Statewide Impact of New Power Plants to Shale Play

New natural gas power plants being built in Ohio will generate an incredible demand for natural gas. For instance, the 800 MW Lordstown Energy Center, currently under construction, would require approximately 130 million cubic feet of natural gas per day, delivered by a Dominion East Ohio Pipeline.¹ Likewise, the 742 MW combined cycle power plant currently being built by Carroll County Energy, LLC will have an anticipated fuel usage of 5,224 million British thermal units per hour (MMBtu/hr).²

The following scenario demonstrates the incredible demand and economic impacts of increased demand for natural gas by new power plants being built in Ohio:

Today's natural gas turbines have a heat rate, or the amount of energy used by an electrical generator or power plant to generate one kilowatthour (kWh) of electricity, of approximately 6,500 Btu/kWh.

A 1,000 MW plant has an output of 1,000,000 kWh/hr.

At full output, the facility would consume 156,000 MMBtu per day. (1,000,000 kWh x 6,500 Btu x 24 hr)

If the facility runs 75% of the time,³ it would consume 42,705,000 MMBtu per year. (156,000 MMBtu x 365 days x 0.75)

 If gas is delivered at \$2.90/MMBtu,⁴ the facility will spend \$123,844,500 per year to buy gas.

Over a 30-year period,⁵ this facility will purchase more than \$3.6 billion of natural gas.

The impact of new plants in Ohio:

- For every 5,000 MW of new capacity: approximately **\$20 billion** of natural gas purchases over a 30-year period.
- For every 10,000 MW of new capacity: over \$40 billion of natural gas purchases of a 30-year period.

New natural gas power plants in Ohio are driving natural gas infrastructure development. For example:





LORDSTOWN

ENERGY CENTER

plant under development by South Field Energy, LLC.

A new 20-inch diameter pipeline is being constructed to serve the power

A new 24-inch diameter pipeline is being constructed to serve the Lordstown Energy Center.

A new 24-inch diameter, 22-mile long pipeline is currently being

constructed to serve the Oregon Clean Energy Center.

¹OPSB Staff Report of Investigation, Case No. 14-2322-EL-BGN (July 13, 2015).

²Application of Carroll County Energy, LLC, Case No. 1752-EL-BGN, at 11 (Nov. 15, 2013).

³In early years, a plant may run upwards of 90% of the time, but over its lifetime (approximately 50-years), the running time may gradually decrease. ⁴This is a very conservative estimate because it is expected that natural gas prices will increase modestly.

⁵This is a very conservative estimate. New natural gas power plants will have a life of approximately 50-years.