Dash to Gas: Fact or Fiction

- Since 1997, gas use by power generators in the U.S. has grown by 135%, or 6% annually on average.

- However, over the past 3 years, gas use by power generators has increased 10% annually.

- Coal’s share of electricity generation dropped to 44% in 2011 from 50% in 2008, as natural gas’ share climbed to 23% from 20%.
PJM Snapshot

- IN PJM, the share of total energy from natural gas has risen from:
  - 7% in 2007
  - 20% in 2012

- Over 18,000 MW of coal-fired generation retired due to environmental rules and economic conditions
  - Much of this capacity is being replaced by new natural gas-fueled resources

- The amount of gas-fired generation in PJM’s interconnection queue doubled between 2010 and 2012
Trends in Electricity Output

Share of Electric Generation

Source: EEI
National Trends in Generating Capacity

Capacity Additions 2012

- Wind: 43%
- Natural Gas: 29%
- Coal: 15%
- Solar: 8%
- Nuclear: 2%
- Other: 2%

New Capacity Announcements 2012

- Wind: 28%
- Natural Gas: 49%
- Solar: 15%
- Hydro: 7%
- Other: 1%

Source: EEI
PA Generation by Fuel Type

2009
- Nuclear: 37.2%
- Renewables: 3.0%
- Natural gas: 10.1%
- Petroleum: 0.4%
- Coal: 49.3%

2013
- Nuclear: 35.5%
- Renewables: 4.0%
- Natural gas: 20.5%
- Petroleum: 0.3%
- Coal: 39.7%

Source: EIA
Key Issues: Gas- Electric Coordination

- **Information Sharing**
  - Are there barriers to the gas and electric industries successfully sharing necessary information?

- **Scheduling Issues**
  - Do the mismatches between scheduling practices in the gas and electric industries inhibit successful communication?

- **Firm Energy**
  - Does the lack of firmness in the gas supply represent an increasing threat to electric reliability?
  - Do generators have the proper incentives to deliver firm energy?
FERC’s Role

- FERC has devoted enormous staff resources to address gas-electric coordination issues:
  - 5 regional technical conferences in Aug. 2012
  - Feb. 13, 2013, tech conference in D.C.
  - April 25, 2013, technical conference in D.C.
  - Staff quarterly reports on regional gas-electric coordination activities: 1st report Mar. 21, 2013
  - May 16 & 17, 2013 RTO/ISO hearings

“This is one of the more pressing issues in our country.”

Commissioner Moeller, testifying before U.S. House Subcommittee on Energy and Power (March 19, 2013) referring to the convergence of the natural gas and electric industries.
Challenges to Developing “National Standards” on Gas-Electric Issues

- **Regionalized Markets**
  - The regional differences in market operations and generation dispatch make national rules hard to develop

- **Varying Levels of Interest**
  - The level of concern about securing supplies for the increase in natural gas powered generation varies widely depending on local infrastructure and demand
Potential Improvements

- Increased cooperation and transparency between the gas and electric industries, ISOs/RTOs, and state and federal agencies through:
  - Tabletop exercises
  - Exchange of gas/electric control room operators
  - Quarterly meetings to discuss outage impacts
  - Non-disclosure agreements to encourage information sharing
Questions?