The Outlook for Electricity Supply and Demand to 2035: Key Drivers

Center for Public Utilities Current Issues Conference
Session on Balancing Reliability, Affordability, and Environmental Protection
College of Business
New Mexico State University
March 12, 2012 | Santa Fe, New Mexico

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While electricity consumption grows by 23% over the AEO2012 Reference case projection, the annual rate of growth slows percent growth (3-year rolling average)

<table>
<thead>
<tr>
<th>Period</th>
<th>Annual Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950s</td>
<td>9.8</td>
</tr>
<tr>
<td>1960s</td>
<td>7.3</td>
</tr>
<tr>
<td>1970s</td>
<td>4.7</td>
</tr>
<tr>
<td>1980s</td>
<td>2.9</td>
</tr>
<tr>
<td>1990s</td>
<td>2.4</td>
</tr>
<tr>
<td>2000-2010</td>
<td>1.0</td>
</tr>
<tr>
<td>2010-2035</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Source: EIA, Annual Energy Outlook 2012 Early Release
Electricity mix gradually shifts to lower-carbon options in the Reference case, led by growth in renewables and natural gas.

Source: EIA, Annual Energy Outlook 2012 Early Release
Domestic natural gas production is projected to grow faster than consumption

U.S. dry gas
trillion cubic feet per year

Source: EIA, Annual Energy Outlook 2012 Early Release
Technically recoverable natural gas resources for AEO 2012 reflect updated assessments

U.S. dry gas resources
trillion cubic feet

*Alaska resource estimates prior to AEO2009 reflect resources from the North Slope that were not included in previously published documentation.

Source: EIA, Annual Energy Outlook
Growing shale gas supplies are projected to more than offset declines in other U.S. natural gas production sources.

U.S. dry gas production
trillion cubic feet per year

Source: EIA, Annual Energy Outlook 2012 Early Release
Global spot natural gas and crude oil prices with average monthly LNG prices in Japan

U.S. dollars per million British thermal unit

Source: EIA based on Bloomberg as of 3/5/2012
EIA’s natural gas price projections are slightly lower than in *AEO2011*, consistent with recent market developments.

natural gas spot price (Henry Hub)
2010 dollars per million Btu


Howard Gruenspecht
Santa Fe, March 12, 2012
The average delivered price of coal to electricity generators varies widely across U.S. regions – transport costs are a key reason.

2010 Delivered coal prices, $ per million Btu

<table>
<thead>
<tr>
<th>National Average</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2.25</td>
<td>$1.46</td>
<td>$4.46</td>
</tr>
</tbody>
</table>

Source: EIA, Annual Energy Outlook 2012 Early Release
Operating costs: existing plants with and without a value on carbon

The “crossover point” for least-cost dispatch of coal and natural gas capacity depends on both fuel prices and the carbon value. At lower natural gas prices, the “crossover” occurs at a lower carbon value.

Environmental operating costs and retrofit costs for pollution controls at existing coal-fired plants can “raise the bar” for their continued operation.

For retrofit decisions, the unit’s perceived “useful life,” which plays a critical role, can be affected by views regarding future climate policies.
For more information


Short-Term Energy Outlook | www.eia.gov/steo

Annual Energy Outlook | www.eia.gov/aeo

International Energy Outlook | www.eia.gov/ieo

Monthly Energy Review | www.eia.gov/mer

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