Energizing America
Facts for Addressing Energy Policy

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U.S. oil and natural gas production is increasing as a result of technological innovations.

U.S. Crude Oil Production (millions of barrels per day)

U.S. Natural Gas Marketed Production (billions of cubic feet per day)

Note: Bars in red show EIA’s Short-term Energy Outlook forecast.
Source: Energy Information Administration.
**Shale Energy Provides A National Opportunity**

**Shale Resources, Lower 48 States**

Current and prospective resources and basins in the continental US

Source: EIA based on data from various published studies – updated May 9, 2011
U.S. shale gas production has increased rapidly in recent years.
Shale production is offsetting declining production from other U.S. oil and natural gas resources.
The price of natural gas has fallen relative to crude oil.

Changes in the price of crude oil and natural gas

Source: EIA
Rising US natural gas output pushed natural gas prices to record discounts against international gas prices.

EIA forecasts relatively low natural gas prices for decades

Source: EIA
Shale energy revolution has pronounced impact on energy-intensive industries

Percent Increase to Industrial Production Indices due to the Unconventional Activity Value Chain

<table>
<thead>
<tr>
<th>Industry</th>
<th>2012</th>
<th>2020</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron &amp; Steel</td>
<td>2.2%</td>
<td>6.7%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Resins &amp; Synthetic Material</td>
<td>1.7%</td>
<td>6.0%</td>
<td>8.1%</td>
</tr>
<tr>
<td>Basic Organic Chemicals</td>
<td>1.5%</td>
<td>7.1%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Plastics and Rubber</td>
<td>1.5%</td>
<td>4.1%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Fabricated Metal</td>
<td>1.4%</td>
<td>3.2%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Agricultural Chemical</td>
<td>1.2%</td>
<td>6.9%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Nonmetallic Mineral</td>
<td>1.2%</td>
<td>3.5%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Petroleum &amp; Coal</td>
<td>1.0%</td>
<td>5.8%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Machinery</td>
<td>0.4%</td>
<td>3.3%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Total Manufacturing</td>
<td>1.3%</td>
<td>3.5%</td>
<td>3.9%</td>
</tr>
</tbody>
</table>

American consumers’ annual savings due to lower gas prices resulting from shale energy development

(IHS Global Insight)
9.8 million jobs are supported by the oil and natural gas industry.
Oil and natural gas jobs pay well
(average annual wages)

- **Oil and natural gas extraction**: $154,317
- **Pipeline transportation**: $116,425
- **Drilling oil and gas wells**: $94,115
- **Support activities for oil and gas**: $81,696
- **Oil and gas pipeline construction**: $72,667
- **U.S.**: $49,700

Oil and natural gas operations rippling through the U.S. economy

$1.2 trillion

The industry contributes to the U.S. economy. This represents 8% of the value added to the economy (PWC)
Refineries and Fuels
U.S. refining capacity continues to expand even as the number of refineries contracts

*Operable as of January 1st of each year.
Source: EIA
For the first time since 1949, the U.S. became a net exporter of petroleum products in 2011

Source: EIA
Expanding alternative fuels for transportation: current laws

The Congressional Budget Office predicts the price of diesel could rise by up to 51 cents per gallon and gasoline by up to 26 cents per gallon by 2017.

The Blend Wall

We are rapidly approaching the point when EPA’s ever increasing alternative fuel mandates exceed what can be safely blended into the nation’s vehicles.
Factors Affecting Prices
Changes in gasoline and diesel prices mirror changes in crude oil prices

Average prices as of December 4, 2014

- Crude Oil $1.59
- Gasoline $2.73
- Diesel $3.54

Sources: NYMEX (WTI crude oil) and AAA (gasoline and diesel)
Many factors affect the price of oil, but in the end it comes down to supply and demand.
Growth in U.S. oil production has largely offset the growth in global oil supply disruptions.

Source: EIA

* Other liquids include of hydrocarbon gas liquids, biofuels, and refinery processing gains.
World crude oil and liquid fuels production growth

Source: EIA, Short-term Energy Outlook, November 2014
Non-OPEC crude oil and liquid fuels production growth

Source: EIA, Short-term Energy Outlook, November 2014
EIA forecasts average consumer expenditures for heating fuels will be lower this winter.

Power and Politics
Crude oil and petroleum product imports have declined as a share of consumption

Source: EIA
Why export crude oil?

Crude oil exports yield economic benefit across all 50 states

- Save consumers up to $5.8 billion a year in lower fuel costs
- Add 300,000 jobs to U.S. economy in 2020
- Reduce America’s trade deficit by $22 billion in 2020

Source: ICF International and EnSys Energy,
EIA projects U.S. will be net exporter of natural gas by 2017

Source: EIA, AEO 2014
Nine US facilities have been approved to export LNG, over 20 are awaiting approval and there are more than 60 competing sites planned or under construction in foreign nations.

Source: API LNG Export Facility Map
87% of federal offshore acreage is off-limits to development.
Development of Canadian oil sands would benefit the U.S. economy

2011 Trade in Goods

For every dollar of goods the U.S. imports, we get back...

From Canada: 89¢
From OPEC: 33¢

Source: http://www.census.gov/foreign-trade/balance/
Filling America’s tank
Within 10 years Canada and U.S. can provide all our liquid fuel needs

Sources of liquid fuel supply in 2024

EIA Forecast

- U.S. Oil Production: 53%
- Oil from Canada: 13%
- Oil from Rest of World: 24%

Potential

- U.S. Oil Production: 72%
- Biofuels: 18%
- Oil from Canada: 10%

Sources: EIA; Wood Mackenzie
America's choice

**increase**

- Oil & natural gas development
- **2020**
- Oil & natural gas taxes

**jobs**
- + 1,100,000 jobs
- - 48,000 jobs

**government revenue**
- + $127 billion
- - $29 billion

**energy production**
- + 4 million barrels’ worth of oil and natural gas per day
- - 700,000 barrels’ worth of oil and natural gas per day

Voters voice strong support for increased domestic oil and natural gas development

Harris Poll Results on Increased U.S. Oil and Natural Gas Development

- Lead to more jobs: 90%
- Help strengthen energy security: 86%
- Help stimulate economy: 86%
- Help lower energy costs: 85%
- Support O&NG development: 83%
- Support Keystone XL pipeline: 72%
- Support offshore development: 70%
- Increasing energy taxes may hurt consumers: 65%

Source: Harris Interactive telephone poll, November 5, 2014
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www.api.org
www.energytomorrow.org
www.energycitizens.org