Table E-1. Total Contribution of the Oil and Natural Gas Industry to the U.S. Economy, 2007

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Percent of U.S. Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operational Impact</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment*</td>
<td>7,818,437</td>
<td>4.4%</td>
</tr>
<tr>
<td>Labor Income ($ millions)**</td>
<td>477,249</td>
<td>5.4%</td>
</tr>
<tr>
<td>Value Added ($ millions)</td>
<td>915,370</td>
<td>6.6%</td>
</tr>
<tr>
<td><strong>Capital Investment Impact</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment*</td>
<td>1,418,944</td>
<td>0.8%</td>
</tr>
<tr>
<td>Labor Income ($ millions)**</td>
<td>81,012</td>
<td>0.9%</td>
</tr>
<tr>
<td>Value Added ($ millions)</td>
<td>121,690</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>Total Impacts</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment*</td>
<td>9,237,381</td>
<td>5.2%</td>
</tr>
<tr>
<td>Labor Income ($ millions)**</td>
<td>558,260</td>
<td>6.3%</td>
</tr>
<tr>
<td>Value Added ($ millions)</td>
<td>1,037,060</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2007 database).
Numbers may not add to total due to rounding.

* Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.
** Labor income is defined as wages and salaries and benefits as well as proprietors' income.
Who Owns “Big Oil?” (Holdings of Oil Stocks, 2007)

- 14.0% IRAs
- 27.0% Pension Funds
- 23.0% Individual Investors
- 29.5% Mutual Funds and Other Firms
- 5.0% Other Institutional Investors
- 1.5% Corporate Management of Oil Companies

Source: The Distribution of Ownership of U.S. Oil and Natural Gas Companies, SONECON, September 2007
Diesel, Gasoline and Crude Prices

4/6/2011
- Diesel (AAA) $4.02
- Gasoline (AAA) $3.73
- Crude Oil (NYMEX) $2.59

Source: NYMEX (WTI crude oil) and AAA (gasoline and diesel)
Gasoline and Crude Oil Prices
AAA, NYMEX

8/26
2.682

8/24
1.7055

8/25
1.829

4/6
3.725
+104.3

2.5912
+88.57
$108.83

Gasoline and Crude Oil Prices
AAA, NYMEX

7/17/08
4.114

7/14/08
3.4567
145.18

12/19/08
0.8064
$33.87

12/29/08
1.616

1/20/09
1.848

1/20/09
0.9224
$38.74

2.5912
+166.88
$108.83

3.725
+187.7
According to an Oil Industry Spokesman, the recent hike in gas prices is due to:

- El Nino
- A coup in Venezuela
- That big blackout
- A hole in the Ozone layer
- NASDAQ
- Rumors of unrest somewhere
- Soaring bond market
- Volatility
- Labor flapped wings in Brazil
- Y2K
- Hedge futures
- Roach

Swear to God.
Oil prices relate to many uncertain factors

- Non-OPEC supply growth
- OPEC production decisions
- Spare production capacity
- Geo-political risks
- Global economic growth
- Speculation, hedging, investment
- Exchange rates and inflation
- Inventories
- Weather
Change in U.S. Petroleum Demand 2010 vs 2009

- Total: 2.0%
- Gasoline: -0.4%
- Diesel: 4.3%
- Jet Fuel: 2.2%
- Residual: 7.7%
World Liquid Fuels Consumption

Total consumption (million barrels per day)

Change from prior year (million barrels per day)

Annual growth


-3.0  -2.0  -1.0  0.0  1.0  2.0  3.0

China  United States  Other Countries

EIA, Short-Term Energy Outlook, March 2011
OPEC Surplus Crude Oil Production Capacity

million barrels per day

Note: Shaded area represents 2000-2010 average (2.8 million barrels per day)

EIA, Short-Term Energy Outlook, March 2011
What Consumers are Paying for at the Gasoline Pump

Crude Oil: 68%
Refining and Retailing*: 17%
Excise Taxes: 15%

*This percent combines the Distribution and Marketing and Refining data reported by EIA.

Source: Average of gasoline components from January through November 2010 as reported by EIA.
**Earnings** (cents per dollar of sales)

- **All Manufacturing**
- **Oil and Natural Gas**

<table>
<thead>
<tr>
<th>Period</th>
<th>All Manufacturing</th>
<th>Oil and Natural Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005 - 2009</td>
<td>6.5</td>
<td>7.3</td>
</tr>
<tr>
<td>2009</td>
<td>5.5</td>
<td>4.3</td>
</tr>
<tr>
<td>3Q 2009</td>
<td>7.2</td>
<td>5.4</td>
</tr>
<tr>
<td>3Q 2010</td>
<td>8.6</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau for U.S. manufacturing and *Oil Daily* for the oil and natural gas industry.
<table>
<thead>
<tr>
<th>Source: EIA, Short-Term Energy Outlook, March 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>WTI Crude</strong>&lt;sup&gt;a&lt;/sup&gt; ($/barrel)</td>
</tr>
<tr>
<td><strong>Gasoline</strong>&lt;sup&gt;b&lt;/sup&gt; ($/gal)</td>
</tr>
<tr>
<td><strong>Diesel</strong>&lt;sup&gt;c&lt;/sup&gt; ($/gal)</td>
</tr>
<tr>
<td><strong>Heating Oil</strong>&lt;sup&gt;d&lt;/sup&gt; ($/gal)</td>
</tr>
<tr>
<td><strong>Natural Gas</strong>&lt;sup&gt;d&lt;/sup&gt; ($/mcf)</td>
</tr>
<tr>
<td><strong>Electricity</strong>&lt;sup&gt;d&lt;/sup&gt; (cents/kw h)</td>
</tr>
</tbody>
</table>

<sup>a</sup> West Texas Intermediate.  
<sup>b</sup> Average regular pump price.  
<sup>c</sup> On-highway retail.  
<sup>d</sup> U.S. Residential average.
<table>
<thead>
<tr>
<th>Percent</th>
<th>Quadrillion BTUs</th>
<th>Percent of Source</th>
<th>Quadrillion BTUs</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>37.4%</td>
<td>Petroleum 35.3</td>
<td>72</td>
<td>Transportation 27.0</td>
<td>28.5%</td>
</tr>
<tr>
<td>24.8%</td>
<td>Natural Gas 23.4</td>
<td>3</td>
<td>Industrial 18.8</td>
<td>19.9%</td>
</tr>
<tr>
<td>20.9%</td>
<td>Coal 19.7</td>
<td>7</td>
<td>Residential, Commercial 10.6</td>
<td>11.1%</td>
</tr>
<tr>
<td>8.2%</td>
<td>Renewable Energy 7.7</td>
<td>26</td>
<td>Electric Power 38.3</td>
<td>40.4%</td>
</tr>
<tr>
<td>8.8%</td>
<td>Nuclear Electric Power 8.3</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Energy Information Administration*

Official Energy Statistics from the U.S. Government
Petroleum: 35.3 Quadrillion BTUs, 72 Percent of Source, 94 Percent of Sector, 28.5% Transportation
Natural Gas: 23.4 Quadrillion BTUs, 3 Percent of Source, 3 Percent of Sector, 28.5% Transportation
Coal: 19.7 Quadrillion BTUs, 3 Percent of Source, 3 Percent of Sector, 28.5% Transportation
Renewable Energy: 7.7 Quadrillion BTUs, 12 Percent of Source, 3 Percent of Sector, 28.5% Transportation
Nuclear Electric Power: 8.3 Quadrillion BTUs, 3 Percent of Source, 3 Percent of Sector, 28.5% Transportation
Figure 7. Energy consumption by fuel, 1980-2035

Primary energy consumption (quadrillion Btu per year)

<table>
<thead>
<tr>
<th>History</th>
<th>Renewables (excluding liquid biofuels)</th>
<th>Projections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil and other liquids</td>
<td>37%</td>
<td>Nuclear</td>
</tr>
<tr>
<td>Natural gas</td>
<td>32%</td>
<td>Coal</td>
</tr>
<tr>
<td>Liquid biofuels</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Nuclear</td>
<td>9%</td>
<td></td>
</tr>
</tbody>
</table>

Energy Information Administration
Official Energy Statistics from the U.S. Government

Total = 100.09 Quadrillion Btu

- Oil: 37%
- Natural Gas: 24%
- Coal: 22%
- Renewable Energy: 8%
- Nuclear Electric Power: 9%

Total = 7.69 Quadrillion Btu*

- Renewable Energy: 2.5%
- Hydroelectric: 4.4%
- Nuclear Electric Power: 9%
- Geothermal Energy: 0.3%
- Wind Energy: 0.5%
- Solar Energy: 0.01%

Note: Sum of components may not add exactly to 100 percent due to rounding.

*Excludes non-marketed renewable energy from residential and commercial sectors.
Source: EIA, AEO 2010 Tables A1 and A17.
I’m writing fake press releases for imaginary new green energy technologies.

Scientists say that by 2040 you will be able to power your entire home with the breeze from your refrigerator door.

Now how will I know which green breakthroughs are real?

Seriously? You think there are real ones?
Oil and Gas Tax Increases in 2012 Budget
Billion $

- Repeal LIFO: $22.50
- Repeal of Sec. 199 for Oil and Natural Gas Companies: $18.20
- Repeal Expensing of Intangible Drilling Costs: $12.40
- Repeal of Percentage Depletion: $11.20
- Modifications of Dual Capacity Rule: $10.70
- Reinstatement of Superfund Taxes: $10.50
- Increase G&G Amortization Period: $1.40
## Capital Spending

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exploration-production</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drilling-exploration</td>
<td>217,532</td>
<td>6.2</td>
<td>204,806</td>
<td>17.0</td>
<td>175,070</td>
</tr>
<tr>
<td>Production</td>
<td>41,331</td>
<td>6.2</td>
<td>38,913</td>
<td>17.0</td>
<td>33,263</td>
</tr>
<tr>
<td>OCS lease bonus</td>
<td>0</td>
<td>-100.0</td>
<td>1,300</td>
<td>62.3</td>
<td>801</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>258,863</td>
<td>5.7</td>
<td>245,019</td>
<td>17.2</td>
<td>209,134</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refining</td>
<td>9,200</td>
<td>73.6</td>
<td>5,300</td>
<td>-47.7</td>
<td>10,140</td>
</tr>
<tr>
<td>Petrochemicals</td>
<td>300</td>
<td>0.0</td>
<td>300</td>
<td>-14.3</td>
<td>350</td>
</tr>
<tr>
<td>Marketing</td>
<td>2,900</td>
<td>6.2</td>
<td>2,730</td>
<td>40.0</td>
<td>1,950</td>
</tr>
<tr>
<td>Crude and products pipelines</td>
<td>1,408</td>
<td>-83.6</td>
<td>8,563</td>
<td>-5.9</td>
<td>9,104</td>
</tr>
<tr>
<td>Natural gas pipelines</td>
<td>5,348</td>
<td>74.7</td>
<td>3,062</td>
<td>-74.3</td>
<td>11,907</td>
</tr>
<tr>
<td>Other transportation</td>
<td>1,100</td>
<td>15.8</td>
<td>950</td>
<td>13.1</td>
<td>840</td>
</tr>
<tr>
<td>Mining, other energy</td>
<td>1,000</td>
<td>0.0</td>
<td>1,000</td>
<td>11.1</td>
<td>900</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>4,000</td>
<td>0.0</td>
<td>4,000</td>
<td>6.7</td>
<td>3,750</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>25,256</td>
<td>-2.5</td>
<td>25,905</td>
<td>-33.5</td>
<td>38,941</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>284,119</td>
<td>4.9</td>
<td>270,924</td>
<td>9.2</td>
<td>248,075</td>
</tr>
</tbody>
</table>

Source: Oil and Gas Journal, March 7, 2011
**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

---

*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.*

---

*Figures may not add exactly to total due to rounding.
Source: MMS, BLM, and API calculations*
Offshore Undiscovered Technically Recoverable Federal Oil (Bbl) and Natural Gas (Tcf) Resources

Source: Minerals Management Service and Department of the Interior.

* Shading estimated.
Carbon Mitigation Investment by Investor Group (2000-2008)

$133 Billion

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

Source: T2 & Associates and CEE, June 2009
Carbon Mitigation Investments by Technology and Investor Group (2000-2008)

- **End-Use:**
  - Federal Government: $30.6 Billion (42%)
  - Other Private Industries: $34.1 Billion (47%)
  - Oil and Natural Gas Industry: $8.1 Billion (11%)

- **Non-Hydrocarbon:**
  - Federal Government: $6.7 Billion (22%)
  - Other Private Industries: $17.1 Billion (58%)
  - Oil and Natural Gas Industry: $6.1 Billion (20%)

- **Fuel Substitution:**
  - Federal Government: $21.1 Billion (73%)
  - Other Private Industries: $3.9 Billion (13%)
  - Oil and Natural Gas Industry: $4.1 Billion (14%)

- **Basic and Applied Research:**
  - Federal Government: $1.1 Billion

Source: T2 & Associates and CEE, June 2009
## Highway and Nonroad Diesel Fuel Standards

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highway Diesel Fuel</strong></td>
<td>80% 15 ppm/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20% 500 ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>100% 15 ppm</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Large Refiners/ Importers</strong></td>
<td>NR</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>LM</strong></td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>NRLM w/ credits (not in NE or AK)</strong></td>
<td>HS</td>
<td>HS</td>
<td>HS</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Small Refiners</strong></td>
<td>NRM (not in NE, w/ approval in AK)</td>
<td>HS</td>
<td>HS</td>
<td>HS</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td><strong>Transmix Processor &amp; In-use</strong></td>
<td>NR (not in NE or AK)</td>
<td>HS</td>
<td>HS</td>
<td>HS</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td><strong>Transmix Processor &amp; In-use</strong></td>
<td>LM (not in NE or AK)</td>
<td>HS</td>
<td>HS</td>
<td>HS</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
</tbody>
</table>

*Dates for **HW diesel fuel** are: June 1 for refiners, July 15 for downstream parties, and September 1 for retail and wholesale purchaser-consumers.*

*For 2006 ONLY, these dates are: June 1 for refiners, September 1 for downstream parties, and October 15 for retailers and wholesale purchaser-consumers.*

*Dates for **NR diesel fuel** are: June 1 for refiners, August 1 for terminals, October 1 for retailers, and December 1 for in-use.*

**Anti-downgrading provisions begin October 15, 2006**
Policy Choices Needed to Ensure Future Energy Security

- Increase, not decrease energy production by promoting all sources.
- Encourage energy efficiency as a core American principle.
- Encourage investment in advanced technologies and long-term energy initiatives.
- Allow market forces to allocate products and adjust to changing conditions.
- Refrain from new taxes that make it more expensive to develop our domestic supplies.
- Support the need to participate actively in global energy markets rather than isolate the U.S.