

**BEFORE
THE OHIO POWER SITING BOARD**

In the Matter of the Letter of	)	
Notification of Ohio River Partners	)	Case No. 17-1091-EL-BLN
Shareholder LLC for a Certificate to	)	
Construct an Electric Generation	)	
Facility in Monroe County, Ohio	)	

**OHIO RIVER PARTNERS SHAREHOLDER LLC'S NOTICE OF
SUBMITTAL OF RESPONSES TO STAFF JUNE 28, 2017 DATA REQUESTS**

Ohio River Partners Shareholder LLC gives notice that a copy of the attached Responses to Staff Data Requests Dated June 28, 2017 was submitted via e-mail to Staff of the Ohio Power Siting Board on July 13, 2017.

Respectfully submitted,

/s/ Michael J. Settineri
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**RESPONSES TO STAFF DATA REQUESTS DATED JUNE 28, 2017
CASE NO. 17-1091-EL-BLN – HANNIBAL PORT POWER PROJECT**

Q1: Gas Supply

For each existing natural gas line that you may interconnect with in order to service the proposed site, please state:

- a. the natural gas pipeline company owner;*
- b. the name, number, and designator of the pipeline;*
- c. the diameter of the pipeline;*
- d. the MAOP (maximum allowable operating pressure) of the pipeline;*
- e. the normal operating pressure;*
- f. the maximum throughput of the pipeline in MMcf per day, corresponding to (d) above;
and*
- g. the normal throughput of the pipeline in MMcf per day, corresponding to (e) above.*

A: Much of the detailed pipeline information in the request was removed from the public domain because of homeland security policies and regulations instituted after the 9/11 terrorist event. Ohio River Partners Shareholder LLC is also subject to non-disclosure agreements in the course of its discussions regarding gas supply. With the objective of providing assurance that the Project can obtain an adequate and reliable fuel supply, we have provided the following information.

The Hannibal Port Power Project (the Project) in Monroe County, Ohio is in the Marcellus/Utica area, which is among the most favorable regions for procuring natural gas supplies at favorable prices in North America. Natural gas production in the region is expected to increase from approximately 20 billion cubic feet per day (Bcf/d) in 2017 to 43 Bcf/d by 2025 and to over 53 Bcf/d by 2035. Projects with over 21 Bcf/d of pipeline takeaway capacity are under construction or planned to provide additional connectivity to natural gas markets. Economic forecasters anticipate development of an additional 9 Bcf/d of projects in response to producer demand. As a local customer with steady natural gas demand, the Project, along with other local power sector and industrial users, should be a preferred outlet for gas producers.

Ohio River Partners Shareholder LLC is engaged with multiple natural gas producers, transporters, and marketers in the process of selecting from available alternatives and completing the fuel plan for the Project. Six routes for interconnecting with eight pipelines were analyzed to support discussions with prospective gas suppliers. The table below includes basic information regarding the natural gas pipeline interconnection options:

Pipeline	Owner	Type	Distance to Site, miles	Capacity, BCF/D	Notes
Rockies Express (REX)	Tallgrass Energy Partners, Tallgrass Development, LP, Phillips 66	Interstate	12	4,400	Chicago and East Coast markets. 42", 1,480 psig MAOP
Texas Eastern (TETCO)	Enbridge, Inc.	Interstate	12	5,500	East Coast / Southwest markets 1,112 psig MAOP

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Pipeline	Owner	Type	Distance to Site, miles	Capacity, BCF/D	Notes
Dominion Transmission	Dominion Energy Transmission Inc.	Interstate	12	700	NY, PA, WV, OH and East Coast markets, 24" & 30", 850 psig MAOP
Leach XPress (LEX)	TransCanada Corporation	Interstate	12	1,500	OH, WV, PA to East Coast and Southwest markets. 30" & 36", 1,200 psig MAOP
Eureka Midstream (EM)	Morgan Stanley Infrastructure Partners and Blue Ridge Mountain Resources	Midstream	2	2,300	Interconnects with REX, TCO, TETCO, EQT, and 8 others, 20" & 24", 1,200 psig MAOP
Blue Racer	Dominion Transmission Inc and Caiman Energy	Midstream	4	400	East Coast markets. Fractionator and gas processing facility
Rover Pipeline	Energy Transfer Partners	Interstate	12	3,250	Chicago and Midwest markets 42", 1,440 psig MAOP
Ohio Valley Connector (OVC)	EQT Midstream Partners, LP	Midstream	12	850	Interconnects with REX, TCO, TETCO, Rover, EM, EQT. 30", 1,480 psig MAOP

Q2: *State the maximum natural gas consumption of the proposed facility, per hour in MMcf.*

A: The maximum hourly natural gas consumption for the facility is between 2,919 MMcf and 3,180 MMcf, depending on which combustion turbine/power island will be selected. Gas consumption is based on site conditions, 92°F ambient temperature, and 1,028 Btu/ft³ (HHV) heat content.

Q3: *Please explain how the Hannibal Port Power Project plans to contract for adequate natural gas capacity to supply the proposed project, whether the contract will be for firm delivery service, and whether the contract will be a full year or seasonal basis.*

A: The Project plans to contract for natural gas to accommodate its expected operating profile and to meet its planned obligations as a PJM Capacity Performance resource. The project will be configured with a dedicated lateral pipeline that will interconnect with one or more upstream pipelines, including those shown in the table in answer #1 above, and no LDC transportation will be required.

Based on its location in the Marcellus/Utica, it is unlikely that the Project will need its own contracted interstate gas pipeline transportation capacity. If the project buys gas for delivery to its dedicated lateral pipeline at a point on an interstate pipeline, interstate transportation will be embedded in the delivered natural gas price and the supplier will use its portfolio of contracted transportation to deliver the gas. As an alternative to buying gas off an interstate pipeline, the Project could buy gas from a local producer¹ at a delivery point on a midstream pipeline. A third supply option the Project is exploring is the

¹ There are 19 natural gas producers with acreage near the Project site and 13 are currently active.

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acquisition of dedicated gas reserves in joint venture with certain local producers. This option would likely include a midstream interconnection as described above.

Q4: *Do any onsite utilities need to be removed or relocated to accommodate the Hannibal Port Power Project, if so please describe.*

A: Yes, a portion of the on-site electrical distribution system must be reconfigured to accommodate the Project. Black & Veatch was commissioned to do a study for the Project that included the following:

- Investigate the existing 138 kV switchyards
- Determine the current load and power distribution requirements
- Identify switchyard equipment that must be retained to avoid service interruptions

Black & Veatch determined that the existing north substation on the site can be reconfigured to designate it as the distribution source for power at the site and prepared a sequence of steps to accomplish the reconfiguration program and accommodate construction of the Project and its new switchyard. Brief line outages will be required to accomplish the cutover to the north substation, but these will be similar to routine maintenance outages that can be scheduled for weekend/holiday hours to minimize their effects. The reconfiguration plan will be discussed with AEP as part of the PJM Facilities Study process, a prerequisite for interconnecting with PJM, which is now underway.

The Applicant does not believe there are other major site utilities located in the Project area. Nevertheless, safety requirements and good industrial practice obligate the owner and its contractors to locate all underground facilities, including utility conduits, before drilling or excavating on the site.

Q5: *When was the air permit to install and operated submitted to Ohio EPA?*

A: The air permit to install was submitted to Ohio EPA through its eBiz system on May 31, 2017.

Q6: *Please provide a letter or email from the Hannibal Development Partners sewage treatment plant indicating that it has capacity to handle the proposed sanitary flow-rate.*

A: The estimated sanitary sewer discharge from the Project is 14,400 gallons per day. The Hannibal Development Partners wastewater treatment plant was built to serve the Ormet smelter and it is currently operating at a fraction of its permitted design capacity of 400,000 gallons per day.

A copy of an email confirming the above is included as attachment 1 to our response.

Q7: *OPSB Staff understands that Hannibal Port Power Project is pursuing a direct discharge NPDES permit for process wastewater. Please describe the current status of that permit (include permit application number, or date submitted to Ohio EPA, and anticipated timeframe for receipt of permit).*

A: The Project is currently developing its NPDES permit application with the assistance of Tetra Tech, its permitting consultant, with support from Black & Veatch, its engineering consultant. The

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application is in the internal review process with some data yet to be developed or confirmed by the project team.

The basis for the permit application is to reuse an existing location for the Project outfall to return effluent to its source. This approach avoids the environmental and economic impacts associated with constructing a new outfall and is like discharging to an existing facility.

The Project team is planning to schedule a meeting with Ohio EPA in July to continue discussions and informally review the contents of the application, followed by the formal submittal of the NPDES permit application. The Applicant anticipates that the NPDES permit will be issued well before the need for wastewater discharge.

Q8: *Please confirm the flowrate units of the water balance is in gallons per minute.*

A: The flow units on the water balances included in the Application are in gallons per minute, as indicated on each drawings in Note 1.

Q9: *Please explain and describe how the facility will incorporate water conservation practices.*

A: Over 91 percent of the water required by the Project on a hot day (92°F) is used for process cooling. The Project is designed with water as the cooling medium because wet cooling towers using the Industrial Property's permitted withdrawal from the Ohio River are consistent with the planned use of the resource and more effective than air-cooled condensers in the context of the Project.

The EPC contractor will build the Project to comply with its design documents, including the specified power island equipment, water and mass balances, and owner-obtained permit limits that will be included in the EPC contract. As a result, many water conserving features will be designed into the facility:

- Advanced combined cycle power generation technology is more efficient than combined cycles using combustion turbines (CT) with lower firing temperatures and significantly more efficient than coal-fired Rankine cycle units. On a comparative basis, higher efficiency means less process heat to be rejected to the environment which results in reduced water consumption.
- The Project is configured with an evaporative cooler to reduce the inlet air temperature to the CT on hot days. Evaporative coolers increase the density of the airflow entering the CT and allow the unit to produce more output than an uncooled unit with no significant efficiency penalty. Without inlet air cooling the Project would rely on additional HRSG duct-fired steam power generation or mechanical cooling, either of which would increase the heat load on the cooling tower, decrease plant efficiency, and increase water consumption.
- Waste streams from internal processes will be captured and reused where possible. For example, wastewater from the reverse osmosis (RO) system that will be used to treat the steam cycle makeup water will be used as cooling tower makeup water.
- The cooling tower cells will be low-mist design with a maximum drift rate of 0.0005 percent of the circulating water flow.

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- The inlet water clarifier system will treat cooling tower makeup water so that it can be operated with a minimum of 14 cycles of concentration.
- Water consumption will also be controlled through application of real-time process monitoring by the plant distributed control system. For example, real-time controls will allow the cooling tower to operate at higher cycles of concentration than the 5 cycles indicated in the water balance diagrams, possibly up to 10 cycles or higher until chlorides in the tower blowdown approach 1,000 ppm and become a limiting factor.

Q9.a: *As noted on the water balance, please confirm that the cooling tower will use 5 cycles of concentration?*

A: The water balance shows 5 cycles of concentration for the cooling tower. Based on a recent water analysis for the Ohio River, the Applicant projects that the Project can operate up to 10 cycles of concentration or higher before chlorides become a limiting factor.

ATTACHMENT 1

Mark Barry

From: Charlie Legg <clegg@fortress.com>
Sent: Thursday, July 6, 2017 1:43 PM
To: Mark Barry
Subject: FW: Sewage Treatment Plant

Hi Mark - see email from Bob Cox below regarding the sewage treatment plant capacity.

Charlie Legg
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-----Original Message-----

From: Bob Cox [mailto:bob.cox@centerportterminal.com]
Sent: Thursday, July 06, 2017 11:45 AM
To: Charlie Legg
Subject: Sewage Treatment Plant

Charlie,

The sewage treatment plant is a Cantex Duplex 2000 System:

It has two 200,000 gallon tanks giving a design of 0.4 million gallons per day.

The maximum treatable surge is 730,000 gallons per day.

The system can easily handle the power plant's expected 14,400 gallons per day of sewage discharge.

Best Regards

Bob

--

Robert Cox
Center Port Terminal
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This foregoing document was electronically filed with the Public Utilities

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in

Case No(s). 17-1091-EL-BLN

Summary: Notice of Submittal of Responses to Data Requests electronically filed by Mr. Michael J. Settineri on behalf of Ohio River Partners Shareholder LLC