



Written Statement of the
National Petrochemical & Refiners Association

delivered by
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before the
Senate Committee on Commerce, Science, and Transportation

concerning
Multiple Factors that Influence the Price of Energy and Related Issues

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Mr. Chairman and members of the Committee, thank you for the opportunity to appear today to discuss the multiple factors that influence the price of energy and related issues. My name is Bob Slaughter and I am President of NPRA, the National Petrochemical & Refiners Association. NPRA is a national trade association with 450 members, including those who own or operate virtually all U.S. refining capacity, and most U.S. petrochemical manufacturers. My comments today will address the supply of transportation fuels, chiefly oil and oil products; I will also discuss the importance of adequate supplies of natural gas.

INTRODUCTION

This hearing is intended to inquire into the factors affecting the gasoline market. The recent natural disaster resulting from Hurricane Katrina has had a significant impact on the nation's energy markets, and that subject will be discussed later. But it is important to remember that the effect of Hurricane Katrina is an overlay on a pre-existing condition. That was and is a situation characterized by high crude prices, strong demand for gasoline, diesel and other petroleum products, and a challenged energy infrastructure, especially in refining. NPRA is pleased to provide the committee the following discussion of these conditions and NPRA's policy recommendations for addressing them. We urge members of the committee to consider the need for long overdue – and perhaps even bold – policy changes to increase the nation's supply of oil, oil products and natural gas as soon as possible.

NPRA supports requirements for the orderly production and use of cleaner-burning fuels to address health and environmental concerns, while at the same time maintaining the flow of adequate and affordable gasoline and diesel supplies to the consuming public. Since 1970, clean fuels and clean vehicles have accounted for about 70% of all U.S. emission reductions from all sources, according to EPA. Over the past 10 years, U.S. refiners have invested about \$47 billion in environmental improvements, much of that to make cleaner fuels. For example, according to EPA, the new Tier 2 low sulfur gasoline program, initiated in January 2004, will have the same effect as removing 164 million cars from the road when fully implemented.

Unfortunately, however, federal environmental policies have often neglected to consider fully the impact of environmental regulations on fuel supply. Frankly, policy makers have often taken supply for granted, except in times of obvious market instability. This attitude must end. A healthy and

growing U.S. economy requires a steady, secure, and predictable supply of petroleum products.

There are no silver bullet solutions for balancing supply and demand. Indeed most of the problems in today's gasoline market—without factoring in the market disruptions caused by Katrina—result from the high price of crude oil due to economic recovery abroad together with strong U.S. demand for gasoline and diesel due to the improving U.S. economy.

UNDERSTANDING GASOLINE MARKET FUNDAMENTALS: HIGH CRUDE PRICES; STRONG GASOLINE DEMAND GROWTH

The overwhelming factor affecting gasoline and distillate prices is the supply and price of crude oil. In June of this year the U.S. Federal Trade Commission released a landmark study titled: "Gasoline Price Changes: The Dynamic of Supply, Demand and Competition." To quote from the FTC's findings: "Worldwide supply, demand, and competition for crude oil are the most important factors in the national average price of gasoline in the U.S." and "The world price of crude oil is the most important factor in the price of gasoline. Over the last 20 years, changes in crude oil prices have explained 85 percent of the changes in the price of gasoline in the U.S."

Crude prices have been steadily increasing since 2004, largely because of surprising levels of growth in oil demand in countries such as China and India, and in the United States as well. Actual demand growth for oil and oil products in these countries in 2004 exceeded the experts' predictions and has remained strong this year. As a result, world demand for crude is bumping up against the worldwide ability to produce crude.

Strong demand for crude has dissipated the cushion of excess available worldwide oil supply, just as strong U.S. demand for refined products has eliminated excess refining capacity in the United States. The good news is that producing countries will probably be able to add crude production capacity in the years to come. The bad news is that the United States has thus far shown only limited willingness to confront its own energy supply problems.

As shown in Attachment 1, gasoline costs closely track the cost of crude oil. Before hurricane Katrina, gasoline price increases lagged crude oil price increases on a gallon for gallon basis. This means that refiners did not pass

through all of the increased costs in their raw material, crude oil. Crude oil accounts for 55-60% of the price of gasoline seen at the service station. The cost of federal and state taxes adds another 19% to the cost of a finished gallon of gasoline. Therefore under current conditions, 74-79% of the total cost of a gallon of gasoline is pre-determined before the crude is delivered to the refiner for manufacture into gasoline. (See Attachment 2)

Another contributor to gasoline costs is tightness in our nation's gasoline markets. While U.S. refiners are producing huge volumes of products, continued strong demand has tightened supply. Gasoline demand currently averages approximately 9 million barrels per day. Domestic refineries produce about 90 percent of U.S. gasoline supply, while about 10 percent is imported. These imports make up over 20% of the refined product demand of the Northeast U.S. Thus, steadily increasing demand can only be met either by adding new domestic refinery capacity or by relying on more foreign gasoline imports. Unfortunately, the need to add more domestic gasoline production capacity – the option NPRA believes to be the prudent choice – is often thwarted by other public priorities.

EXPERIENCE WITH THE AFTERMATH OF HURRICANE KATRINA SUGGESTS THAT THE MARKET PRICING SYSTEM IS WORKING AS ANTICIPATED.

In the aftermath of Hurricane Katrina our nation confronts death, injuries and devastation of staggering proportions. The images of the tragedy displayed on television and other media underscore the human toll and seeming hopelessness in ways more eloquent and compelling than could ever be captured in testimony. We share both the sense of dismay and increased humility felt by all Americans before this latest reminder of nature's power to devastate and confound the best efforts of human beings. NPRA offers our sympathy and prayers to those who have suffered the loss of loved ones among family members, or their neighbors and colleagues, as well as to those who have lost much or all of their personal assets and livelihood in this worst U.S. natural disaster.

The damage left in Hurricane Katrina's wake made significantly worse the troubling supply and price situation already discussed above. The market pricing system did work in the aftermath of that disaster, however. Crude oil and many product prices had retreated to pre-Katrina levels by last Friday, in spite of the fact that considerable offshore crude production remains out of

service and about 5% of U.S. refinery capacity is still not operating due to storm damage. (See Attachment 3) The approach of Hurricane Rita has since resulted in increased futures prices this week due to concerns about possible additional damage in the Gulf due to this storm.

U.S. NATIONAL ENERGY POLICY SHOULD CONTINUE TO RELY ON MARKET FORCES.

Continued reliance on market forces provides appropriate market signals to help balance supply and demand even during difficult times. President Reagan eliminated price controls on oil products immediately upon taking office in 1981. He was outspoken about the inefficiencies and added costs to consumers that resulted from America's ten-year experiment with energy price controls.

The energy price and allocation controls of the 1970s resulted in supply shortages in the form of long gas lines. Studies have shown that, although intended to reduce costs, controls actually resulted in increased costs and greater inconvenience for consumers. The benefits of market pricing became clear soon after their elimination. The U.S. Federal Trade Commission stated in an extensive study published this June that "Gasoline supply, demand and competition produced relatively low and stable annual average real U.S gasoline prices from 1984 until 2004, despite substantial increases in U.S. gasoline consumption" and "...For most of the past 20 years, real annual average retail gasoline prices in the U.S., including taxes, have been lower than at any time since 1919." Price caps and other forms of price regulation are no more effective in the 21st century than they turned out to be in the 1970s. Interference in market forces always creates inefficiencies in the marketplace and extra costs for consumers.

THE U.S. REFINING INDUSTRY IS DIVERSE AND COMPETITIVE.

Today's U.S. refining industry is highly competitive. Some suggest past mergers are responsible for higher prices. The data do not support such claims. In fact, companies have become more efficient and continue to compete fiercely. There are 54 refining companies in the U.S., hundreds of wholesale and marketing companies, and more than 165,000 retail outlets. The biggest refiner accounts for only about 13 % of the nation's total refining capacity; and the large integrated companies own and operate only

about 10 % of the retail outlets. The Federal Trade Commission (FTC) thoroughly evaluates every merger proposal, holds industry mergers to the highest standards of review, and subjects normal industry operations to a higher level of ongoing scrutiny.

In 2004 the FTC published an FTC Staff Study “The Petroleum Industry: Mergers, Structural Change, and Antitrust Enforcement.” Among the points made in that publication was the following: “...mergers have contributed to the restructuring of the petroleum industry in the past two decades but have had only a limited impact on industry concentration. The FTC has investigated all major petroleum mergers and required relief when it had reason to believe that a merger was likely to lead to competitive harm...”

Critics of mergers sometimes suggest that industry is able to affect prices because it has become much more concentrated, with a handful of companies controlling most of the market. This is untrue. According to data compiled by the U.S. Department of Commerce and by Public Citizen, in 2003 the four largest U.S. refining companies controlled a little more than 40% of the nation’s refining capacity. In contrast, the top four companies in the auto manufacturing, brewing, tobacco, floor coverings and breakfast cereals industries controlled between 80% and 90% of the market. Further, several mergers in the refining industry have actively maintained and even increased refining capacity when, without such consolidation, the individual refineries involved might not have been economically viable. One such example represents over 550,000 barrels/day of capacity. In other instances, Valero Energy Corporation has increased the productive capacity of the refineries it has acquired by an aggregate of nearly 400,000 barrels per day over the past several years.

INDUSTRY ACTIVITIES HAVE BEEN SCRUTINIZED IN SIMILAR PAST SITUATIONS BUT NO ANTICOMPETITIVE BEHAVIOR HAS BEEN FOUND.

Tight gasoline market conditions have often led to calls for industry investigations. More than two dozen federal and state investigations over the last several decades have found no evidence of wrongdoing or illegal activity on our industry’s part. For example, after a 9-month FTC investigation into the causes of price spikes in local markets in the Midwest during the spring and summer of 2000, former FTC Chairman Robert Pitofsky stated, “There were many causes for the extraordinary price spikes

in Midwest markets. Importantly, there is no evidence that the price increases were a result of conspiracy or any other antitrust violation. Indeed, most of the causes were beyond the immediate control of the oil companies.” Similar investigations before and since have reached the same conclusion.

A “WINDFALL PROFITS TAX” COULD STIFLE NEEDED INDUSTRY INVESTMENT

The U.S. had a “windfall profit tax” on crude oil from 1980 until 1988. That tax, which was actually an ad valorem tax imposed on crude oil, discouraged crude oil production in the United States and resulted in other market distortions. It was repealed in 1988.

Current suggestions for re-imposition of a windfall profits tax on refiners reflect a misunderstanding of refining industry economics. In the ten-year period 1993-2002, average return on investment in the refining industry was only about 5.5%. This is less than half of the S&P industrials average return of 12.7% for the same period. Refining industry profits as a percentage of operating capital are not excessive. In dollars, they seem large due to the massive scale needed to compete in a large, capital-intensive industry. For example, a new medium scale refinery (100,000 to 200,000 b/d) would cost \$2 to \$3 billion. In short, company revenues can be in the billions, but so, too are the costs of operations.

The FTC June 2005 study cited above had the following comments on industry profits: “Profits play necessary and important roles in a well-functioning market economy. Recent oil company profits are high but have varied widely over time, over industry segments and among firms...Profits also compensate firms for taking risks, such as the risks in the oil industry that war or terrorism may destroy crude production assets or, that new environmental requirements may require substantial new refinery capital investments.”

Many other industries have higher earnings than the oil industry. Among these are telecommunication services, software, semiconductors, banking, pharmaceuticals, coal and real estate, to name just a few. Imposition of a windfall profits tax on the industry would discourage investment at a time when significant capital commitments to all parts of the industry, including refining, will be needed.

NPRA DOES NOT TOLERATE PRICE GOUGING

There have been allegations of price gouging by unscrupulous individuals who seek to profit during the current time of national emergency and crisis. Federal and state laws prohibit actions of this kind in emergency situations like the present. Each alleged situation should be thoroughly investigated by the appropriate state and federal authorities and prosecution should occur when the law has been broken. It is important, however, that illegal activity be clearly distinguished from the normal operation of market forces attempting to allocate available product in a shortage or near-shortage situation.

U. S. POLICY SHOULD ENCOURAGE ADDITIONAL DOMESTIC REFINING CAPACITY.

Domestic refining capacity is a scarce asset. There are currently 148 U.S. refineries owned by 54 companies in 33 states, with total crude oil processing capacity at roughly 17 million barrels per day. In 1981, there were 325 refineries in the U.S. with a capacity of 18.6 million barrels per day. Thus, while U.S. demand for gasoline has increased over 20% in the last twenty years, U.S. refining capacity has decreased by 10%. No new refinery has been built in the United States since 1976, and it will be difficult to change this situation. This is due to economic, public policy and political considerations, including siting costs, environmental requirements, a history of low refining industry profitability and, significantly, “not in my backyard” (NIMBY) public attitudes.

Nevertheless, existing refineries have been extensively updated to incorporate the technology needed to produce a large and predictable supply of clean fuels with significantly improved environmental performance. Capacity additions have taken place at many facilities as well. (See Attachment 4) Between 1985 and 2004, U.S. refineries increased their total capacity to refine crude oil by 7.8%, from 15.7 mm b/d in 1985 to 16.9 mm b/d in May 2004. This increase is equivalent to adding several mid-size refineries, but it occurred at existing facilities to take advantage of economics of scale. Refiners also changed processing methods to broaden the range of crude oil they can process and to allow them to produce more refined product for each barrel of crude processed. (2005 FTC analysis)

With the increased returns on refining operations in the past two years, it is very possible that additional investment in refining will now occur. Some modest additions have been announced. But the increase in capacity at existing sites will probably not keep pace with the growth in U.S. demand for products, meaning that the nation is increasing its reliance on imports of gasoline and other petroleum products each year.

Proposed capacity expansions can often become controversial and contentious at the state and local level, even when necessary to produce cleaner fuels pursuant to regulatory requirements. We hope that policymakers will recognize the importance of domestic refining capacity expansion to the successful implementation of the nation's environmental policies, especially clean fuels programs. The Administration's New Source Review reform program is a solid example of policy modifications that, while maintaining desired environmental protections, will provide one tool to help add and update capacity.

NPRA also wants to recognize a provision in the recently enacted energy legislation that will help encourage additional refining investment. This provision allows 50% expensing of the costs associated with expanding a refinery's output by more than 5%. The refiner must have a signed contract for the work by 1/1/08, and the equipment must be put in service by 1/1/12.

Common sense dictates that it is in our nation's best interest to manufacture the lion's share of the petroleum products required for U.S. consumption in domestic refineries and petrochemical plants. Nevertheless, we currently import more than 62% of the crude oil and oil products we consume. Reduced U.S. refining capacity clearly affects our supply of refined petroleum products and the flexibility of the supply system, particularly in times of unforeseen disruption or other stress. Unfortunately, EIA currently has predicted "substantial growth" in refining capacity only in the Middle East, Central and South America, and the Asia/Pacific region, not in the U.S.

REFINERS FACE A BLIZZARD OF REGULATORY REQUIREMENTS AFFECTING BOTH FACILITIES AND PRODUCTS.

Despite the powerful factors that influence gasoline manufacturing, cost and demand, refiners are addressing current supply challenges and working hard to supply sufficient volumes of gasoline and other petroleum products to the

public. Refineries have been running at very high levels, producing gasoline and distillate. Refiners operated at high utilization rates even before the start of the summer driving season. To put this in perspective, peak utilization rates for other manufacturers average about 82%. At times during summer, refiners often operate at rates close to 98%. However, such high rates cannot be sustained for long periods.

In addition to coping with higher fuel costs and growing demand, refiners are implementing significant transitions in major gasoline markets. Nationwide, the amount of sulfur in gasoline will be reduced to an average of 30 parts per million (ppm) effective January 1, 2006, giving refiners an additional challenge in both the manufacture and distribution of fuel.

Equally significant, California, New York and Connecticut bans on use of MTBE are in effect. This is a major change affecting one-sixth of the nation's gasoline market. MTBE use as an oxygenate in reformulated gasoline accounted for as much as 11% of RFG supply at its peak; substitution of ethanol for MTBE does not replace all of the volume lost by removing MTBE. (Ethanol's properties generally cause it to replace only about 50% of the volume lost when MTBE is removed.) This lost volume must be supplied by additional gasoline or gasoline blendstocks. **Especially during a period of supply concerns it is in the nation's interest to be prudent in taking any action that affects MTBE use. That product still accounts for 1.6% of the nation's gasoline supply on average, but it provides a larger portion of gasoline supplies in areas with RFG requirements that are not subject to an MTBE ban. As with the case of imports, the Northeast is most dependent on these volumes.**

Refiners currently face the massive task of complying with fourteen new environmental regulatory programs with significant investment requirements, all in the same 2006 – 2012 timeframe. (See Attachment 5) In addition, many programs start soon. (See Attachment 6) For the most part, these regulations are required by the Clean Air Act. Some will require additional emission reductions at facilities and plants, while others will require further changes in clean fuel specifications. NPRA estimates that refiners are in the process of investing about \$20 billion to sharply reduce the sulfur content of gasoline and both highway and off-road diesel. Refiners will face additional investment requirements to deal with limitations on ether use, as well as compliance costs for controls on Mobile Source Air Toxics and other limitations. These costs do not include the

significant additional investments needed to comply with stationary source regulations that affect refineries.

Other potential environmental regulations on the horizon could force additional large investment requirements. They are: the challenges posed by the energy bill's mandated increased ethanol use, possible additional changes in diesel fuel content involving cetane, and potential proliferation of new fuel specifications driven by the need for states to comply with the new eight-hour ozone NAAQS standard. The 8-hour standard could also result in more regulations affecting facilities such as refiners and petrochemical plants.

These are just some of the pending and potential air quality challenges that the industry faces. Refineries are also subject to extensive regulations under the Clean Water Act, Toxic Substances Control Act, Safe Drinking Water Act, Oil Pollution Act of 1990, Resource Conservation and Recovery Act, Emergency Planning and Community Right-To-Know (EPCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and other federal statutes. The industry also complies with OSHA standards and many state statutes. A complete list of federal regulations impacting refineries is included with this statement. (See Attachment 7)

The high level of mandatory environmental expenditures in the current decade continues a trend established after the passage of the Clean Air Act Amendments in 1990. The American Petroleum Institute (API) estimates that refining accounted for about 53% of the petroleum industry's stated environmental expenditures of \$98 billion (in 2004 dollars) between 1992 and 2001.

Obviously, refiners face a daunting task in completing many changes to deliver the fuels that consumers and the nation's economy require. But they are succeeding. And regardless of recent press stories, we need to remember that American gasoline and other petroleum products have long been low when compared to the price consumers in other large industrialized nations pay for those products. The Federal Trade Commission recently found that "Gasoline supply, demand and competition produced relatively low and stable annual average real U.S. gasoline prices from 1984 until 2004, despite substantial increases in U.S. gasoline consumption."

A KEY GOVERNMENT ADVISORY PANEL HAS URGED GREATER SENSITIVITY TO SUPPLY CONCERNS.

The National Petroleum Council (NPC) issued a landmark report on the state of the refining industry in 2000. Given the limited return on investment in the industry and the capital requirements of environmental regulations, the NPC urged policymakers to pay special attention to the timing and sequencing of any changes in product specifications. Failing such action, the report cautioned that adverse fuel supply ramifications may result. Unfortunately, this warning has been widely disregarded. On June 22, 2004 Energy Secretary Abraham asked NPC to update and expand its refining study and a report was released last December. NPRA again urges policymakers to take action to implement NPC's study recommendations in order to address U.S. refining problems.

NPRA RECOMMENDATIONS TO ADD U.S. REFINING CAPACITY AND INCREASE FUTURE OIL PRODUCT AND NATURAL GAS SUPPLY.

- **Make increasing the nation's supply of oil, oil products and natural gas a number one public policy priority.** Now, and for many years in the past, increasing oil and gas supply has often been a number 2 priority. Thus, oil and gas supply concerns have been secondary and subjugated to whatever policy goal was more politically popular at the time. Enactment of the recent Energy Bill is a first step to making a first priority the supply of energy sources the nation depends upon.

- **Remove barriers to increased supplies of domestic oil and gas resources.** Recent criticism about the concentration of America's energy infrastructure in the western Gulf is misplaced. Refineries and other important onshore facilities have been welcome in this area but not in many other parts of the country. *Policymakers have also restricted access to much-needed offshore oil and natural gas supplies in the eastern Gulf and off the shores of California and the East Coast. These areas must follow the example of Louisiana and many other states in sharing these energy resources with the rest of the nation because they are sorely needed.*

- **Resist tinkering with market forces when the supply/demand balance is tight.** Market interference that may initially be politically popular results in market inefficiencies and unnecessary costs. Policymakers must resist

turning the clock backwards to the failed policies of the past. Experience with price constraints and allocation controls in the 1970s demonstrates the failure of price regulation, which adversely impacted both fuel supply and consumer cost.

- **Consider expanding the refining tax incentive provision in the Energy Act.** Reducing the depreciation period for refining investments from ten to seven or five years would remove a current disincentive for refining investment. Changes could allow expensing under the current language to take place as the investment is made rather than when the equipment is actually placed in service, or the percentage expensed could be increased as per the original legislation introduced by Senator Hatch.

- **Review and streamline permitting procedures for new refinery construction and refinery capacity additions.** Seek ways to encourage state authorities to recognize the national interest in more U.S. domestic capacity.

- **Keep a close eye on several upcoming regulatory programs that could have significant impacts on gasoline and diesel supply.** They are:

→ *Implementation of the new 8-hour ozone NAAQS standard. The current implementation schedule determined by EPA has established ozone attainment deadlines for parts of the country that will be impossible to meet. EPA has to date not made changes that would provide realistic attainment dates for the areas. The result is that areas will be required to place sweeping new controls on both stationary and mobile sources, in a vain effort to attain the unattainable. The new lower-sulfur gasoline and ULSD diesel programs will provide significant reductions to emissions within these areas once implemented. But they will not come soon enough to be considered unless the current unrealistic schedule is revised. If not, the result will be additional fuel and stationary source controls which will have an adverse impact on fuel supply and could actually reduce U.S. refining capacity. This issue needs immediate attention.*

→ *Design and implementation of the credit trading program for the ethanol mandate (RFS) contained in the recent Energy Act. This mechanism is vital to increase the chance that this program can be implemented next year without additional gasoline supply disruption.*

Additional resources are needed within EPA to accomplish this key task.

→ Implementation of the ultra low sulfur diesel highway diesel regulation. The refining industry has made large investments to meet the severe reductions in diesel sulfur that take effect next June. We remain concerned about the distribution system's ability to deliver this material at the required 15 ppm level at retail. If not resolved, these problems could affect America's critical diesel supply. Industry is working with EPA on this issue, but time left to solve this problem is growing short.

→ Phase II of the MSAT (mobile source air toxics) rule for gasoline. Many refiners are concerned that this new regulation, which we expect next year, will be overly stringent and impact gasoline supply. We are working with EPA to help develop a rule that protects the environment and avoids a reduction in gasoline supply.

NPRA's members are dedicated to working cooperatively with government at all levels to resolve the current emergency conditions that result from Hurricane Kristina. But we feel obliged to remind policymakers that action must also be taken to improve energy policy in order to increase supply and strengthen the nation's refining infrastructure. We look forward to answering the Committee's questions.