Potential Supply of Natural Gas in the United States

Report of the Potential Gas Committee (December 31, 2014)

Washington, D.C. April 8, 2015

50th Anniversary 1964-2014
Potential Gas Committee

• ~100 Volunteer geoscientists & petroleum engineers

• Biennial assessments—since 1964—of the Technically Recoverable U.S. natural gas endowment

PGC Resources + EIA Proved Reserves = Potential Future Gas Supply

Learn more about the PGC: http://www.potentialgas.org
Potential Gas Committee

Natalie H. Reagan
President/General Chairman

Richard J. Snyder
Chairman, Board of Directors

Develops assessment policy and procedures; directs and manages studies of natural gas resources; recruits personnel and supervises work; prepares reports on natural gas resources.

Potential Gas Agency

Colorado School of Mines
(supported by industry)

Dr. John B. Curtis, Director

Approves criteria and methods, insures maintenance of standards and objectivity; reviews and evaluates reports; publishes final assessments of gas resources.
Proved Reserves vs Resources

- Known gas reservoirs
- Existing economic conditions
- Existing operating conditions
- Discovered
- Undiscovered
- Effects of technology
Dynamics of Resource Appraisal

Present Resources
- Probable Resources
- Possible Resources
- Speculative Resources

Drilling & Appraisal
- Proved Reserves
- Revised Probable
- Probable Resources
- Revised Possible
- Possible Resources
- Revised Possible
- Speculative Resources
- Revised Speculative

Future Resources
<table>
<thead>
<tr>
<th>Resource Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Gas Resources</td>
<td>2,356.8 Tcf</td>
</tr>
<tr>
<td>Coalbed Gas Resources</td>
<td>158.1 Tcf</td>
</tr>
<tr>
<td>Total U.S. Gas Resources</td>
<td>2,514.9 Tcf</td>
</tr>
<tr>
<td>Proved Reserves (EIA)*</td>
<td>338.3 Tcf</td>
</tr>
<tr>
<td>Future Gas Supply</td>
<td>2,853.2 Tcf</td>
</tr>
</tbody>
</table>

Totals are subject to rounding.

* Latest available value (dry gas), year-end 2013
PGC Resource Assessments, 1990-2014

Total Potential Gas Resources (Mean Values)

Data source: Potential Gas Committee (2015)
PGC Resource Assessment 2014

Total Traditional Resources (mean values) by category

* Total values are separately aggregated, not arithmetically additive.

Data source: Potential Gas Committee (2015)
PGC Resource Assessment 2014

Total Traditional Resources (mean values) by category

- **Probable (existing fields)**: 844.4 Tcf
- **Possible (new fields)**: 930.1 Tcf
- **Speculative (frontier)**: 586.1 Tcf
- **Total**: 2,356.8 Tcf

* Total values are separately aggregated, not arithmetically additive.

* Separately aggregated value.

Data source: Potential Gas Committee (2015)
PGC Resource Assessment 2014

Total Coalbed Gas Resources (mean values) by category

Data source: Potential Gas Committee (2015)
PGC Resource Assessment 2014

Total Coalbed Gas Resources (mean values) by category

- Probable (existing fields): 14.2 Tcf
- Possible (new fields): 48.3 Tcf
- Speculative (frontier): 95.7 Tcf
- Total*: 158.1 Tcf

* Separately aggregated value.

Data source: Potential Gas Committee (2015)
Regional Resource Comparison

Potential Resources, Year-End 2014 (“Most Likely” values, Bcf)

- **Atlantic**
- **Gulf Coast**
- **Rocky Mountain**
- **Mid-Continent**
- **Alaska**
- **Pacific**
- **North Central**

*Data source: Potential Gas Committee (2015)
Regional Resource Assessment

Data source: Potential Gas Committee (2015)

* Separately aggregated from all province data.

U.S. Traditional (mean)* 2,356.8 Tcf
U.S. Coalbed (mean)* 158.1 Tcf
Grand Total U.S. (mean) 2,514.9 Tcf

Traditional Gas Resources, mean value
Coalbed Gas Resources, "most likely" value. Area mean values not computed.
## Regional Resource Assessment Summary

<table>
<thead>
<tr>
<th>PGC Area</th>
<th>Traditional Gas Resources (Mean Value, Tcf)</th>
<th>Proportion of Total US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic</td>
<td>833.4</td>
<td>35.2%</td>
</tr>
<tr>
<td>Gulf Coast</td>
<td>536.0</td>
<td>22.7%</td>
</tr>
<tr>
<td>Rocky Mountain</td>
<td>430.9</td>
<td>18.2%</td>
</tr>
<tr>
<td>Mid-Continent</td>
<td>296.4</td>
<td>12.5%</td>
</tr>
<tr>
<td>Pacific</td>
<td>54.1</td>
<td>2.3%</td>
</tr>
<tr>
<td>North Central</td>
<td>20.8</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>Total Lower 48 U.S.</strong>*</td>
<td><strong>2,169.6</strong></td>
<td></td>
</tr>
<tr>
<td>Alaska</td>
<td>193.8</td>
<td>8.2%</td>
</tr>
<tr>
<td><strong>Total U.S. Traditional</strong></td>
<td><strong>2,356.8</strong></td>
<td></td>
</tr>
</tbody>
</table>

Data source: Potential Gas Committee (2015)  
* Separately aggregated total. Area means are not arithmetically additive.
Influences on Future Gas Supply

- Resource Base
- Gas Price
- Regulatory & Land Issues
- Environmental Issues
- Skilled Workforce
- Rig Availability
- Technology
- Pipeline Capacity

Sufficient Supply to Meet Demand