gasohol Competition Act noted that the statute was intended "to remove any potential obstacles that may be raised by the major oil companies to dealers who desire to market gasohol and other synthetic fuels . . . ."

The Gasohol Competition Act put the days of discrimination against and unreasonable limitations on the sale of gasohol behind us; however, in recent years the efforts of many independent retailers to begin to sell E-85 at their stations have been thwarted by the major suppliers. Since E-85 has certainly reached the same level of quality and acceptability as gasohol had in 1980, such actions are plainly illegal under the Gasohol Competition Act, and yet the interference still occurs.

Oil companies today do not generally sell E-85, so they lose a sale when a driver pulls into a service station bearing their name and purchases E-85 instead of the gasoline the oil companies supply to the service station. It is not in their best interest financially, then, to permit E-85 to be sold at these service stations. ConocoPhillips, in a letter (attached) to Senators Tom Harkin and Richard Lugar on February 14, 2006, plainly stated that E-85 "is not currently sold as a ConocoPhillips Branded product," and one of the key reasons is that "E-85 fuel predominately originates and is manufactured by other producers."

[The letter from ConocoPhillips, as referenced above, is not attached.]

If an oil company, however, were to grant an exemption and allow a franchise service station to buy E-85 from an outside supplier, the service station would then be required to follow restrictive rules the oil companies say are in place to protect customers, as well as their brand. It is not unusual to find clauses in oil company contracts with franchisees that require service stations to dispense E-85 from its own unit, and not part of the existing multi-hose dispenser, necessitating service station owners to install new pumps and tanks at their own expense. It is common practice for oil companies to disallow the sale of E-85 on the primary island—under its canopy—and franchisees must therefore find another location on the property to install a new pump. And then, even if the franchisee is able to jump through all of those hoops, it is likely that the oil companies would prohibit the service station from advertising the availability and price of E-85 on their primary signs listing fuel prices.

The reason this interference continues is simple—enforcement of the Gasohol Competition Act relies primarily on the willingness of marketers to face economic ruin. To bring a private action under the Gasohol Competition Act, the plaintiff must have suffered "antitrust injuries," according the United States Court of Appeals for the Seventh Circuit. For a marketer, that would mean that he could not sue unless his contract with the supplier has been terminated. Short of that, the marketer would be unable to demonstrate any antitrust injuries, and so there would be no remedy available for the wrongful conduct of the supplier. Faced with the possibility of termination of the contract with the supplier, and consequent economic ruin, the marketer will simply have to capitulate to the demands of the supplier to not sell E-85. An ethanol producer could bring an action against suppliers who interfere with the sale of E-85, but under current market conditions the producers are selling all the ethanol they can make already, and so they too would be unable to show any antitrust injuries. Further, any such litigation would be extremely costly, further discouraging the use of the Gasohol Competition Act.

In the faces of these barriers, many retailers are taking action to bring fuel choice to their customers. Recently, regional chains like Kroger and Meijer Inc. have taken the initiative to install E-85 pumps at their stores in Ohio and Texas, and Michigan and Indiana, respectively. National chains, like Wal-Mart, have also shown an interest in installing E-85 pumps at their 388 company-owned stations across the country. Even state legislatures are taking steps to end the restrictive policies put in place by the oil companies. In 2006, New York State enacted legislation that barred oil companies from requiring stations to buy all of their fuel from the companies, and the first E-85 pump is now in operation in Albany.

The goal of the Gasohol Competition Act was to integrate the sale of synthetic fuels into the existing distribution system, and Congress observed that the longer it takes to do so, "the longer we will be subjected to the vagaries of the international petroleum markets and the harshness of cartel price actions." That was true then, and it is just as true now. The need for opening up the gasoline supply infrastructure to E-85, to allow the millions of flex-fuel cars that the auto companies have manufactured over the last several years and will manufacture in increased numbers over the years to come, is critical to the achievement of the our national goal of reducing our dependence on imported oil. It is also critical to reducing our emissions of greenhouse gases, through the increased use of biofuels, like ethanol.

CONCLUSION

The RFA urges this Congress to consider augmenting the existing enforcement mechanisms under the Gasohol Competition Act through the creation of a regulatory enforcement regime. Assigning responsibility to an appropriate regulatory

agency to ensure that marketers eager to give their customers the option of using home grown and American made fuels in place of imported oil have the realistic opportunity to do so would make a major contribution to opening up the market for E-85, and to helping alleviate our Nation's addition to oil. The continued commitment of the 110th Congress and this Committee to further expand the rapidly growing domestic biofuels industry will contribute to ensuring America's future energy security. The RFA looks forward to working with you on these important issues.

Thank you.

PREPARED STATEMENT OF RED CAVANEY, PRESIDENT AND CEO, API

I am Red Cavaney, President and CEO of API, which is the national trade association of the U.S. oil and natural gas industry. API represents nearly 400 companies involved in all aspects of the oil and natural gas industry, including exploration and production, refining, marketing and transportation, as well as the service companies that support our industry. We welcome this opportunity to present our industry's views on mergers and acquisitions, gasoline prices, and related issues to the Joint Economic Committee.

INDUSTRY MERGERS ARE NOT A CAUSE OF HIGHER GASOLINE PRICES

Industry mergers have not caused today's higher gasoline prices. In fact, mergers contribute to production efficiencies that benefit consumers. As with all industries, mergers have occurred only after careful Federal Trade Commission (FTC) scrutiny to ensure the competitiveness of markets. The FTC reviews all proposed mergers and acquisitions in the oil and natural gas industry. It has required divestitures, or challenged mergers in the industry, at lower levels of concentration than in any other industry and has stated that "despite some increases over time, concentration for most levels of the petroleum industry has remained low to moderate."

Those who allege that mergers cause gasoline price increases fail to recognize that there is no shortage of competitors today in the industry, and market power is not heavily concentrated. The eight largest refiners in the U.S. account for 66 percent of the market, a level of concentration that is exceeded by 15 other consumer product industries. In fact, in eight other major industries, the top eight companies, on average, account for 85 percent or more of their respective markets, according to U.S. Department of Commerce 2003–2006 data.

There are 55 refining companies, 142 operating refineries, and approximately 165,000 motor fuel outlets. In the case of the latter, all but a small percentage are owned and operated by small businessmen and women, not refiners. According to the FTC, the share of U.S. refining capacity owned by independent refiners with no production/exploration operations rose from 8 percent in 1990 to over 25 percent in 2006.

While a 2003 GAO report alleged that mergers affected prices by less than one half of 1 cent per gallon at the wholesale level, the FTC dismissed the report as "fundamentally flawed" and full of "major methodological mistakes that make its quantitative analyses wholly unreliable." Beyond this suspect GAO report, we are unaware of anything in the professional literature tying higher prices to mergers. (See attachment to this statement for a detailed analysis of the 2003 GAO report.)

In part, as a result of the mergers, the industry has become more efficient, which has reduced costs to consumers, with gasoline prices dropping to all-time record lows in the late 1990s. Sharp increases in crude oil prices and costly investments made to reduce emissions have masked this benefit in later years.

Attached to this statement is a time chronology showing that all significant oil and natural gas industry mergers occurred before 2001.

Industry challenges, economic pressures, and changing regulatory requirements were some of the factors behind the oil company mergers of the 1990s.

During the 1990s, the oil and natural gas industry earned relatively poor rates of return on their investments. This was especially true in the refining sector, which was hard hit with the need for new investment in technology and equipment to produce cleaner-burning fuels to meet clean air standards set by the Clean Air Act of 1990. This law had a major impact on the operation of refineries in the United States and the return on investment realized at the time. (See Figures 1–3.)

Technological advancements have helped refineries produce more fuel from existing facilities than they did in the past. In addition, the elimination of subsidies under government regulations after 1981 led to the closure of many smaller, less-efficient refineries throughout the 1980s and 1990s. Those refineries left standing did a better job of bringing product to market for less. The massive restructuring

that occurred in the 1990s cut costs, increased economies of scale and improved utilization rates.

The consolidation in the refining sector has increased measurements of industry concentration, but according to the FTC, "despite some increases over time, concentration for most levels of the petroleum industry has remained low to moderate." (August 2004, p.3) Even though concentration in the refining sector has increased since 1997, the concentration ratio is still less than it is for many other industries.

REFINERS ARE NOT WITHHOLDING SUPPLIES

Recent gasoline price increases reflect the forces of supply and demand. The same is true for past price increases that have been thoroughly investigated by government agencies who would have taken the industry to task, if illegal or improper activity had been discovered. Over the past couple of decades, there have been more than 30 state and Federal investigations of the industry. Invariably, these investigations have explained price spikes by supply/demand conditions that had nothing to do with manipulation of supplies or illegal agreements among companies.

Here, for example, is what the FTC said in May 2006 as a result of an investigation:[1]

> . . . the best evidence available through our investigation indicated that companies operated their refineries at full sustainable utilization rates. Companies scheduled maintenance downtime in periods when demand was lowest in order to minimize the costs they incur in lost production. Internal company documents suggested that refinery downtime is costly, particularly when demand and prices are high. Companies track these costs, and their documents reflected efforts to minimize unplanned downtime resulting from weather or other unforeseen calamities. Our investigation uncovered no evidence indicating that refiners make product output decisions to affect the market price of gasoline. Instead, the evidence indicated that refiners responded to market prices by trying to produce as much higher-valued products as possible, taking into account crude oil costs and other physical characteristics. The evidence collected in this investigation indicated that firms behave competitively.

Moreover, the current FTC Chairman, Deborah Platt Majoras, has said of the oil and natural gas industry: "No other industry's performance is more deeply felt, and no other industry is more carefully scrutinized by the FTC."

Those who persist in suspecting, despite the massive evidence to the contrary, that the industry is holding back supplies often cite the lack of new refinery construction. While it is true that no new refinery has been built since the 1970s, companies have steadily increased the capacity of existing refineries and continue to do so. Over the past 10 years, existing refineries have expanded capacity equivalent to building 10 new refineries and, based on public announcements of refinery expansions, are projected to add capacity equivalent to an additional eight new refineries through 2011.

CAUSES OF HIGHER GASOLINE PRICES

We recognize that today's higher prices are a burden to consumers and a threat to the economy. The cause of the higher prices is an imbalance between supply and demand, worsened by policy shortcomings.

U.S. oil companies are working extremely hard to provide Americans with the fuels they need and demand. The industry has been making record amounts of gasoline, about 8.75 million barrels per day to date this year (see Figure 4). However, because of maintenance at European refineries, an extended port-workers' strike in France, refinery problems in Venezuela and refining disruptions in Nigeria, less imported gasoline has been available to contribute to the traditional seasonal build in inventories. Typically, imports make up about 12 percent of gasoline supply. As a result, though gasoline production has been at record highs, total U.S. gasoline supplies have struggled to keep up with demand, which has been extremely strong. So far in 2007, total U.S. gasoline demand has set a record, averaging over 9 million barrels a day.

As noted by the FTC in their August 2004 report on oil industry mergers, "The world price of crude oil is the most important factor in the price of gasoline. Over the last 20 years, changes in crude oil prices have explained 85 percent of the changes in the price of gasoline in the U.S." (p.1)

[1] "Investigation of Gasoline Price Manipulation and Post-Katrina Gasoline Price Increases," U.S. Federal Trade Commission, May 22, 2006.

More than half the cost of gasoline is attributable to the cost of crude oil. Crude oil prices have fluctuated significantly, driven by lingering geopolitical tensions, OPEC's continuing production controls, and worldwide demand growth. Oil companies do not set the price of crude. It is bought and sold in international markets, with the price for a barrel of crude reflecting the market conditions at the time of purchase. It is well recognized that the market for crude oil has tightened. World oil demand reached unprecedented levels in 2006 and continues to grow due to strong economic growth, particularly in China and the United States. World oil spare production capacity—crude that can be brought online quickly during a supply emergency or during surges in demand—is near its lowest level in 30 years.

No one company or group of companies has control over global crude oil prices. In terms of market power, investor-owned oil companies own only 6 percent of the world's proven crude oil reserves. Almost 80 percent is exclusively controlled by the foreign government-owned national oil companies.

In addition, the annual switchover to "summer blend" gasoline required by EPA has occurred, and this warm-weather gasoline is more expensive to produce. The switchover lowers yields per barrel of oil and requires a large supply drawdown to meet regulations, which reduces inventories.

Finally, despite record U.S. gasoline production, regularly scheduled refinery maintenance and unexpected problems relating to extreme weather, external power outages and other incidents have prevented the industry from making even more gasoline. Refinery maintenance is a normal procedure, though it has been delayed, in some cases, by damage suffered from the catastrophic hurricanes in 2005. While maintenance curtails refining operations temporarily, it helps ensure the long-term viability of the refinery and protects the health and safety of workers.

HIGHER GASOLINE PRICES CANNOT BE VIEWED IN ISOLATION

Rising gasoline prices are a burden on U.S. consumers—but they cannot be viewed in isolation from the overall U.S. energy situation. If we are to avoid price volatility and tight supplies and ensure that the fuel needs of U.S. consumers are met, we must focus on three areas: efficiency, technology, and diversity.

- First, America's energy companies must continue to improve our own energy efficiency, and encourage energy efficiency in other industries and by the American people;
- Second, we must increase the use of advanced energy technologies that allow us to develop our resources cleanly and responsibly; and
- Third, we must increase the diversity of our oil and natural gas supplies, both here at home and from around the world.

One of the first steps toward increasing our energy security is making the most of what we already have. We all need to become more energy efficient. API member companies pledged to improve aggregate energy efficiency at refineries between 2002 and 2012, in response to the President's Climate Action Challenge, and we are on track to meeting that goal.

Our efforts go beyond just our operations. Last summer, our refineries began to deliver an impressive, new fuel that significantly reduces emissions and allows the increased use of energy-efficient diesel engines. It's called Ultra Low Sulfur Diesel and it's the cleanest diesel fuel supplied in the world today—with a 97 percent reduction in sulfur content.

In addition to energy efficiency, our industry has researched and developed breakthrough technologies to help us find, develop and deliver energy. For example, we now have 4-Dimensional Imaging, which helps us better locate oil underground. Imagine a geoscientist watching multiple data screens of 3D visuals revealing exactly what exists below the surface—like stepping into the earth and seeing specific rock strata: sandstone, limestone, and salt domes, along with oil. Time being the fourth dimension, we can take snapshots of those underground reservoirs over time and overlay the pictures to see in which direction the oil is moving. That's how we find oil today. It's non-invasive and more environmentally compatible than ever.

We also use what's called multi-directional drilling. We can drill down at one site, then turn left or right and drill for more than five miles, and then go further down or back up—whatever is needed to encounter the oil. Advanced techniques like this have dramatically reduced our environmental footprint. Today it's possible to develop nearly 80 square miles of area below the surface from a single two-acre site on the surface. These technological innovations are making a difference.

Just as we need to diversify the kinds of energy we use, we also need to acknowledge that a diversity of sources is the best way to ensure energy security and meet growing demand. Our country should be doing all it can to increase the amount of energy produced in the United States. We should encourage the development of al-

ternative and renewable sources of energy, which are growing at a rate faster than traditional sources.

However, it's important to place U.S. energy sources in the proper perspective. According to the Energy Information Administration (EIA), renewable energy presently accounts for about 6 percent of our Nation's energy use. And, this EIA figure is projected to climb to 7 percent over the next 25 years. Concurrently, the Department of Energy estimates that oil, natural gas, and coal will continue to meet approximately 86 percent of U.S. energy demand for at least the next two decades.

We have abundant volumes of oil and natural gas resources beneath Federal lands and coastal waters. According to Federal Government estimates, there is enough oil in these areas to power more than 60 million cars for 60 years and heat more than 25 million homes for 60 years. And there is enough natural gas to heat an additional 160 million homes for another 60 years. However, more than 85 percent of coastal waters in the lower-48 states that are up to 200 miles from our shores are off-limits to oil and natural gas exploration and 75 percent of the most prospective, technically available U.S. onshore areas are off-limits or accessible only with significant restrictions.

If our Nation is to continue to have access to secure, affordable energy from today's global marketplace, U.S. oil and natural gas companies must be able to successfully compete.

• We need companies that have the scale to manage a large and diverse portfolio of global projects and to compete with large foreign and government-owned companies.

• Our companies also must have the financial strength to undertake the risk involved to make the enormous investments required to develop future energy supplies.

• In addition, we need companies committed to developing and utilizing leading-edge technologies to enable them to bring harder-to-reach resources to market.

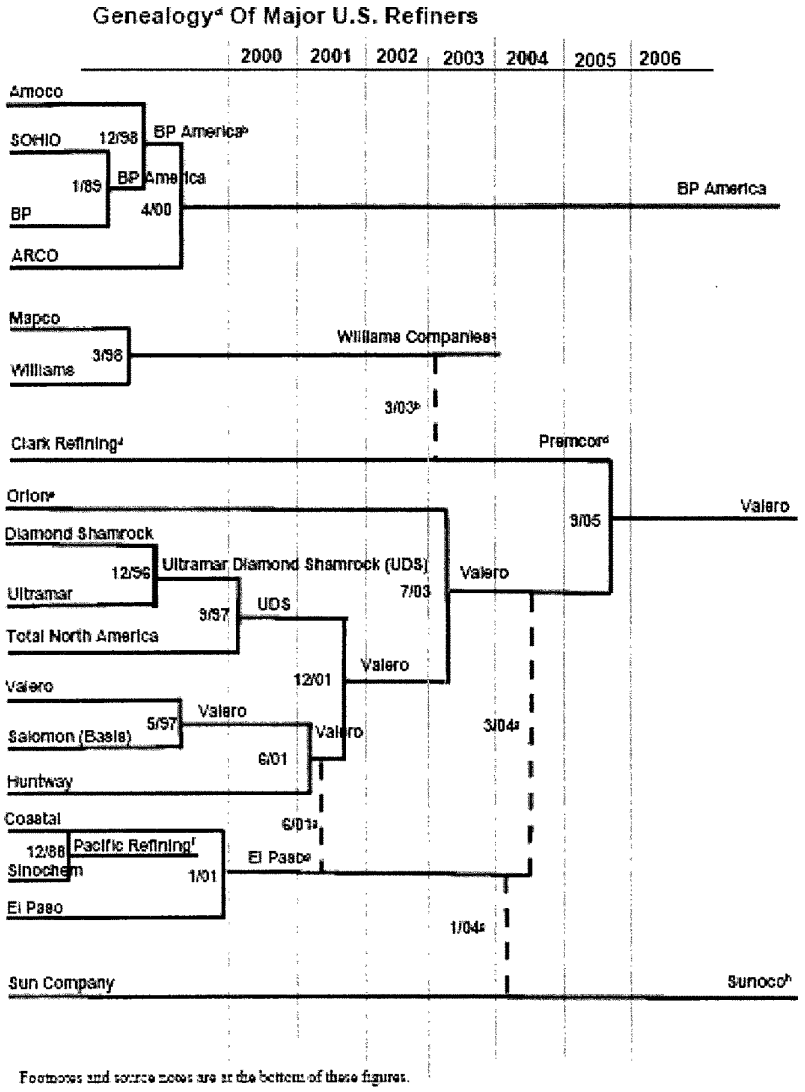
• Furthermore, competitive companies must have the financial resources to make significant investments over time in research and development of new technologies to meet ever-changing environmental expectations.

CONCLUSION

Oil company mergers and acquisitions have not caused higher gasoline prices. We need to focus on the factors shaping higher prices and not be misled by claims that have been repeatedly disproved, have no basis in fact, and mask root causes.

The U.S. oil and natural gas industry is doing everything it can to produce the fuel supply needed to meet consumer energy needs. However, the industry cannot meet U.S. energy challenges alone. Our Nation's energy policy needs to focus on increasing supplies; encouraging energy efficiency in all sectors of the economy, including transportation; and promoting responsible development of alternative and non-conventional sources of energy.

APPENDIX 1: GENEALOGY OF MAJOR U.S. OIL AND GAS PRODUCERS AND REFINERS



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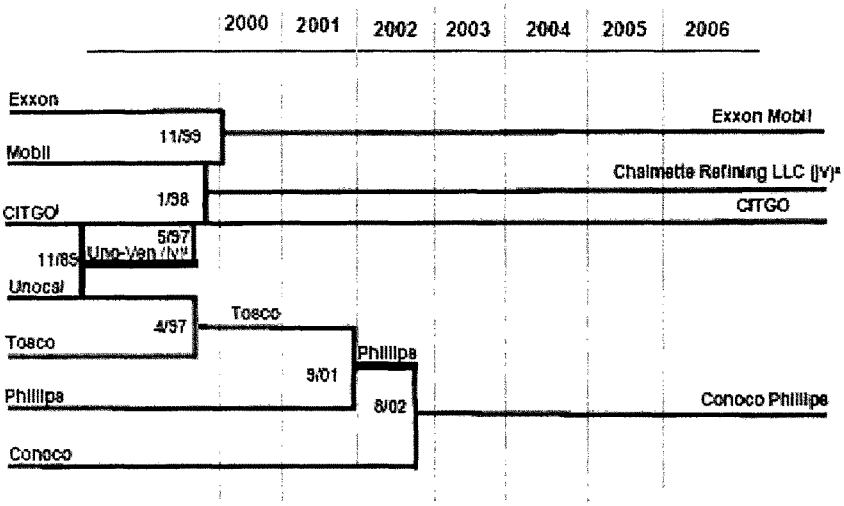
Genealogy Of Major U.S. Refiners (continued)



[a]This presentation includes the sale of individual refineries if the sale, in hindsight, is part of a strategy of the seller to exit the U.S. refining industry and the sale is to a publicly traded company.
[b]The company resulting from BP's merger with Amoco was called BP Amoco initially (including at the time of the acquisition of ARCO), but subsequently reverted to BP America.
[c]Williams Companies sold its Memphis, Tennessee 180,000-barrels-per-day refinery to Premcor in March 2003. In April 2004, the balance of its refinery capacity, a 210,000-barrels-per-day North Pole, Alaska refinery was sold to Flint Hills Resources, a subsidiary of Koch Industries, a non-publicly traded refiner.
[d]Clark Refining divested its marketing operations (including the "Clark" brandname) and renamed itself Premcor in July 1998.
[e]Although the transaction between Valero and Orion was not presented as a merger in press releases, but only as Valero's purchase of Orion's solitary refinery, the closing of the transaction marks Orion's exit from the U.S. refining industry.
[f]Pacific Refining was a joint venture of Coastal and Sinochem, a Chinese petrochemical company. The joint venture included the 50,000-barrels-per-day Hercules, California refinery and ceased operation (and the refinery shut-down) in September 1997.
[g]El Paso Corporation sold its 16,700-barrels-per-day Chickasaw, Alabama refinery to Trigeant EP Ltd. a subsidiary of Trigeant, a company that is not publicly traded, in August 2003. El Paso's remaining refineries, all of which were acquired when it merged with Coastal Corporation in November 1998, were sold to publicly traded companies at the times indicated, the last of which marked El Paso's exit from the U.S. refining industry.
[h]On November 6, 1998, following its divestitures of its worldwide oil and gas production properties, Sun Oil renamed itself Sunoco.
[i]Marathon and Ashland formed a joint venture called Marathon Ashland Petroleum that was primarily owned by Marathon Oil (62 percent), which was a wholly owned affiliate of USX Corporation at the time the joint venture was created. Ashland sold its 38 percent ownership of the joint venture to Marathon on June 30, 2005.
[j]For the purpose of simplification, the partner of all U.S.-based joint ventures between the state oil company of Venezuela, PdVSA, and a U.S. company is reported as CITGO, regardless as to which U.S. affiliate of PdVSA actually is the partner.
[k]Lyondell held 58.75 percent of the joint venture and bought out CITGO's 41.25 percent ownership in August 2006.
[l]Hovensa is a 50/50 joint venture that includes Hess' U.S. Virgin Islands 495,000 barrels per day refinery. It is included here because of the relative size of the refinery and its proximity to U.S. markets.

Genealogy Of Major U.S. Refiners

	2000	2001	2002	2003	2004	2005	2006

*Star Enterprise was a 50/50 joint venture between the U.S. affiliate of Saudi Aramco, the state oil company of Sa Arabia and Texaco. The venture sold motor gasoline and petroleum products under the Texaco brand name in the southeastern and Midwestern U.S.

*Motiva Enterprises was a joint venture between Star Enterprise and Shell Oil that sold motor gasoline and petrole products under both the Shell and Texaco brand names. Motiva is now a 50/50 joint venture between Saudi Refin Shell Oil after Texaco sold its ownership to its partners as a precondition of the U.S. Federal Trade Commission approving the merger of Chevron and Texaco.

*Equilon Enterprises was a 56/44 joint venture between Shell Oil and Texaco, respectively, that operated in the we United States and sold motor gasoline and petroleum products under both the Shell and Texaco brandnames. As a precondition of the U.S. Federal Trade Commission's approval of the merger of Chevron and Texaco, Texaco sold ownership in Equilon to Shell Oil, which then consolidated Equilon as of March 2002

*Deer Park Refining is a 50/50 joint venture. The firm in which this transaction is presented may suggest that PEM no longer exists, this is not true. However, PEMEX has no other existence in the U.S. refining/marketing industry outside of this joint venture

*Chevron's merger with Texaco is largely ignored in this presentation because Texaco was compelled by the U.S. Federal Trade Commission (FTC) to divest all its U.S. refining and marketing assets (i.e., its ownership in the Equi and Motiva joint ventures) before the FTC would approve the merger. Consequently, the merger had no material e on Chevron's U.S. refining and marketing assets. ChevronTexaco, the company resulting from the October 9, 2001 merger of Chevron and Texaco renamed itself Chevron on May 9, 2003.

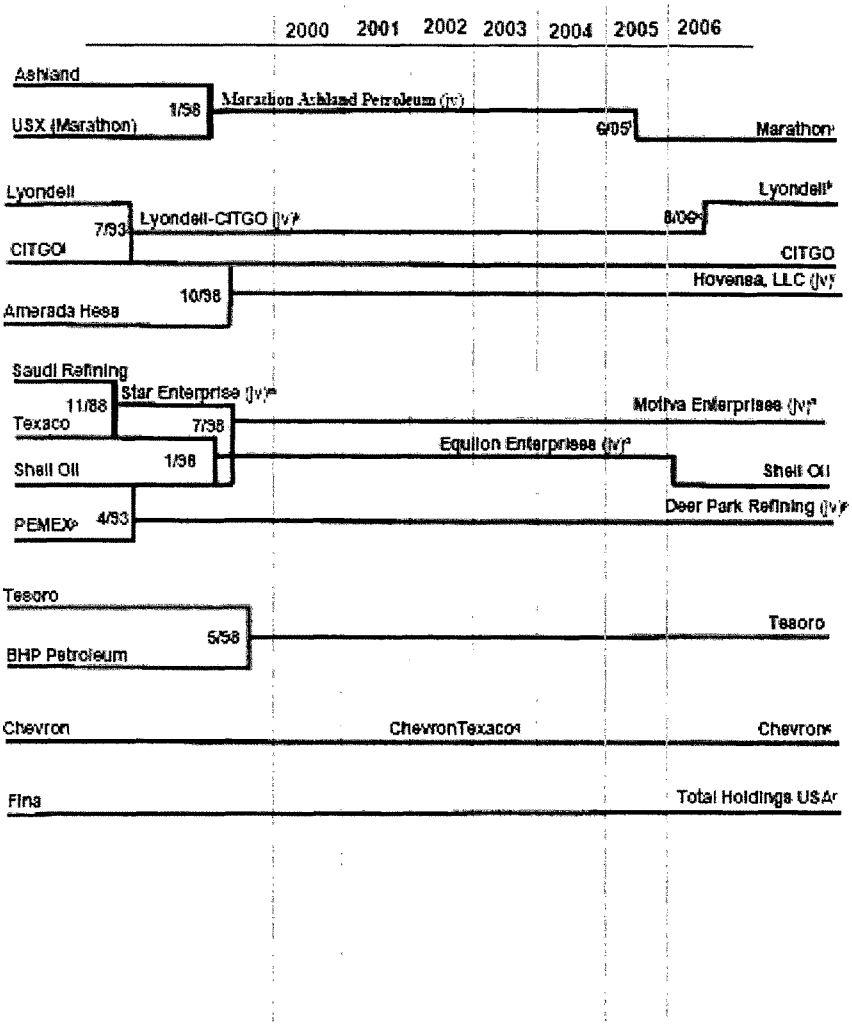
*Although no merger or acquisition occurred between Fina's U.S. assets and other companies, Fina's parent, the Be company Petrofina, was acquired by the French company Total on July 9, 1999 (at which time Total owned more t percent of Fina), which created TotalFina. TotalFina later acquired the French company Elf Aquitaine on Septemb 1999 (at which time the boards of both TotalFina and Elf voted to accept the merger), creating TotalFinaElf, which subsequently renamed itself Total at its May 6, 2003 general meeting. These numerous transactions resulted in sev changes in the name of the U.S. affiliate, the most recent of which is Total Holdings USA.

*Chalmette became a 50/50 joint venture between CITGO and Exxon Mobil following Exxon and Mobil's merger.

*Uno-Ven was a 50/50 joint venture that only included Unocal's Lemont, Illinois refinery. The joint venture was dissolved in May 1997 when Unocal sold its ownership to CITGO. The balance of Unocal's refineries had already acquired by Tesco in April 1997.

Sources: Energy Information Administration, *Petroleum Supply Annual* [1997-2005], Volume 1, DOE/EIA-0340 (Washington, DC: June), Tables 40, 48, and 49; and company news releases and other public disclosures.

Genealogy Of Major U.S. Refiners (continued)



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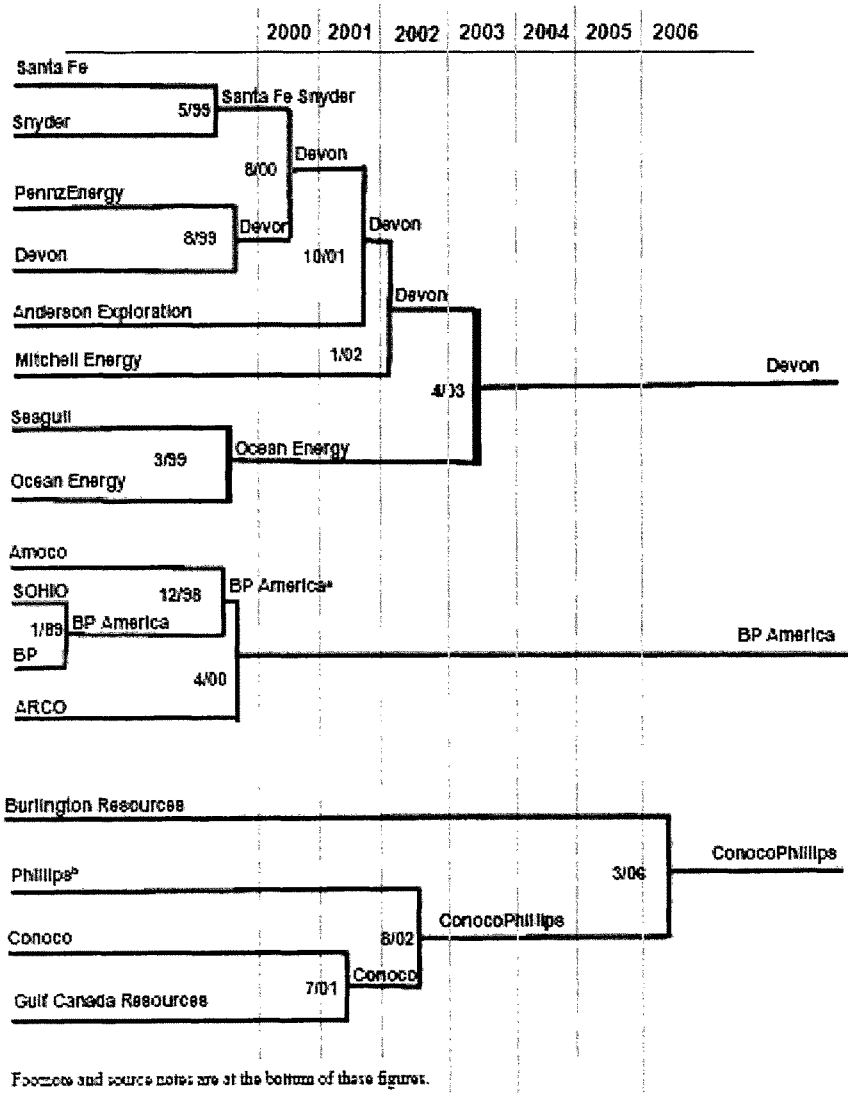
Genealogy of Major U.S. Oil and Gas Producers



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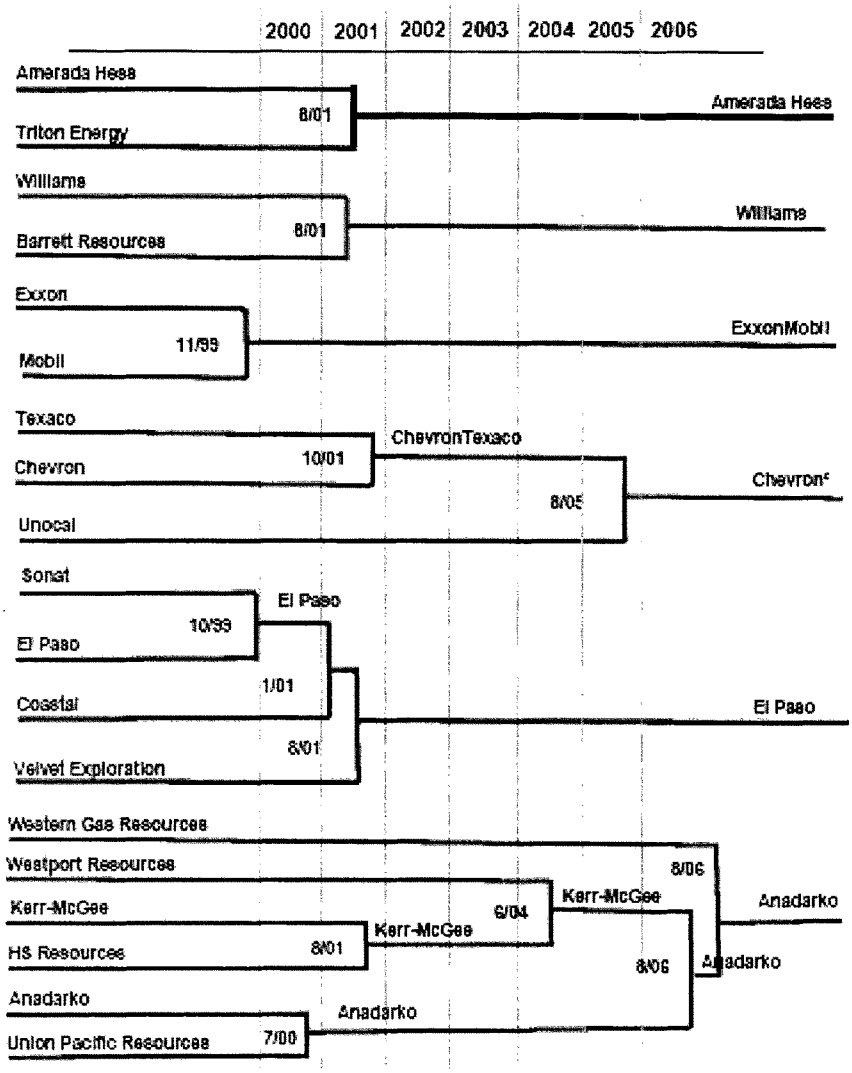
Genealogy of Major U.S. Oil and Gas Producers (continued)



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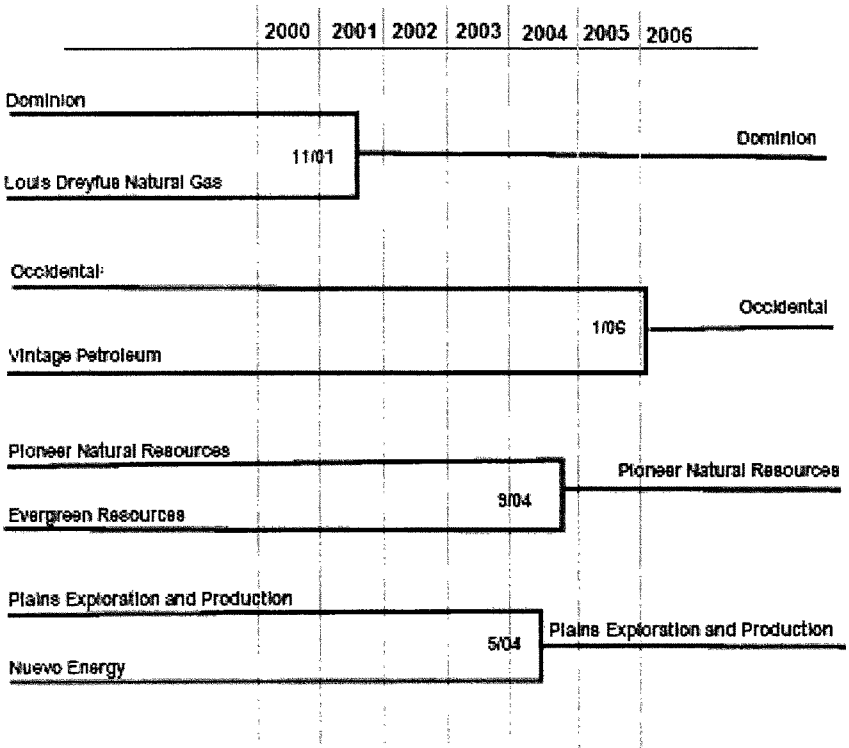
Genealogy of Major U.S. Oil and Gas Producers (continued)



[1]The company resulting from BP's merger with Amoco was called BP Amoco initially (including at the time of the acquisition of ARCO), but subsequently reverted to BP America.
[2]Phillips acquired control of ARCO's Alaska assets from BP America in April 2000 as part of the consent agreement that was part of the U.S. Federal Trade Commission's approval of BP Amoco's acquisition of ARCO in April 2000.
[3]ChevronTexaco renamed itself Chevron on May 9, 2005.
[5]Occidental acquired control of Altura Energy, a limited partnership owned by BP Amoco and Royal Dutch/Shell (through Shell Oil) at approximately the same time as it acquired ARCO Long Beach. Altura Energy was the largest oil producer in the state of Texas at the time of the transaction. See Energy Information Administration, "Aspects of Occidental Petroleum's Purchase of Altura Energy and ARCO Long Beach" (April 18, 2000). This is available on the Internet at http://www.eia.doe.gov/emeu/finance/mergers/oxyindex.html (as of November 28, 2006).
Sources: Company news releases and other public disclosures.

APPENDIX 2: U.S. OIL AND NATURAL GAS INDUSTRY EARNINGS AND INVESTMENTS

There is considerable misunderstanding about U.S. oil and natural gas industry earnings. Companies' earnings are typically in line with other industries and often lower. For 2006, the industry's annual earnings averaged 9.5 cents on each dollar of sales. The average for all manufacturing industries was 8.2 cents or about a penny lower. From 2002 to 2006, average earnings for the industry stood at approximately 7.4 cents on each dollar of sales—a penny above the 5-year average for all U.S. manufacturing industries.

The oil and natural gas industry is one of the world's largest industries. Its revenues are large, but so are its costs of providing consumers with the energy they need. Among those are the cost of finding and producing oil and natural gas and the costs of refining, distributing and marketing it. These costs remain huge, regardless of whether earnings are high or low—as was the case throughout most of the 1990s and during other industry "bust" periods. It is only in recent years that the return on investment (net income/net investment in place) for the industry has matched or exceeded the returns for the S&P industrials. Over the 10-year period 1996–2005, for example, the return on investment for the refining sector was 10 percent, or about 4.7 percent less than the returns realized by the S&P Industrials. Over the same period the returns for the more profitable upstream oil and gas production sector averaged 13.5 percent. In 2005, the return for all three were very close with the S&P Industrials realizing 21 percent, and refining and marketing 23.5 percent and oil and gas production 22.5 percent. (See Figures 1–3.)

It should not be forgotten that the energy Americans consume today is brought to us by investments made years or even decades ago. Today's oil and natural gas industry earnings are invested in new technology, new production, and environmental and product quality improvements to meet tomorrow's energy needs. Between 1992 and 2006, the industry invested more than $1.25 trillion in a range of long-term energy initiatives: from new exploration and expanding production and refining capacity to applying industry leading technology. In fact, over this period, our cumulative capital and exploration expenditures exceeded our cumulative earnings of $900 billion. New investment in 2006 by leading U.S. oil companies reached more than $174 billion, a 29 percent increase from 2005.

Furthermore, the industry's future investments are not focused solely on oil and natural gas projects. For example, one oil company is among the world's largest producers of photovoltaic solar cells; another oil company is the world's largest developer of geothermal energy; and the oil and gas industry is the largest producer and user of hydrogen. Over the period from 2000 to 2005 in North America alone, the industry invested $12 billion in renewable, alternative and advanced non-hydrocarbon technologies. In fact, when you add up all of the various types of emerging energy technologies, our industry, over the 5 years, has invested almost $100 billion—more than two and half times as much as the Federal Government and all other U.S. companies combined.

It also requires billions more dollars to maintain the delivery system necessary to ensure a reliable supply of energy and to make sure it gets where it needs to go: to industry customers. According to the Energy Information Administration (EIA), U.S. consumers will need 28 percent more oil and 19 percent more natural gas in 2030 than in 2005. The industry is committed to making the reinvestments that are critical to ensuring our Nation has a stable and reliable supply of energy today and tomorrow.

It is also important to understand that those benefiting from healthy oil and natural gas industry earnings include numerous private and government pension plans, including 401K plans, as well as many millions of individual American investors. While shares are owned by individual investors, firms, and mutual funds, pension plans own 41 percent of oil and natural gas company stock. To protect the interest of their shareholders and help meet future energy demand, companies are investing heavily in finding and producing new supplies.

APPENDIX 3: API ANALYSIS OF THE 2003 GAO REPORT

GAO, in 2003, was asked to examine the price effect of the wave of mergers that occurred in the U.S. oil and natural gas industry in the 1990s. It found that "increased market concentration generally led to higher whole gasoline prices in the U.S. from the mid-1990s through 2000."

GAO's results are measured to within fractions of a cent. It found, for example, that wholesale prices for "conventional gasoline increased by less than one-half cent per gallon, on average from 1994 through 2000. The increases were larger in the West than in the East—the increases were between one-half cent and 1 cent per

gallon in the West, and about one-quarter cent in the East (for branded gasoline only) on average." (p.11). Given the number of mergers GAO attempted to analyze at once, and the limitations of the data available to it, as well as the approach it used in its analysis, there is simply no way it could trace price effects with sufficient credibility.

The FTC, in a statement issued by Chair Timothy J. Muris shortly after its release, had this to say about the GAO report:

> In 30 years as an antitrust enforcer, academic, and consultant on antitrust issues, I have rarely seen a report so fundamentally flawed as the GAO study of several oil mergers that the Federal Trade Commission investigated under my predecessor, Robert Pitofsky. As the Commission unanimously said in its August 2003 letter to the GAO, this report has major methodological mistakes that make its quantitative analyses wholly unreliable; relies on critical factual assumptions that are both unstated and unjustified; and presents conclusions that lack any quantitative foundation. As a result, the report does not meet GAO's own high standards of 'accountability, integrity, and reliability' that one expects from its reports and publications.

At the heart of the problem with the GAO's approach was the idea of causality. Essentially, GAO arrived at its conclusion that the mergers that occurred during the 1990s increased the wholesale price of gasoline by measuring the difference between the price a refiner pays for crude oil and the price of the gasoline sold at the refiners rack. It measured this price for a period before the mergers took place and for a period after the mergers, and saw an increase after the merger and concluded the merger was the cause.

This approach is surprisingly simplistic and misguided. It only accounts for a refiner's crude costs; it leaves out all the costs incurred by a refinery, such as capital costs, energy costs, and labor costs. And it does this at a critical juncture in the history of U.S. refineries—just when massive investments in capital expenditures were being made by refineries to comply with the 1990 Clean Air Act. Between 1994 and 2003, for example, the refining sector spent $47 billion on environmental expenditures alone. Furthermore, GAO dismissed the need to examine these other costs because, it said, "these inputs comprise a small share of the inputs used to produce gasoline" since "crude oil costs constitute about 66 percent of total refining costs." (GAO, p.115). When results are measured in pennies and fractions of pennies, as GAO's are, leaving out 34 percent of the equation is a stunning omission.

The GAO also completely ignored the introduction of new types of gasoline. Over the period studied, the first two phases of the Clean Air Act provisions were introduced that required two new more costly blends of reformulated gasoline. Also, over the period several new higher-cost "boutique" blends of gasoline were introduced. GAO ignored this cost increase and simply attributed the rise in price due to the mergers.

In addition, the cost of crude oil will vary as a share of the cost to refiners. It is not always 66 percent. It depends, in large measure, on the price of the crude, as well as capital costs, energy costs and labor costs. This can and does vary quite a bit. There was considerable volatility in the price of crude oil at exactly the time of the mergers. In 1998, for example, the price of crude dropped to just $10 a barrel, from around $20 a barrel. Anytime you have sharp changes in crude prices, you'll see price adjustments being made at varying speeds and heights throughout the wholesale and retail market.

Also, there are a number of different kinds of crude oil and different prices for these crudes. The GAO used the price of West Texas Intermediate crude for its analysis. This is a reference spot market price. A better measure of what U.S. refiners actually pay for their crude oil is to use the refiner's composite acquisition cost. This is a volume-weighted average of the price of domestic crude oil and imported crude oil. Domestic crude oil is more expensive, on average, than the heavier imported crudes. That differential was growing in the 1990s. At the same time, refineries were becoming more technologically sophisticated in order to produce cleaner-burning fuels. The most advanced of them were able to take advantage of the growing difference in price between the lighter crude and the heavier imports and process more of the heavier cheaper imports. If we are measuring changes in the difference between a refiner's rack and the WTI price, we'll get a different answer than if we use one of the other crude prices. The results vary by several cents per gallon. This is important to note because the GAO's results are measured to within fractions of a cent. This kind of precision, given the variables the GAO measured, is simply not credible.

REFINERY UTILIZATION RATES

GAO's interpretation of inventory information and refinery utilization rates is also uninformed. For example, it correlates national refinery utilization rates with city rack prices. GAO does this because it said that regional data was not available. This is inaccurate. The national utilization rate is an inadequate choice for studying local markets. GAO was apparently unaware that weekly regional utilization rates are available for the 12 refining districts from both API and the Energy Information Administration.

Refinery utilization rates are high. Typically, they average over 90 percent of their capacity. For most industries, utilization rates are in the 80 percentile. Refinery utilization rates peaked in the late 1990s because capacity additions and imports took some pressure off the need to run refineries so hard.

Refinery utilization rates will fluctuate widely during the year and in different parts of the country for different reasons. In a typical year, refineries shut down for routine maintenance before they gear up to produce a new slate of products. So, for example, refiners will shut their operations down in the fall in advance of the winter season and will start producing more distillate for heating oil and less gasoline than they will in the spring and summer months when the demand for gasoline is at its peak. This process became increasingly complicated during the 1990s because of the number and variety of new fuel specifications being introduced during that time in response to the Clean Air Act. Different cities, counties, and states adopted different fuel specifications with different implementation dates. This added to the volatility of gasoline prices during that time. It truly complicates the job of discerning merger price impacts from fuel specification impacts.

Even if the GAO had used the refining districts for its analysis, rather than national averages, its analysis would not account for such things as "formulation changes, supply disruptions, refinery outages, and changes in imports" (FTC to GAO, p.178). It is not enough to have a utilization rate and a price and from that infer some relationship. We really need to know the information behind that rate or the correlation is meaningless.

INVENTORIES

Another variable that GAO relied on to explain the availability and price of gasoline at the wholesale level is an inventory ratio, which the GAO defined as "the ratio of gasoline inventories to expected demand" (p.115). GAO apparently intended inventory levels as a proxy for "supply" or the supply curve, but in reality the supply curve includes not just the potential to draw from inventories, but the potential for refineries to produce gasoline and the potential for imports.

The ratio does not account for something as simple as the summer/winter blend difference for gasoline. Summer blends tend to be more costly to produce because evaporation must be reduced, which leads to more costly inputs to keep octane levels up. That doesn't have anything to do with the inventory ratio used by GAO, and strongly suggests there may be a type of seasonal price variation that would not be captured by that variable.

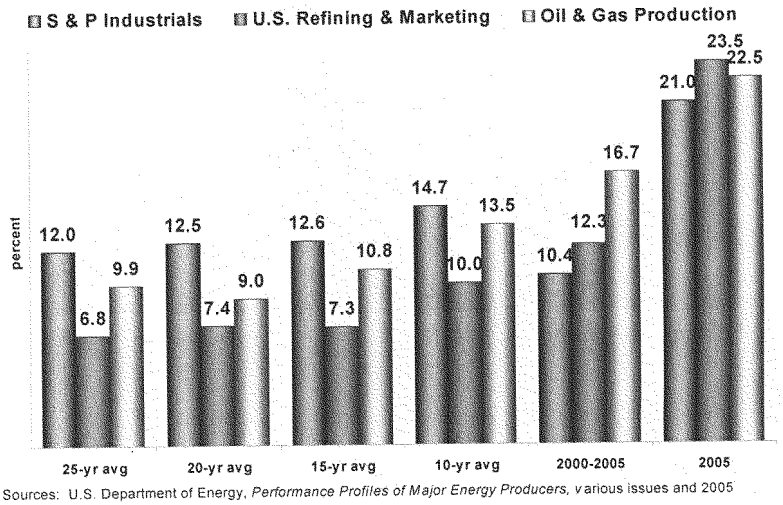
In addition, changes in inventory holding costs can affect inventory levels. For example, when oil prices are high, a refiner might decide to hold a smaller inventory and rely more on producing gasoline when needed. This might be more a reflection of the prices and not have any direct relationship to the tightness or slackness in the gasoline market. Also, there has been a steady decline in privately held inventories for many years, reflecting growing efficiencies of operations and the steady decline in the market share of several products with high seasonal fluctuation (residual fuel for electricity generation and distillate for home heating, for example). In short, GAO's simplistic assumption that "prices will increase if inventories are low relative to demand and decrease if inventories are high relative to demand" (p.115) does not sufficiently capture the reasons for changes in inventories and has the causality of the relationship backward.

GAO SILENT ON RETAIL PRICE EFFECTS OF MERGERS

Finally, we find it surprising that GAO never once mentions the retail price of gasoline in the areas it measured wholesale prices. That would be one of the first things most analysts would check wholesale price results against. GAO's silence on this is telling. No doubt a spot check would show results all over the board.

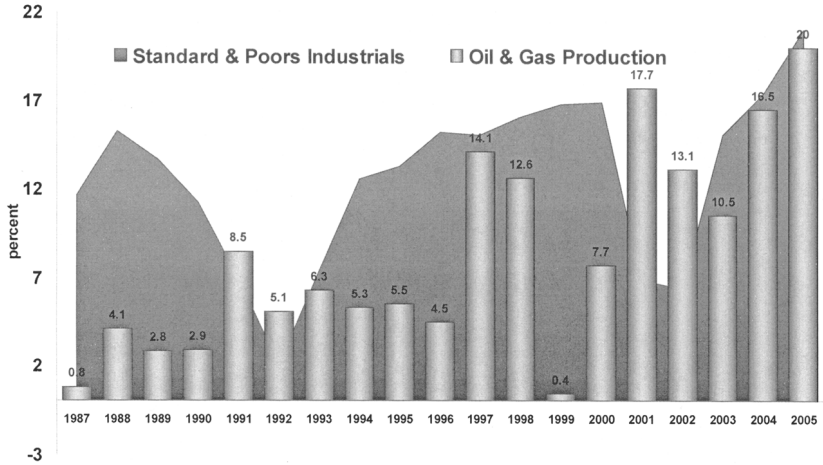
This is a seriously flawed report and ought not be used as the basis for public policy decisions.

Figure 1: Return on Investment (net income/net investment in place



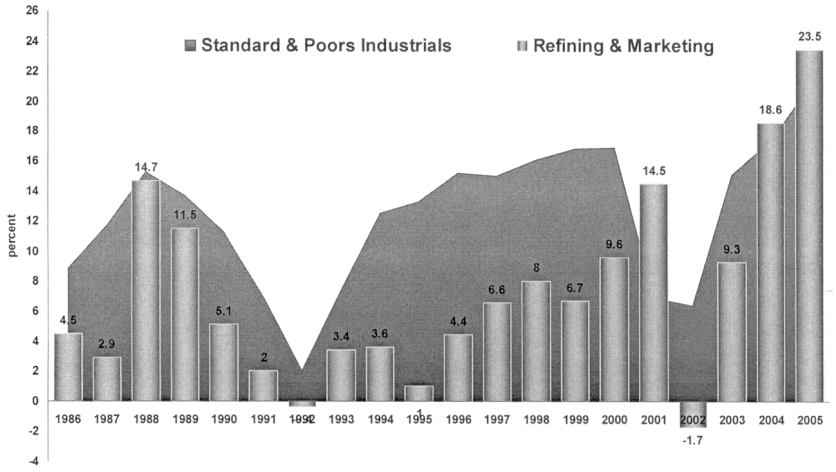
Sources: U.S. Department of Energy, *Performance Profiles of Major Energy Producers*, various issues and 2005
S&P figure compiled by PWC from Compustat data..

Figure 2: Oil and Gas Production v S&P Industrials Return on Investment (net income/net investment in place)



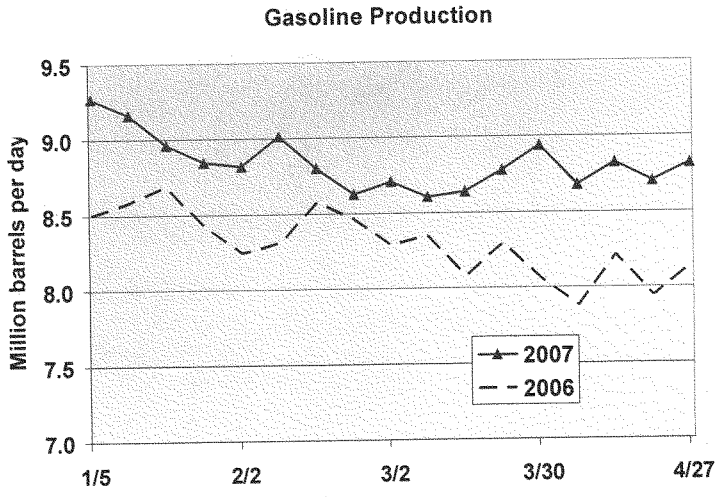
Source: U.S. Department of Energy, *Performance Profiles of Major Energy Producers*.

Figure 3: Refining & Marketing v. S&P Industrials Return on Investment (net income/net investment in place



Source: U.S. Department of Energy, *Performance Profiles of Major Energy Producers.*

Figure 4



PREPARED STATEMENT OF DR. JAMES L. SMITH, CARY M. MAGUIRE CHAIR IN OIL AND GAS MANAGEMENT, DEPARTMENT OF FINANCE, SOUTHERN METHODIST UNIVERSITY

THE ROLE OF OPEC IN THE WORLD OIL MARKET

The Organization of the Petroleum Exporting Countries (OPEC) is an international cartel of oil-producing states that has attempted with varied success to manipulate world oil prices during the past 35 years. OPEC was founded in 1960 by Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela, a group of major oil producing countries who wished to coordinate national petroleum policies and forge a more united front in dealings with the multinational oil companies who were licensed to produce and export petroleum from their lands. Within the next dozen years, eight additional members (Algeria, Ecuador, Gabon, Indonesia, Libya, Nigeria, Qatar, and the United Arab Emirates) joined in, which brought the total membership of OPEC to 13 by 1973. At that time, the combined membership of OPEC accounted for over half of worldwide crude oil production. Two small producers (Gabon and Ecuador) withdrew during the 1990s, and in 2007 Angola joined OPEC, bringing current membership to 12 nations.

As with any cartel, OPEC's ability to hold the price of oil above the competitive level is dependent upon barriers to entry, which in this case hinge upon OPEC's dominant ownership and control of low-cost oil reserves. By accident of nature, some 75 percent of the world's proved reserves of crude oil are located in OPEC nations. Proved reserves constitute that portion of the ultimate resource base that has already been discovered and is commercially producible. Additional reserves can and will be developed through exploration, discovery, and development of new fields, but this process has become increasingly difficult and expensive—even more so outside the OPEC nations than within. Thus, while production of crude oil from non-OPEC sources does expand in response to the higher prices that result when cartel members restrict output, the scope for this is limited and will remain so. Moreover, OPEC's coordinated efforts to manipulate the price of oil are protected from antitrust enforcement and legal intervention by the sovereign rights of its members.

Economists have debated and tested various theories about how OPEC actually goes about exerting its influence on the market, whether through the independent initiatives of individual members, via actions and strategies undertaken by semi-autonomous coalitions working within the larger organization, or through concerted plans embraced and executed by the organization as a whole. Some researchers might question whether OPEC has ever managed to operate successfully in the manner of a classic cartel. Whatever are one's opinions on those matters, there is no question that OPEC members have restricted production in ways that are unrelated to the inherent scarcity of crude oil. Although OPEC's proved oil reserves were steadily rising during 1973–1985, production was cut by nearly half during that 12-year interval, falling from 31 million barrels per day (mbpd) in 1973 to an all-time low of 16 mbpd in 1985. Today, OPEC continues to hold production below the 1973 level, although the proved oil reserves of OPEC members have doubled in volume since then and total worldwide consumption of crude oil has grown by roughly 50 percent. It does appear that OPEC members have been up to something.

EVOLUTION OF OPEC

To better understand OPEC, its history and development can be viewed in three phases. During the first phase (1960–1970), OPEC's primary objective was to win for its members a larger share of the oil profits that private companies generated within their territory. The stated goal of increasing government take from 50 percent to 80 percent of total profits was pursued largely through the imposition of tax and administrative reforms by individual OPEC members, including the introduction of fictional "tax reference prices" that boosted the tax base, and therefore government take, without altering the stated tax rate and without much impact on the market price of oil. During this phase, there was no direct attempt by OPEC to raise the overall level of world oil prices, and perhaps there was not even the realization that such a feat would be possible. In those early years, OPEC was concerned with winning for itself a bigger share of the pie, rather than growing the size of the pie.

The second phase (1970–1982) saw greater reliance on collective deliberations and coordinated actions designed to reverse a long period of decline in world oil prices (and therefore tax revenues) that had set in after World War II. These efforts began with a series of dictated agreements (the so-called Teheran-Tripoli agreements of 1970–71) by which the OPEC members unilaterally raised posted tax reference prices by 21 percent. The members also announced that further increases could and would be imposed as they saw fit under the doctrine of "changing circumstances," one of which was the declining exchange value of the dollar, the currency in which

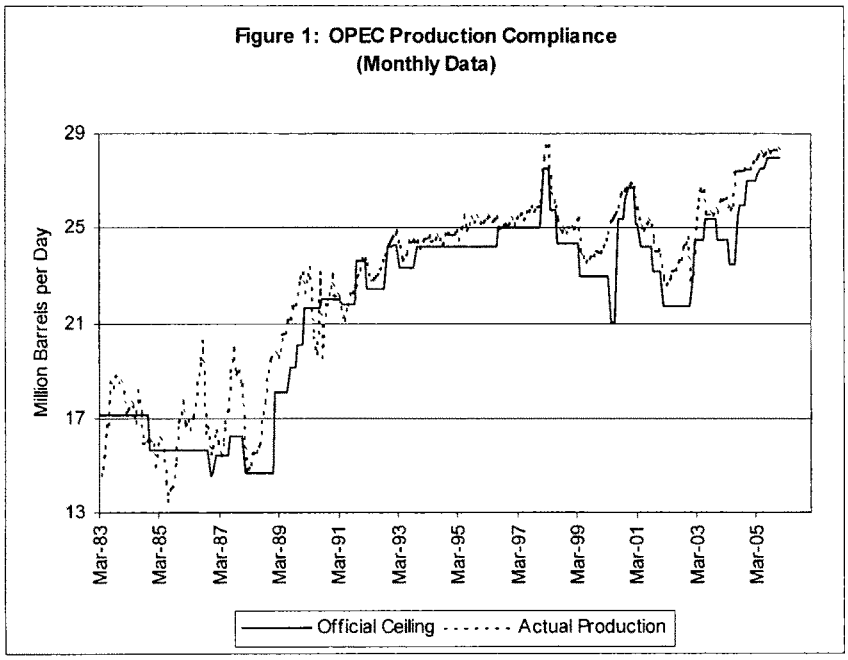
oil prices were denominated. Indeed, it was during a special OPEC conference convened to review these matters that the October 1973 Arab-Israeli war broke out, which prompted the Arab members of OPEC to declare an embargo on sales to Israel's allies (the United States and the Netherlands). Although the embargo did not have much effect on actual deliveries of oil to those countries, and was soon rescinded, this bold move panicked the markets and fueled a speculative demand for oil inventories, which ultimately drove prices in the spot market to unprecedented levels and taught OPEC ministers something about the value of their oil. By 1974, the "official" OPEC price had reached $11.25 per barrel, a startling increase from the $2.18 price level that had been established just 2 years before. By 1975, the posted price was no longer merely a fictional "tax reference" price used by OPEC members to compute their share of company profits. Indeed, the multinational companies were mostly removed from the equation by a wave of nationalizations that began in earnest in 1974, after which OPEC members sold their oil outright to whichever customers were willing to pay the official price. The posted price was successively increased during the 1970s by collective agreement of the OPEC ministers, but the real price of oil actually declined as the decade progressed since the posted price failed to keep pace with accelerating inflation. Such was the state of affairs at the onset of the Iranian Revolution, when the expulsion of foreign oil field service firms and a series of labor strikes in 1978 and 1979 disrupted Iranian output. Disruptions spread to Iraq in 1980 with the outbreak of the Iran-Iraq war. Again the market panicked, and again the OPEC members were taught something about the value of their oil. By October, 1981, the posted price of OPEC oil reached $34 per barrel (which in real terms still represents the all-time high).

A sharp downturn in the oil market led to the third (and current) phase in OPEC's evolution. Already by 1982, individual OPEC members were offering customers large discounts below the "official" OPEC price in order to maintain or even increase their share of what had become a dwindling market. Sluggish OPEC sales and falling prices were the product of reduced consumption and rising non-OPEC oil supplies, both spurred by the price shocks of the 1970s. To deal with the growing surplus of oil in the marketplace, OPEC adopted in March 1983 a formal system of production allocations that imposed—for the first time—individual ceilings on the output of each member. During this third phase of OPEC's development, which continues today, OPEC members meet at regular intervals (and sometimes more frequently on an emergency basis) to review market conditions and adjust members' quotas as needed to support or "defend" the market price within a desired range. This phase of OPEC's history is the one that most resembles the textbook example of a cartel, at least outwardly.

OPEC'S FUTURE PROSPECTS

When judging OPEC's past success or contemplating its future course of action, several things must be kept in mind. Foremost is the fact that any system of output restraint is vulnerable to the classic free-rider problem. OPEC as a whole may be made better off by reducing total output, but each member has an incentive to produce beyond its assigned quota. From the individual member's point of view, marginal revenue from incremental sales exceeds the marginal cost of extraction, which creates the temptation to cheat. Cartel membership is most beneficial to a producer when other members are doing the hard work. But if they won't, who will? Without a system to detect and punish cheating, the cartel is hampered by a prisoner's dilemma in which the dominant strategy for most, if not all, members is to ignore their assigned production quotas.

In fact, OPEC lacks an effective means to monitor, detect, and punish members who exceed their quotas. A monthly chart of OPEC's combined crude oil production level relative to the agreed ceiling indicates the scope and persistence of this problem (see Figure 1). Compliance has been sporadic. Since the inception of the quota system, total OPEC production of crude oil has exceeded the ceiling by 4 percent on average, but on numerous occasions the excess has run to 15 percent or more. For the most part, compliance has been achieved only during episodes (like 2005–2006) when the production ceiling itself pushed the limits of each member's available production capacity.



Source Ceilings, OPEC Annual Statistical Bulletins, Actuals, U S Energy Information Administration

A second factor that confounds OPEC's attempt to manage the market price is the lack of timely and accurate information about changes in the level of demand for oil and the availability of non-OPEC oil supplies. Several forecasts of demand and supply are available at any given time (including those prepared by the U.S. Energy Information Administration, the International Energy Agency, and by the OPEC Secretariat itself), but the precision of these forecasts is low and surprises are frequent. For example, none anticipated the surge in Asian demand that triggered the sudden tightening of oil markets in 2005. OPEC's forecasting problem is compounded by the fact that several years may elapse, due to rigidities in both supply and demand, before the full impact of a price change can be observed—so if a mistake is made, it may go undetected for several years and then take several years more to rectify.

Even if perfect information about future market conditions were available, there is no assurance that the interests of individual OPEC members could be easily aligned around a single "correct" price or production target. In part, this is due to the fact that OPEC has very limited means by which to redistribute earnings among members. Therefore, any given set of quotas determines not only the overall profit of OPEC, but also the individual revenues that accrue to each member.

If the members were more homogeneous demographically and economically, the problem of misaligned interests would be less severe. As things happen, however, large volumes of low-cost reserves are concentrated in certain countries with small populations and relatively high incomes (e.g., Kuwait, Saudi Arabia, and the United Arab Emirates), while smaller volumes of higher-cost reserves are found in populous and relatively poor countries (e.g., Nigeria, Indonesia, and Venezuela). Table 1 sets forth some of the more salient differences among the members of OPEC. The potential for conflicting interests involves not only the question of which members "deserve" larger quotas, but what is the preferred market price level for OPEC oil. What price would the respective members of the cartel like to see? Members with low-cost, long-lived reserves will take a long view of the future and may be reluctant to push prices too high given the fear of induced technological innovations that would usher in new forms of energy (or energy conservation) that eventually compete against OPEC. Members holding fewer reserves and shorter horizons are less vulnerable to this type of risk and therefore perhaps less averse to high prices. In-

ternal divisions between "price hawks" and "price doves" have been observed previously and will likely surface within OPEC again.

TABLE 1. DIFFERENCES AMONG OPEC MEMBERS

Member	*since*	GDP *$ per capita*	Value of Oil Exports *$ per capita*	Proved Oil Reserves *bbl per capita*	Crude Oil Production *bbl per capita*	Reserves to Production Ratio *years*
Algeria	1969	3,113	999	373	15	25
Indonesia	1962	1,290	42	20	2	11
Iran*	1960	2,863	704	1,986	22	91
Iraq*	1960	1,063	812	3,989	24	165
Kuwait*	1960	27,028	15,429	36,775	340	108
Libya	1962	6,618	4,839	7,084	106	67
Nigeria	1971	752	355	275	7	42
Qatar	1961	45,937	22,614	18,455	339	54
Saudi Arabia*	1960	12,931	6,876	11,029	143	77
UAE	1967	29,367	11,044	21,733	193	113
Venezuela*	1960	5,240	1,796	2,990	43	70
OPEC Average		2,649	941	1,660	21	81

** Founding member of OPEC*

Source OPEC Annual Statistical Bulletin, 2005

A final factor that looms large in the future of OPEC is the role to be played by serendipitous events and geopolitical tensions. A large portion of OPEC's apparent historical impact on the price of oil has come about not as the result of deliberate plans crafted by a purposeful cartel, but as the by-product of clashing national agendas that encompass far more than the petroleum sector. During the past 35 years, most of the idle capacity held by OPEC members has been involuntary—taken out of production due to military conflict. Much of the hard work that any cartel has to do—commanding the determination and discipline to restrict output—has in OPEC's case been provided fortuitously. For that reason, the ultimate strength and cohesion of OPEC has perhaps not yet been tested.

The value of crude oil produced and sold on the world market exceeds $1 billion each day. Even a relatively small impact on the unit price of oil represents an enormous transfer of wealth between consumers and producers. Moreover, the disruptive impact of sudden price "shocks" and heightened volatility threatens the goal of sustained and steady global economic growth. As consumers, investors, and government officials continue to wrestle with these problems, it is no exaggeration to say that OPEC has left an indelible imprint on the world economy through its impact on the price of oil.

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