

September 2005

Solutions to America's Oil Crisis



**A Federal Agenda for
Reducing Oil Demand and
Protecting Consumers**



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Acknowledgements

Written by Kristin Dean and Navin Nayak of the U.S. Public Interest Research Group (U.S. PIRG) and Tony Dutzik, Policy Analyst with the Frontier Group.

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For more information, contact:

U.S. PIRG
218 D Street SE
Washington, DC 20003
(202) 546-9707
www.uspirg.org

Table of Contents

Executive Summary	4
The Current Oil Crisis: Why are Prices Rising?.....	6
Reducing America’s Overdependence on Oil	13
Solution #1: Make Cars More Fuel Efficient	13
INCREASE FUEL ECONOMY STANDARDS TO 40 MILES PER GALLON.....	13
ELIMINATE FINANCIAL INCENTIVES FOR GAS GUZZLERS.....	14
Solution #2: Provide Consumers with Short-Term Relief and Long-Term Solutions	15
REPEAL AND SHIFT ALL EXISTING OIL & GAS TAX BREAKS	15
ESTABLISH A WINDFALL PROFITS TAX.....	16
USE THE MONEY TO HELP CONSUMERS AND SAVE OIL.....	17
Option #1: Allow more consumers to claim a higher tax credit for buying a fuel efficient vehicle	18
Option #2: Increase funding for public transportation.....	20
Option #3: Increase funding for the Low Income Home Energy Assistance Program...	21
Conclusion	24
End Notes	25

Executive Summary

America is too dependent on oil, and consumers are paying the price. For the last two years, gasoline prices have been creeping upward. In 2003, a gallon of regular gasoline averaged \$1.56; so far in 2005, the same gallon has averaged \$2.20, with prices in some areas spiking close to \$4.00 in August and September.

The recent rise in oil and gasoline prices is the result of increasing demand bumping against both natural and technological limits in the world's ability to produce and supply oil. This tight supply/demand balance, coupled with increased market concentration in the oil industry, has left consumers vulnerable to price spikes at the pump.

The long-term limits on oil resources underscore the important ways in which oil does not operate like other commodities. While market theory would suggest that oil production would simply increase every time demand increases, the geological limits of oil belie this assumption. Should demand continue to increase—as is anticipated under current policies—the most likely scenario is for prices to continue to rise, placing an even greater strain on the American economy and consumers.

Meanwhile, oil companies have raked in record profits. ExxonMobil alone made \$25 billion in profits in 2004 and is on pace to surpass that amount in 2005. Essentially, high gasoline prices are helping fuel a massive transfer of wealth from average consumers to large multi-national oil companies that benefit from America's oil dependence.

With consumers being drained at the pump and America spinning into a worsening spiral of dependence, it is well beyond the time for congressional action. Congress has opportunity to parlay the oil industry's record profits into proposals that will reduce America's dependence on oil and protect consumers in the long-run.

This paper outlines two policy solutions to address this problem.

Solution #1: Make our cars more fuel efficient.

The best way to cut America's oil dependence and shield consumers from spikes at the pump is to make cars and light trucks go farther on a gallon of gasoline. Congress and the Bush administration should increase the fuel economy of the country's fleet of cars and light trucks to 40 miles per gallon and eliminate perverse financial incentives that encourage manufacturers to produce and consumers to choose gas guzzlers over more efficient cars.

Solution #2: Prioritize consumer savings over oil industry profits.

Growing oil demand, shrinking supply, and anti-competitive nature of oil markets provide compelling reasons for Congress and the Bush administration to take immediate action to end the current transfer of wealth to the oil industry and transition consumers to a less oil dependent economy. We must redirect some of the record oil company profits into measures that will dramatically reduce our oil consumption. To this end, we propose:

- Repealing all existing tax breaks for the oil and gas industry. Under current law, the oil and gas industry would receive \$10.7 billion in tax breaks between 2005 and 2009. Congress should immediately repeal all existing tax breaks for the oil and gas industry and shift these incentives toward conservation solutions that will help consumers.

- Instituting a windfall profits tax. Congress should immediately enact a windfall profits tax on oil that will recoup a portion of the oil industry's record profits. The windfall profit tax would only apply when the price of crude oil exceeds \$40 per barrel.

With the estimated \$26 billion in revenue generated in 2005 alone from repealing the tax breaks and establishing a windfall profits tax, we can pursue policies to ease America's oil dependence and save consumers money. For example:

- Congress could double the tax credit available to consumers purchasing more fuel efficient cars and remove all restrictions on the number of fuel-efficient cars eligible for the credit. In addition, Congress could expand the credit so that it applies to all vehicles that meet the fuel economy criteria, regardless of the technology utilized. Every \$2 billion of the windfall profit invested in expanding this tax credit would allow approximately 318,000 more consumers to benefit.

- Congress could increase funding for public transportation, such as light rail. Currently, for every \$4 that the federal government spends on highways, only \$1 is invested in mass transit. This car-dependent transportation system fuels America's over-reliance on oil. Diverting \$8 billion of the windfall profits each year to public transportation would effectively double the federal government's investment in mass transit. Similarly, for \$8 billion, the federal government could build more than 200 miles of light rail—resulting in a 20 percent increase in light rail infrastructure nationally. Alternatively, the revenue could be used to reduce fares on existing public transit systems. With \$8 billion, the federal government could enable everyone who rode public transit in 2003 to ride for free.

- Congress could increase funding for the Low Income Home Energy Assistance Program (LIHEAP), a federally funded program that helps low-income households meet their home energy needs through immediate bill payment assistance and weatherization upgrades to make homes more energy efficient. Applying just \$2 billion of the windfall profit toward this program could help four million more needy households this winter, when home heating costs are expected to be high.

America's energy problems are not going to go away on their own, nor can we depend on the market to solve them. The U.S. government needs to step in and help move America toward a more efficient, less oil dependent, energy future while protecting consumers' wallets, rather than oil companies' profits.

The Current Oil Crisis: Why are Prices Rising?

Gasoline prices have been steadily on the rise for the last two years. In 2003, a gallon of regular gasoline averaged \$1.56; by 2004, it averaged \$1.85; so far in 2005, a gallon of regular gasoline has averaged \$2.20.¹ After Hurricane Katrina hit the U.S. Gulf Coast in August 2005, damaging refineries and offshore rigs, oil jumped to more than \$70 per barrel, sending gasoline prices soaring to close to \$4 a gallon in some places. This price spike in the wake of the natural disaster is only symptomatic of larger underlying problems that need long term solutions.

The recent rise in oil prices is the result of increasing demand bumping against both natural and technological limits in the world's ability to produce and supply oil. Increasing the supply of oil or gasoline – through more drilling or the expansion of refining capacity – may provide marginal, temporary relief at best. Even if supplies somehow do keep up with demand in the short-term, America will be forced to import increasing amounts of oil from abroad, with most of the oil coming from unstable parts of the world. At the same time, long-term supply problems, coupled with the world's already delicate oil supply/demand balance and the increased concentration in the oil industry, indicate that the situation will only worsen. With the industry both incapable of responding adequately to the increase in demand and lacking the competitive market pressure to do so, consumers will only become more vulnerable to future price spikes.

❶ RISING U.S. AND GLOBAL DEMAND

As demand for a commodity increases, its price tends to increase as well. The rising demand for oil in rapidly industrializing and developed countries has helped trigger the recent rise in world oil prices.

The United States is far and away the world's number one consumer of oil. With less than five percent of the world's population, the U.S. consumes nearly a quarter of the world's petroleum (Figure 1).² On a per-capita basis, the average American consumes two-thirds more oil than the average resident of Japan, two times more than the average German, and 14 times more than the average resident of China.³

And our consumption has been growing by leaps and bounds. In fact, American oil consumption has been increasing rapidly for the last 20 years (Figure 2). Between 1978 and 1983, Americans slashed their consumption of oil by nearly 20 percent, as energy efficiency and fuel economy measures implemented during the 1970s energy crisis took hold. Since 1983, however, petroleum consumption has increased by nearly one-third and is now well above seven billion barrels per year.

Increasing oil consumption in the U.S. is a key driver of the jump in world oil demand that has triggered the recent oil price spike. Between 2000 and 2004, the U.S. was responsible for one-sixth of the increase in world demand for oil, ranking second behind only China in oil demand growth (Figure 3).⁴

Figure 1. World Petroleum Consumption, 2004, by Country⁵

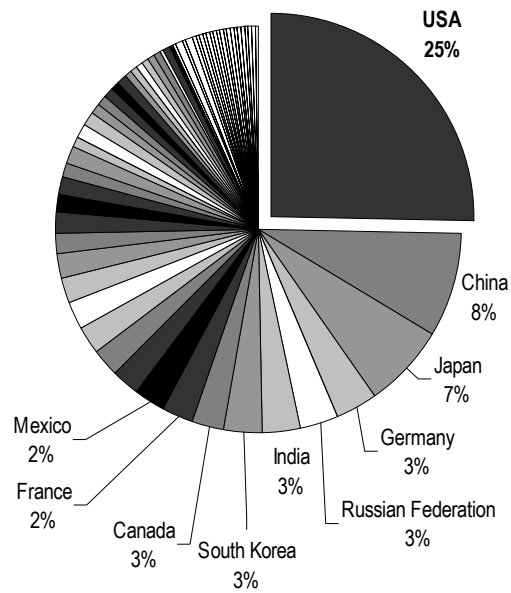


Figure 2. U.S. Petroleum Consumption, Annual⁶

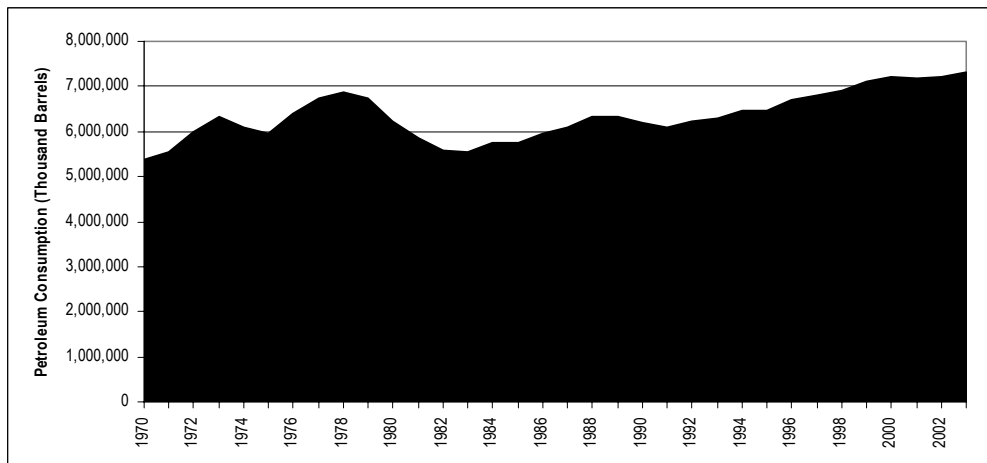
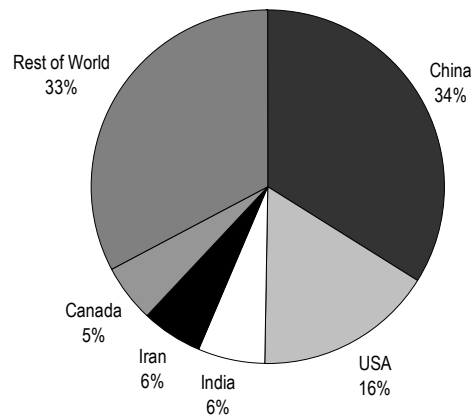


Figure 3. Shares of World Oil Demand Growth, 2000-2004, by Country⁷



Despite the rapid growth in oil demand from China, the U.S. remains the world's unchallenged number one oil consumer. Our dependence on petroleum leaves us uniquely exposed to oil price and supply disruptions, as well as to the many environmental and societal problems – ranging from air pollution to global warming – to which petroleum consumption contributes.

Where is all this oil going? Increasingly into the fuel tanks of America's cars, trucks and SUVs.

America uses more oil for transportation than for anything else. About two-thirds of the oil America uses is to move people or goods from place to place, and the vast majority of that is used in personal vehicles like cars, trucks and SUVs.⁸ Transportation has also been the main driver of increased oil use, responsible for 79 percent of the growth in oil consumption in the U.S. between 1985 and 2003.⁹

There has been a dramatic shift in the American vehicle fleet, with increasing sales of less-efficient vehicles, such as SUVs. By 2004, SUVs accounted for more than one-quarter of all light-duty vehicle sales, while the share held by cars had shrunk to less than half.¹⁰ The average American now drives one-third more miles each year than he or she did two decades ago and uses on average an equally inefficient vehicle.¹¹

At the same time, the average fuel economy of both cars and SUVs has stagnated, as Congress and the Bush administration have refused to increase federal Corporate Average Fuel Economy (CAFE) standards (except for a minor increase in SUV fuel economy). The combined result of these trends is that the average fuel economy of new vehicles *declined* by six percent between 1987 and 2004.¹² Even this figure is somewhat deceiving as more and more driving now takes place under conditions – higher speeds and in urban areas – that erode the fuel economy performance of vehicles once they are on the road.

In short, our increased driving plus lower fuel economy equals higher oil consumption, deepening our dependence on oil. Higher oil consumption in the U.S. (along with increasing consumption in other nations) has played a significant role in the recent run-up in oil prices.

America's current transportation and land-use policies – which encourage dependence on automobiles for most travel and do little to make those automobiles fuel efficient – may have appeared to be sustainable during the era of cheap oil. But with the world beginning to brush up against natural and technological limits in its ability to produce oil, the sustainability of those policies is now in serious jeopardy.

② LIMITED PRODUCTION CAPACITY

The rapid increase in global oil demand has bumped up against limitations in the amount of oil and gasoline the world can supply *at any given time*. The timeliness of production is important: even if the world held an infinite amount of oil, limitations on the ability to produce oil quickly – whether they are technological, economic, or political – could cause supplies to fall short and prices to rise.

Oil production and refining capacities that have been sufficient to supply global demand for the past several decades have now suddenly become inadequate. While the oil industry has had ample warning that demand would rise sharply, it has failed to respond to these market signals. In 2004, spare production capacity worldwide—additional capacity that can be made available to serve surging demand—hit its lowest level in 30 years.¹³ The U.S. has not built

any new refineries in the past 30 years, and indeed, the industry has even closed many refineries—further limiting capacity in the country. In 1981, there were 324 gasoline refineries operating in the U.S.; today, there are only 149.¹⁴ Even with upgrades and expansions at the remaining refineries, domestic capacity is down nine percent since 1981, while demand for gasoline has increased 38 percent.¹⁵

Now with American consumers caught in the midst of a severe economic pinch, the industry is incapable of addressing the problem. New production and refining capacity cannot be brought on line overnight and would require the industry to undertake financial risks—something that it has not been willing to do. ExxonMobil CEO Lee Raymond recently told investors at the company’s annual meeting that “you won’t see our investment spending swing with changes in near-term commodity prices.”¹⁶ With companies such as ExxonMobil, which has more than \$18 billion in cash on hand, expressing no interest in building new refineries, it is virtually certain that refining capacity will remain tight and prices high. In addition, new capacity often takes a long time to come on line; a refinery currently in the planning stages in Arizona, for example, will not be complete until 2009.

③ LIMITED SUPPLIES

No one knows for certain how much oil remains in the ground. But we do have some clues. First, we know that, between the first significant drilling for petroleum in the mid-1800s and the end of 1997, the world had produced about 838 billion barrels of oil.¹⁷ Since the end of 1997, the world has produced about another 174 billion barrels of oil, for a grand total of about one trillion barrels.¹⁸ Each year, the world consumes about another 29 billion barrels of oil, with the rate of consumption increasing at about two percent per year. Maintaining current levels of oil consumption would result in the world consuming as much oil in the next 34 years as it did in the previous century.

The physical reality is that in order for oil to be produced, it must first be discovered. In that regard, recent trends are not encouraging. Discovery of new oil fields peaked in the 1960s and has trailed production from existing fields since the late 1980s. Currently, the world consumes about four barrels of oil for every barrel discovered.¹⁹ Meanwhile, we continue to get by on oil produced from fields discovered long ago: 80 percent of current production is from fields discovered before 1970.²⁰

We also know that nations around the world currently claim “proved reserves” of about 1.1 trillion barrels of oil—or about as much as has already been consumed in modern history.²¹ But, “proved reserves” is a misleading measure of future oil availability for two reasons. First, proved reserves include only those oil supplies that can be produced under current technological and economic conditions. Should prices rise or technology advance, the amount of reserves would increase. On the other hand, however, estimates of reserves are notoriously inaccurate and prone to distortion. For example, nations belonging to the Organization of Petroleum Exporting Countries (OPEC) have an inherent incentive to overestimate their reserves, since the cartel sets its all-important production quotas for member nations based on their estimated reserves. Oil companies also face incentives to overestimate in order to enhance their perceived value to shareholders. In 2004, Royal Dutch/Shell Group announced that it had overstated its proved oil and gas reserves by 20 percent over the course of several years.²²

The inaccuracy of proved reserves as a measure leads geologists and oil industry analysts to another measure, “recoverable oil”—that is, all the oil that exists anywhere that can ultimately be produced. Estimates of recoverable oil—including that amount that has already been produced—also vary widely, from as little as 1.85 trillion barrels to as much as three trillion barrels.²³

What is “Peak Oil”?

Oil production is expected to “peak” when additional supplies cannot be brought online fast enough either to replace oil wells that have been depleted or to meet increased demand. “Peak oil” does not mean that oil supplies have run out – or that they will run out in the near future. Rather, it means that once about half of the available oil has been produced, sufficient oil supplies will no longer be available to serve demand. As a result, at the time of “peak oil,” market forces will bring demand down to the level that can be effectively supplied – likely through dramatically higher prices for oil.

In the end, experts disagree about when global production of oil will “peak,” with estimates ranging from as soon as next year to as far away as the mid-2020s.²⁴ Even ExxonMobil, usually known for its optimistic forecasts, now predicts that non-OPEC oil production will peak within the next decade.²⁵ The nuances of these estimates are ultimately beside the point. If oil consumption continues to increase unabated, we have, at best, about two decades to prepare for a transition to an economy far less reliant on oil. And during those two decades, we will receive more of our oil from abroad, more of it from OPEC and unstable nations, and pay a higher price for our consumption. The worst-case scenario is even grimmer, providing us with far less time to prepare and adjust.

The long-term limits on oil resources underscore the important ways in which oil does not operate like other commodities. While market theory would suggest that oil production would simply increase every time demand increases, there are limits to the amount of oil that the world can supply at any one time. Moreover, bringing additional production and refinery capacity on line takes time and is extremely capital intensive (and, therefore, risky). Should demand continue to increase—as is anticipated under current policies—the most likely scenario is for prices to continue to rise, placing an even greater strain on the American economy and consumers. Although market forces may eventually destroy enough demand to regain balance with supply, it is unlikely to occur without significant economic and social harm to consumers and the overall economy.

④ PRICE MANIPULATION

Oil price increases are often met with public anger – usually directed at the major oil companies and OPEC. While this public anger is often ill-informed, and while no direct evidence yet exists of overt price manipulation in the current oil crisis, trends in the market suggest that the industry has been positioning itself for years to benefit from precisely this type of situation.

In a well-functioning market for a commodity such as oil, sellers would compete with each other to attract buyers by offering the lowest price possible. However, oil markets do not function well for several reasons.

First, oil markets are notorious for their lack of transparency. On any given day, it is impossible to know accurately how much oil is being produced around the world, how much is being consumed, and how much petroleum can be legitimately banked as “proved reserves.” As a result, buyers must often simply guess at the supply and demand situation based on the scraps of information available, leading to erratic market behavior and providing individuals with the opportunity to manipulate prices through the spread of false information.

Second, oil production is controlled by relatively few countries and companies. OPEC, of which Saudi Arabia, Iran, Libya, Nigeria, and seven other countries are members, controls approximately 40 percent of world oil production (and a larger share of proved reserves).²⁶ OPEC coordinates the oil production of its members, establishing price and volume targets. Though the member countries have an incentive to keep the price of oil from rising too high (lest consumers decide to wholeheartedly pursue alternative energy sources), the cartel also has a financial incentive to maintain prices at the highest level that can be sustained over the long term.

A similar concentration of control exists within the U.S. oil industry – and that concentration is accelerating. A decade ago, the five largest oil companies in the U.S. controlled 34 percent of domestic crude oil production, 33 percent of domestic refinery capacity, and 27 percent of the retail market – amounting to immense power in the marketplace. But today, the five largest firms control about half of domestic oil production and refinery capacity, as well as 62 percent of the retail gasoline market.²⁷ The five companies – ExxonMobil, ChevronTexaco, ConocoPhillips, BP, and Royal Dutch/Shell – earned profits of \$60 billion in 2003.²⁸ In 2004, profits for the world’s 10 largest oil companies were \$100 billion.²⁹ Fewer companies controlling the U.S. market means that each company has less need to reduce prices to attract customers.

Indeed, the market is so tightly controlled that companies have been able to engage in anti-competitive action to intentionally increase prices. For example, in March 2001, the U.S. Federal Trade Commission found that oil companies had withheld gasoline supplies in a deliberate move to increase prices and boost profits.³⁰ This action was not illegal because the firms did not coordinate their action, but market consolidation made it possible.

In sum, the increased consolidation of oil resources and refining capacity has resulted in a significant decrease in competition within the industry. With a few big oil companies enjoying record profits and controlling the majority of the supply, there is no incentive for the industry to increase production or pressure to reduce prices.

Short-Term Price Fluctuations and Temporary Price Spikes

Long-term trends in oil markets are often masked by volatile, short-term fluctuations in oil prices, which often include dramatic spikes followed by equally dramatic crashes. At a time when there is little spare oil production capacity anywhere in the world, this type of short-term volatility becomes far more prevalent.

Among the most important potential triggers of price spikes are security concerns and the threat of terrorism. Political upheaval in nations such as Venezuela, Nigeria and Russia has already set off price spikes within just the past few years – and the risk posed by disruptions in top oil-producing nations such as Saudi Arabia is even greater. The “security risk premium” – caused both by increased real expenditures for security, insurance by oil companies, and the risk of major terror incidents – may add anywhere from \$4 to \$13 dollars a barrel to the price of crude oil.³¹

Natural disasters – such as Hurricanes Katrina and Rita, which disrupted production of oil in the Gulf Coast – can also trigger temporary price spikes, as can accidents and malfunctions at major oil refineries. Hurricane Katrina caused the shutdown of eight oil refineries and forced at least 10 others to slow processing. Offshore, Katrina destroyed four drilling rigs and caused extensive damage to nine others; destroyed 46 low-producing structures and damaged 20 others; and set six drilling rigs adrift in the Gulf.³² At the peak of Hurricane Katrina on August 30, 95 percent of daily oil production and 88 percent of daily gas production was idle.³³

These types of disruptions have less effect on oil prices if petroleum – and the means to extract, refine and deliver it – is plentiful in relation to underlying demand. As a result, with the supply/demand balance in oil markets continuing to tighten, short-term price spikes are likely to become increasingly frequent and severe in the years to come.

Reducing America's Overdependence on Oil

With only three percent of the world's oil reserves and 25 percent of the world's oil demand, it is impossible for the United States to drill its way to energy security. The single most effective thing that the United States can do to shield consumers from price spikes at the pump is to reduce the demand for oil and to lay the groundwork for a transition to a less oil-intensive energy future. With markets unable to respond and oil resources finite, the federal government should intervene now to protect consumers and address the long-term problem of oil dependence.

Solution #1: Make Cars More Fuel Efficient

INCREASE FUEL ECONOMY STANDARDS TO 40 MILES PER GALLON

The best way to cut America's oil dependence and shield consumers from spikes at the pump is to make cars and light trucks go farther on a gallon of gasoline.

In response to the Arab oil embargo of the early 1970s, Congress implemented the first miles per gallon (mpg) standards in 1975 to protect consumers from high gasoline prices and supply vulnerability resulting from U.S. dependence on foreign oil. The drafters of the successful oil savings law recognized that the only way to reduce dependence on foreign oil was to reduce oil demand, requiring cars and light trucks to nearly double miles per gallon averages to 27.5 and 20.7 miles, respectively.³⁴ As a result, consumers were able to go farther on a gallon of gasoline; these standards also had the benefit of reducing emissions of global warming gases. Cars today use 2.8 million barrels of oil per day less than they would have without the fuel economy increases.³⁵

The 1975 oil savings law also requires that the National Highway Traffic Safety Administration (NHTSA) continuously review and increase miles per gallon standards as technologically feasible.³⁶

In 2001, the National Academy of Sciences (NAS) identified ranges of fuel economy improvements for both cars and trucks while holding acceleration, performance, size, accessories, amenities, mix of vehicle types, makes, and models sold constant. The result was a 2002 NAS report, *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards*, which concluded that automakers could use existing technology to increase the fuel economy of their fleets to 40 mpg over the next decade while improving safety and maintaining performance.³⁷ Furthermore, the NAS study was conducted when gasoline prices were significantly lower; with higher gasoline prices many more efficiency measures may become more cost-effective.

The technology is available today to make cars and light trucks go farther on a gallon of gasoline. The Toyota Prius, which gets an estimated 60 mpg in the city, and the Ford SUV Escape, which gets about 35 mpg in the city, demonstrate that foreign and domestic manufacturers can produce smarter engines, more efficient transmissions, and other design improvements to make substantial gains in fuel economy.

Despite the advances in technology, average fuel economy is at a 24-year low of 20.8 mpg for model year 2004 cars and light trucks – six percent lower than the peak value of 22.1 mpg achieved in 1987 and 1988.³⁸

Several studies have demonstrated the economic and environmental benefits of increasing the fuel economy of cars and light trucks. The Union of Concerned Scientists (UCS) estimated the effect of phasing in a 40 miles per gallon standard by 2015, finding that consumers would save a net of \$23 billion in 2015 alone. In that same year, we would cut our national oil use by 2.3 million barrels per day—nearly as much as we currently import from the Persian Gulf—and we would reduce emissions of global warming pollution from cars and trucks by 106 million metric tons of carbon.³⁹

Similarly, if President Bush had picked up a pen in 2001 and begun phasing in a 40 mpg fuel economy standard, the U.S. would be consuming 350,000 barrels of oil less per day in 2005. This is more than half our current imports from Iraq. In addition, consumers would be saving more than \$5 billion at the pump this year, equivalent to \$300 per new vehicle. At the same time, the U.S. would be offsetting 23.9 million tons of carbon dioxide, the primary gas responsible for global warming. This is equivalent of removing four million average vehicles from the roads.⁴⁰

The Bush administration or the U.S. Congress should immediately begin phasing in a 40 mpg fleetwide fuel economy standard.

ELIMINATE FINANCIAL INCENTIVES FOR GAS GUZZLERS

According to the Union of Concerned Scientists (UCS), a flawed U.S. tax code actually provides financial incentives for consumers to buy gas guzzlers and for carmakers to manufacture them. In a recent study, UCS found that simply closing three major loopholes in fuel economy standards and two major cracks in the tax code would reduce U.S. oil dependence by 1.5 million barrels per day in 2025 and save consumers more than \$30 billion.⁴¹ The “loopholes and cracks” UCS identified include:

The non-passenger loophole (or “truck loophole”): This loophole allows the manufacturers to classify minivans, SUVs, station wagons and some cars as non-passenger vehicles. Thus, they can meet the requirements of a lower fuel economy standard. Congress or NHTSA must revise the definition of a non-passenger vehicle so that these passenger vehicles are classified as such.

The 8,500-pound loophole: This loophole exempts the largest pickups, vans, and SUVs, such as the Hummer H2, from fuel economy standards entirely. NHTSA must include these vehicles in the fuel economy program.

The dual-fuel loophole: This loophole provides car manufacturers extra credit toward meeting fuel economy standards in exchange for manufacturing vehicles that can run on alternative fuels. However, most of these vehicles never do. Congress should eliminate this program or create a program that ties credits more directly to actual alternative fuel use.

The luxury SUV tax loophole: This loophole allows small business owners, regardless of their business uses, to receive higher tax breaks for large luxury vehicles rather than small trucks or

cars. Congress needs to create a limit on tax breaks for large trucks and update the amount for smaller ones.

The gas-guzzler loophole: This loophole exempts SUVs, minivans, and pickups from paying a tax on excessive fuel use. Congress should enact a provision that requires trucks that get less than 17.5 mpg to pay progressively higher taxes based on the amount that they consume.

Solution #2: Provide Consumers with Short-Term Relief and Long-Term Solutions

The looming threat of peak oil and the inadequate response of oil markets to the current crisis provide compelling reasons for Congress to take immediate action to end the current transfer of wealth resulting from high oil prices and help transition consumers to a less oil dependent economy. To this end, we propose repealing all existing tax breaks for the oil and gas industry and instituting a windfall profits tax. With this revenue, we can provide incentives for consumers to buy more fuel efficient vehicles, invest in mass transit, and provide weatherization assistance to low-income families.

REPEAL AND SHIFT ALL EXISTING OIL & GAS TAX BREAKS

Although oil companies have recorded more than \$250 billion in profits since 2001,⁴² the oil and gas industry continues to receive billions of dollars in tax breaks from the federal government. Even before the energy bill was enacted in August, the oil and gas industry already enjoyed \$2 billion in tax breaks each year.⁴³ Under current law, the oil and gas industry would receive \$10.7 billion in tax breaks between 2005 and 2009. Congress should immediately repeal all existing tax breaks for the oil and gas industry and shift these incentives toward conservation solutions that will help consumers.

Below is a brief description and cost estimate (over five years) for each of the existing tax breaks for the oil and gas industry that Congress should eliminate.

Expensing of Exploration and Development Costs (\$2.4 billion)

Provisions in the tax code allow integrated oil and gas companies such as ExxonMobil and ChevronTexaco to immediately expense 70 percent of their intangible drilling costs (IDCs). The other 30 percent must be amortized over five years. IDCs are defined as the cost of wages, fuel, repairs to drilling equipment, materials, hauling, and supplies. Although these activities are necessary for developing a well and should be treated as capital costs, the federal government effectively allows companies to write off a significant portion of their expenses.

Excess of Percentage over Cost Depletion (\$2.8 billion)

Under existing law, oil and gas companies can deduct or write off capital investments. The write-off is based on the theory that a well has declining value and therefore an operator should be allowed to deduct a portion of the cost that was originally invested in the well. However, the structure of the tax credit is such that in many cases deductions exceed the amount the operator invested in the first place to acquire and develop the oil reserve. Companies that drill for oil and gas can deduct 15 percent of their gross income or sales revenue. Percentage depletion is not available to large integrated oil companies but is available for independent producers and royalty owners.

Tax Credit for Enhanced Oil Recovery Costs (\$1.5 billion)

Oil companies can qualify for a 15 percent income tax credit for the costs of recovering domestic oil as long as they use qualified “enhanced oil recovery” methods. Qualifying methods involve injecting fluids, gases and other chemicals into the oil reservoir, or using heat to extract oil that is too viscous to be extracted by conventional techniques. Costs covered by the tax credit include the costs of equipment, labor, supplies, repairs, and injectants.

Tax Credit for Production of Non-Conventional Fuels (\$4 billion)

In response to the oil crisis of the 1970s, Congress established a tax credit for the production of non-conventional fuels. The provision, which applies to coalbed methane, Devonian shale, tar sands and other so-called “non-conventional fuels,” currently provides a credit of more than \$6.40 per barrel of oil equivalent. Energy sources such as coalbed methane have proven to be incredibly lucrative even without the tax credit.

ESTABLISH A WINDFALL PROFITS TAX

Since 2001, as oil and gasoline prices have soared, the top five oil companies have earned record profits, totaling \$254 billion. ExxonMobil has earned \$89 billion since 2001; Shell almost \$61 billion; BP \$53 billion; ChevronTexaco \$31 billion; and ConocoPhillips \$20 billion.⁴⁴

These profits are not the result of any significant new investments by the oil industry. Rather, they are almost exclusively the result of rising crude oil prices and refinery margins. As such, the record profits enjoyed by oil companies have been nothing more than a significant transfer of wealth from average Americans—dependent on oil—to large companies that control oil production and refining capacity.

Congress should immediately enact a windfall profits tax, retroactive to the beginning of 2005, on domestically-produced crude oil to recoup a portion of the industry’s record profits. The windfall profit tax would only apply when the price of crude oil exceeds \$40 per barrel. Integrated oil producers would pay a 50 percent tax on oil revenue above this threshold; independent producers, which account for 40 percent of the nation’s supply of oil, would be taxed at the lower rate of 25 percent. In other words, when the price of oil is \$66 per barrel, integrated oil producers would pay a 50 percent tax on the \$26 windfall for each barrel of oil produced domestically. When oil prices hovered around \$40 per barrel in 2004, the oil industry enjoyed record profits; as such, oil companies could continue to operate profitably while the federal government can help consumers in the short and long term.

How much would this windfall profits tax generate?

Although the revenue raised by the windfall profit tax will fluctuate with the price of crude oil, we can estimate how much revenue would be raised under a certain set of assumptions.

According to the Energy Information Administration (EIA), the U.S. produced 8.7 million barrels of oil each day in 2004.⁴⁵ Since independent oil companies produce 40 percent of the national supply, approximately 5.2 million barrels of oil produced each day would be subject to the 50 percent windfall tax, while 3.5 million barrels would be subject to the 25 percent tax rate. According to EIA, the annual average price of crude oil in 2004 was \$41/barrel.⁴⁶

For 2004, the windfall profit tax would have raised \$3.5 million each day and nearly \$1.3 billion for the year. For 2005, EIA has projected that the annual average price of crude oil will be nearly \$59/barrel (\$58.77).⁴⁷ If we assume that production remains constant, the windfall profit tax in 2005 would raise \$66 million each day and \$24 billion for the year (Table 1).

Table 1. Potential Revenue Generated from a Windfall Profits Tax on Oil Companies

2004					
	U.S. Oil Production in 2004 (mbd)	Windfall Profit Tax Rate	Avg. Annual Price of Crude in 2004 (\$/barrel)	Windfall Profits (\$/barrel)	Annual Revenue from Windfall Profit
Production by Integrated Oil Companies	5,200,000	0.5	\$41	\$1	\$949,000,000
Production by Independent Producers	3,500,000	0.25	\$41	\$1	\$319,375,000
Total	8,700,000				\$1,268,375,000

2005					
	U.S. Oil Production in 2004 (mbd)	Windfall Profit Tax Rate	Avg. Annual Price of Crude in 2005 (\$/barrel)	Windfall Profits (\$/barrel)	Annual Revenue from Windfall Profit
Production by Integrated Oil Companies	5,200,000	0.5	\$59	\$19	\$18,031,000,000
Production by Independent Producers	3,500,000	0.25	\$59	\$19	\$6,068,125,000
Total	8,700,000				\$24,099,125,000

USE THE MONEY TO HELP CONSUMERS AND SAVE OIL

The combination of repealing existing oil and gas federal tax breaks and applying a windfall profit tax would generate significant revenue that would enable Congress to assist consumers and reduce America's dependence on oil.

As discussed above, cutting existing oil and gas tax breaks would free up an average of \$2 billion each year; instituting a windfall profits tax on the oil industry would generate \$24 billion in 2005. In total, these two policies would generate approximately \$26 billion in 2005.

This revenue would afford policy-makers with several opportunities to help consumers deal with rising gasoline prices and cut oil demand. With world oil supplies tightening, Congress should use a significant portion of the revenue to implement long-term solutions that will pull America out of its downward spiral of dependence. Responses that focus solely on short-term assistance will continue to leave consumers vulnerable to future price shocks.

Furthermore, Congress should *not* use the revenues generated under this proposal incentives to increase supply. In an era of increasingly strained global capacity to produce oil, supply-side incentives will do nothing to solve the long-term problem of our over-dependence on oil. In addition, providing further incentives to increase supply would simply transfer even more money to the industries that are already enjoying record profits. As President Bush himself has stated, "we don't need tax incentives to encourage exploration when you got price driving

exploration.”⁴⁸ Instead of focusing on providing the oil industry with additional benefits, Congress and the Bush administration should seize the opportunity and parlay the industry’s record oil industry profits into a dramatic reduction in our oil consumption.

Below are three primary suggestions for how Congress could apportion this money.

Option #1: Allow more consumers to claim a higher tax credit for buying a fuel efficient vehicle

Incentives play a key role in getting Americans to purchase advanced technology vehicles and cars that go farther on a gallon of gasoline. The Energy Policy Act of 2005 included tax credits for new qualified fuel cell motor vehicles, hybrid motor vehicles, and alternative fuel motor vehicles. The Joint Committee on Taxation estimates that these tax credits will cost \$874 million over the next 10 years.

Congress should use a portion of the revenue generated from the windfall profits tax and from eliminating oil industry tax breaks to increase consumer incentives to purchase more fuel efficient cars. Specifically, Congress should:

- double the tax credit available to consumers purchasing more fuel efficient cars;
- remove all restrictions on the number of fuel-efficient cars eligible for the credit;
- expand the credit so that it applies to all vehicles that meet the credit’s fuel economy criteria, regardless of the technology utilized.

Currently, the incentives program caps the number of cars for which consumers can claim a credit at 60,000 vehicles per automaker between now and 2010. The credit phases out over the course of five financial quarters once a car manufacturer sells 60,000 cars that qualify for the credit. This penalizes car companies that are on the forefront of manufacturing fuel-efficient vehicles. For example, Toyota is projected to sell 60,000 cars within six months, Honda in two years, and Ford in three years or less, while GM may experience no restriction from this cap.⁴⁹ Congress should remove the cap and allow consumers to determine the number of credits claimed.

Under the credit system, consumers will receive \$400 for every 25 percent improvement in efficiency above the baseline average fuel economy, up to a maximum of 250 percent. In other words, consumers purchasing a vehicle that is 50 percent more efficient will receive an \$800 tax credit. A consumer purchasing the Toyota Prius is estimated to receive a credit of \$3,150.⁵⁰ Congress should use the revenues from the windfall profit tax to double this credit to \$6,300 so that cars are receiving \$800 for every 25 percent improvement over the baseline fuel economy.

As shown in Table 2, for every \$2 billion allocated from the windfall profits to this credit, approximately 318,000 consumers could claim a \$6,300 tax credit for purchasing more fuel efficient cars.

While raising the credit and eliminating the cap, Congress also should repeal the Energy Policy Act’s so-called “conservation credit.” The conservation credit is based on the estimated lifetime fuel savings of a qualifying vehicle compared with a similar 2002 model year vehicle. Since this credit does not specify fuel economy standards, consumers driving gas guzzlers can

qualify for and claim the credit. Congress should not be rewarding consumers for purchasing gas-guzzling SUVs that do not increase the overall fleet’s average fuel efficiency.

Table 2. Using Windfall Profits to Fund Tax Credits for More Fuel-Efficient Cars

Revenue from Windfall Profits	Number of Cars Qualifying for \$6,300 Tax Credit
\$2,000,000,000	317,500
\$4,000,000,000	635,000
\$6,000,000,000	952,000

Alternative Motor Vehicles Currently Qualifying for the Tax Credit

Under the energy bill passed in August only four types of vehicles qualify for the consumer tax credit. Congress should expand the credit so that it applies to all vehicles that meet the tax credit’s fuel economy criteria, regardless of the technology utilized. For example, several model year 2005 vehicles could qualify under this expanded tax credit, such as the Honda Civic, Nissan Sentra, Scion xA, and Dodge Neon.⁵¹

Listed below are the only categories of vehicles that are currently eligible for the credit.

Fuel-Cell Vehicle: Motor vehicle that is propelled by power derived from one or more cells that convert chemical energy directly into electricity by combining oxygen with hydrogen fuel, which is stored on board the vehicle or may not require reformation to prior use.⁵² Fuel cell vehicles are propelled by electric motors that are fueled by hydrogen or hydrogen-rich fuels.

Hybrid Vehicle: Vehicle that draws propulsion energy from onboard sources of stored energy, which include both an internal combustion engine or heat engine using combustible fuel and a rechargeable energy storage system.

Alternative-Fuel Vehicle: Includes flex-fuel vehicles, bi-fuel vehicles, and electric vehicles. These vehicles use alternative fuels such as compressed natural gas, liquefied natural gas, liquefied petroleum gas, hydrogen, and any liquid fuel that is at least 85% methanol. In order to qualify as an alternative fuel vehicle, the vehicle must operate on qualifying alternative fuel and be incapable of operating on gasoline or diesel.

Lean Burn Vehicle: Generally uses a lean-burn diesel engine.

Option #2: Increase funding for public transportation

One of the major reasons that the U.S. remains overly dependent on oil is the federal government's failure to make significant investments in public transportation. For every \$4 that the federal government spends on highways, only \$1 is invested in mass transit. This imbalance has left Americans with few transportation options and has directly resulted in an increase in vehicle miles traveled. By making significant new investments in public transportation, the federal government could dramatically decrease our dependence on oil while providing consumers with cheaper transportation alternatives.

For every passenger mile traveled, public transportation uses about 50 percent of the fuel consumed by cars and about 65 percent less than used by sport utility vehicles and light trucks.⁵³ If, however, the federal government increased investment in public transportation so that Americans were using it at the same rate as Europeans—for roughly 10 percent of our daily travel needs—the U.S. would reduce its dependence on imported oil by more than 40 percent, or nearly the amount we import from Saudi Arabia each year.⁵⁴

Congress should use a portion of the revenues generated from the windfall profits tax and from repealing existing oil tax breaks to increase investment in public transportation and to provide additional support to existing transit systems. For example, diverting \$8 billion of the revenue generated each year to public transportation would effectively double the federal government's investment in mass transit. The U.S. currently contains 996 miles of light rail.⁵⁵ As shown in Table 3, \$4 billion would provide sufficient funding to build more than 100 miles of new light rail service. With just \$8 billion, the federal government could build more than 200 miles of light rail—resulting in a 20 percent increase in light rail infrastructure.

Table 3. Using Windfall Profits to Boost Funding for New Light Rail⁵⁶

Revenue from Windfall Profits	Miles of Light Rail That Could Be Built
\$2,000,000,000	50.6
\$4,000,000,000	101.3
\$6,000,000,000	151.9
\$8,000,000,000	202.5

To support current users of public transportation, the federal government could use a portion of the profits from the windfall profits tax and from eliminating the oil tax breaks to reduce or suspend fares on existing transit systems. As shown in Table 4, by investing \$8 billion to support existing fares the federal government could afford to allow nearly everyone who rode mass transit in 2003 to ride for free. Similarly, \$16 billion would enable almost everyone who rode mass transit in 2003—and a friend—to ride for free.

Table 4. Using Windfall Profits to Reduce User Costs of Public Transportation⁵⁷

Revenue from Windfall Profits	Percentage of Riders in 2003 That Could Ride for Free
\$4,000,000,000	47
\$8,000,000,000	95
\$12,000,000,000	142
\$16,000,000,000	189

Option #3: Increase funding for the Low Income Home Energy Assistance Program (LIHEAP)

This winter, the price of heating and powering our homes and businesses promises to be higher than ever before. Even before Hurricane Katrina hit, booming demand for natural gas had caused prices to steadily climb; the hurricane caused them to skyrocket. In mid-September, natural gas futures reached \$12.70, the highest since 1990.⁵⁸

As a result, the U.S. Department of Energy predicts that Northeast homeowners will pay a third more to heat their homes with oil this winter, and that Midwest homeowners will pay 71 percent more to heat their homes with natural gas.⁵⁹ And that's compared to last year's already-high prices. A colder-than-predicted winter or slower-than-expected recovery from this year's hurricanes could make these projections even worse for consumers. Expenditure increases for natural gas are expected to be particularly strong in parts of the Midwest (Ohio, Indiana, Illinois, Michigan and Wisconsin) because of expected higher heating-related demand in comparison to the relatively mild conditions seen last year.⁶⁰

The Low Income Home Energy Assistance Program (LIHEAP) is a federally funded program that helps low-income households, particularly those with the lowest income, to meet their immediate home energy needs. The program provides both immediate bill payment assistance and weatherization upgrades, which provide consumers with long-term savings on their energy bills.

The FY2005 budget allotted \$2 billion for the LIHEAP program, including \$1.8 billion for the block grant program and an additional \$200 million for the contingency fund.⁶¹ The contingency fund is available for use in an extreme emergency, such as high fuel prices. The LIHEAP program provides aid for more than four million families a year.⁶² Unfortunately, funding has not kept pace with need. Between 1981 and FY 2002 the number of federally eligible households increased 66 percent; however, federal fuel assistance funds increased by only 44 percent. As a result, the percentage of federally eligible households assisted declined sharply from 36 percent in 1981 to 13 percent in FY 2002.⁶³

Congress could use a portion of the revenue generated from the windfall profits tax and from eliminating oil industry tax breaks to increase funding for LIHEAP and help those most likely to be hit the hardest by rising heating oil and natural gas costs. The funds could be used both to expand the number of families that receive assistance and to provide additional assistance to families that will be forced to pay more as costs rise. As shown in Table 5, an additional \$1 billion would help at least two million more families per year receive similar assistance as those currently benefiting from the program. Likewise, \$5 billion would assist 10 million more families per year.

Table 5. Using Windfall Profits to Increase Funding for LIHEAP

Revenue from Windfall Profits	Additional Households Helped/Year
\$2,000,000,000	4 million
\$3,000,000,000	6 million
\$4,000,000,000	8 million
\$5,000,000,000	10 million

Providing more money for the LIHEAP program would offer low income families help in the short-term. In the long term, however, this will not protect low income families from spikes in home heating and cooling costs.

Rebates for Consumers

Congress also could utilize the revenue generated to provide consumers with an immediate financial rebate. For example, each American who filed an income tax return could receive a rebate in the mail. With 127 million Americans filing tax returns,⁶⁴ \$10 billion in revenue from the windfall profits tax would enable each person to receive a consumer rebate of \$79.

That said, we do not support any proposal that would use all of the revenue generated to assist consumers in the short-term, while ignoring the systemic, long-term problem of America's oil dependence. Simply returning the industry's windfall profits to consumers would leave them vulnerable to future price shocks and result in consumers paying more to oil companies in the years to come. The federal approach must provide consumers with long-term solutions that reduce our dependence on petroleum.

Small Changes Can Make a Big Difference: Reducing Oil Demand in the Short Term

In order to make America less oil-dependent and shield consumers from oil price spikes, the U.S. government needs to take immediate action to make our cars and SUVs go farther on a gallon of gasoline. In the meantime, however, federal, state and local governments can help consumers achieve modest, yet important, reductions in petroleum demand. None of the programs detailed below should be considered an adequate response to the energy challenges outlined in this paper.

- **Promoting alternatives to driving.**

Reducing single-passenger driving – particularly during peak periods – has a double energy-saving benefit, not only reducing the number of miles driven but also reducing the congested, stop-and-go driving that erodes vehicle fuel economy.

Ridesharing – either through carpooling or the use of vanpools – is one alternative that can be expanded quickly and at limited cost. Carpooling played a major role in responding to the energy crises of the 1970s, but has declined precipitously over the past two decades – in 1980, about 19.7 percent of all work trips were in carpools; by 1990, the percentage had declined to 13.4, and the figure has not rebounded since.⁶⁵

Many states and metropolitan areas offer free rideshare matching services to help commuters set up carpools and vanpools in their areas. Other ridesharing services – such as vanpools – are offered by some metropolitan transit agencies. Transit, walking, biking and other transportation alternatives can reduce oil consumption and save consumers money. Higher oil prices provide a perfect opportunity for federal, state and local governments to promote such alternatives through public and employer education efforts – or to create new ridesharing services where they do not currently exist.

- **Encouraging telecommuting.**

An estimated 28 million Americans relied on telecommuting at some point in 2001, and telecommuting even once a week can significantly reduce gasoline consumption for travel.⁶⁶ Federal, state and local governments can encourage telecommuting by providing assistance to employers. Connecticut, for example, helps employers create telecommute pilot programs, evaluate costs and benefits, and train managers and staff.⁶⁷ Government agencies can also expand their own use of telecommuting.

Consumers can do their part as well by improving fuel economy in their current driving habits. Observing posted speed limits, driving less aggressively, avoiding unnecessary idling, maintaining proper tire inflation, and conducting proper maintenance can significantly improve fuel economy. For example, vehicle fuel economy drops by approximately 17 percent for a vehicle traveling 70 miles per hour versus 55 miles per hour.⁶⁸ Along with public education campaigns, more vigorous enforcement of speed limits also could encourage more fuel-efficient driving patterns.

Conclusion

Several factors have caused oil and gasoline prices to spike in the past year. Chief among those factors is the U.S.'s role as the world's unrivaled consumer of oil. Our continued growth in oil consumption coupled with worldwide increases in demand has placed severe pressure on oil supplies globally. The rapid increase in global oil demand has bumped up against limitations in the amount of oil and gasoline the world can supply at any given time. Concurrently, global and national concentration of oil production and refining capacity has given a few countries and companies increased control over the market. As the nation's demand for oil and gasoline has continued to rise, the increased market consolidation has removed the competitive pressure on the industry to increase production or reduce prices. As a result, there has been an unprecedented transfer of wealth from average Americans to large oil companies.

Yet, while the oil industry's short-term production capacity is reason for concern, the long-term outlook is worse. As oil consumption continues to increase—as is predicted under current policies—global supplies of oil will tighten further. Indeed, the long-term limits on oil resources underscore the important ways in which oil does not operate like other commodities, leaving consumers increasingly vulnerable to future price spikes.

With the oil industry incapable of responding to the current surge in demand and consumers left without any solutions in sight, the federal government must act immediately to address this problem. Solving the nation's oil crisis will require aggressive action on the part of the U.S. government to reduce demand for petroleum. Congress and the Bush administration should make our cars and light trucks go farther on a gallon of gasoline and use some of the oil industry's windfall profits to help consumers transition to a less oil-dependent economy.

America's energy problems are not going to go away on their own. The U.S. government needs to step in and help move America toward a more efficient, less oil dependent, energy future while protecting consumers' wallets, rather than oil companies' profits.

End Notes

¹ Energy Information Administration (EIA), Retail Gasoline Historical Prices, accessed September 25, 2005 at <http://tonto.eia.doe.gov/oog/ftparea/wogirs/xls/pswrgvwreg.xls>. Data through 2005 current as of September 19, 2005.

² “Less than 5 percent” based on U.S. Census Bureau, U.S. and World Population Clocks, downloaded from www.census.gov/main/www/popclock.html, 30 June 2005.

³ Based on BP, *BP Statistical Review of World Energy 2005*, 14 June 2005 and population estimates from U.S. Central Intelligence Agency, CIA World Factbook, downloaded from www.cia.gov/cia/publications/factbook/, 24 June 2005.

⁴ BP, *BP Statistical Review of World Energy 2005*, 14 June 2005.

⁵ BP, *BP Statistical Review of World Energy 2005*, 14 June 2005.

⁶ U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 2003*, 7 September 2004.

⁷ BP, *BP Statistical Review of World Energy 2005*, 14 June 2005.

⁸ U.S. Department of Energy, Energy Information Administration, *Petroleum Quick Stats, Data for 2003*, downloaded from www.eia.doe.gov/neic/quickfacts/quickoil.html, 5 May 2005.

⁹ U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 2003*, September 7, 2003.

¹⁰ U.S. Environmental Protection Agency, *Light-Duty Automotive Technology and Fuel Economy Trends, 1975 Through 2004*, April 2004.

¹¹ Based on vehicle travel estimates from U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* series of reports, Summary through 1995 and 2003 edition; and population estimates from U.S. Census Bureau, *Intercensal Estimates of the Total Resident Population of States:1980 to 1990*, August 1996 and U.S. Census Bureau, *Annual Estimates of Population Change for the United States and States and for Puerto Rico and Rankings: July 1, 2002 to July 1, 2003*, January 2005.

¹² Based on vehicle travel estimates from U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* series of reports, Summary through 1995 and 2003 edition; and population estimates from U.S. Census Bureau, *Intercensal Estimates of the Total Resident Population of States:1980 to 1990*, August 1996 and U.S. Census Bureau, *Annual Estimates of Population Change for the United States and States and for Puerto Rico and Rankings: July 1, 2002 to July 1, 2003*, January 2005.

¹³ Guy Caruso, Administrator, U.S. Energy Information Administration, *U.S. Energy Markets: Short-Term and Mid-Term*, PowerPoint presentation to Louisiana State University Center for Energy Studies, 13 April 2005.

¹⁴ Robert Pirog, “*Oil Industry Profits: Analysis of Recent Performance*,” Congressional Research Service, August 4, 2005.

¹⁵ Steve Everly, “The Big Squeeze by Big Oil,” *Kansas City Star*, June 27, 2005.

¹⁶ Steve Everly, “The Big Squeeze by Big Oil,” *Kansas City Star*, June 27, 2005.

¹⁷ L.F. Ivanhoe, M. King Hubbert Center for Petroleum Supply Studies, *Hubbert Center Newsletter*, “World Oil Supplies—Production, Reserves and EOR,” January 2000.

¹⁸ U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*, May 2005, Table 11.3.

¹⁹ Colin Campbell, “Industry Urged to Watch for Regular Oil Production Peaks, Depletion Signals,” *Oil & Gas Journal*, 14 July 2003.

²⁰ John Vidal, “The End of Oil is Closer than You Think,” *The Guardian*, 21 April 2005.

²¹ BP, *BP Statistical Review of World Energy 2005*, 14 June 2005.

²² Beth Gardiner, “Shell Cuts Oil Reserves for Fourth Time,” *Seattle Times*, 25 May 2004.

²³ John Vidal, “The End of Oil is Closer than You Think,” *The Guardian*, 21 April 2005.

²⁴ Robert L. Hirsch, Roger Bezdek, Robert Wendling, Peaking of World Oil Production: Impacts, Mitigation & Risk Management, February 2005

²⁵ ExxonMobil, *ExxonMobil's 2004 Energy Outlook*, downloaded from www2.exxonmobil.com/Corporate/Citizenship/Corp_citizenship_energy_outlook.asp, 8 June 2005.

²⁶ U.S. Department of Energy, Energy Information Administration, *Country Analysis Briefs: OPEC*, 26 November 2004.

²⁷ Public Citizen, *Mergers, Manipulation and Mirages: How Oil Companies Keep Gasoline Prices High, and Why the Energy Bill Doesn't Help*, March 2004.

²⁸ Public Citizen, *Mergers, Manipulation and Mirages: How Oil Companies Keep Gasoline Prices High, and Why the Energy Bill Doesn't Help*, March 2004.

²⁹ Jad Mouawad, “No New Refineries in 29 Years? There Might Well Be a Reason,” *New York Times*, 9 May 2005..

³⁰ Public Citizen, *Mergers, Manipulation and Mirages: How Oil Companies Keep Gasoline Prices High, and Why the Energy Bill Doesn't Help*, March 2004.

³¹ John Schoen, "Oil Prices Include a Growing Risk Premium," *MSNBC*, 12 May 2004.

³² MMS, "Hurricane Katrina Damage to OCS Facilities in the Gulf of Mexico," accessed September 19, 2005 at <http://www.mms.gov/ooc/Assets/Katrina091605/damage.pdf>.

³³ MMS, "MMS Working to Restore Gulf of Mexico Energy Resources," press release, September 16, 2005, accessed September 19, 2005 at <http://www.mms.gov/ooc/press/2005/press0916a.htm>.

³⁴ Light truck fuel economy standards have since been increased to 21 mpg.

³⁵ National Research Council, *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards*, 2002.

³⁶ The CAFE law recognizes that the only way to reduce our dependence on foreign oil is to reduce oil demand. Thus it mandates that NHTSA continually review and increase CAFE standards to the maximum level technologically feasible:

At least 18 months before the beginning of each model year, the Secretary *shall* prescribe by regulation average fuel economy standards for automobiles (except passenger automobiles) manufactured by a manufacturer in the model year (emphasis added). Each standard *shall* be the maximum feasible average fuel economy level that the Secretary decides the manufacturers can achieve in that model year (emphasis added). (49 U.S.C. 32902)

The statute also permits the Secretary to increase CAFE standards for passenger automobiles above 27.5 miles per gallon subject to disapproval by either House of Congress (49 U.S.C. 32902(2)). The United States Supreme Court has since held that legislative action by one House is invalid. (*Immigration and Naturalization Service v. Chadha*, 103 S.Ct. 2764 (1983)). Any legislative action must be passed by both Houses of Congress and presented to the President for signature in order to be legitimate (*Immigration and Naturalization Service v. Chadha*, 103 S.Ct. 2764 (1983)). Therefore, the section of the statute subjecting an increase in passenger automobile CAFE standards to approval by one House of Congress is invalid. Because the remaining portions of the statute are fully operative, NHTSA can honor the intent and purpose of the law by increasing CAFE to 40 mpg.

³⁷ National Research Council, *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards*, 2002.

³⁸ Karl H. Hellman and Robert M. Heavenrich, U.S. Environmental Protection Agency, "Light-Duty Automotive Technology and Fuel Economy Trends: 1975 Through 2004," Executive Summary at 2, April 2004.

³⁹ Union of Concerned Scientists, *Creating Jobs, Saving Energy and Protecting the Environment*, July 2004. Accessed September 27, 2005 at http://www.ucsusa.org/clean_vehicles/fuel_economy/jobs-energy-fuel-economy.html.

⁴⁰ U.S. PIRG Education Fund, *America Idles: President Bush's Inaction Costs Americans \$5 Billion at the Pump in 2005*, May 2005.

⁴¹ Union of Concerned Scientists, *Fuel Economy Fraud: Closing the Loopholes that Increase U.S. Oil Dependence*, August 2005.

⁴² Public Citizen, "Skyrocketing Gasoline Prices and Record Oil Company Profits: No Coincidence," accessed September 25, 2005 at http://www.citizen.org/cmep/energy_enviro_nuclear/articles.cfm?ID=13912; see also Testimony of Tyson Slocum, Research Director Public Citizen's Energy Program, Before the U.S. Senate Committee on Commerce, Science & Transportation, "Causes and Solutions for America's High Gasoline Prices," September 21, 2005.

⁴³ Joint Committee on Taxation, "Estimates of Federal Tax Expenditures for Fiscal Years 2005-2009," January 12, 2005.

⁴⁴ Public Citizen, "Skyrocketing Gasoline Prices and Record Oil Company Profits: No Coincidence," accessed September 25, 2005 at http://www.citizen.org/cmep/energy_enviro_nuclear/articles.cfm?ID=13912; see also Testimony of Tyson Slocum, Research Director Public Citizen's Energy Program, Before the U.S. Senate Committee on Commerce, Science & Transportation, "Causes and Solutions for America's High Gasoline Prices," September 21, 2005.

⁴⁵ EIA, International Petroleum Monthly, Table 1.4 World Oil Supply, accessed September 20, 2005 at <http://www.eia.doe.gov/ipm/supply.html>.

⁴⁶ EIA, *Short-Term Energy Outlook*, September 7, 2005, accessed September 20, 2005 at <http://www.eia.doe.gov/emeu/steo/pub/contents.html>.

⁴⁷ EIA, *Short-Term Energy Outlook*, September 7, 2005, accessed September 20, 2005 at <http://www.eia.doe.gov/emeu/steo/pub/contents.html>.

⁴⁸ Excerpts of President Bush's interview in the Oval Office with editors and reporters of *The Washington Times*, Washington Times, January 12, 2005, accessed September 20, 2005 at <http://www.washingtontimes.com/national/20050111-114349-9789r.htm>.

⁴⁹ Personal communication with Brendan Bell, Sierra Club, September 2005.

-
- ⁵⁰ American Council for an Energy Efficient Economy, “*Light Duty Hybrid and Diesel Vehicle Tax Credits in the Energy Bill*,” accessed September 20, 2005 at <http://www.aceee.org/transportation/hybtaxcred.htm>. Note: this analysis is based on a combination of both increased fuel efficiency and conservation. While propose that the credit be doubled for increased efficiency and the conservation credit be repealed, we used the simple calculation here of doubling the value of the current credit.
- ⁵¹ U.S. Department of Energy and U.S. EPA, 2005 Fuel Economy Guide, accessed September 27, 2005 at <http://www.fueleconomy.gov/feg/FEG2005.pdf>.
- ⁵² Energy Policy Tax Incentives Act of 2005, June 16, 2005.
- ⁵³ Robert Shapiro, Kevin Hassett, and Arnold Frank for the American Public Transportation Association, *Conserving Energy and Preserving the Environment: The Role of Public Transportation*, July 2002.
- ⁵⁴ Robert Shapiro, Kevin Hassett, and Arnold Frank for the American Public Transportation Association, *Conserving Energy and Preserving the Environment: The Role of Public Transportation*, July 2002.
- ⁵⁵ American Public Transportation Association, “Light Rail Transit Agencies Mileage and Station Data,” accessed September 27, 2005 at <http://www.apta.com/research/stats/rail/lrmiles.cfm>.
- ⁵⁶ The analysis is based on the Government Accountability Office’s calculation that one mile of light rail costs on average \$35 million (2000\$), or \$39.5 million in 2005 dollars. See GAO, “*Mass Transit: Bus Rapid Transit Shows Promise*,” September, 2001, accessed September 25, 2005 at <http://www.gao.gov/new.items/d01984.pdf>.
- ⁵⁷ The analysis is based on figures from the National Transit Database showing that in 2003 fare box recovery for operating expenses totaled \$8.45 billion. Federal Transit Administration, *2003 National Transit Summary and Trends Report*, accessed September 25, 2005 at www.ntdprogram.com/NTD/NTST/2003/HTMLFiles/2003%20National%20Transit%20Summaries%20and%20Trends.htm.
- ⁵⁸ “Crude Oil, Gasoline Surge as Storm Heads for the Gulf of Mexico,” *Bloomberg*, September 19, 2005.
- ⁵⁹ EIA, *Short-Term Energy Outlook*, September 7, 2005, accessed September 20, 2005 at <http://www.eia.doe.gov/emeu/steo/pub/contents.html>.
- ⁶⁰ EIA, *Short-Term Energy Outlook*, September 7, 2005, accessed September 20, 2005 at <http://www.eia.doe.gov/emeu/steo/pub/contents.html>.
- ⁶¹ Department of Health and Human Services, *FY2005 Budget in Brief: Administration for Children and Families*, 1 March 2005. <http://www.hhs.gov/budget/05budget/acf.html>.
- ⁶² U.S. Senate Committee on Energy and Natural Resources, “Senators Seek Release of Emergency LIHEAP Funding,” press release, February 1, 2005; David Enrich, “Mass. Lawmakers Seeking Increased Federal Heating Aid,” *State News Service*, May 15, 2003.
- ⁶³ U.S. Department of Health and Human Services, *LIHEAP Home Energy Notebook for FY 2003*, accessed September 25, 2005 at <http://www.liheap.ncat.org/pubs/energynotebook03.doc>; The Campaign for Home Energy Assistance, “The History of LIHEAP,” accessed September 25, 2005 at <http://www.liheap.org/background.html>.
- ⁶⁴ Internal Revenue Service, accessed September 25, 2005 at <http://www.irs.gov/pub/irs-soi/04ifss19.txt>.
- ⁶⁵ Erik Ferguson, Recent Nationwide Declines in Carpooling, 1990 *Nationwide Personal Transportation Survey: Travel Mode Special Reports*, US Department of Transportation Federal Highway Administration, December 1994, Chapter 2. “Has not rebounded since” from Pat S. Hu, Timothy R. Reuscher, U.S. Department of Transportation, Federal Highway Administration, *Summary of Travel Trends: 2001 National Household Travel Survey*, December 2004.
- ⁶⁶ “28 million Americans” from International Telework Association and Council, *Telework Facts and Figures*, downloaded from www.telecommute.org/resources/abouttelework.htm, 24 May 2005.
- ⁶⁷ Telecommute Connecticut, *Telecommute CT Services*, downloaded from www.telecommutect.com/services/default.asp, 24 May 2005.
- ⁶⁸ U.S. Department of Energy, Energy Efficiency and Renewable Energy, FreedomCar and Vehicle Technologies Program, *Fact of the Week: Speed Versus Fuel Economy: Slow Down to Get More Miles to the Gallon*, downloaded from www.eere.energy.gov/vehiclesandfuels/facts/favorites/fcvt_fotw222.shtml, 29 June 2005.