Price at the Fuel Pump – Facts and Myths

Legislative Energy Horizon Institute

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The energy conversation

It’s complex, it’s crucial, it’s interconnected
Myth: The world is running out of oil.
Fact: Estimates of global recoverable conventional oil resources have grown over time.

Source: ExxonMobil, U.S. Geological Survey
Fact: USGS estimates global oil & gas endowment is 5.2 trillion barrels
13% has been used; 87% remains to be used and/or found

Fact: Unconventional sources of oil continue to grow

Figure 3. Unconventional Oil Resources Exceed World Conventional Resources (Ref. 9)

Fact: Many of the constraints on oil production are policy driven

Comparative Oil Reserves (billions of barrels)

Source: Oil & Gas Journal, 2007
Fact: Many of the constraints on oil production are policy driven.

U.S. Crude Oil (Bbl) and Natural Gas (Tcf) Resources
(Undiscovered Technically Recoverable Federal Resources)*

- **Pacific Offshore**
  - 10.5 Bbl
  - 18.3 Tcf

- **Lower 48, Onshore**
  - 11.7 Bbl
  - 145.9 Tcf

- **Atlantic Offshore**
  - 3.8 Bbl
  - 37.0 Tcf

- **Alaska Onshore**
  - 18.8 Bbl
  - 85.1 Tcf

- **Alaska Offshore**
  - 26.6 Bbl
  - 132.1 Tcf

- **Gulf Offshore/Deepwater**
  - 44.9 Bbl
  - 232.5 Tcf

*Figures may not add exactly to total due to rounding.

Source: MMS, BLM, and API calculations.

- **116.4 billion barrels** is enough oil to power over 65 million cars for 60 years.

- **650.9 trillion cubic feet** is enough natural gas to heat 60 million homes for 160 years.
“This is the fifth time that the world is said to be running out of oil. Each time – whether it was the ‘gasoline famine’ at the end of WWI or the ‘permanent shortage’ of the 1970s – technology and the opening of new frontier areas has banished the specter of decline. There’s no reason to think that technology is finished this time.”
Myth: Oil companies control the world’s supply of oil
Fact: Oil companies control just 6% of world supply

The Myth of “Big Oil” (As a Percent of Proven Reserves)
National Oil Companies (NOCs) Increasingly Control the World’s Oil Reserves

Source: API, PFC Energy
Myth: Oil companies determine the price of crude oil
Fact: The price of crude oil is determined by global commodity markets

New York Mercantile Exchange

International Petroleum Exchange, London

Singapore International Monetary Exchange
Fact: Oil prices are linked to many uncertain factors

Source: API, U.S. Energy Information Administration

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Source: U.S. Energy Information Administration, Spot Price, Brent Crude Oil
Myth: Oil companies set the price of gasoline at the pump.
Fact: Most gas stations are independently owned and operated

- Independent owners and/or operators: 64%
- Integrated oil company owned and operated: 16%
- Oil company owned, operated by leasee: 14%
- Independent refiner owned and operated: 6%

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated oil company owned/operated</td>
<td>2,877</td>
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<tr>
<td>Independent refiner owned/operated</td>
<td>1,093</td>
</tr>
<tr>
<td>Refiner owned, leasee operated</td>
<td>2,617</td>
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<tr>
<td>Independently owned/operated</td>
<td>11,550</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>18,137</strong></td>
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</table>
Myth: Gasoline prices go up like a rocket but come down like a feather
Fact: Retail gasoline prices follow wholesale prices (which, in turn, are driven by crude oil prices and other supply and demand factors) at virtually the same speed upward as they do downward.

Myth: Oil companies make obscene profits
Fact: Oil company earnings average less than average manufacturing company earnings

Earnings (cents of net income per dollar of sales)

Source: API, U.S. Census Bureau for U.S. manufacturing and Oil Daily for the oil and natural gas industry.
Fact: Oil & gas stocks are top performers in public pension funds

- Large public employee pension funds in 17 states have $1.1 trillion invested in oil and gas stocks
- Oil & gas investments returned an average of $1.42 for every $1 invested between 2005 and 2009
- All other investments returned $1.06 for every $1 invested between 2005 and 2009

Source: API; The Financial Contribution of Oil and Natural Gas Company Investments To Major Public Employee Pension Plans in Seventeen States, 2005 – 2009: Robert J. Shapiro and Nam D. Pham, July 2011
Myth: High gas prices mean big profits for oil companies
Fact: Gasoline prices closely track crude oil costs

Source: U.S. Energy Information Administration, Spot Price, West Texas Intermediate; Average weekly price U.S. gasoline and California gasoline
Fact: Crude oil and taxes are major cost components in a gallon of gasoline

What We Pay For In A Gallon of Regular Gasoline
May 2011

Source: U.S. Energy Information Administration, based on U.S. average cost for regular gasoline
Fact: West Coast taxes are among the highest in the nation

Source: API
July 2011
Fact: Gasoline prices closely track crude oil costs

- Recent historic highs are the result of record crude oil prices and increasing worldwide demand for oil products.

- Regional retail price differences are explained in part by differences in wholesale prices and to a larger degree by differences in retail supply costs and retail competition.

Myth: Oil companies are preventing development of alternative and renewable energy sources
Fact: Oil companies are major investors in low and zero emission technologies

$133 Billion

- Oil and Natural Gas Industry: $58.4 Billion (44%)
- Other Private Industries: $55.3 Billion (42%)
- Federal Government: $19.2 Billion (14%)

Fact: Oil companies are major investors in low and zero emission technologies
Myth: Oil companies are not interested in a diversified energy portfolio
Fact: Global energy demand is rising

Source: U.S. Energy Information Administration, Annual Energy Outlook 2011
Fact: EIA projects by 2035, fossil fuels will still represent 81 percent of US energy supply.
Fact: Public policies pose major challenges to energy supply

LFCS Compliance Scenario – Gasoline Only

Carbon intensity of ethanol blended into gasoline required to meet LCFS gasoline targets*

- Cellulosic Ethanol From Trees CI 20.40 (not commercially available)
- 2010: 95.86
- 2011: 92.27
- 2012: 88.82
- 2013: 81.93
- 2014: 75.04
- 2015: 61.26
- 2016: 58.40
- 2017: 53.90
- 2018: 50.04
- 2019: 46.38
- 2020: 42.92

Midwest Corn Ethanol CI Range: 73.20 – 120.99
California Ethanol CI Range: 71.40 – 88.90
Brazil Sugar Cane Ethanol CI Range: 58.40 – 83.96
Sorghum/Wheat/corn Ethanol CI Range: 56.56 – 99.89

* Assumes no change to current 10% ethanol blend wall and no wide scale use of E85

Fact: Public policies pose major challenges to energy supply


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Fact: Public policies pose major challenges to energy supply

- Total US supply of low-carbon biofuel forecast for 2015
- Volume of low-carbon ethanol needed to meet California demand in 2015
- Cellulosic ethanol
- Imported ethanol

Fact: Public policies pose major challenges to energy supply.
Fact: It’s complex, it’s crucial, it’s interconnected

Connecting the dots
Fact: It’s complex, it’s crucial, it’s interconnected