



# A CASE STUDY: RISING ENERGY PRICES

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In just five short years, gas prices have soared from just over a dollar per gallon to an average of \$3.15 per gallon this summer. Families across the country are surely feeling the impacts of this “energy crisis.” Energy related issues are popping up everywhere ranked as top priorities across our nation. Each day, we are bombarded by startling energy related statistics and figures that remind us that the current energy path we are walking down is not sustainable. We see energy sources dwindling and there is an anxiousness to become the most efficient with what we have left. Regardless of whether some say it is a big or a small problem, the fact is that we do face inevitable consequences of our energy consumption.

This continuous trend of high energy prices warrants a thorough study to address the causes of these skyrocketing energy costs, the impact overall energy costs are having on our society, and the plan for thoroughly addressing our energy crisis. America’s challenge is to formulate a reasonable and thoughtful energy plan that balances and combines conservation incentives, production increases, and alternative energy research and development to further the equally important goals of:

- sheltering consumers from severe energy price spikes;
- preserving and protecting the environment and natural resources;
- stimulating and growing our economy; and,
- seeking a greater degree of autonomy from other nations in fulfilling our energy needs.

I have created *A Case Study: Rising Energy Prices* to address these energy questions. I look forward to hearing from you on this issue as well. I invite you to visit my website, <http://randyforbes.house.gov>, and email me with your questions and concerns regarding energy consumption in the United States. With kind personal regards, I am

Yours truly,

A handwritten signature in cursive script that reads "J. Randy Forbes".

J. Randy Forbes  
Member of Congress



# THE REALITY OF RISING ENERGY COSTS

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## A Recent History of Gas Price Increases and Their Causes

Gas prices are impacted by a number of factors, each individually placing its own pressure on our overall energy system. Some affect the price of crude oil and others affect the cost of producing and marketing gasoline, but combined, these factors greatly impact the fluctuation of gas prices that we experience on a daily basis.

**Changes in crude oil prices** - Crude oil prices are determined by worldwide supply and demand, with significant influence by the Oil Producing and Exporting countries (OPEC) as they determine how much oil to produce and sell to other countries. The more crude oil OPEC chooses to produce and release, the lower the price. Additionally, because oil is traded in a world market, events in remote areas affect the price of crude for almost everyone. In recent years, worldwide events that have impacted gas prices include:

- Decisions by the OPEC cartel to raise production quotas slowly and reluctantly after having reduced them in 2002.
- An increase in worldwide demand for oil, including unexpected demand growth in China, India, and other quickly developing nations.
- Disruptions in oil production in countries that are major exporters, including Venezuela, Iraq and Nigeria.
- A decline in the value of the U.S. dollar—the currency in which oil is traded in the world market—compared to other major currencies, particularly the Euro.
- Fears of terrorist attacks crippling the market and its resulting feelings of uncertainty regarding oil supply disruptions in Iraq and Saudi Arabia.

**Refinery imbalances** - Oil refineries are plants where crude oil is processed and refined into more useful petroleum products, such as gasoline, diesel fuel, heating oil, and kerosene. Currently, imbalances within the U.S. oil refinery industry have contributed to the steady increase in gas prices. With economic growth in the U.S., our demand for gasoline has increased greatly. However, despite the demand increase, domestic refining capacity has declined as a result of the refining industry operating with lower inventories of both crude oil and gasoline as a means of cutting costs. The side effect has been a reduced ability to meet sudden oil demands in the U.S., which leads to greater price pressure. With these domestic refining constraints, a greater proportion of gasoline demand has to be met with imported products.



**Seasonal changes** - Other outside influences, like the time of year, can have a serious impact on gas prices as well. Gas prices increase greatly during the summer and holiday seasons because American's travel increases during these times. For example, the American gas demand increases by 5% in the summer season, resulting in higher gas prices during these times.

## The Causes of Fluctuating Regional Gas Prices

Fluctuating gas prices do not depend solely on crude oil production. Gas prices naturally fluctuate regionally due to environmental programs, seasonal changes and retail competition:

**Environmental programs** - Gasoline markets within the U.S. are separated by region because of varying air quality requirements established by the state. In order to meet these varying standards, oil refineries must use different formulations, called “boutique fuels,” which cause refiners to lose flexibility in production. This, in turn, creates an increase in price pressure.

**Proximity of supply** - Americans living farther from the Gulf Coast, where half of gasoline in the U.S. is produced, tend to have higher gas prices because they are paying to cover the cost of transporting the gas from the refinery.

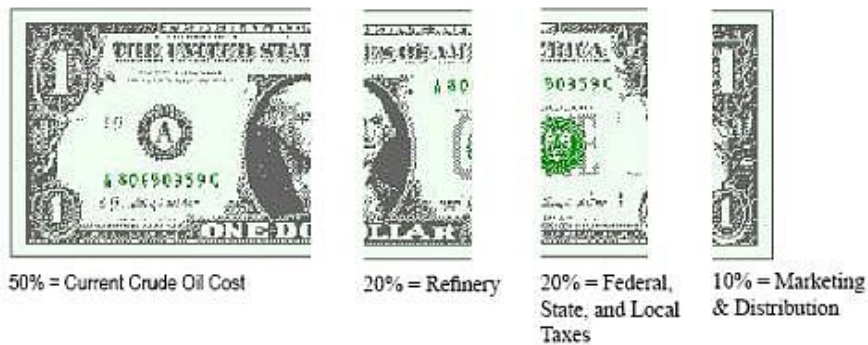
**Competition in your local market** – Local market competition varies from region to region, and gas prices will naturally reflect the amount of competition in your area. For example, more rural areas may experience high gas prices because there are fewer stations supplying gas. Likewise, an area with a number of stations will offer the most competitive prices because they are trying to offer the lowest price in an effort to draw consumers to their store.

### The Components of Retail Gas Price

Gas prices fluctuate based on where you live, but the following breakdown is a standard representation of where your money is going at the pump.

- The cost of crude oil is the largest factor in determining gasoline prices, because at least 50% of the price of gasoline is reflective of the cost of crude oil. Local gasoline prices take about seven weeks to reflect a change in crude oil prices.
- The cost to refine oil and the process to transform crude oil into gasoline makes up 20% of the total cost of gasoline.
- Local, state, and federal taxes are levied on gasoline, accounting for 20% of the total cost.
- The cost of the gas company’s advertising campaign is passed onto the consumer and accounts for about 10% of the total cost of gasoline.

### Where does each dollar go?



## THE IMPACT OF HIGH ENERGY COSTS

High energy costs have an impact on our society above and beyond the price you are paying at your local gas station; they affect our overall economy and our sense of security as consumers.



### Farming

High energy costs impact the amount of crop farmers are able to produce during the year. Because farmers use energy in the fertilization process, high energy costs are causing farmers to cut their normal production quotas. Farm fuel costs increase each year, and overall percentage spent on fuel increased almost 10% between 2000 and 2005 according to the U.S. Department of Agriculture says. In response to the decrease in production, the overall cost of food to consumers has increased. The Department of Labor states that food prices increased 2.6% between 2005 and 2006.

### Manufacturing

Manufacturers are also experiencing an increase in the amount spent on energy to produce goods. In order to make up for the increased amount spent on energy, manufacturers must pass on costs to consumers and even sometimes lower the amount they are paying workers for their labor. This drives the cost of products up and strains our economy.

### **Tourism**

Rising gas prices have an enormous impact on the tourism industry. Airlines, cruise lines, and bus lines all need fuel to operate; hotels, resorts, and restaurants need energy to heat and cool their buildings; and families traveling by car who have to pay over \$3 per gallon are beginning to limit their normal travels. Increased travel costs have made normal travel difficult, and the overall tourism industry is suffering. A decline in tourism means small cities and towns who depend on tourism to fuel their economies are suffering economically. The airline industry is struggling to keep airline travelers.

### **Individual Disposable Income**

Perhaps the most personally painful aspect of the energy crisis is the way that it is impacting individual disposable income. Rising fuel prices have placed pressure on budgets as families and individuals must readjust their spending in order to pay astronomical amounts to heat their home and drive their cars. Rising energy costs have even made it more expensive to cook family dinner on a gas stove, enjoy staying warm by the fireplace, or entertain out of the town guests for a lengthy period of time.

### **Sense of Security**

High energy costs impact our sense of security as consumers. Price gouging has become a threat to consumers, causing many consumers to wonder if they are being ripped off at the gas station. Gouging is the act of an individual station taking advantage of supply problems (real or perceived) and inflating their price to take advantage of the supply problem. Most experts agree that it is difficult for a consumer to make a definitive judgment as to whether they are a victim of price gouging. Each state has different standards as to what is considered taking “unfair advantage” of a crisis, and each state’s attorney general monitors these situations closely, but regardless, the sense of consumer security as it relates to fuel is lost.

## **WHERE I STAND ON THE ENERGY CRISIS**

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### **✓ We Must Conserve**

Energy conservation is the practice of decreasing the quantity of energy used while achieving a similar outcome of end use. As direct consumers of energy, we should conserve energy in order to reduce energy costs to ourselves, as well as to promote economic and environmental sustainability. Conserving energy, whether at the residential level, industrial level, or commercial level, can increase efficiency and maximize our savings and profits.

On a global scale, energy conservation is important to reduce our energy consumption and our energy demand. With rising energy costs, we can hope that increasing our conservation efforts may lead to lower energy costs and the reduction in the need to produce more power. The reduced energy demand can provide more flexibility in choosing the most preferred methods of energy production.

### **✓ We Must Bring on More Fuel**

If we increase our fuel supply, we will lessen the pressure on gas prices. The first step in creating more fuel is by building new oil refineries and updating existing refineries. The effects of Hurricane Katrina showed us just how stretched our oil refineries are and the importance of addressing our nation's lack of refining capacity. We haven't built a new oil refinery in the U.S. since the late 1970s, and the inability of our existing refineries' to meet fuel demands places great pressure on gasoline prices. A discussion of the current capacity of refineries, the need to upgrade refineries, and the steps needed to increase capacity to an appropriate level is essential to addressing our energy crisis.

We also must begin to look at alternative sources of fuel including biodiesel, ethanol, and hydrogen, all of which can be produced domestically. These alternative sources of fuel generally have little or no impact on the environment from a pollution perspective. Additionally, alternative sources like ethanol, which are produced by using resources such as corn or other vegetation, are renewable. In theory, we won't run out of these sources because we are continually producing vegetation in the U.S.

### ✓ We Must Release Our Dependency on Foreign Oil

We will not see a dramatic decrease in gas prices until we release our dependency on foreign sources of oil. As it is right now, we are paying gas prices that directly reflect decisions by OPEC and disruptions of oil production due to instability within supplying countries, and this dependency creates severe limitations on our national security options. Achieving energy independence will require us work together and approach the energy crisis from multiple directions—drilling within the U.S. will not provide enough oil for us to break our foreign dependency, so we must turn to a combined effort. Searching for diversified fuel sources, conserving energy on a personal level, and encouraging the use of energy efficient technology together will increase our chances of reaching energy independence.

### ✓ We Must Support Alternative Energy Research and Development

Seeking technological change through innovative research and development will allow not only allow us to become energy independent, but energy efficient. We improve energy efficiency when we improve parts of technology within a service so that it requires less energy in the process. Increasing federally funded energy research and development in our nation will increase our energy efficiency, while still allowing us some of the technological luxuries that we have become accustomed to.



To encourage the use of products that utilize new materials or technology developed through energy research and development, we should provide increased tax credits for consumers who purchase, for example, the most advanced available flexible fuel hybrid electric vehicles that are proven to dramatically reduce oil consumption. Offering incentives for energy efficient products will encourage consumers to consider those products on an increased level, and will also encourage the expansion of energy-innovated market competition.

## WHAT I AM DOING TO ADDRESS OUR ENERGY CRISIS

Appropriately addressing the energy crisis means seeing that we are covering all areas that are directly affecting it, from refinery shortages, to releasing our dependency on foreign sources of oil, to supporting alternative energy research and development. I am addressing our energy crisis in the following ways:

✓ I recently supported the **Advanced Fuels Infrastructure Research and Development Act**, which would encourage the development of markets for alternative fuels and ultra-low sulfur diesel fuel through research, development, and demonstration. This would help us diversify our fuel supply to include domestically produced alternative biobased fuels and lessen our dependence on foreign sources of oil.

✓ I am a member of **Renewable Energy and Energy Efficiency Caucus**, a group that is continually looking at the latest advancements in renewable energy, hydrogen, fuel cells, energy-efficient buildings, transportation technologies, and industrial applications in an effort to promote cutting-edge technologies that protect the environment. Offering incentives for energy efficient products will encourage consumers to consider those products on an increased level, and will also encourage the expansion of energy-innovated market competition.



- ✓ I have supported legislation that would make “price gouging” of crude oil, gas, or natural gas an offense punishable by fines or jail time, if the act occurs during an energy emergency as declared by the President. The Federal Price Gouging Prevention Act, H.R. 1252, would allow a state attorney general to pursue civil action against companies or individuals who violate this law.
- ✓ I voted in favor of legislation that would direct the Secretary of Energy to award competitive cash prizes biennially to advance the research, development, demonstration, and commercial application of hydrogen energy technologies. Through H.R. 632, the H-Prize Act of 2007, prizes would be awarded for: advancements in certain hydrogen components or systems; prototypes of hydrogen-powered vehicles or other hydrogen-based products; and transformational changes in technologies for hydrogen distribution or production.
- ✓ I voted in favor of H.R. 1716, the Green Energy Education Act of 2007, which would authorize the Secretary of Energy to contribute energy research and development funds to the National Science Foundation (NSF) for programs to support graduate education related to energy projects such as the design and construction of high performance buildings.
- ✓ I have voted in favor of legislation that would make oil-producing and exporting cartels, such as the Organization of the Petroleum Exporting Countries (OPEC), illegal under U.S. law. H.R. 2264 would prohibit foreign countries from forming cartels or other associations to affect the market, supply, price, or distribution of oil, natural gas, or other petroleum product in the United States. The Attorney General would be authorized to enforce this legislation under U.S. antitrust laws. The possibility of sovereign immunity for foreign states found in violation of this legislation would be waived.

## FOR MORE INFORMATION...

For more information on energy legislation that I have supported or for a list of valuable resources concerning energy, please visit my website <http://randyforbes.house.gov>. I would appreciate hearing your thoughts on energy issues. Please take a moment to [Email](#) me via my website, or call my Washington, D.C. office at (202) 225-6365.

