The Economic Impact of Kentucky’s Oil and Gas Industry on Kentucky’s Economy

Presented by: Andrew V. McNeill  Executive Director – KOGA

Research Conducted by: Dr. Paul Coomes, Professor Emeritus of Economics - University of Louisville
Gas Production – Kentucky Counties 2010

Source: Special thanks to Brandon Nuttall at KGS for supplying county-level data to create map. Data edited by Paul Coomes, Ph.D.

www.kyoilgas.org
Number of Producing Gas Wells: 2007-2011

Producing Gas Wells - Kentucky

- 2007: 16,563
- 2008: 16,290
- 2009: 17,152
- 2010: 17,670
- 2011: 14,632

Source: EIA – www.eia.doe.gov
Top 15 Natural Gas Producing Counties: 2001-2011

Top 5 Counties = 72% of Statewide Production

Source: Kentucky Geological Survey

www.kyoilgas.org
Oil Production – Kentucky Counties 2010

Source: Special thanks to Brandon Nuttall at KGS for supplying county-level data to create map.
Data edited by Paul Coomes, Ph.D.
Annual Oil Production: 2001-2012

Total Barrels 2001 – 2012 = 31,059,015

Source: Kentucky Geological Survey and EIA.DOE.GOV

http://kgs.uky.edu/kgsmap/OGProdPlot/OGProduction.asp

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Top 20 Oil Producing Counties: 2001-2011

Top 20 Counties = 85.5% of Statewide Production

Source: Kentucky Geological Survey

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Oil & Gas: Annual Severance Taxes

Source: Kentucky Geological Survey

Source: Kentucky Dept of Revenue

Avg / Year = $33,091,108

www.kyoilgas.org
# Oil Production Severance Tax 2002-2012

## Oil Production Severance

<table>
<thead>
<tr>
<th>County</th>
<th>Oil Production Severance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Henderson</td>
<td>$8,918,344.25</td>
</tr>
<tr>
<td>Union</td>
<td>$8,696,690.45</td>
</tr>
<tr>
<td>Lee</td>
<td>$7,175,184.44</td>
</tr>
<tr>
<td>Leslie</td>
<td>$5,019,457.37</td>
</tr>
<tr>
<td>Letcher</td>
<td>$3,083,791.29</td>
</tr>
<tr>
<td>Webster</td>
<td>$3,024,619.22</td>
</tr>
<tr>
<td>Muhlenberg</td>
<td>$2,968,596.08</td>
</tr>
<tr>
<td>Perry</td>
<td>$2,841,098.28</td>
</tr>
<tr>
<td>Hopkins</td>
<td>$2,511,858.15</td>
</tr>
<tr>
<td>Bell</td>
<td>$2,449,082.22</td>
</tr>
</tbody>
</table>

Source: Kentucky Dept of Revenue
Natural Gas Severance: By County 2002-2012

Nat Gas Severance

- PIKE: $90,947,616
- FLOYD: $48,303,955
- KNOTT: $31,400,917
- LETCHER: $24,344,182
- PERRY: $20,235,584
- MARTIN: $16,457,174
- KNOX: $8,508,261
- LESLIE: $8,355,619
- BELL: $6,817,976
- CLAY: $6,611,827

Source: Kentucky Dept of Revenue

www.kyoilgas.org
Kentucky Oil & Gas: 5 Year Trend

- **Permits Issued**
- **Horizontal Permits**
- **Wells Completed**
- **Henry Hub Price**

Source: KY Division of Oil and Gas
Henry Hub Prices Based upon June of each year.
*Exception = April 2013

www.kyoilgas.org
Oil and Gas Extraction: Jobs

Source: Bureau of Economic Analysis www.bea.gov
NAISC 211 – Oil and Gas Extraction

Source: Bureau of Economic Analysis www.bea.gov

www.kyoligas.org
Industry Snapshot: Wes Cate

• Fireborn Energy
• Interest in 220 wells in Kentucky.
• Vice-President
  • Staking Locations
  • Leasing Acreage
  • Finance & Management
Industry Snapshot: Monica Sturgill

- Hay Exploration
- Operations Manager
- B.A. Economics
- M.B.A.
Industry Snapshot: C.V. Reynolds

- Attorney at Law
- Viking Exploration LLC
- 11 Natural Gas Wells
- 2 Oil Wells
Oil & Gas Employment Trends: Wage and Salary Employees

- *Wage & Salary Employees
- Henry Hub = $12.69

- Support Activities: 213112
- Drilling Oil and Gas Wells: 213111

* Wage & Salary Employees

- * Wage and Salary only. Doesn’t include “Proprietors”.
- Source: Kentucky Office of Employment & Training

www.kyoilgas.org
An Industry Snapshot: “Jobs”

<table>
<thead>
<tr>
<th>NAISC</th>
<th>Sector Name</th>
<th>“Jobs”</th>
</tr>
</thead>
<tbody>
<tr>
<td>211</td>
<td>Oil and Gas Extraction (Proprietors)</td>
<td>7,233</td>
</tr>
<tr>
<td>211</td>
<td>Oil and Gas Extraction (Wage &amp; Salary)</td>
<td>873</td>
</tr>
<tr>
<td>213111</td>
<td>Drilling Oil and Gas Wells</td>
<td>384</td>
</tr>
<tr>
<td>213112</td>
<td>Support Activities for Oil and Gas Operations</td>
<td>524</td>
</tr>
</tbody>
</table>

**TOTAL** 9,014

## An Industry Snapshot: “Jobs” (Downstream)

<table>
<thead>
<tr>
<th>NAISC</th>
<th>Sector Name</th>
<th>“Jobs”</th>
</tr>
</thead>
<tbody>
<tr>
<td>2212</td>
<td>Natural Gas Distribution</td>
<td>790</td>
</tr>
<tr>
<td>324110</td>
<td>Petroleum Refineries</td>
<td>680</td>
</tr>
<tr>
<td>486110</td>
<td>Pipeline Transportation (Crude Oil)</td>
<td>59</td>
</tr>
<tr>
<td>486210</td>
<td>Pipeline Transportation (Natural Gas)</td>
<td>844</td>
</tr>
<tr>
<td>32512</td>
<td>Industrial Gas Manufacturing</td>
<td>242</td>
</tr>
</tbody>
</table>

**TOTAL (Downstream)** 2,615

## An Industry Snapshot: Wages

<table>
<thead>
<tr>
<th>Sector Name</th>
<th>Total Wages</th>
<th>Avg. Annual Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil and Gas Extraction (Wage &amp; Salary)</td>
<td>$53,956,295</td>
<td>$61,788</td>
</tr>
<tr>
<td>Drilling Oil and Gas Wells</td>
<td>$17,310,996</td>
<td>$45,042</td>
</tr>
<tr>
<td>Support Activities for Oil and Gas Operations</td>
<td>$28,102,028</td>
<td>$53,681</td>
</tr>
</tbody>
</table>

**Total Oil & Gas Wages (2011)** $99,369,319  
**Average Annual Wage (2011)** $55,794


[www.kyoilgas.org](http://www.kyoilgas.org)
## An Industry Snapshot: Wages (Downstream)

<table>
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<tr>
<th>Sector Name</th>
<th>Total Wages</th>
<th>Avg. Annual Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Distribution</td>
<td>$45,204,055</td>
<td>$57,190</td>
</tr>
<tr>
<td>Petroleum Refineries</td>
<td>$73,425,467</td>
<td>$107,913</td>
</tr>
<tr>
<td>Pipeline Transportation (Crude Oil)</td>
<td>$5,377,967</td>
<td>$91,023</td>
</tr>
<tr>
<td>Pipeline Transportation (Natural Gas)</td>
<td>$73,023,259</td>
<td>$86,478</td>
</tr>
<tr>
<td>Industrial Gas Manufacturing</td>
<td>$14,310,853</td>
<td>$59,238</td>
</tr>
</tbody>
</table>

**Total Oil & Gas Wages (Downstream)**  $211,341,601  
**Average Annual Wage (2011)**  $80,818

2007 Economic Census

$1,000,000,000

$984,609,000

$800,000,000

$600,000,000

$400,000,000

$200,000,000

$0

211 – Oil and Gas Extraction
213111 – Drilling Oil and Gas Wells
213112 – Support Activities for Oil and Gas Operations

Total Value of Shipments
Capital Expenditures
Total = $1.4 billion

www.kyoilgas.org
Kentucky Oil and Gas Industry: Total Output (2010)

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Output (Value of Production)</td>
<td>$1,108,807,700</td>
</tr>
<tr>
<td>Intermediate Expenditures</td>
<td>$299,198,800</td>
</tr>
<tr>
<td>Employee Compensation</td>
<td>$64,025,090</td>
</tr>
<tr>
<td>Proprietor Income</td>
<td>$384,060,700</td>
</tr>
<tr>
<td>Other Property Income</td>
<td>$236,971,400</td>
</tr>
<tr>
<td>Indirect Business Taxes</td>
<td>$124,551,700</td>
</tr>
</tbody>
</table>

Source: IMPLAN version 3.0 of Kentucky, using 2010 county-level data.

1 Ex. Support services for oil and gas operations, leasing of nonfinancial intangible assets, valves and fittings, etc.
Opportunities & Challenges for the Oil and Gas Industry Moving Forward

• Public education about safe hydraulic fracturing practices
• Increased EPA and ESA regulation affecting Kentucky’s industry
• Dry gas prices in a dry gas state
• Planning for potential discovery of shale-like resources.
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