Curtis Davis, Chief Operating Officer, Generation and Marketing
Allegheny Energy Supply

Governor’s Energy Summit 2010
Allegheny & FirstEnergy Combined Service Territory

FirstEnergy (FE) Service Area
Allegheny Energy (AYE) Service Area
Potomac Edison/TrAILCo
VA Transmission Zone
FirstEnergy Power Plants
Allegheny Power Plants
Challenges to the Generator

- Electricity demand is down
- Power prices are down
- Capacity prices are down
- Coal prices are up
- Environmental regulations are increasing and unclear, thus creating uncertainty
Coal is the Dominant Source of Electricity

United States
- Coal: 45%
- Natural Gas: 23%
- Nuclear: 20%
- Renewables: 10%
- Other: 2%

West Virginia
- Coal: 97%
- Natural Gas: 0.2%
- Renewables: 3%
- Other: 0.2%

West Virginia Generation
The maze of regulations over the next five years…

…will force nearly all coal plants to retrofit or retire.
Potential Effects of EPA Regulations

Multiple reports conclude EPA regulations will result in:

- The loss of significant amount of generation capacity
- Extensive capital costs associated to comply
- Upward pressure on energy prices
- Negative effects on system reliability
Estimated Coal Retirements/Sample Reports

- NERC (October 2010)
  - 34 GW of retirements through 2015-2018
- MJ Bradley (August 2010)
  - 25-40 GW of retirements by 2015
- Sanford Bernstein (October 2010)
  - 65 GW of retirements by 2014-2015
- Credit Suisse (September 2010)
  - 35-103 GW of retirements through 2013-2017
- ICF for EEI (May 2010)
  - 25-60 GW of retirements through 2015
- UMWA (May 2010)
  - 56 GW of retirements by 2015

Source: ACCCE – November 2010
Utilities/Generators may need billions to retrofit or replace coal generation…

…and these costs will be borne by utility customers.

Source: Air costs per EEI Coal Fleet Initiative study. Water & solids cost per AYE internal estimates. Carbon costs per EIA AEO 2010.
All West Virginia Coal Generation will be Impacted

While billions have been spent in WV to reduce air emissions…

…all plants will now face additional mandated investments.

Source: EPA ‘Needs v.4.10’ database
40% of US coal capacity is scrubbed (SO2 and mercury).
33% of US coal capacity has an SCR (NOX control).
Therefore, to survive the train wreck, about 2/3 of US coal capacity would have to invest in a scrubber and/or an SCR, plus other controls.
76% of WV coal capacity has both SCR and scrubbers.
10% of WV coal capacity has only scrubbers.
14% of WV coal capacity has neither a SCR nor scrubbers.
AE has already invested ~$3 Billion in clean air controls.
Continuous Environmental Improvements

*Index 1980 = 100*

- **NO\textsubscript{x} Emissions ↓72%**
- **SO\textsubscript{2} Emissions ↓67%**

*Scrubbers which reduce SO\textsubscript{2} also reduce a significant amount of mercury*

- **p** = preliminary
- 1980 represents the base year. Graph depicts increases or decreases from the base year.

Source: U.S. Environmental Protection Agency (EPA)

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Effect of plant closures on jobs

- Job loss is an issue of concern with pre-mature coal plant closures
- More than 2,700 operation and maintenance employees work in WV coal fired power stations
- There are approximately 46,000 mining employees in WV
- Other suppliers
- Every 4 MW of generation lost represents the loss of one power plant job
- Every 10,000 tons of coal that will not be used due to retirements represents the loss of one mining job
What can we do?

- We must work with Congress and the EPA to mitigate the Train Wreck by coming up with regulations that:
  - Provide a better time line for implementation of regulations.
  - Balance reducing emissions with keeping the lights on
  - Limit cost impact on customers.
  - Support the long-term development of clean coal technologies.

- If we do not find solutions, then we face:
  - A rash of coal generation retirements.
  - Loss of jobs in the utility/generation sectors.
  - Increased costs for utilities and their customers.

- We cannot give on a few regulations
  - One regulation by itself is enough to cause plant closures