Challenges Facing Power Generation

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Power Generation Drivers and Externalities

- Fuel Availability & Price (Natural Gas)
- Renewables
- Emissions Constraints
- Water Management
- Economic Viability
- Market Drivers
- Aging Assets
- Demand Trends
U.S. Electricity Demand Growth Forecast

• Drivers
  – Changes in economy
  – Energy efficiency policies

Source: U.S. Energy Information Administration, Annual Energy Outlook 2014 Early Release

Forecast average annual growth rate of 0.9% thru 2040
Power Industry’s Stake in Natural Gas

• Natural gas has changed the landscape of power generation
• Electricity production #2 consumer of natural gas
• Impacts operations of both coal and gas plants
• Natural gas price is driver for power production options.

Natural gas availability key driver for Operational Flexibility needs of both coal and gas assets
Environmental Risk Management

Technology innovation needed to prepare for the future
Drivers for new Power Cycles

- Near-zero emissions
- High efficiencies
- Flexible
- Affordable

Re-thinking how to generate power
Together…Shaping the Future of Electricity