



Written Statement of the
**National Petrochemical & Refiners Association and
the American Petroleum Institute**

delivered by
Bob Slaughter
President, NPRA

before the
Senate Committee on Environment and Public Works

concerning
**The Environmental Regulatory Framework Affecting Oil
Refining and Gasoline Policy**

12 May 2004
Washington, DC

OVERVIEW

Mr. Chairman and members of the Committee, thank you for the opportunity to appear today to discuss the impact of environmental regulations on fuel supply. My name is Bob Slaughter, and I am President of NPRA, the National Petrochemical & Refiners Association. I am also appearing today on behalf of the American Petroleum Institute (API).

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. API is a national trade association representing more than 400 companies engaged in all sectors of the U.S. oil and natural gas industry.

To summarize our message today, we urge policymakers in Congress and the Administration to encourage the production of an abundant supply of petroleum products for U.S. consumers. By the end of my testimony, I will outline and discuss key factors that will provide perspective about the current, as well as the anticipated future situation the nation confronts regarding gasoline supply and demand.

Before addressing these topics in detail, however, I want to state emphatically that NPRA and API support 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.

For example, according to EPA, the new Tier II low sulfur gasoline program, initiated in January, will have the same effect as removing 164 million cars from the road when fully implemented.

Since 1970, clean fuels and clean vehicles account 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.

Unfortunately, however, federal environmental policies have often neglected the impact of environmental regulations on fuel supply, and 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.

Although there is much finger pointing regarding current gasoline market conditions, there are no silver bullet solutions for balancing supply and demand. Indeed most of the problems in today's gasoline market result from the high price of crude oil and strong demand for gasoline due to the improving U.S. economy. U.S. refineries have produced increased amounts of gasoline and distillates so far this year compared to last year.

Instead of engaging in a fruitless search for dubious quick-fix "solutions", or, even worse, taking action that could be harmful, we urge Congress, the Administration, and the motoring public to exercise continued patience with the free market system. The nation's refiners are working hard

to meet rising demand while complying with extensive regulatory controls that affect both our facilities and the products we manufacture.

To summarize our policy recommendations, we urge the Committee first to find the necessary two additional Senate votes to pass the Conference Report on HR 6. This is the most important action that can be taken to improve U.S. energy security. Putting the conference report on the President's desk is the best way to move energy policy forward into the 21st century. Congress should also support the New Source Review (NSR) reforms which have spanned two Administrations, which will encourage capacity expansions and efficient operation of existing refineries; it should resist any new "federal fuel recipes" or hasty action on the subject of boutique fuels; and act to repeal the 2% RFG oxygenation requirement.

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

In order to fully appreciate the impact of environmental regulations on fuel supply, we should first consider the dynamics of current gasoline markets. It is important to begin with the most significant factor affecting gasoline prices: crude oil. The cost of crude oil represents about 45% of the total cost of a finished gallon of gasoline. Crude oil prices have increased 60% since April 2003, recently crossing the \$40 per barrel threshold. High demand for crude from Asia and the U.S., plus OPEC activities to restrain crude production in recent years, are the most important factors affecting crude prices.

The other key factor underlying current gasoline market conditions is the tight supply/demand balance. This is due to steadily increasing gasoline demand (growing population, Americans drive larger vehicles greater distances) and the meager growth in refining capacity in the United States. Due to U.S. economic recovery, the U.S. Energy Information Administration (EIA) estimates that growth in our gasoline demand is averaging 4.5%. Gasoline demand currently averages approximately 9 million barrels per day. Domestic refineries produce about 90 percent of U.S. gasoline supply, while 10 percent is imported. Therefore, growing demand can only be met by either increasing domestic refinery production or by relying on more foreign gasoline imports. Unfortunately, our rising gasoline demand and the need for more domestic gasoline production capacity collide with public policies, local opposition, and regulatory obstacles that deter increased domestic refining capacity.

IT IS IMPORTANT TO ENCOURAGE ADDITIONAL DOMESTIC REFINING CAPACITY

Domestic refining capacity is a scarce asset. There are currently 149 U.S. refineries owned by almost 60 companies in 33 states. Their capacity is roughly 16.8 million barrels per day. In 1981, there were 321 refineries in the U.S. with a capacity of 18.6 million barrels per day. No new refinery has been built in the United States since 1976, and it is unlikely that one will be built here in the foreseeable future, due to economic, public policy and political considerations, including siting costs, environmental requirements, industry profitability and, most importantly, "not in my backyard" (NIMBY) public attitudes.

U.S. refining capacity has increased slightly in recent years, but it has become increasingly difficult to keep pace with the growth in demand for petroleum products. Because new refineries have not been built, refiners have increased capacity at existing sites to offset the impact of capacity lost elsewhere due to refinery closures. But it is now becoming harder to add capacity at existing sites due in part to more stringent environmental regulations. Proposed capacity expansions can often become difficult 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 expansions to success of the nation's environmental policies, and help inform the public of the need for these facility improvements. New Source Review reform will also provide an important tool to help add new U.S. refining capacity.

For this reason, we urge policymakers to recognize the importance of sustaining the Administration's NSR reforms so that domestic refiners can continue to meet the growing public demand for gasoline and comply with new environmental programs. These reforms have been under consideration since 1996 and reflect significant public review and comment. The NSR reforms should facilitate new domestic refining capacity expansions. Those reforms will also encourage the installation of more technologically-advanced equipment and provide greater operational flexibility while maintaining a facility's environmental performance.

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 predicts "substantial growth" in refining capacity only in the Middle East, Central and South America, and the Asia/Pacific region, not in the U.S.

INDUSTRY IS WORKING HARD TO KEEP PACE WITH GROWING DEMAND FOR FUEL

Tight gasoline market conditions often lead 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. 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.

As this statement is written, product prices and supply are again a hot topic in the media and in political debates. In addition to the usual tight supply/demand balance for gasoline and other petroleum products, critical external factors are contributing to high gasoline costs this year:

- Higher crude oil costs (Crude oil recently crossed the \$40 threshold.);

- Increased consumer demand (EIA calculates current gasoline demand at 8.9–9 mm b/d and predicts it could rise to equal a record 9.4 mm b/d this summer);
- Implementation of state MTBE bans and an ethanol mandate in California, Connecticut, & New York (These states represent one-sixth of U.S. gasoline sales.);
- Rollout of Tier II gasoline with reduced sulfur, a new standard which may have affected imports temporarily; and
- Changeover to summer fuel formulations.

We would like to discuss some of these factors in more detail.

The most significant cost factor in gasoline manufacture is the cost of the feedstock, crude oil. This currently represents slightly less than half of the cost of a gallon of gasoline (45%), while taxes add another 25% to the price. Thus, over 70% of the retail cost of gallon of gasoline is attributable to these two components, crude oil costs and tax, which are beyond the control of refiners. (See Attachment 1.) Most significantly, crude oil and gasoline costs closely track each other. (See Attachment 2.)

Since April of 2003, crude oil prices have escalated nearly 60%, and recently breached the \$40 benchmark. Factors driving crude prices include: (1) high demand, spurred by significant economic growth in Asia (with Chinese demand for oil up 30% this year), (2) decisions by OPEC to reduce output, including a 10% output cut not yet totally implemented, and (3) continued uncertainties about crude and product production capabilities in the Middle East.

Despite these powerful influences on gasoline manufacturing, cost and demand, refiners are addressing supply challenges and working hard to supply sufficient volumes of gasoline and other petroleum products to the public. During the four-week period ending April 30, 2004, EIA reported that refiners produced 8.7 million barrels per day of gasoline, a five percent increase over the same period last year.

Refineries are running at record levels, producing record amounts of gasoline and distillate for this time of year. Refiners have been operating at an average utilization rate of 93 percent even before the start of the summer driving season. To put this in perspective, peak utilization rates for other manufacturers average about 82 percent. At times, during the summer, refiners have operated at rates close to 98 percent. However, these high rates cannot be sustained for long periods.

In addition to coping with the higher fuel costs and growing demand, refiners are implementing significant transitions in major gasoline markets. Nationwide, the amount of sulfur in gasoline was reduced from 300 parts per million (ppm) to a corporate average of 120 ppm effective January 1, 2004, 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 went into effect January 1. This is a major change affecting one-sixth of the nation's gasoline market. Where MTBE was used as an oxygenate in reformulated gasoline it accounted for as much as 11% of RFG supply at its peak, and 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.) The missing volume must be supplied by additional gasoline or gasoline blendstocks.

Due to these changes in U.S. gasoline specifications, the volume of gasoline imports declined roughly 10% earlier this year, although volumes have recently increased somewhat. As U.S. fuel specifications change, foreign refiners may not be able to supply the U.S. market without making expensive upgrades at their facilities. They may eventually elect to do so, but a time lag may occur.

Refiners are also just completing the annual switch to summer gasoline blends, a process which is complicated by the ethanol mandate in markets like New York, Connecticut and California that previously experienced little ethanol use. This is because of the need to adjust the gasoline blend for increased ozone precursor emissions in warm weather.

Obviously, refiners face a daunting task in rationalizing all these changes in order to deliver the fuels that consumers and the nation's economy need. But they are succeeding. And regardless of current press stories, we need to remember that American gasoline and other petroleum products remain a bargain when compared to the price consumers in other large industrialized nations pay for those products.

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

Refiners currently face the massive task of complying with fourteen new environmental regulatory programs with significant investment requirements, all in the same 2002 – 2010 timeframe. (See Attachment 3.) For the most part, these regulations are undertaken pursuant to 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 may 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 additional, significant investments needed to comply with stationary source regulations affecting refineries.

On the horizon are other potential environmental regulations which could force additional large investment requirements. They are: the challenges posed by increased ethanol use, possible additional changes in diesel fuel content involving cetane, and the potential for a proliferation of new fuel specifications driven by the need for states to comply with the new eight-hour ozone NAAQS standard. The industry must also supply two new mandatory RFG areas (Atlanta and Baton Rouge) under the "bump up" policy of the current one-hour ozone NAAQS.

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 4.)

API estimates that, since 1993, about \$89 billion (an average of \$9 billion per year) has been spent to protect the environment. This amounts to \$308 for every person in the United States. More than half of the \$89 billion was spent in the refining sector.

A KEY GOVERNMENT ADVISORY PANEL HAS JOINED INDUSTRY IN URGING REGULATORY 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.

We would point to the public rulemaking record illustrating recommendations industry has made on environmental regulations over the past eight years. Industry has consistently supported continued environmental progress, but cautioned regulators to balance environmental and energy goals by considering the supply implications of multiple new regulatory requirements. Industry has commented on many new stationary source and fuel proposals, urging adoption of more reasonable standards with adequate lead-time to make the necessary facility changes in order to mitigate potential supply shortfalls. Many times, if not most, industry recommendations have been rejected, as regulators opted to promulgate more stringent standards without leaving a margin of safety for energy supply security. We are now beginning to experience the impact of these decisions.

Continuing America's environmental progress through increased supply of cleaner fuels is a crucial part of U.S. policy, but environmental improvements are not free. There are sizeable costs. All too often this reality is underestimated or ignored. Heavy investment requirements affect U.S. production capabilities. And again, as we are beginning to experience, imported products may be harder to come by at least initially, since U.S. gasoline (and soon diesel) specifications may be too strict for foreign refineries to manufacture without making significant investments to upgrade facilities. This means that product imports may decline at the outset of a new regulatory program while foreign suppliers decide whether to invest or to sell in non-U.S. markets.

At the same time, when the domestic industry has made the significant capital expenditures required by the regulations, it is important that final regulations not be changed except in cases of absolute necessity. Stability and certainty in regulatory implementation is needed to encourage and recognize the investment of the regulated industry in the new regulations. A far better approach than granting waivers is to develop regulations that reflect the need for caution regarding continued fuel supply at the very beginning when regulations are finalized, not during the implementation period when investments have been made.

This year as gasoline markets began to reflect the implementation of Tier II gasoline sulfur reduction, policymakers were perceived to be considering easing the new gasoline sulfur specifications for some gasoline importers as a “relief valve” for the market, despite conflicting indications whether or not any real problems existed. This action would have adversely affected the refining industry, which has already made substantial investments in gasoline sulfur reductions and is in the process of making equally large investments in diesel sulfur reductions. Perhaps even more importantly, a program change would have eliminated part of the environmental benefits of the Tier II program, all for the benefit of foreign suppliers. Fortunately, no action was taken to waive gasoline sulfur requirements at this early date.

As a general rule, when any party suggests that regulatory relief is needed, it is important that EPA consult with and work closely with EIA, which has expertise in gasoline supply and demand analysis.

Waivers may merit consideration on rare occasions, and they are a tool available to regulators. But there should be a high burden of proof for waiver proponents. Waivers by their very nature can cause uncertainty and unfair loss of investment in the affected market. However, where there is universal agreement that a particular rule or policy no longer is valid or better options exist for reaching desired objectives, then certainly that policy should be reconsidered. An example is the 2% oxygenate requirement for reformulated gasoline (RFG).

REFINERS WILL DO THEIR BEST TO MEET SUPPLY CHALLENGES, BUT SOME FACILITIES MAY CLOSE

Domestic refiners will rise to meet the supply challenges in the short and the long term with the support of policymakers and the public. They have demonstrated the ability to adapt to new challenges and maintain the supply of products needed by consumers across the nation. But certain economic realities cannot be ignored and they will impact the industry. Refiners will, in most cases, make the investments necessary to comply with the environmental programs outlined above. In some cases, however, where refiners are unable to justify the costs of investment at some facilities, facilities may close or the refiner may exit certain petroleum product markets. These are economic decisions based on facility profitability relative to the size of the required investment needed to stay in business either across the board or in one product line, such as U.S. highway diesel fuel.

EIA summarizes the impact of past and future refinery closures: “Since 1987, about 1.6 million barrels per day of capacity has been closed. This represents almost 10% of today’s capacity of 16.8 million barrels per calendar day...The United States still has 1.8 million barrels of capacity under 70 MB/CD (million barrels per calendar day) in place, and closures are expected to continue in future years. Our estimate is that closures will occur between now and 2007 at a rate of about 50-70 MB/CD per year.” (EIA, J. Shore, “Supply Impact of Losing MTBE & Using Ethanol,” October 2002, p. 4.)

Refining industry profitability is also not well understood. The ten-year average return on investment in the industry is about 5.4%; this is about what investors could receive by investing

in government bonds, with little or no risk. It is also less than half of the S& P industrials figure of a 12.7% return. This relatively low level of refiners' return, which incorporates the cost of capital expenditures required to meet environmental regulations, is another reason why domestic refinery capacity additions have been modest and also one reason why new refineries are unlikely to be constructed here. (Last year was a relatively good year for the refining industry with average rates of return at 6.4%, above the rate of return for previous years; however, in the industry's long experience, rates of return over time revert to the mean of about 5%.)

Data compiled by DOE (Performance Profiles of Major Energy Producers) show that over the 10 year period from 1993 – 2002, the return on investment (net income/investment in place) for the refining sector averaged 5.5%, compared to an average return of 12.7 % for the S& P Industrials. In 2002, the return was a negative 2.7% for refining, compared to 6.6% for the S & P Industrials.

THERE ARE NO “QUICK FIXES” TO CURRENT MARKET CONDITIONS. POLICYMAKERS AND THE PUBLIC SHOULDN'T LOSE FAITH IN THE FREE MARKET.

Modern energy policy relies upon an important tool which encourages market participants to meet consumer demand in the most cost-efficient way: market pricing. The free market swiftly provides buyers and sellers with price and supply information to which they can quickly respond. Refiners need maximum flexibility to react to this market information as they make decisions about product manufacture and distribution. Mandates and other command-and-control policy mechanisms reduce this needed flexibility and add unnecessary cost to gasoline manufacture.

Industry appreciates the patience and restraint that the public and policymakers have shown in responding to current market conditions and the higher cost of gasoline. Consumers clearly want and need abundant supplies of clean fuels at market-based prices. Fuel manufacturers do their best to meet this demand and will continue to work with policymakers to support policies that increase the supply of clean fuels while maintaining adequate supplies. In the short term, there are no “silver bullets” to alleviate the high costs of gasoline for consumers this summer. Putting the current situation in a broader, more positive perspective, however, the U.S. has some of the cleanest and most cost-effective fuels in the world.

We ask that policymakers take particular care in considering the impact of so-called “boutique fuel” gasolines. In many cases, these programs represent a local area's attempt to address its own air quality needs in a more cost-effective way than with RFG, which is burdened by an overly prescriptive recipe and an oxygenation mandate. Industry supports further study of the “boutique fuels” phenomenon, but urges members of the Committee to resist imposition of any additional fuel specification changes. Further changes in fuel specifications in the 2004 – 2010 timeframe could add greater uncertainty to a situation which already provides significant challenges to all market participants.

CONCLUSION

There is a very close connection between federal energy and environmental policies. Unfortunately, these policies are often debated and decided separately and thus in a vacuum. As

a result, positive impacts for one policy area sometimes conflict with or even undermine goals and objectives in the other.

Industry therefore requests that an updated energy policy be adopted incorporating the principle that, in the case of new environmental initiatives affecting fuels, environmental objectives must be balanced with energy supply requirements. As explained above, the refining industry is in the process of redesigning much of the current fuel slate to obtain desirable improvements in environmental performance. This task will continue because consumers desire higher-quality and cleaner-burning fuels. And our members want to satisfy their customers. They ask only that the programs be well-designed, coordinated, appropriately timed and cost-effective. The Committee can advance both the cause of cleaner fuels and preserve the domestic refining industry by adopting this principle as part of the nation's energy and environmental policies.

A healthy and diverse U.S. refining industry serves the nation's interest in maintaining a secure supply of energy products. Rationalizing and balancing our nation's energy and environmental policies will protect this key American resource. Given the challenges of the current and future refining environment, the nation is fortunate to retain a refining industry with many diverse and specialized participants. Refining is a tough business, but the continuing diversity and commitment to performance within the industry demonstrate that it has the vitality needed to continue its important work, especially with the help of a supply-oriented national energy policy.

RECOMMENDATIONS

We make the following recommendations to address concerns regarding fuel supplies, environmental regulations, and market issues.

- The Senate should redouble its efforts to obtain the two votes needed to pass the Conference Report on HR 6, a balanced and fair energy bill that brings energy policy into the 21st century. This is the most important step needed to encourage new energy supply and streamline regulations.
- Public policymakers should balance environmental policy objectives and energy supply concerns in formulating new regulations and legislation.
- EPA should grant the California and New York requests to waive the 2% oxygen requirement for federal RFG. This will give refiners increased flexibility to deal with changing market conditions. It will also allow them to blend gasoline to meet the standards for reformulated gasoline most efficiently and economically, without a mandate.
- Congress should support the New Source Review reforms and encourage capacity expansions at existing refineries.
- Congress should be cautious in making any policy changes affecting “boutique fuels.”

- Policymakers must resist turning the clock backwards to the failed policies of the past. Experience with price constraints and allocation controls in the 1970s and 1980s demonstrates the failure of price regulation, which adversely impacted both fuel supplies and consumers.

The industry looks forward to continuing to work with this Committee, and thanks the Chairman for holding this important hearing. I would be glad to answer any questions raised by our testimony today.