The Energy Influencers and the Impact on Coal

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Discussion Plan

• NiSource and NIPSCO

• Competing Values Driving Utilities Energy Supply Strategies

• Energy’s Big Trends 2.0

• Competing on Cost: What this means for Producers and the Railroads

• Natural Gas: No fossil fuel is immune

• Now what?
NiSource: An Industry-Leading Natural Gas and Electric Utility Company

- $11B market cap
- 7-State Footprint
- ~7,500 Employees
- ~3.5M Natural Gas Utility Customers
- ~500K Electric Utility Customers
- ~$30B, 20+ Year Infrastructure Enhancement Plan
NIPSCO: Regulated Subsidiary of NiSource

Business Profile
- Third largest electric utility in Indiana (~500K customers)
- Fully integrated electric utility
- 2,853 MW of environmentally compliant generation
- ~ $3.0B rate base

Customer Focus
- Fewest customer complaints in Indiana
- Top quartile reliability performance
- Continued rise in J.D. Power customer satisfaction survey

Economic Outlook / Customer Growth
- Customer growth potential through rural extension opportunities

Business Profile
- Largest LDC in Indiana (~800K customers)
- ~ 17,000 miles of pipe
- ~ 35 miles of unprotected steel
- Regulatory construct encourages gas system expansion into rural areas
- ~ $800M fair value rate base

Customer Focus
- Lowest-cost gas provider
- Fewest customer complaints
- Continued rise in J.D. Power customer satisfaction survey
The NIPSCO Trend In Energy Mix and Consumption

Takeaway Alert! Creative Coal and Transportation pricing stopped the bleeding.....
Utility Strategy Driver Interplay: Everything Venn 2019

- Environment continues to grow its sphere of influence
- Social Justice has joined the influencers table
- Shareholders: Increased capital cost = Increased returns
- Regulators: Reallocation risk

Takeaway Alert! Stakeholders influence strategy and environment is the likely largest influencer
Environment Continues to Drive Utility Strategy

Environmental Impact Targets

<table>
<thead>
<tr>
<th>Environmental Impact</th>
<th>Current Reductions (from 2005 levels)</th>
<th>New Reductions (from 2005 levels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Oxides</td>
<td>90%</td>
<td>99%</td>
</tr>
<tr>
<td>Sulfur Oxides</td>
<td>90%</td>
<td>99%</td>
</tr>
<tr>
<td>Water Withdrawal</td>
<td>60%</td>
<td>99%</td>
</tr>
<tr>
<td>Wastewater Discharge</td>
<td>50%</td>
<td>99%</td>
</tr>
<tr>
<td>Coal Ash Generated</td>
<td>50%</td>
<td>100%</td>
</tr>
<tr>
<td>Greenhouse Gas</td>
<td>50%</td>
<td>90%+</td>
</tr>
<tr>
<td>Methane (Pipeline Replacement)</td>
<td>50%</td>
<td>50%+</td>
</tr>
</tbody>
</table>

NISOURCE GREENHOUSE GAS REDUCTIONS

- By 2026 (from 2005 levels): 50%
- By 2030 (from 2005 levels): 90%

Two Degree Scenario

Through our carbon reduction plan, we are committed to being a part of the solution to the global climate crisis. There is broad scientific consensus that achieving 80 percent carbon reduction by 2050 will be necessary to begin to limit the global temperature increase below two degrees Celsius over preindustrial levels.

Our commitment to renewable energy.

80% CARBON REDUCTION

2050

The future of energy is low- to no-carbon.

Learn More
Market purchases jump to 41% of the supply mix in this example. This strategy is not unique to this utility.

The increased cost of coal generation has created more supply options (wind, solar, batteries, gas turbines, fuel cells and others to make a deeper market).

Takeaway Alert! Utilities are looking to the market for supply.
Coal has become the highest cost supply option

The zero coal option provides customers with the lowest RELATIVE cost energy supply

**Takeaway Alert! Relativity**
Utility Perspective: The Bottom Line

- Environmental influences have increased pressure on utilities.
- Utilities must weigh competing forces that are dominated by environmental drivers.
- Reliability is still a fundamental requirement.
- Provide cost competitive supply.
  - Lowest cost ≠ low cost (remember, costs are relative).
- A balanced energy supply mix is prudent (2019 caveat: unless it is fossil or nuclear).
Impact of these Strategies on CO₂ Emissions

Takeaway Alert! Gas passed coal and Petroleum is still the largest emitter...

Reference: https://www.eia.gov/environment/emissions/carbon/
What Does this all mean for Coal Producers and Railroads?

- Competition has shifted to other generating sources and not each other
- Pricing needs to consider market dynamics
  - Index to energy products
    - Day ahead power prices are the most transparent and correlate directly to the market
    - Power prices allow participants to share in the rewards or the pain, but ultimately increases the probability higher coal consumption (no guarantees)
    - Gas can be used, but the correlation is poor at best
- For coal to compete with other generation sources or demand curtailment programs, railroads have to be part of the creative solution
- Even with these strategies, lowing the offer price does not guarantee more consumption
  - Lowing the offer price influences the market
  - Some of the competition can offer generation at negative prices
- This is by no means a silver bullet, but it’s the best we’ve got
Peabody and Arch: Driven by Energy Market Pricing

• The Peabody and Arch Joint Venture
  – Flat to declining coal prices is driving a strategy to compete on cost to maximize shareholder value
  – Race to the bottom continues to pressure coal and transportation prices
  – Benefits:
    • Drive costs down to compete with renewables and natural gas
    • Coal Customers are the beneficiaries in a low price wholesale energy market
    • Electric customers win with lower wholesale prices
  – Risks:
    • Natural gas prices and/or energy prices increase drastically and allow “Supplier Power”
    • Race to the bottom continues and coal remains on the margin

• Can Producers in other Basins execute this strategy?
  – Yes, but it depends......

I’ll get back to you Gene
• Natural Gas is not immune to environmental challenges
  – Tough to stop drilling activities, so go after the distribution and users

• Regions in New York have stopped taking on new customers due to distribution capacity constraints
  – This has gas producers missing out on better pricing and demand
  – Gas is being shifted whenever possible to get better export prices
  – This is drastically altering pipeline flows
  – New England imported LNG to control localized price spikes
Where is Natural Gas Moving?

- Constrained transport and distribution on the East Coast and in the Pacific Northwest caused massive price spikes.
- A surplus of production not caused localized negative pricing
- Producers are looking to exports to improve pricing
- The irony is the East Coast imported LNG to reduce volatility
- Why? Environmental strategy has, in part, forced significant inefficiencies and extreme market bias

Where are we going?

- Stakeholders drive strategy
- Utilities appear to be willing to bet more on the market for supply
- The trends are not great for fossil fuels
- Coal has been disadvantaged
- Gas is fighting its own war
- Its now a race to the bottom
- Suppliers and utilities must get creative with pricing
Thank You for Your Attention!

ONE DOES NOT SIMPLY

SAY THANK YOU WITHOUT A MEME