Perspective from the Electric Utility Industry: Rural Electric Cooperatives

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865 distribution and 66 generation & transmission cooperatives serve:

• 42 million people in 47 states.

• 18 million businesses, homes, schools, churches, farms, irrigation systems, and other establishments in 2,500 of 3,141 counties in the U.S. (80 percent of the nation's counties).

• 12 percent of the nation's population.
Co-op Statistics

To perform our mission, electric cooperatives:

• own assets worth $92 billion,
• own and maintain 2.5 million miles, or 42%, of the nation's electric distribution lines, covering three quarters of the nation's landmass,
• deliver 10 percent of the total kilowatt hours sold in the U.S. each year,
• generate nearly 5 percent of the total electricity produced in the U.S. each year,
• employ 65,000 people in the United States,
• pay more than $1 billion in state and local taxes.
Apache Generating Station

- 605 MW owned generation
- 390 MWs coal generation
- 215 MWs gas generation
- 620 miles of transmission lines
- 241 employees
- 6 members systems
- Zero discharge facility
- High-hazard CCR facility
Six rural-based distribution cooperatives

Approximately 150,000 meters
Generation Fuel Mix
Total Industry (all electric utilities)

Total Generation: 4,054 billion kWh

- Coal: 37%
- Gas: 30%
- Nuclear: 19%
- Hydro: 7%
- Renewables: 5%
- Oil: 1%

Source: 2012 EIA data (all sectors)
May 2013
Fuel Mix

Rural Electric Distribution Co-ops

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>58%</td>
</tr>
<tr>
<td>Gas</td>
<td>17%</td>
</tr>
<tr>
<td>Renewables*</td>
<td>13%</td>
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<tr>
<td>Nuclear</td>
<td>12%</td>
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</tbody>
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*including hydro (10%)

Source: EIA and RUS data
Co-op Generation Fuel Mix

Total Generation: 209 billion kWh

- Coal: 70%
- Gas: 19%
- Nuclear: 10%
- Other: 1%

Source: 2012 Ventyx
June 2013
The three largest IOU owners of coal own a combined 22% of all US coal capacity. The three largest G&T Co-ops own less than 2% of all coal capacity.
AEP owns the most coal capacity of any utility, almost 10% of the US total coal capacity. The total amount of coal plant owned by all co-ops combined is still less than AEP’s coal capacity.
Co-op Perspectives

• Co-ops support an “all the above energy strategy”

• We believe that coal needs to be part of the fuel mix in order to provide safe, reliable, affordable electricity to our consumer

• Heavy reliant on coal, time for transition of a more diverse portfolio
Co-op Financing

• Co-ops are not-for-profit public service utilities providing affordable reliable electricity to our consumer members.
• President Roosevelt created the Rural Electrification Administration (REA), which historians credit for making the nation’s electrical grid — one of the great engineering feats of the last century — possible.
• Financing from the Department of Agriculture’s Rural Utilities Service (RUS) remains an essential component of the co-op utility sector’s loan portfolio.
  — as well as private financing both to maintain and modernize the existing system and to expand the system to meet the nation’s increasing demand for electricity.
• Although some cooperatives have seen a portion of their service territories transformed into urban areas, for the most part electric co-ops are the sole providers serving far-flung, sparsely populated areas with below-average income levels.
CO$_2$ Capture and Storage (CCS)

- Low cost CCS technology is key if we are going to have coal and natural gas as part of a carbon constrained energy future.
- It needs to be commercially available technology that is not costly.
- There are areas of the country that will require additional electric capacity in the future, but do not have sufficient access to natural gas, do not have suitable sites for CO$_2$ storage or enhanced oil recovery sites, and cannot be supplied wholesale power reliably through the existing transmission grid. It is critical that new coal remain an economically viable option for such locations.
- If no coal plants are being built, there will be even less support from the private sector for continued investment in CO$_2$ capture development. And, consequently, CO$_2$ capture won’t be available to use fossil fuels as energy in a carbon constrained future neither in the US nor around the world.
Thank you!

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