Climate Change Issues in 2011: Energy Perspective

Judy M. Poferl
President and CEO
Northern States Power Company - Minnesota
February 10, 2011
Maintain reasonably priced, reliable energy
Address risk through advanced, balanced, and diverse energy portfolio
Create value for customers, shareholders and employees

Gas Customers 1.9 M
Electric Customers 3.4 M
Xcel Energy’s Perspective

- Clarity and certainty of rules is essential
  - Aging infrastructure
  - Long-lead time, long-lived assets
  - Significant capital required

- Investments should prove valuable from a variety of perspectives
  - Cost
  - Reliability
  - Environment
  - Risk
CO₂ Emissions: 2003 to 2020

Millions of tons

2003
2005
2007
2009
2011
2013
2015
2017
2019

2003 - 2020

26% Reduction

Xcel Energy
Responsible by Nature™
## Emission Reduction Initiatives

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Details</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Retrofit “anchor” coal units</strong></td>
<td>- Retrofit one unit to BACT level controls</td>
<td>Preserve valuable assets for the future</td>
</tr>
<tr>
<td></td>
<td>- Retire five units</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Construct two natural gas combined cycle units</td>
<td></td>
</tr>
<tr>
<td><strong>Minneapolis Emissions Reduction Project</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Retrofit “heritage” coal units</strong></td>
<td>- Retire 270 MW of remaining coal</td>
<td>Maintain reasonable long-term cost</td>
</tr>
<tr>
<td></td>
<td>- Construct natural gas combined cycle unit</td>
<td></td>
</tr>
<tr>
<td><strong>Black Dog Proposal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach requires significant investment and supportive regulation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Nuclear

Monticello Plant

Prairie Island Plant

- Low cost, emission-free, carbon-free, reliable base load
- License extensions save customers money ($1 billion)
- Expanded capacity to meet growing needs (+235 MW)
Concurrent Strategies

- Nation’s No. 1 Wind Provider
- Nation’s No. 4 Energy Efficiency Programs
- Transmission investments
- Commitment to innovation
  - Energy Innovation Corridor
  - Electric vehicles

Savings

- Demand
  - 2.1 million kW

- Natural Gas
  - 9.3 million MCF

- Electricity
  - 4.8 billion kWh

Results: Equivalent of removing 4 million metric tons of CO₂ emissions
Upper Midwest Fuel Mix

**2009**
- Coal: 47%
- Nuclear: 27%
- Natural Gas: 6%
- Wind: 8%
- Other: 12%

**2025**
- Coal: 30%
- Nuclear: 28%
- Natural Gas: 16%
- Wind: 20%
- Other: 6%
Key Decisions

Retire and Replace
- Natural gas supplemented with renewables?
- Higher operating costs?
- More volatility?

Retrofit
- More retrofits in the future?
- Future carbon costs?
- Costs over useful life?
Looking Forward

◆ Continue to pursue balanced, diverse energy portfolio
  — Coal, nuclear, gas, renewables and efficiency

◆ Address coal infrastructure
  — Retire and replace aging coal infrastructure
  — Retrofit the more efficient “anchor coal”
  — Invest in natural gas and renewables as appropriate

◆ Explore and implement cost-effective new technology development

◆ Advocate for flexible, low-cost energy and environmental policies