Natural Gas Power Generation

2018 West Virginia Governor’s Energy Summit

October 10, 2018
Combined-Cycle Power

Small Footprint – less than 30 acres
Short stacks – less than 200 feet
Clean Burning Jet Engine and HRSG
PJM – The Grid

- Pennsylvania, Jersey, Maryland
- 13-State Grid including West Virginia
- Provides a transparent daily and hourly power price for each supply and load location based on generation cost and power transmission
Power in the PJM

- Monday’s PJM
- 1/3 of the Lights in this room
ESC Harrison County Power
ESC Harrison County Power
Clarksburg, West Virginia

- 610 MW natural gas power plant
- GE 7HA.02 combustion turbine, most efficient fossil fuel technology available
- Site
  - Exhausted Coal Mine
  - Current Harrison County Commission Property
- Gas Usage: 85,000 MMBtu/Day
- Construction: ~24 Months
ESC Brooke County Power

Project Rendering

www.brookecountypower.com
ESC Brooke County Power

ESC Brooke County Power I, LLC
Colliers, West Virginia

- 830 MW natural gas power plant
- GE 7HA.01 combustion turbines, most efficient fossil fuel technology available
- Site:
  - Exhausted Coal Mine
  - Current DNR WMA
- Existing Infrastructure
  - Gas Wells & Pipelines
  - Electrical Transmission
- Gas Usage: 138,000 MMBtu/Day
- Construction: ~34 Months
ESC Harrison County Power

Economic Impact

Construction:
• Construction investment estimated at $616.1 Million

Operation:
Full year operational impact projected:
• 713 jobs
• $47.9M employee compensation
• $72.8M in value added
• $287.4M in output

Natural Gas:
• $111 Million of natural gas annually
• Pipeline investment $20 Million
ESC Brooke Economic Impact

ESC Brooke County Power I, LLC

Economic Impact

Construction:
• Construction investment estimated at $884.1 Million

Operation:
Full year operational impact projected:
• 1,164 jobs
• $73.3M employee compensation
• $112.7M in value added
• $440.5M in output

Natural Gas:
• $177.5M of natural gas annually
• Pipeline Investment $60 Million
Power Plants Status

ESC Harrison County Power, LLC
- Electricity Injection: PJM Interconnection Rights – Complete
- State Waters Permit – Complete
- Public Service Commission: Siting Certificate – Complete
- Air Permit – Under Appeal by OVJA

ESC Brooke County Power I, LLC
- Electricity Injection: PJM Interconnection Rights – Complete
- Federal/State Wetland Permits – Complete
- Air Permit – TBD
Marcellus-Utica Power Plants

WV – OH – PA Power Generation Summary

- Late in the cycle of new natural gas plant construction.
- Limited new capacity needed in PJM Grid.
- Clear path for new plant approval in OH & PA and many in late stage development.
- Timing is critical factor in determining if WV plants will be built or if remaining new capacity will go to PA & OH.
THANK YOU!

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