

What's Up With  
Gasoline Prices?



America's Oil and Natural Gas Industry

February 2015

For the latest report, please visit [www.api.org/gasolineprices](http://www.api.org/gasolineprices)

# Table of Contents

---

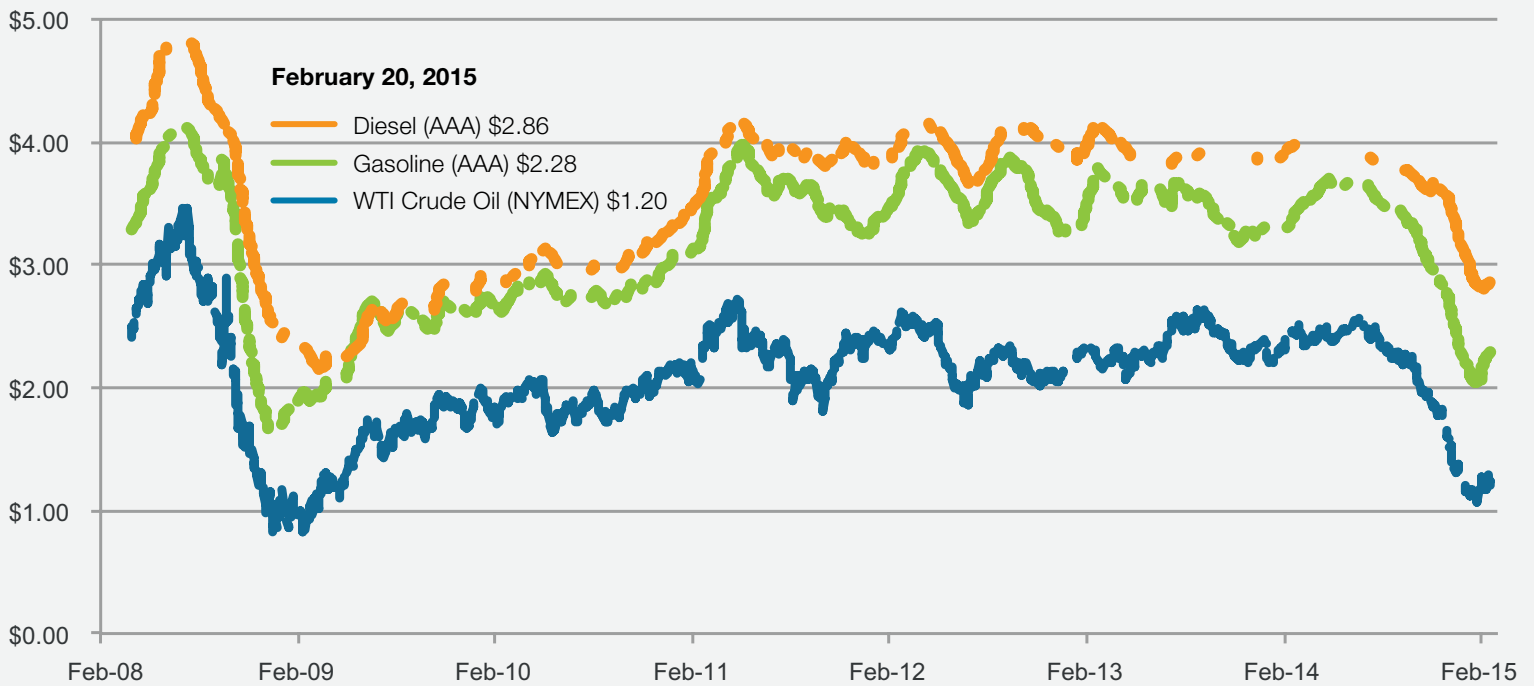


Gasoline, Diesel and Crude Oil Prices.....	Page 1
Oil Prices Relate to Many Uncertain Factors.....	Page 2
Global Oil Supply Disruptions vs. U.S. Oil Growth .....	Page 3
World Liquid Fuel Consumption.....	Page 4
Growth in World Liquid Fuel Consumption .....	Page 5
OPEC Surplus Production Capacity .....	Page 6
The Value of the Dollar Makes a Difference.....	Page 7
Accumulating Risks to the Development of Oil and Natural Gas .....	Page 8
Strategic Petroleum Reserve .....	Page 9
What Consumers Are Paying for at the Pump .....	Page 10
Gasoline Taxes by State .....	Page 11
Earnings Compared to Manufacturing.....	Page 12
Who Owns the Oil Companies .....	Page 13
EIA Price Forecast .....	Page 14
Fuel-Saving Tips for Drivers.....	Page 15

# Gasoline, Diesel and Crude Oil Prices

Changes in gasoline and diesel prices mirror changes in crude oil prices.

Gasoline, Diesel and Crude Oil Prices



Source: NYMEX (WTI crude oil) and AAA (gasoline and diesel).

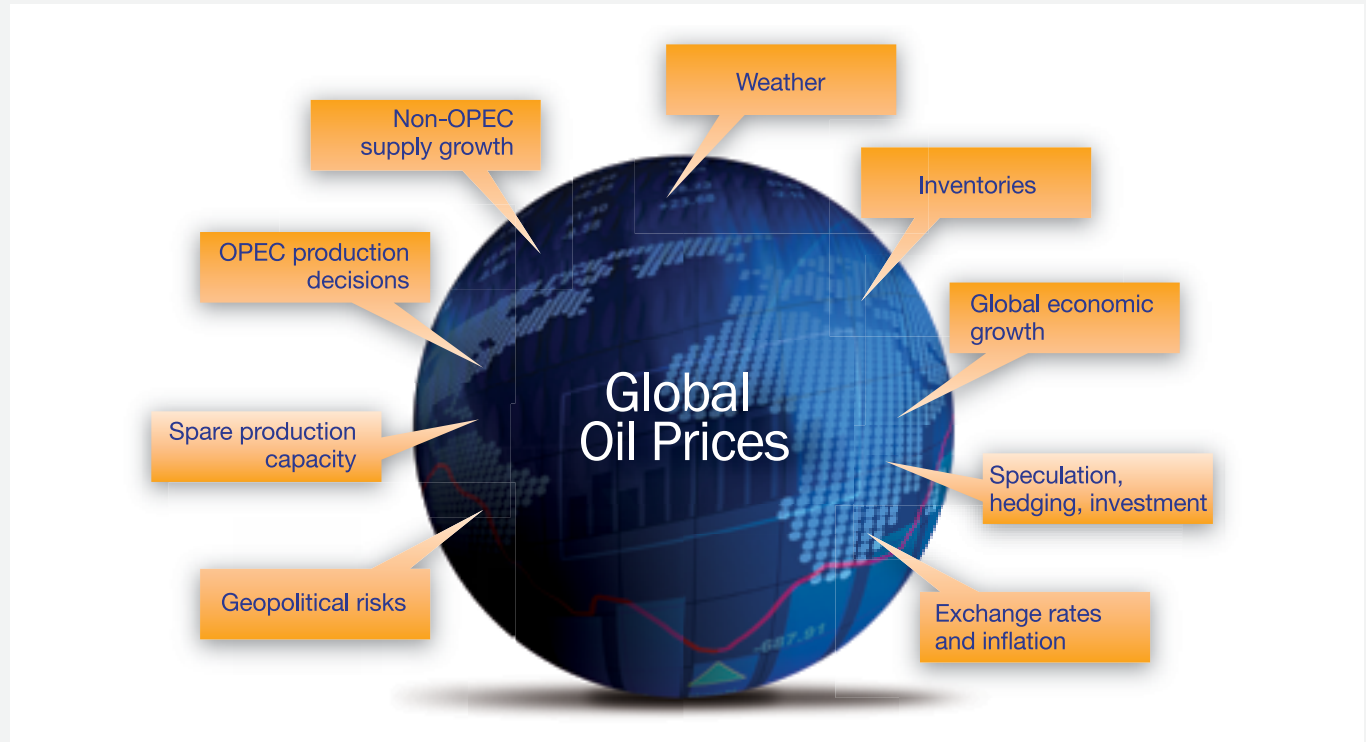
Changes in gasoline and diesel prices mirror changes in crude oil prices. Those changes are determined in the global crude oil market by the worldwide demand for and supply of crude oil. Weak economic conditions in the U.S. and around the world in 2008 and into 2009 led to less demand which helped push prices down.

With the worldwide economic recovery underway, demand is on the rise again but unrest in the Middle East and North Africa has put supplies at risk. This combination of rising demand and reduced supply helped to push prices higher over the last few years. However, the recent downturn in prices was the result of the growth in oil supplies, largely from the U.S., outpacing the growth in global demand.

# Oil Prices Relate to Many Uncertain Factors

A host of factors, many of them uncertain, affect the price of crude oil and the products made from it.

## Oil Prices Relate to Many Uncertain Factors



Source: EIA.

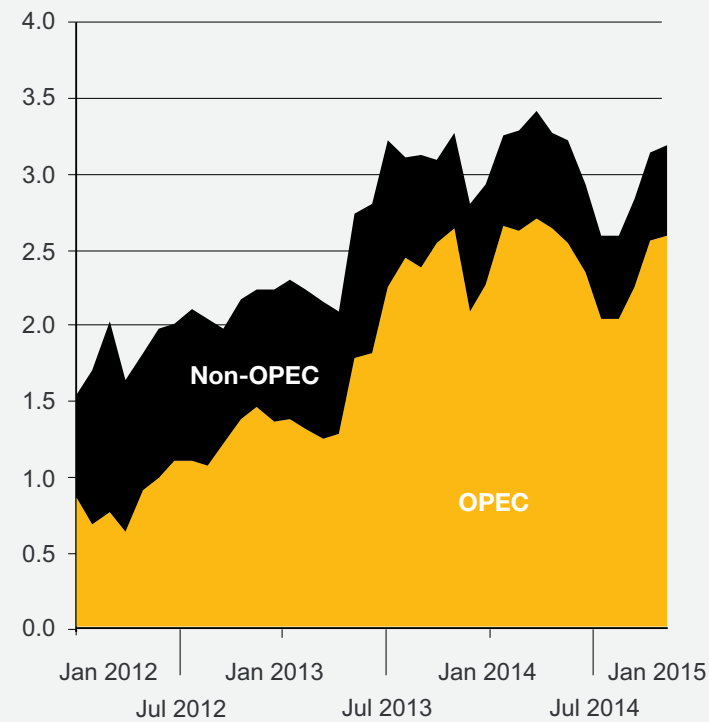
Crude oil prices are set globally through the daily interactions of thousands of buyers and sellers in both physical and futures markets, and reflect participants' knowledge and expectations of demand and supply.

In addition to economic growth and geopolitical risks, other factors, including weather events, inventories, exchange rates, investments, spare capacity, OPEC production decisions, and non-OPEC supply growth all figure into the price of crude oil.

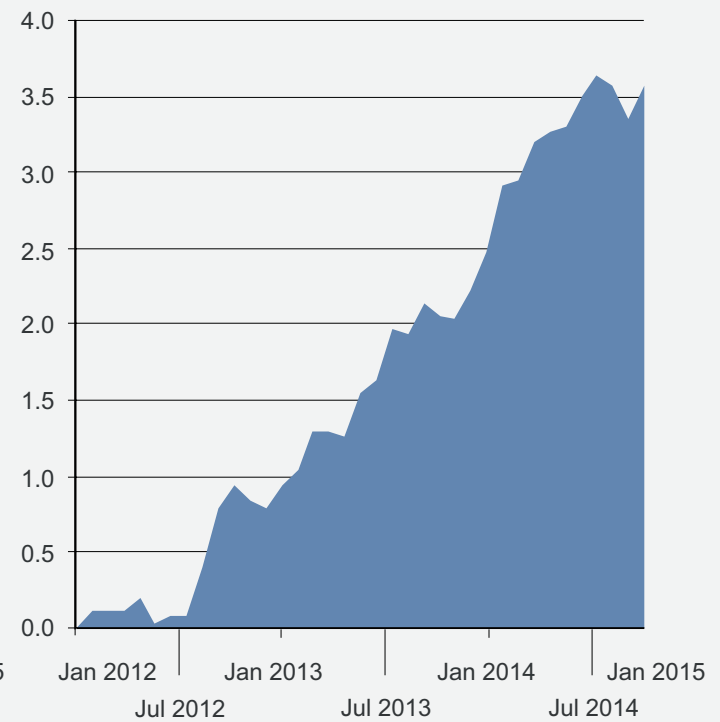
# Global Oil Supply Disruptions vs. U.S. Oil Growth

Growth in U.S. oil production has largely offset the growth in global oil supply disruptions since 2011.

Growth in Global Oil Supply Disruptions  
(mmb/d)



Growth in U.S. Oil Production\*  
(mmb/d)



Source: EIA.

\* Include hydrocarbon gas liquids, biofuels, and refinery processing gains.

Unplanned supply disruptions in the global crude oil market have grown from 1.6 million barrels a day in 2012 to peaking at 3.4 million barrels a day in May 2014, before falling to 2.6 million barrels a day by September and October, but landing back up to 3.2 million barrels a day by January 2015. According to the EIA, this is the highest level of supply disruptions since the Iraq-Kuwait War (1990-91) when prices spiked to new highs.<sup>1</sup>

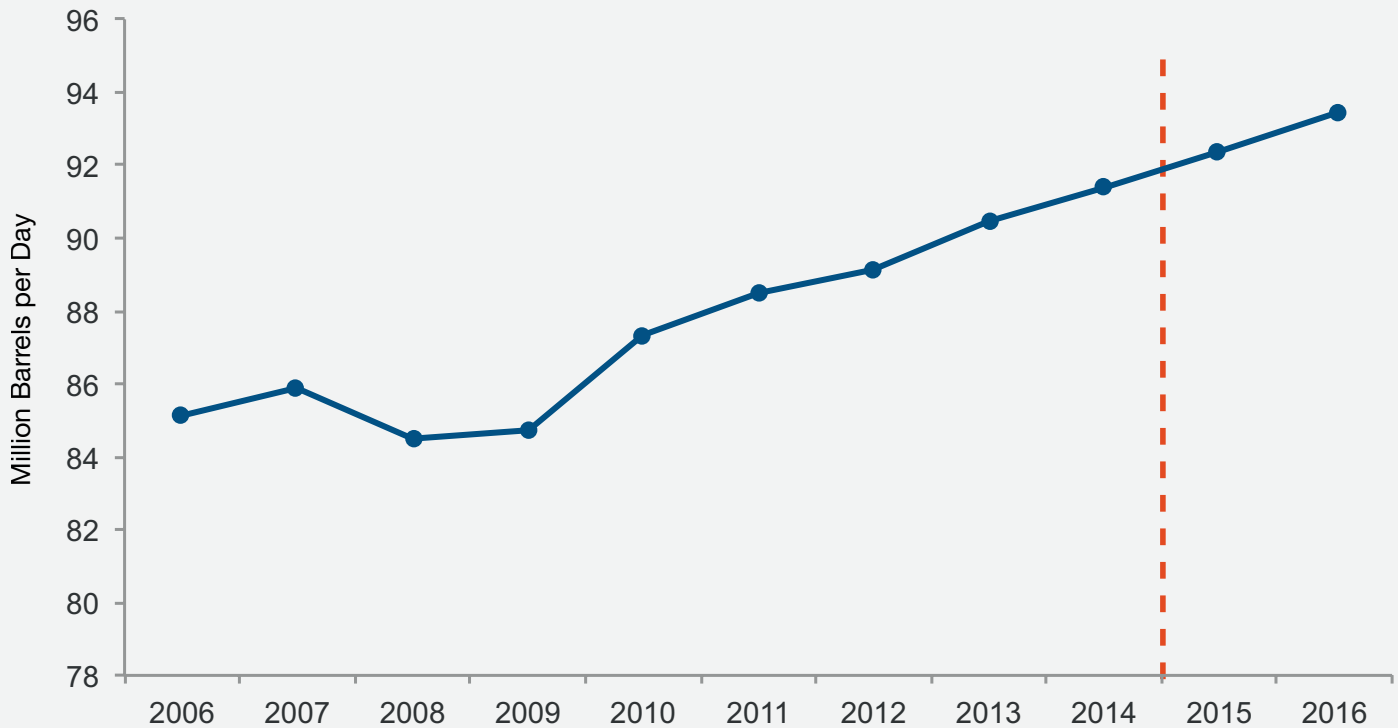
U.S. production growth has largely offset the loss from unplanned production outages around the world and put downward pressure on prices to the benefit of all consumers.

<sup>1</sup> EIA, Today in Energy, August 27, 2014.

# World Liquid Fuel Consumption

World oil consumption is expected to grow as the global economy rebounds.

World Liquid Fuel Consumption



Source: EIA, Short-Term Energy Outlook, February 2015.

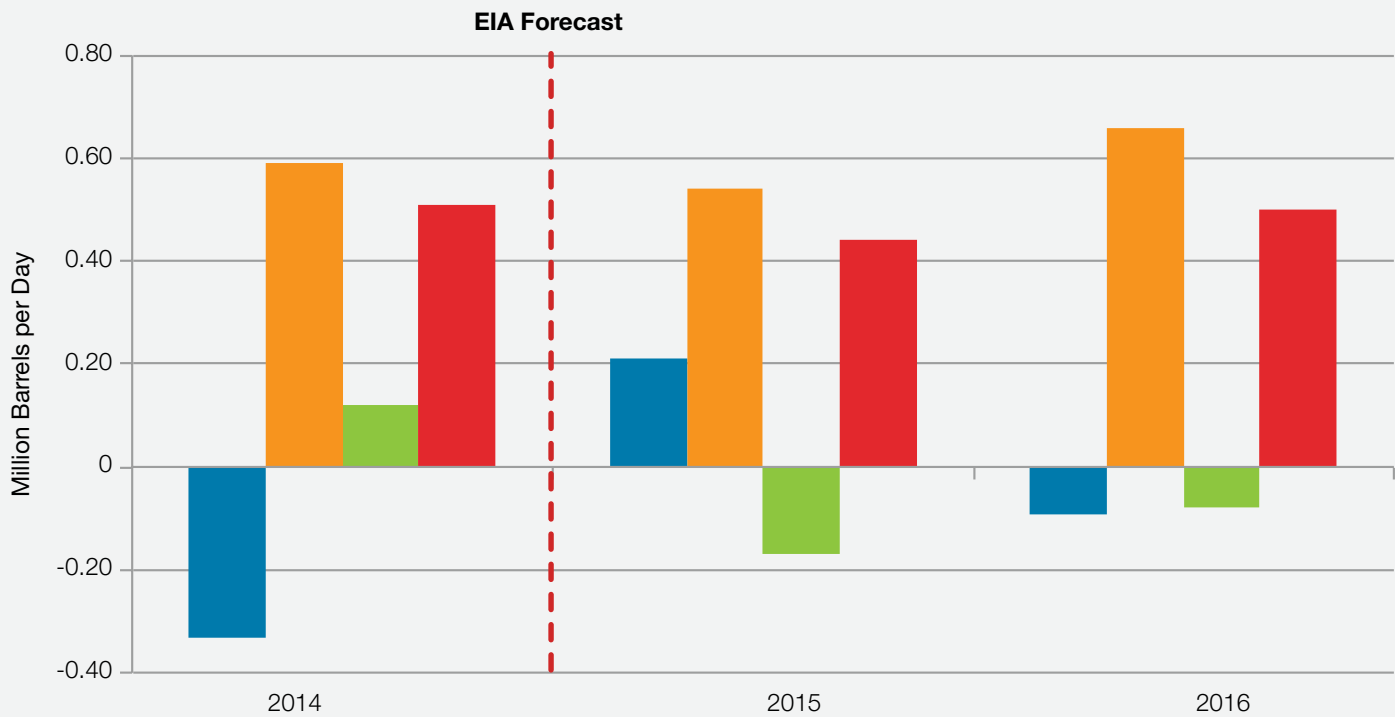
The world's demand for oil increased sharply for several years, peaking at 86 million barrels per day in 2007. However, the global economic slowdown in recent years reversed this trend and demand fell for two consecutive years to just 85 million barrels per day in 2009, or

over one million barrels per day less than at its peak before rebounding in 2010. The Energy Information Administration expects growth to continue over the next couple of years reaching 93.1 million barrels per day in 2015 and 94.2 million in 2016.

# Growth in World Liquid Fuel Consumption

Growth in world oil consumption is expected to be concentrated in non-OECD countries.

## Growth in World Liquid Fuel Consumption



Source: EIA, Short-Term Energy Outlook, February 2015.

The EIA projects consumption in the Organization for Economic Cooperation and Development (OECD)<sup>2</sup> countries to increase slightly this year before falling in 2016. Global growth is concentrated in the non-OECD countries including China, the Middle East and Central and South America with world gains of 1 million barrels per day in 2015 and 1 million barrels per day in 2016.

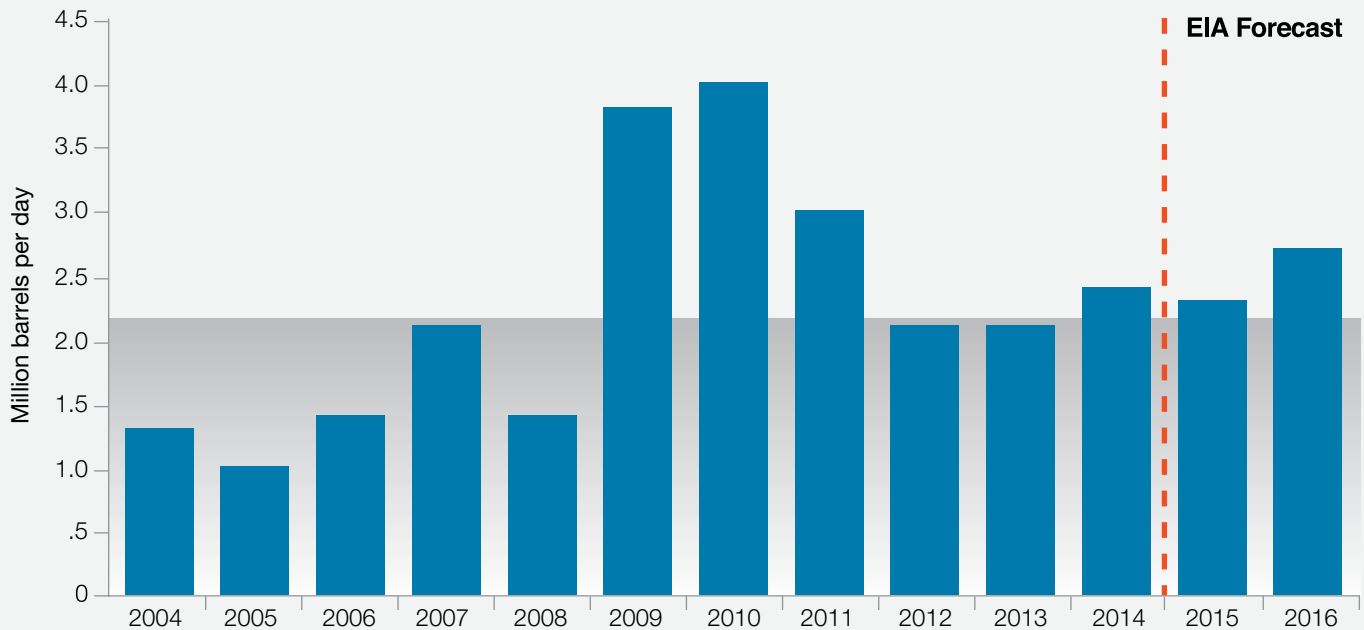
<sup>2</sup> The 34 member countries of the OECD include:

- |                |               |                |
|----------------|---------------|----------------|
| Australia      | Hungary       | Poland         |
| Austria        | Iceland       | Portugal       |
| Belgium        | Ireland       | Slovakia       |
| Canada         | Israel        | Slovenia       |
| Chile          | Italy         | Spain          |
| Czech Republic | Japan         | Sweden         |
| Denmark        | Korea (South) | Switzerland    |
| Estonia        | Luxemburg     | Turkey         |
| Finland        | Mexico        | United Kingdom |
| France         | Netherlands   | United States  |
| Germany        | New Zealand   |                |
| Greece         | Norway        |                |

# OPEC Surplus Production Capacity

Surplus crude oil capacity is expected to increase.

OPEC Surplus Crude Oil Production Capacity



Note: Shaded area represents 2004–2016 average (2.2 million barrels per day).

Source: EIA, Short-Term Energy Outlook, February 2015.

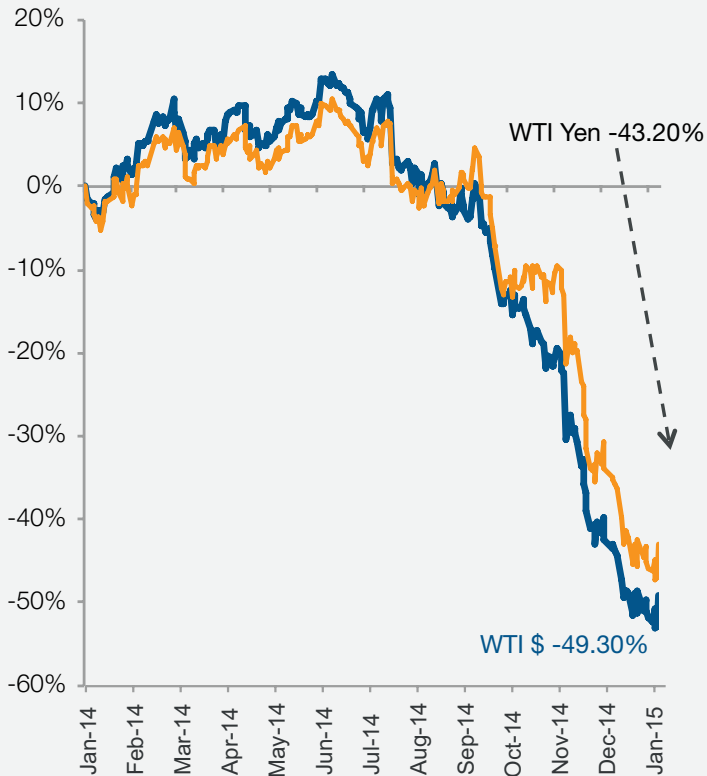
The amount of surplus crude oil capacity, which is the amount of oil available to meet surges in demand or disruptions in supply, remained at 2.1 million barrels per day in 2012 and 2013 before increasing to 2.4 million barrels per day in 2014 as demand for crude oil increased along with global economic growth, and supplies were put at risk by unrest in the Middle East and North Africa.

EIA expects OPEC surplus production capacity will average about 2.3 million barrels per day in 2015 and increase to 2.7 million barrels per day in 2016.

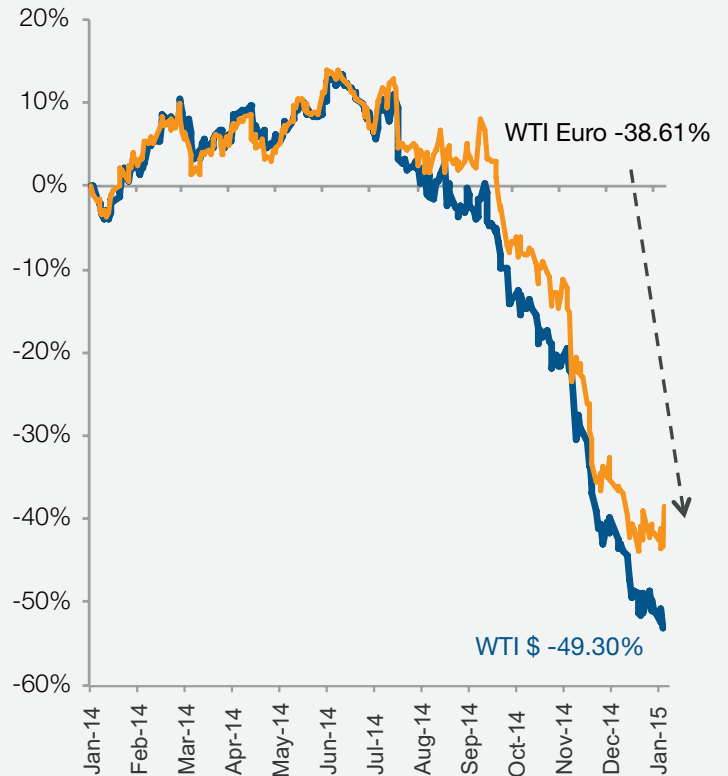


# The Value of the Dollar Makes a Difference

Percent Change of West Texas Intermediate Crude (WTI) in Dollars and Yen (Jan 2, 2014 – Jan 30, 2015)



Percent Change of West Texas Intermediate Crude (WTI) in Dollars and Euro (Jan 2, 2014 – Jan 30, 2015)



Sources: Board of Governors of the Federal Reserve Bank, EIA, NYMEX.

The strength of the U.S. dollar against other currencies around the world has widened compared to the Yen and the Euro. For American consumers this means they are experiencing a greater fall in crude oil prices than the citizens of Japan and Europe.

As oil prices have fallen around the world, the price decline has been greater for countries that have a strong currency like the U.S., but less for those that don't.

# Accumulating Risks to the Development of Oil and Natural Gas

There are accumulating risks to the development of oil and natural gas.

## Accumulating Risks to the Development of Oil and Natural Gas



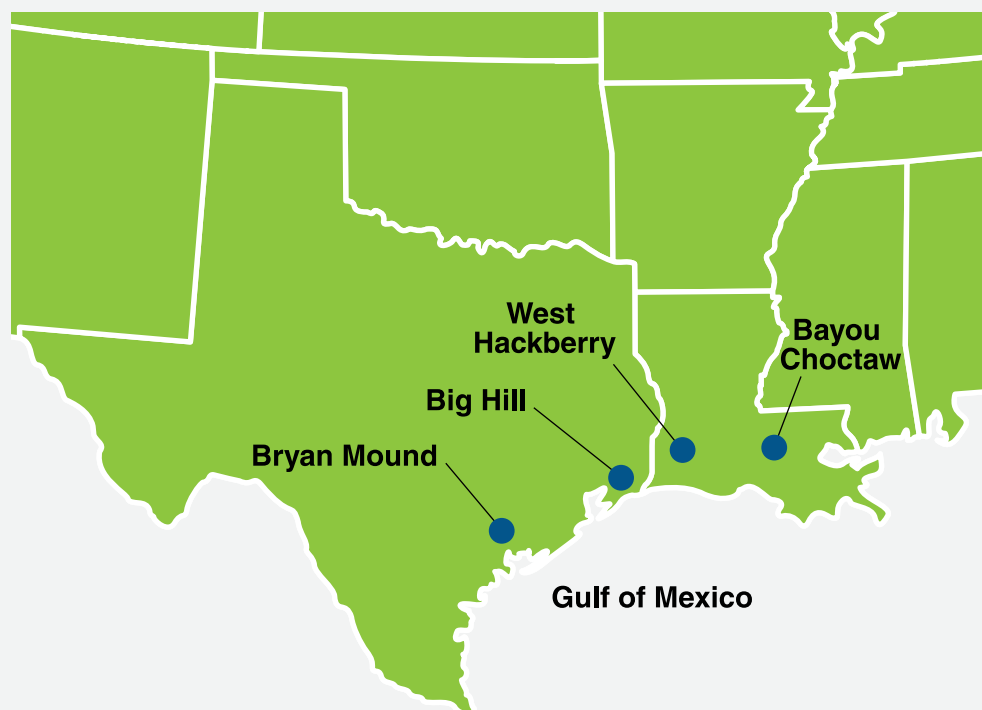
Source: NPC.

The National Petroleum Council (2008) examined a broad range of global energy supply, demand and technology projections through 2030 and concluded that “the world is not running out of energy resources, but there are accumulating risks to continuing expansion of oil and natural gas production from the conventional sources relied upon historically.”

These risks include political instability in the Middle East and North Africa, the resurgence of resource nationalism in Latin America, civil unrest in Nigeria, piracy off the African coast, transit vulnerability in the Caspian, energy subsidies in Asia, extreme weather around the world, and restricted access to resources in the U.S. These risks create significant challenges to meeting projected energy demand.

The Strategic Petroleum Reserve: America's insurance policy in case of an oil supply disruption.

## SPR Storage Sites



The Strategic Petroleum Reserve (SPR), the world's largest supply of emergency crude oil, was designed to protect the country from fuel shortages in the event of an emergency. Although the need for a reserve had been recognized for decades, it was the 1973-74 oil embargo by Arab nations – which significantly affected the nation's economy – that led to its creation in 1975.

The oil in the reserve is stored in underground salt caverns along the coastlines of Texas and Louisiana. Its more than 700 million barrels – the largest emergency oil stockpile in the world – make it a significant deterrent to oil import cutoffs.

Under the Energy Policy and Conservation Act, the president is authorized to withdraw crude oil from the SPR in an energy emergency “to counter a severe supply interruption” and distribute it by competitive sale. The SPR has been used under these circumstances three times (during Operation Desert Storm in 1991, after Hurricane Katrina in 2005, and in response to the loss of Libyan crude in 2011).

In addition to energy emergencies, crude oil has been withdrawn from the reserve for a variety of reasons, including test sales, exchange arrangements with private companies, and as authorized by Congress to raise revenue.

The SPR was not intended to be used to interfere with the crude oil or gasoline markets or to ease temporary retail fuel price hikes.

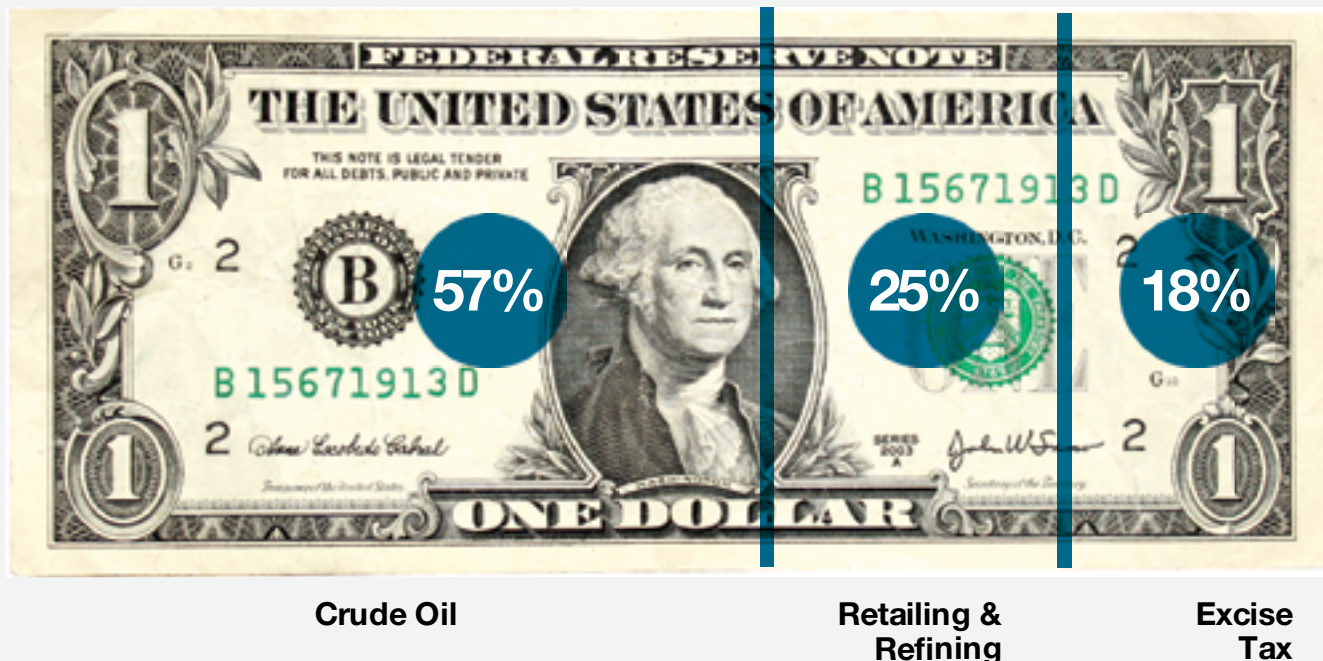
According to the Congressional Research Service (CRS), it is unclear what sort of effect a draw on the SPR would have in a market where there is no actual physical shortage because oil companies may have limited interest in SPR oil unless they have spare refining capacity to turn the crude into useful products, or want to build stocks.<sup>3</sup> The CRS also noted that it is possible that producing nations might reduce production to offset any SPR oil delivered into the market.

<sup>3</sup> CRS, “The Strategic Petroleum Reserves: History, Perspectives, and Issues,” April 18, 2009.

# What Consumers Are Paying for at the Pump

Pump prices: A fractional story.

What Consumers are Paying for at the Gasoline Pump  
(as of December 2014)



Source: EIA estimate based on average price of \$2.54 per gallon, December 2014.

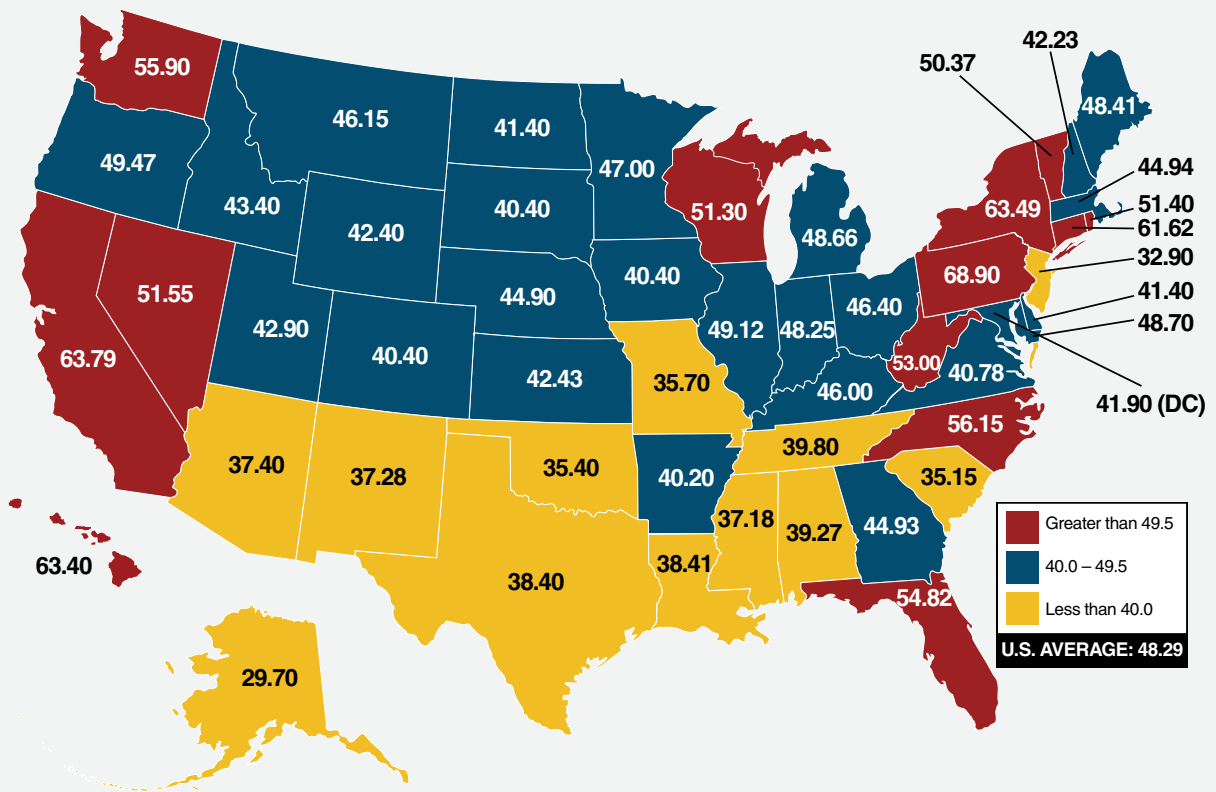
The biggest single component of retail gasoline prices is the cost of the raw material used to produce the gasoline – crude oil. Recently, that price has been between \$44 and \$52 a barrel, depending on the type of crude oil purchased. With crude oil at these prices a standard 42 gallon barrel translates to \$1.05 to \$1.24 a gallon at the pump. Excise taxes add another 48 cents a

gallon on average nationwide. So the price for gasoline is already at \$1.53 or more per gallon even before adding the cost of refining, transporting, and selling the gasoline at retail outlets. Crude oil costs account for about 57 percent of what people are paying at the pump. Excise taxes average 18 percent. That leaves just 25 percent for the refiners, distributors, and retailers.

# Gasoline Taxes by State

One reason the price of gasoline can vary by state is the fact that the taxes often do.

Gasoline Taxes (Combined Local, State and Federal – Cents per Gallon, January 12, 2015)



The average nationwide tax collected on each gallon of gasoline sold at the retail station is 48.3 cents. Of that, 18.4 cents per gallon goes to the federal government; the rest ends up in state and local government coffers.

The amount of gasoline taxes collected by states can vary widely, from just 29.7 cents per gallon in Alaska, to as much as 68.90 cents per gallon in Pennsylvania.

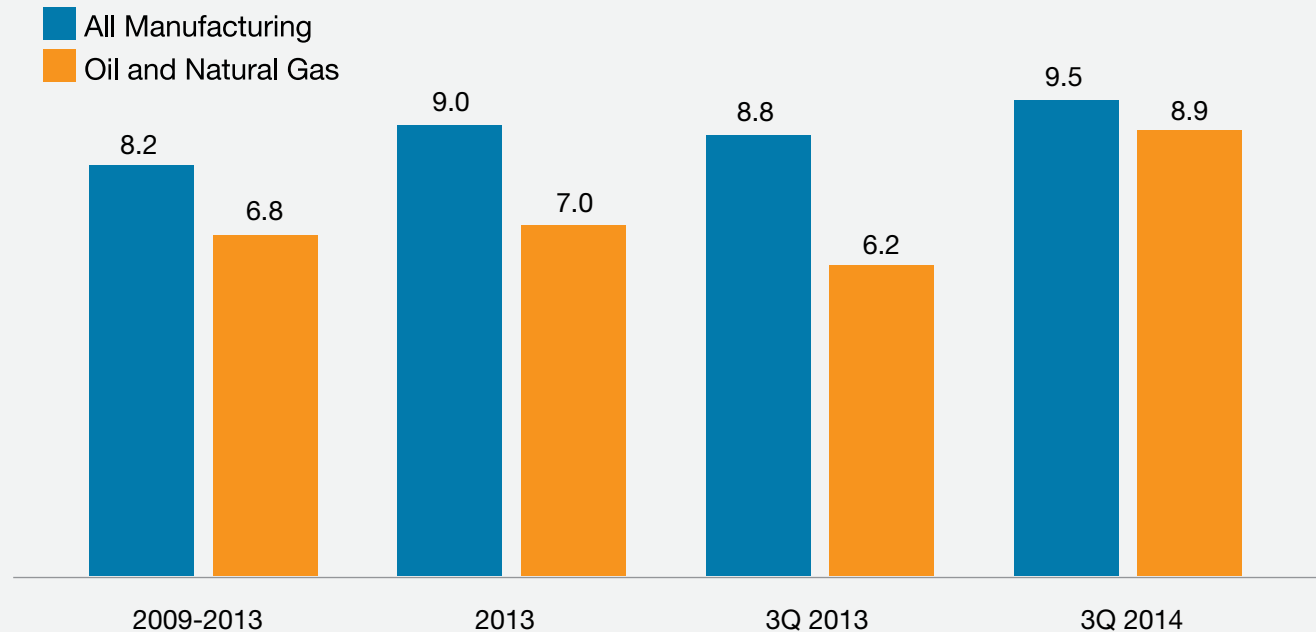
In addition to excise taxes, other taxes can also apply, such as sales taxes, gross receipts taxes, oil inspection fees, county and local taxes, underground storage tank fees, and other miscellaneous environmental fees. These additional taxes contribute to the difference collected among states.

# Earnings Compared to Manufacturing

Earnings: Keeping America going strong.

## Earnings

(cents of net income per dollar of sales)



Source: U.S. Census Bureau for U.S. manufacturing, and Standard & Poor's Research Insight for oil and natural gas.

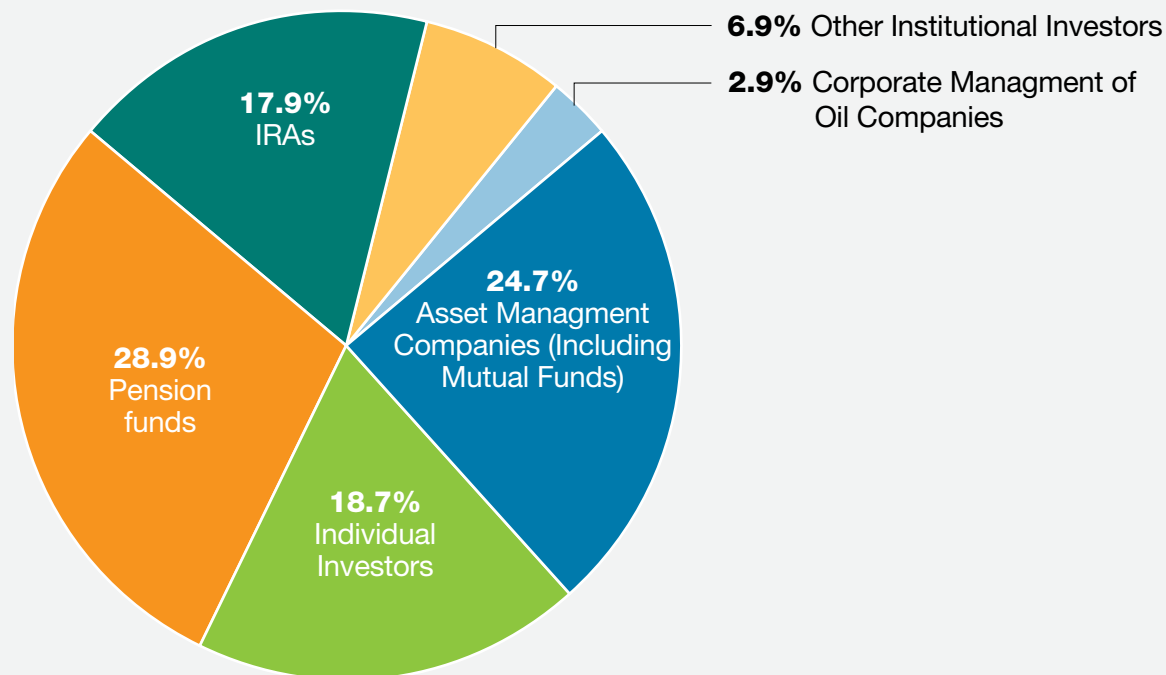
Over the last five years, average earnings for the oil and natural gas industry have been well in line with the rest of the U.S. manufacturing industry, averaging about 7 cents for every dollar of sales compared to 8 cents for manufacturing. By the third quarter of 2014, the average for the oil and gas industry increased to 8.9 cents on the dollar compared to 9.5 cents on the dollar for all U.S. manufacturing as the economy continued to recover.

Like other industries, the oil and natural gas industry strives to maintain a healthy earnings capability. It does so to remain competitive and to benefit its millions of shareholders, across the country and in all walks of life. Healthy earnings also allow the industry to invest in innovative technologies that improve our environment and increase production to keep America going strong – even as it leads the search for newer technologies, and new sources of energy that will provide a more secure tomorrow.

# Who Owns the Oil Companies

When politicians talk about taxing “Big Oil” or taking their “record profits,” they should think about who they really would be hurting.

Who Owns “Big Oil?”  
(holdings of oil stocks, 2014)



Source: Who Owns America's Oil and Natural Gas Companies, SONECON, October 2014.

If you're wondering who owns “Big Oil,” chances are good the answer is “you.” If you have a mutual fund account, and 57 million U.S. households do, there's a good chance it invests in oil and natural gas stocks. If you have an IRA or personal retirement account, and 46 million U.S. households do, there's a good chance it invests in energy stocks. If you have a pension plan, and 61 million U.S. households do, odds are it invests in oil and natural gas.

Contrary to popular belief, and what some politicians might say, America's oil companies aren't owned just by a small group of insiders. Only 2.9 percent of industry shares are owned by corporate management. The rest is owned by tens of millions of Americans, many of them middle class.

A strong oil and natural gas industry is a vital part of the retirement security for millions of Americans. State pension fund investments in oil and natural gas companies are providing strong returns for teachers,

firefighters, police officers, and other public pension retirees, according to a Sonecon study.<sup>4</sup> Returns on oil and natural gas assets in the top two state funds in 17 states, which include almost half of all the people covered by state and local pension plans in the U.S., averaged 42 cents for each dollar invested compared to just 6 cents for other assets in these funds from 2005 through 2009.

The oil and natural gas industry is a major contributor to the health of these funds, many of which face huge future payout obligations. Investments in the industry accounted for 4.6 percent of the average fund's total assets while producing 15.7 percent of total returns.

<sup>4</sup> Robert J. Shapiro and Nam D. Pham, “The Financial Contribution of Oil and Natural Gas Company Investments to Major Public Pension Plans in Seventeen States, Fiscal Years 2005-2009,” SONECON, June 2011.

Looking ahead: EIA's price forecast.

## EIA Price Forecast

	Year			
	2013	2014	2015 Projected	2016 Projected
<b>WTI Crude<sup>a</sup></b> (\$/barrel)	97.91	93.26	55.02	71.00
<b>Brent Crude</b> (\$/barrel)	108.64	99.02	57.56	75.00
<b>Gasoline<sup>b</sup></b> (\$/gallon)	3.51	3.36	2.33	2.73
<b>Diesel<sup>c</sup></b> (\$/gallon)	3.92	3.83	2.83	3.24
<b>Heating Oil<sup>d</sup></b> (\$/gallon)	3.78	3.73	2.74	3.03
<b>Natural Gas<sup>d</sup></b> (\$/mcf)	10.30	10.91	10.28	10.56
<b>Electricity<sup>d</sup></b> (¢/kwh)	12.12	12.49	12.63	12.85

<sup>a</sup> West Texas Intermediate   <sup>b</sup> Average Regular Pump Price   <sup>c</sup> On-Highway Retail   <sup>d</sup> Residential Average

Source: EIA, Short-Term Energy Outlook, February 2015.

Looking ahead, the Energy Information Administration projects the annual price of WTI crude will fall by \$38.24 per barrel in 2015 and increase by \$15.98 per barrel in 2016. Brent crude oil prices are projected to follow a similar pattern of falling this year and increasing next year. EIA expects changes in crude oil prices will be reflected in prices for the products made from crude oil, such as gasoline, diesel, and heating oil.



# Fuel-Saving Tips for Drivers

Fuel-saving tips for drivers.

## Simple Tips to Save Fuel



We count on our cars to get us where we want to go, when we want to go. That sense of freedom is important to us, but we also want to be sure we do our best to conserve natural resources for future generations.

Here are a few simple steps you can take to meet these goals.

- **Have your car tuned regularly.** An engine tune-up can improve car fuel economy by an average of 1 mile per gallon.
- **Keep your tires properly inflated.** Underinflated tires can decrease fuel economy by up to 1 mile per gallon.
- **Slow down.** The faster you drive, the more gasoline your car uses. Driving at 65 miles per hour rather than 55 miles per hour reduces fuel economy by about 2 miles per gallon.
- **Avoid jackrabbit starts.** Abrupt starts require about twice as much gasoline as gradual starts.
- **Pace your driving.** Unnecessary speed ups, slowdowns and stops can decrease fuel economy by up to 2 miles per gallon. Stay alert and drive steadily, not erratically. Keep a reasonable, safe distance from the car ahead of you and anticipate traffic conditions.
- **Use your air conditioner sparingly.** The use of air conditioning can reduce fuel economy by as much as 2 miles per gallon at certain speeds and under certain operating conditions.
- **Plan your trips in advance.** Combine short trips into one to do all your errands. Avoid traveling during rush hours if possible, to reduce fuel consumption patterns such as starting and stopping and numerous idling periods. Consider joining a car pool.

For more information, please visit  
[www.energytomorrow.org](http://www.energytomorrow.org)  
[www.api.org](http://www.api.org)



AMERICAN PETROLEUM INSTITUTE