

# Longview Power- A Merchant Coal Plant

*prepared for the*

# West Virginia 2009 Energy Summit

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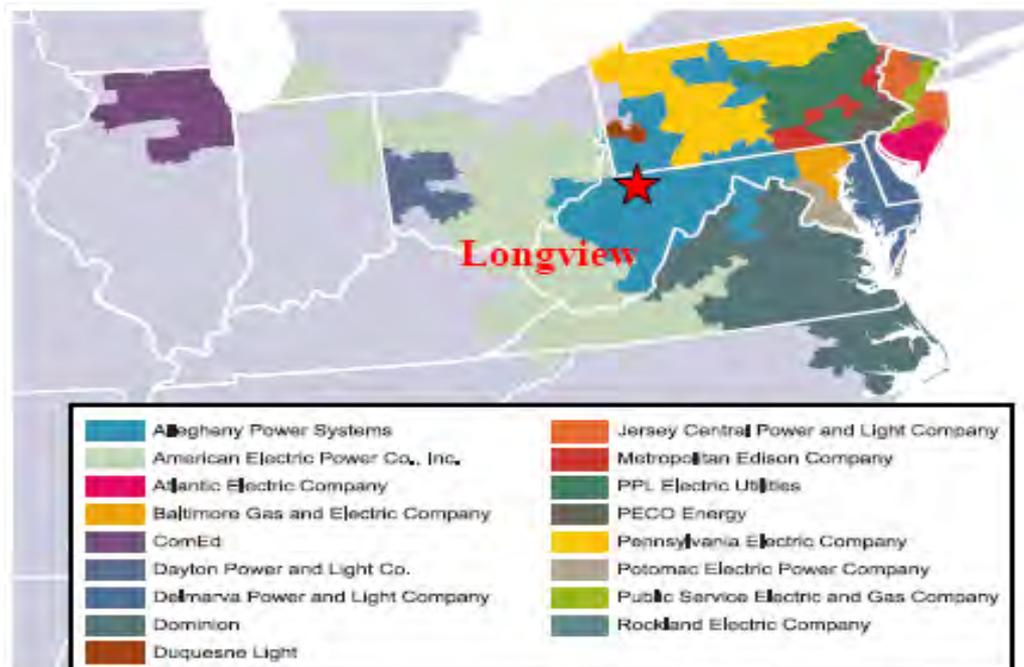


# Longview Power Overview



- The Longview Power Project is a greenfield 769 MW gross (695 MW net) advanced supercritical pulverized-coal generation facility currently under construction in Madsville, West Virginia, 6 miles north of Morgantown, WV.
- Permitting for the project started in 2003. Construction started in 2007, and is scheduled to be completed early in 2011.

# Longview Power Overview



- The total project cost is approximately \$2.0 billion – the largest private investment in WV history.
- The project is owned by Longview Power which is majority owned by GenPower Holdings, L.P. (GenPower).
- Longview Power is located in the PJM West Power Market.
- When complete Longview will be one of the cleanest, most efficient coal-fired power plants in the United States, producing 695 megawatts of electric power.

# Best in Class Technology

Longview's advanced supercritical pulverized coal (SCPC) technology is best in class

- 8,728 Btu/kWh net heat rate (the efficiency of the facility) will be the lowest heat rate of all coal plants in PJM.
- High efficiency of boiler and state-of-the-art air emissions control technology provides lower emissions per MWh generated than other coal fired boilers in the U.S.

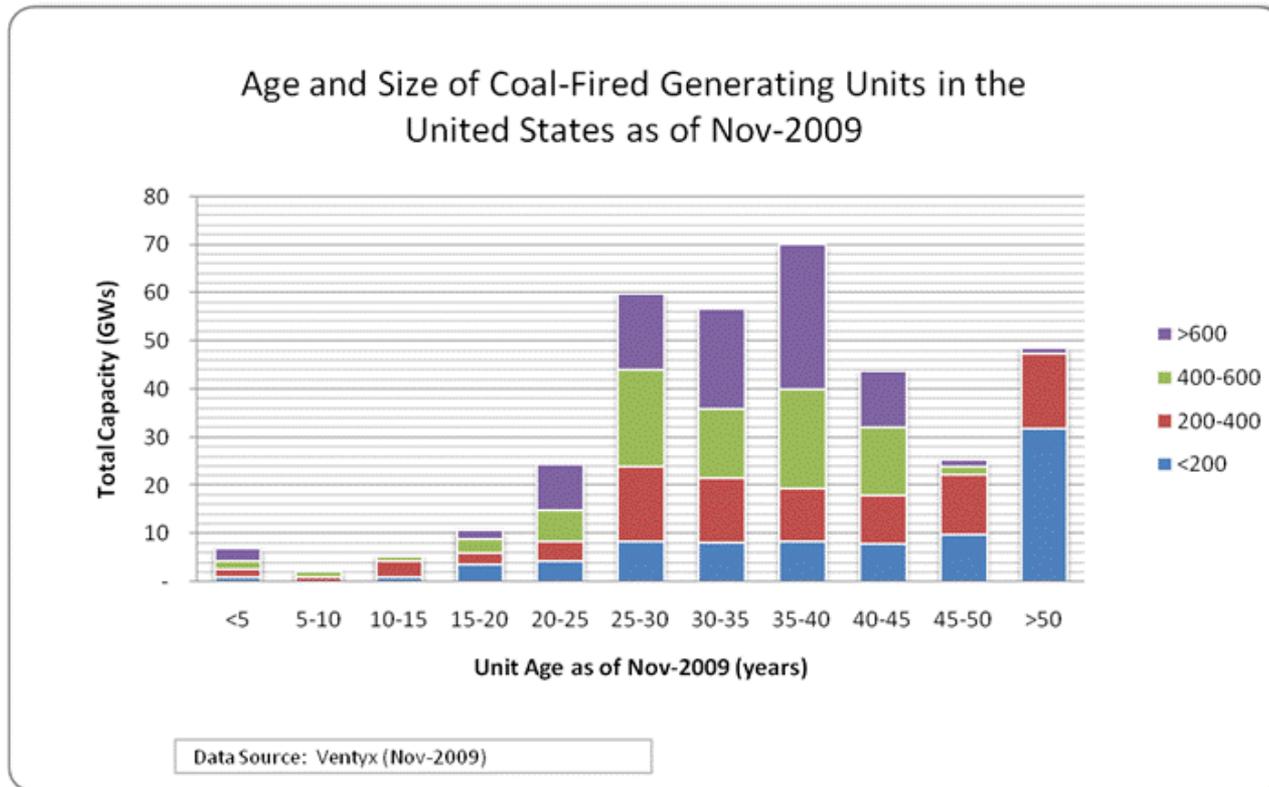
Example of efficiency improvement of 600 MW power plants to supercritical boiler technology:

	Subcritical	<b>Supercritical</b>	Reduction through adopting supercritical technology
Coal consumption (t/year)	1,700,000	<b>1,400,000</b>	300,000
CO <sub>2</sub> emissions (t/year)	3,930,000	<b>3,250,000</b>	680,000
NO <sub>x</sub> emissions (t/year)	9,800	<b>3,700</b>	6,100
SO <sub>2</sub> emissions (t/year)	6,150	<b>5,100</b>	1,050

# Best in Class Technology

Longview will be among the newest and most technically advanced in the nation.

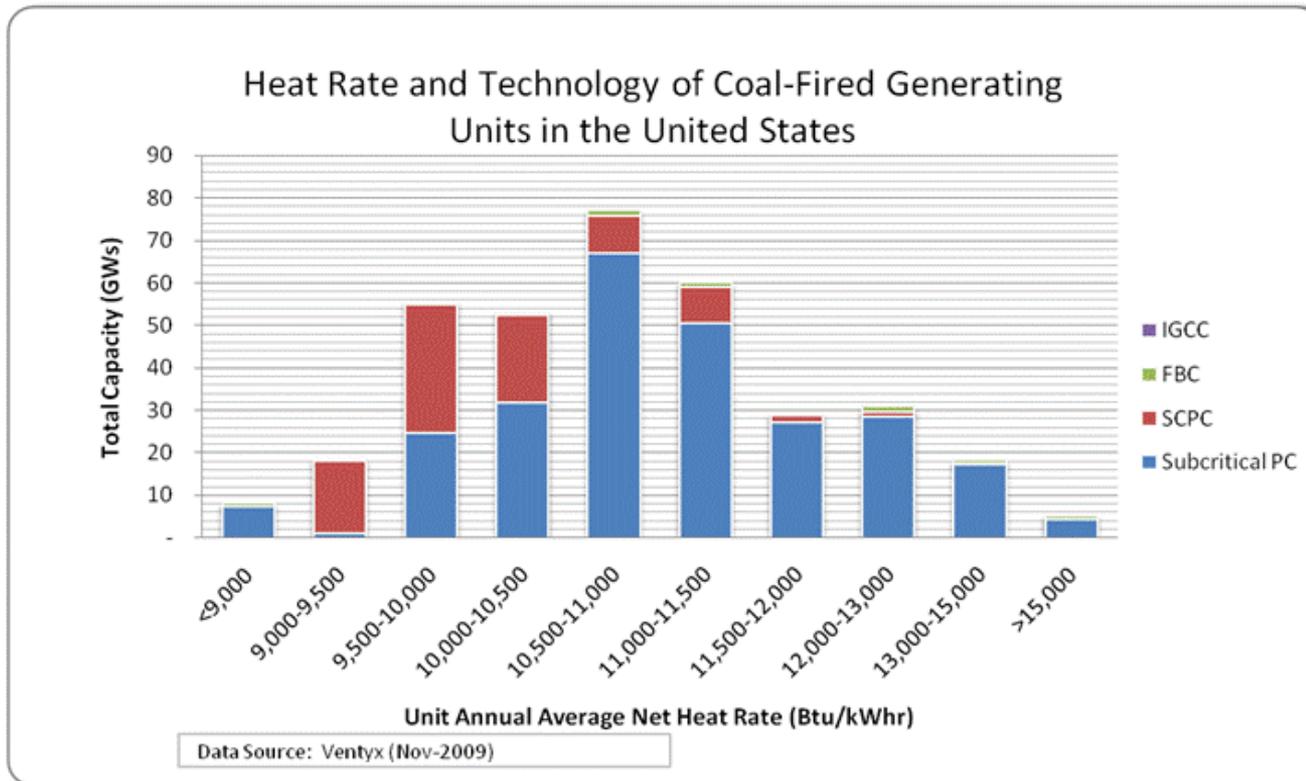
- 93% of existing coal fleet was built prior to 1989.
- 50% of existing fleet was built prior to 1974.



# Best in Class Technology

Longview will be among most efficient in the nation.

- The average U.S. net heat rate of the coal fleet is 10,600 Btu/kwh; Longview is projected to be 8,728.
- Longview is approximately 17% more efficient than the average (less fuel consumption, less emissions).

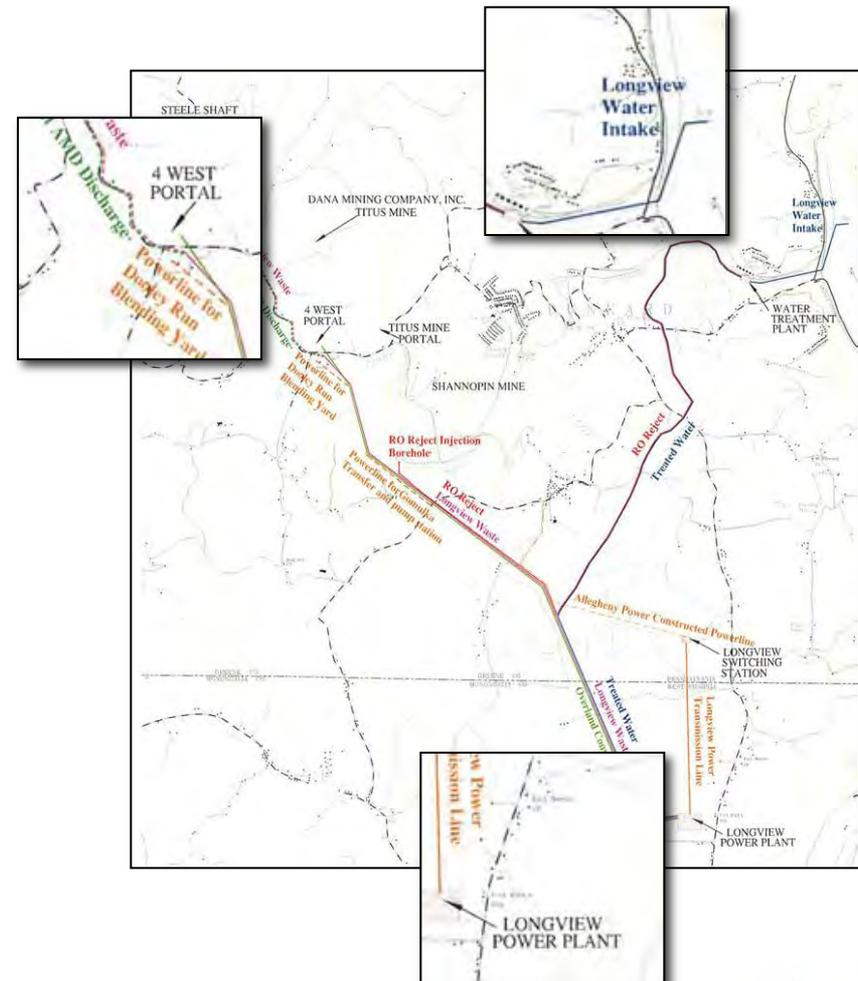


# Longview Project Efficiencies

## Project efficiencies include:

- Proximity to fuel
  - “Mine Mouth” project, fuel to be delivered by conveyor
- Water system design
  - Minimal wastewater discharge, zero discharge to WV
- Local quarries to supply limestone
- Proximity to ash disposal
  - ½ mile transportation, no public roads

Collectively, Longview's advanced supercritical boiler efficiency and project efficiencies add up to the lowest cost of dispatch (delivery of electricity) of any pulverized coal plant in the region.

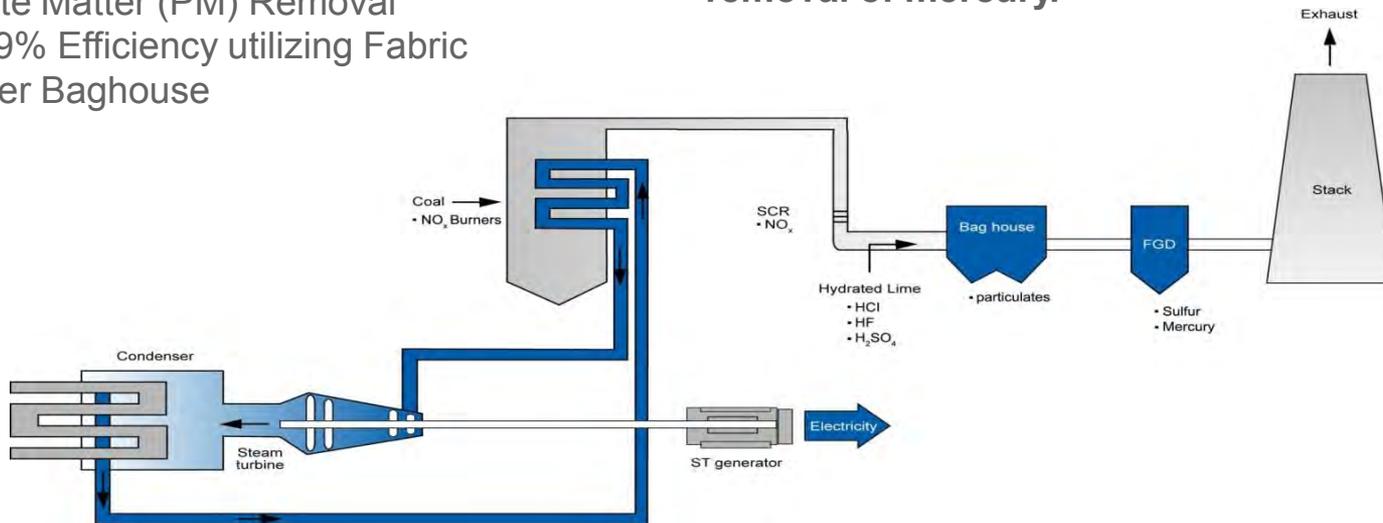


# Longview Air Emission Controls

Longview will meet or exceed Best Available Control Technology (BACT) air emissions standards using the following control systems:

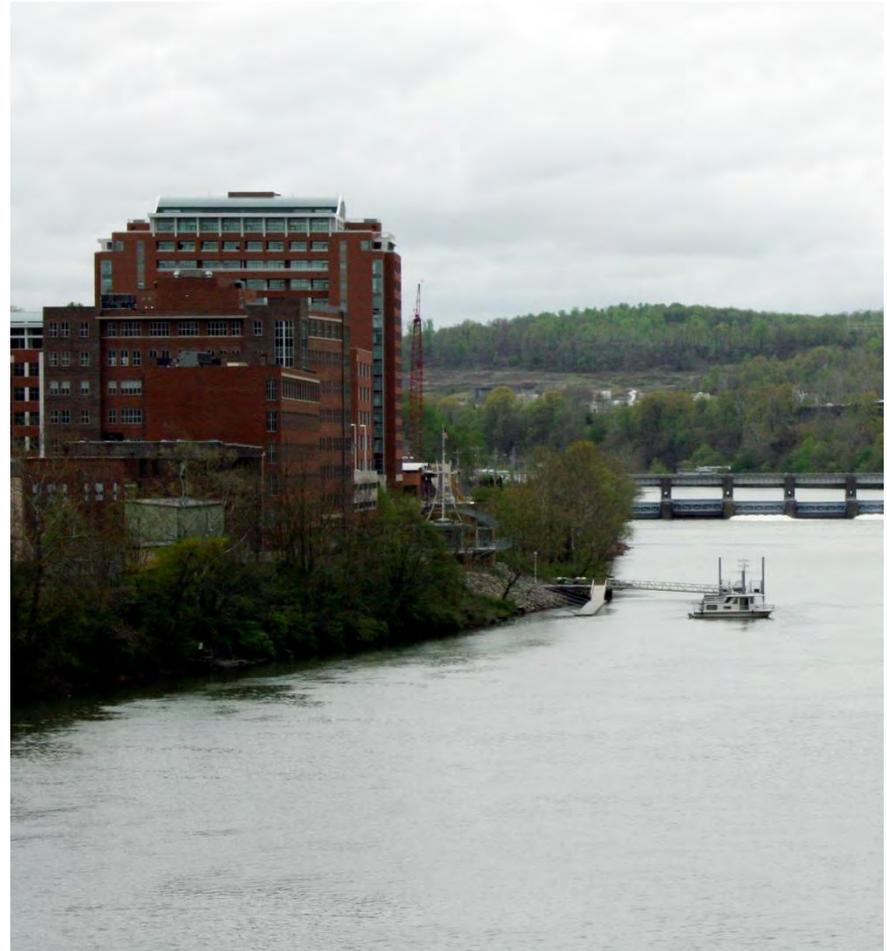
- NO<sub>x</sub> Reduction
  - Low NO<sub>x</sub> Burners with Overfire Air
  - Selective Catalytic Reduction System (SCR)
- Acid Mist Reduction
  - Hydrated Lime Injection System
- Particulate Matter (PM) Removal
  - >99% Efficiency utilizing Fabric Filter Baghouse
- SO<sub>2</sub> Removal
  - >98% Efficiency with Wet Flue Gas Desulfurization System (FGD)

**These combined controls will also provide for significant removal of mercury.**



# Additional Environmental Benefits

- Longview will provide an Environmental Mitigation Fund to support CO<sub>2</sub> reduction and sequestration and stream mitigation programs in the region.
  - \$500,000/year for first 10 years, then \$300,000/year for life of project
- Longview will discharge less than 30 gallons of water per minute, which will be treated at an EPA award-winning acid mine drainage treatment facility located in Greene County, Pennsylvania. This facility treats up to 7,500 gallons per minute of acid mine drainage that was threatening local streams and the Monongahela River.
- Longview will purchase 1.1 SO<sub>2</sub> allowances per ton of emissions, over and above the required federal Acid Rain requirements, to offset potential acid deposition and visibility impacts to nearby Federal Class I Lands.



# Environmental Research Projects

**Longview Power is continually finding ways to further reduce the carbon footprint and environmental impacts.**

- Partnership with West Virginia University for proposed biofuel co-firing feasibility study
- Partnership with WVU and NETL for proposed CO<sub>2</sub> Sequestration/Algae Propagation pilot project
- Funding WVU research into a quasi-passive water treatment facility utilizing acid mine drainage and sewage
- Evaluating carbon capture and sequestration technologies
- Evaluating beneficial use of coal combustion byproducts



# Construction Status

## Construction Highlights (as of October 23, 2009)

- The Project's current forecasted Substantial Completion Date is ahead of schedule
  - Guaranteed Completion Date: March 12, 2011
  - Current Forecasted Substantial Completion Date: February 17, 2011 (23 days early)
- Project overall progress is 83.3% complete, with Engineering, Procurement and Construction tracking as follows:
- Over 3.7 million man-hours expended
- Over 1,900 personnel on site last month
- Over \$1.4 Billion expended to date

### Percent Complete for Current Project Schedule

Discipline	Actual
Engineering	99.9%
Procurement	98.8%
Construction	67.5%



# Economic Benefits to Host Communities

## Construction Phase

- Over \$551 million of direct expenditures will be incurred in Monongalia and Preston Counties, and adjacent PA counties.
- Construction of the project will directly support 984 local jobs (annual average).
- An estimated additional 991 jobs will be supported in Monongalia and Preston Counties, and adjacent counties in Pennsylvania (annual average), resulting in a total of 1,975 WV and PA jobs.
- An estimated \$313.8 million in labor income (\$78.5 million / year) will be earned in Monongalia and Preston Counties, and adjacent PA counties.
- Construction and related economic activity will produce an estimated \$23.6 million in additional state and local tax revenues over the four year construction phase.



# Economic Benefits to Host Communities

## Operating Phase

- Longview will directly employ 95 personnel and generate up to 467 additional jobs in the Morgantown Metropolitan Statistical Area (MSA)
- Longview operation will increase state and local revenues by \$7.9 million annually, and increase annual labor income in Monongalia and Preston Counties, and adjacent counties in PA by \$43.0 million.
- Longview Power's purchase of coal from mines in the region will increase regional employment by over 500 jobs.



# Economic Benefits to Host Communities

## Local coal supplier: Mepco LLC (Mepco)

- Reserve base of approximately 32,500 acres of mineral rights, 140 million recoverable coal tons in Monongalia County, WV and Greene County, PA
- 2 million tons/yr. to Longview Power
- Estimated 215 affiliated coal mining jobs
- Annual gross wages and benefits associated with these jobs: \$25 million



# WV Alternative & Renewable Portfolio Standard

**Longview Power supports the initiative for West Virginia Public Service Commission to allow non-utility electric generators to earn alternative and renewable energy resource credits.**

- Facilitates more accurate accounting of total statewide energy generated from alternative and renewable fuels.
- Provides incentive for development of additional generation from alternative and renewable fuels by non-utility generators.
- Provides incentive for development of additional offset projects.
- Provides an additional source of credits for utility generators to help meet their annual quotas.

**Merchant plants can play a significant role in helping WV meet its alternative and renewable energy objectives.**

# Climate Change Legislation

- Even with federal and state plans to expand renewable power sources, the United States will continue to need coal-fired power facilities for the foreseeable future.
- Longview is a highly efficient, low emissions and high economic benefit facility.
- Climate change legislation should not disadvantage best in class plants like Longview in favor of older, less efficient, higher emitting plants.
- Allocation of Allowances (auction vs. free distribution)
  - If allowances are allocated to regulated electric utilities, merchant coal facilities such as Longview should receive an equitable share of allowances. Both Waxman-Markey and Kerry-Boxer provide some allowances to merchant coal facilities to transition the costs of climate change regulation.
  - GenPower supports an initial free allocation of allowances transitioning to an auction approach to alleviate costs to consumers.



# Climate Change Legislation

**Carbon offsets are key for GenPower, Longview Power and other power producers that wish to mitigate their carbon impact.**

- GenPower has assigned senior officials to develop domestic and international carbon offset projects and implement carbon mitigation strategies.
- We support the Waxman-Markey bill that would make 2 billion in offsets available for compliance annually.
  - This would allow Longview to make long-term commitments to offset projects.
  - GenPower supports the equal split (50-50) between domestic and foreign offsets and the approach of EPA approving off-set credits issued by an international body.
- We strongly support early reduction offset credit approach.
- We also support early action offsets of \$50 per ton for the first 20 GW of CCS installed capacity (Kerry – Boxer).
- We agree that other Clean Air Act provisions should not be used for regulating global warming gases.

# In Summary

## The Longview Power Project is good for West Virginia and the U.S.

### Environmentally

- displacing older technology
- going beyond permit limits
- funding research and partnering with WVU and others to find answers to air, water and land use issues

### Economically

- bringing additional revenues to WV
- bringing employment to the Morgantown MSA
- bringing opportunities to area businesses that will support Longview operations

### Socially

- providing low cost, highly reliable electricity to the region
- committing time and resources to education
- committing time and resources to community safety and outreach programs
- being a good corporate citizen



# Our Energy Future

## West Virginia & Longview Power

- Enable research that will advance environmental and technological best practices and will shape the energy industry for years to come
- Maximize the state's natural resources in a responsible, environmentally friendly way
- Support West Virginia's energy leadership



THANK YOU

