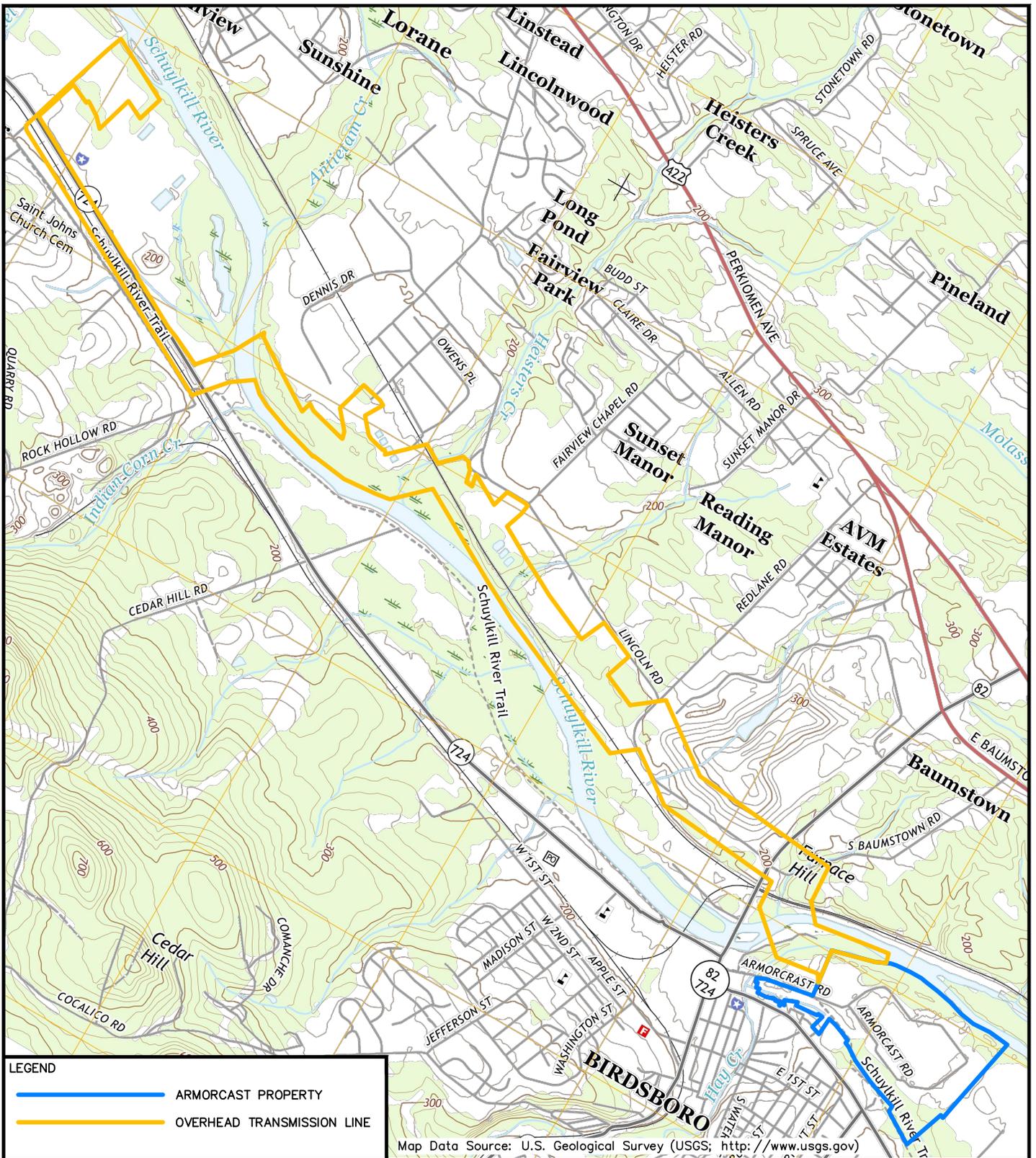


REQUIREMENT I  
LOCATION MAP



**LEGEND**

- ARMORCAST PROPERTY
- OVERHEAD TRANSMISSION LINE

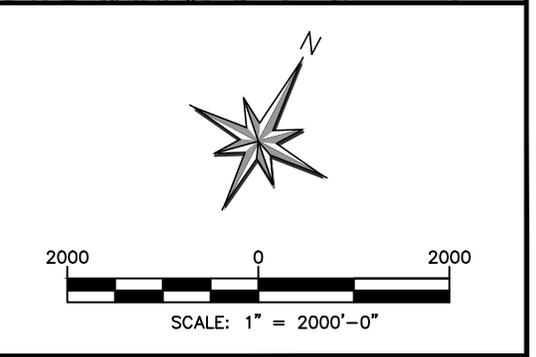
Map Data Source: U.S. Geological Survey (USGS; <http://www.usgs.gov>)

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TITLE:	FIGURE 1: SITE LOCATION MAP
PROJECT NAME:	BIRDSBORO POWER, LLC
LOCATION:	EXETER AND ROBESON TOWNSHIPS & BIRDSBORO BOROUGH, BERKS COUNTY, PENNSYLVANIA
MAP REFERENCE:	USGS QUADRANGLES: BIRDSBORO, PA
PROJECT NUMBER:	216040.01
DRAWN BY:	TKM
APPROVED BY:	KRR / JY



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REQUIREMENT J  
PROJECT DESCRIPTION NARRATIVE AND COMMUNITY  
BENEFITS ANALYSIS

## **Project Description**

Birdsboro Power, LLC is proposing the construction of a natural gas-fired combined cycle electric generation facility on a former industrial use site located in Birdsboro, Pennsylvania. A new 230kV electric transmission line will originate at the proposed natural-gas generating plant and tie into the existing power grid approximately 4 miles west in Robeson Township, Berks County. A steel pipeline will provide the natural gas feedstock for the project. Reading Area Water Authority (RAWA) is under agreement to provide 2,500 gallons per minute (GPM) to the proposed combined cycle facility. To do this RAWA must concurrently improve a portion of its existing distribution system and extend the system to the site. Each piece of the project is presented in greater detail in the below sections. Only impacts to water resources associated with the power plant and electric transmission line will be permitted through this application.

### **Combined Cycle Electric Generation Facility**

There are three existing storm water discharge pipes (Outfalls #2-4) associated with the site that are in need of repair/replacement in the same location. Each outfall has an existing pipe equipped with an endwall that has a cast iron flap gate, to prevent floodwater and debris receipt, a protective open grate and a riprap apron. The repairs/replacements needed for each outfall vary and are detailed in the Erosion and Sediment Control Narrative and Plan Set. No avoidance or conservation measures were recommended as a result of the PNDI search and subsequent agency correspondence. A Construction Monitoring and Waste Management Plan will be implemented during construction activities associated with the outfalls to identify, control, and prevent the spread of contamination at the former Armorcast facility.

Repair/replacement work for Outfalls #2-4 will result in permanent and temporary impacts (tabulated below) to floodways.

### **230 kV Electric Transmission Line**

Birdsboro Power, LLC is planning to construct a new privately owned and operated 230kV electric transmission line that will originate at the proposed natural-gas generating plant which is to be located on the old Armorcast site within the Borough of Birdsboro, Berks County, PA. The proposed line is approximately 3.86 miles long and terminates at a new 230kV ring bus station in Robeson Township, Berks County, PA.

The route will originate at the new generating facility in the Borough of Birdsboro and head in a generally west direction, turn northwest and traverse the Schuylkill River into Exeter Township. The line will then head in a southwesterly direction along the Schuylkill River, until it traverses the Schuylkill into Robeson Township. The electric transmission line will then head in a generally west direction, where it will cross into S.R. 724 right-of-way (ROW) and transition to an underground configuration. The line continues to follow the S.R. 724 ROW in a westward direction until it turns north at Boonetown Road before terminating at the proposed ring bus.

Water resource identification and delineation activities have been conducted for the proposed right-of-way. A total of 10,322 linear feet of stream and 1.61 acre of wetland are delineated within the project study area for the transmission line. Cumulative resource impacts are shown in Table 1 below.

The ROW was reduced to a maximum width of 100' within the boundary of the Schuylkill River floodway in order to minimize permanent floodway impacts (see Table 1 below), while providing the necessary area

needed to complete construction activities and perform maintenance activities in the future. These impacts will not increase the flood risk in the vicinity of the project nor degrade water quality. Once construction activities are complete within the ROW, small trees and shrubs may be permitted to re-establish the area.

The ROW widths, within jurisdictional water resource limits, were reduced to widths of 50' to 60', where possible. In areas where the contractor's construction requirements required a larger ROW, the widths were reduced as much as possible. These were reduced from a preferred right-of-way width of 150' and the specified width of 100' per the National Electric Code (NEC).

The electric transmission line project will cross Hay Creek. Hay Creek is a stocked trout stream according to the PFBC 2016 Trout Stocking Schedule and is listed on the PFBC October 2017 Pennsylvania Wild Trout Waters (Natural Reproduction) list from the headwaters to the mouth. In-stream time-of-year restrictions would be required from March 1 – June 15 for its stocked trout designation and from October 1 to December 31 of any given year for its Wild Trout Waters designation. No in-stream work will be required within Hay Creek to complete the project.

In-stream work will only be required for the underground crossings of ME2, PA2, and PA3 within existing ROWs. Stream crossings via temporary access roads will be required over streams ARK2 and ARK3.

Avoidance/conservation measures are required to avoid the potential take of the Eastern Redbelly Turtle (*Pseudemys rubriventris*). The Pennsylvania Fish and Boat Commission offered the following guidance in their approval letter dated November 28, 2016.

1. Earth disturbance for this project that occurs north of the Norfolk-Southern rail line, in full canopy forest at the commencement of the project, or more than 1000 feet from the Schuylkill River or its tributary streams should be considered to **not** be potential nesting habitat for the eastern redbelly turtle, and no further avoidance measures in these areas for this species are necessary.
2. Earth disturbance areas not exempt as described in #1 should receive the proposed avoidance measures as outlined below
  - a. Project activities may be conducted during the inactive period of the redbelly turtle (October 15 - April 15) without additional avoidance measures.
  - b. Project activities that will occur during the active period of the redbelly turtle (April 16 – October 14) should receive a silt fence barrier placed at the edge of the proposed area of disturbance, in between the waterway and the work area, to prevent turtles from accessing active work zones. This fence should be installed during the inactive period of the redbelly turtle (October 15-April 15) so that active turtles or their nests do not get trapped in the work zone.
  - c. Areas that need to be fenced or disturbed during the active period of the eastern redbelly turtle should be inspected by a qualified eastern redbelly turtle biologist prior to earth disturbance and fenced upon completion of the pre-construction clearance.
3. Any turtle found on site should be relocated to the nearest aquatic habitat. Additionally, the PFBC must be contacted within 48 hours of the find.

Slight route alterations and ROW width adjustments were proposed after the 11/8/2016 approval letter was issued. As a result, the updated route was submitted to the agency, and a response was received from PFBC on June 5, 2017. According to the response, the PFBC determined that there have been no changes in the project information that will change the impacts on redbelly turtles; therefore, the

Commission's comments regarding potential impacts to rare, candidate, threatened, or endangered species under their jurisdiction, as detailed in the November 28, 2016 letter for SIR# 16267 remain unchanged.

Coordination with the US Fish and Wildlife Service resulted in a determination of no effect for the bog turtle.

Coordination with PHMC is underway for the proposed project. The initial response letter was received October 19, 2016 and dictated further study of both archeological and above ground historic resources.

A phase 1 archeological assessment and above ground historic resources identification/reconnaissance survey were completed and submitted at the request of PHMC. A phase II archeological assessment was completed yielding two national register eligible sites within the project study area. Avoidance of these sites is not feasible so Phase III date recovery plans were enacted at both sites and are currently underway.

Additional information was requested regarding some of the identified above ground historic resources so a follow-up memo was prepared and submitted to PHMC. The agency concurred with all recommendations from the memo and a determination of no adverse effect was issued for above ground cultural resources on January 27, 2017.

A NPDES Permit for Stormwater Discharges associated with Construction Activities was issued on December 28, 2015 (NPDES Permit # PAG02 0006 15 032, BCCD ID # ESP-00731). A major modification was approved May 11, 2017 (NPDES Permit # PAC060046, BCCD Project ID #ESP-00731) which added the work associated with the construction of the Electric Transmission Line and Storm Outfall Rehabilitation. An additional minor modification was approved on July 18, 2017 which adjusted the routing of the transmission line. A minor modification was submitted to BCCD on December 06, 2017 to address additional area required to complete connection of the transmission line to existing distribution lines. A final minor modification will be submitted in early February 2018 to BCCD to address minor revisions in proposed E&S controls for the project.

Additionally, vegetation clearing near and adjacent to sensitive areas will be limited to hand-clearing within the proposed transmission line right-of-way. A sensitive area is defined as a location of unique landscape, habitat, or historical value. These areas are typically regulated under Chapter 105 of the PA Code or Section 106 of the National Historic Preservation Act.

Upon completion of construction once the line is operational, vegetative maintenance of the transmission line right-of-way (ROW) will occur approximately annually. The minimum vegetation clearance distance for the 230kV line is 4 feet, which will be maintained according to the standard.

A visual inspection of the conductors, insulators, and support towers will be performed periodically during the life of the transmission line. In order to perform such inspections, a standard pickup truck will require access to the transmission line ROW. It is expected that an employee from First Energy will be on-site at the switch yard periodically during the service life of the line.

#### Natural Gas Pipeline

The pipeline will originate at the power plant in Birdsboro and proceed in a generally north direction to the tie-in location at an existing 30-inch diameter Texas Eastern Transmission Pipeline located in Rockland

Township, Berks County, Pennsylvania. The proposed pipeline will exit the power plant site, cross below the Schuylkill River via horizontal directional drilling operations, and extend northward through Amity and Oley Townships. The pipeline will travel mainly through agricultural and forested land consisting of relatively mild rolling hills.

The approximate area of disturbance for the pipeline is 128 acres.

Water resource identification and delineation activities have been conducted for the proposed pipeline route. Approximate impact totals for the Pipeline Project are compiled below in Table 1. The Birdsboro Pipeline Joint Permit Application has been submitted to the Department and is being reviewed under Permit number E06-717.

Reading Area Water Authority

The improvements to the distribution system (Part 1) are located in the City of Reading. These improvements consist of a new 16” water main along Morgantown Road from the intersection with Lancaster Avenue. The new water main will extend approximately 7,000 feet to the southeast past the intersection of St. Bernadine Street to connect to an existing 16” water main in the street adjacent to the existing RAWA water tank.

Recently RAWA expanded its distribution system along PA Route 724 to the intersection with Cedar Hill Road. This was completed to service a development proposed in the area. In order to service the proposed power plant, a 16” water main will be extended easterly from this location, along PA Route 724 (Main Street) to Birdsboro Borough. Once in the Borough, it will follow Jackson Street, First Street, and Mill Street. At Mill Street near Main Street, the pipe will be constructed through private properties to and then along Armorcast Road to the power plant site. This part is approximately 12,500 feet long.

Water resource identification and delineation activities have been conducted to support RAWA activities and impacts to resources are documented in Table 1.

**Table 1. Total Resource Impacts per Proposed Activity**

<b>Site Name</b>	<b>Perm. Stream Impacts<sup>1</sup></b>	<b>Temp. Stream Impacts<sup>1</sup></b>	<b>Perm. Floodway Impacts</b>	<b>Temp. Floodway Impacts</b>	<b>Perm. Wetland Impacts</b>	<b>Temp. Wetland Impacts</b>
Electric Generation Facility	n/a	n/a	2,524 SF	14,221 SF	n/a	n/a
Transmission Line	510 LF (49,763 SF)	136.5 LF (328 SF)	399,767 SF	18,919 SF	2,399 SF	246 SF
Pipeline	1,068 LF (6,184 SF)	n/a	89,719 SF	9,565 SF	105,099 SF	n/a
Water Line	126 LF (848 SF)	n/a	1780.5 SF	n/a SF	70 SF	n/a
<b>Cumulative</b>	<b>1,704 LF (56,795 SF)</b>	<b>136.5 LF (328 SF)</b>	<b>493,790.5 SF</b>	<b>42,705 SF</b>	<b>107,568 SF</b>	<b>246 SF</b>

LF: Linear feet  
SF: Square feet

### Statement of Water Dependency

The Birdsboro Power electric transmission line requires siting of facilities within the jurisdictional limit of waters and wetlands to achieve its primary purpose of transporting electricity generated at the Birdsboro Power Plant to the existing electrical grid. As indicated in the alternatives analysis, the location of the grid tie-in was determined independent of the transmission line routing. Numerous routing alternatives were investigated. Resource specific avoidance and minimization measures were employed at each of the crossing locations.

# Birdsboro Power LLC

## Local Community Benefits

The Birdsboro Power Project (the Project) will be a state-of-the-art 485 MW natural gas-fired combined cycle power plant using the latest, highly efficient gas turbine technology. The proposed \$550 million power plant and related \$50 million in improvements to the natural gas pipeline, City’s water system, Borough’s water treatment plant, and local power grid will revitalize the abandoned Armorcast Site. The Project will remediate any pre-existing environmental contamination on the Site and return the property to productive use.

The Birdsboro Power Project will bring more than \$140 million in direct economic benefits to Berks County and the Borough of Birdsboro over the next four decades.

<b>Birdsboro Power Project</b>			
Direct Benefits to Local Economy			
		<b>Annual</b>	<b>40 years</b>
	Property Tax Rate in Berks County	592,800	23,712,000
	Property Tax Rate in Birdsboro	206,400	8,256,000
	Local Employment Taxes 3 yrs during const	105,000	315,000
	Local Employment Taxes after 3 years	7,000	259,000
	Building Permit		1,000,000
	Contribution of road, bridge and paver		1,000,000
	Water Usage & Facility Fee to Birdsboro	250,000	10,000,000
	Water Discharge	500,000	20,000,000
	Water Supply	2,000,000	80,000,000
	<b>Direct Contributions</b>		<b>144,542,000</b>

In addition to the direct economic benefits, the Project also will create significant indirect economic benefits. A growing body of evidence suggests that every dollar spent at a locally owned business generates two to four times more value measured in income, wealth, jobs, and tax revenue. For each additional skilled job created, 2.5 jobs are also generated in the local non-tradable goods and services sectors. Furthermore, for every \$1 spent on local business, 45 cents is reinvested locally.

Some of the additional benefits to community include:

- \$8 million improvement to the water supply system
- \$1.5 million improvement to Birdsboro sewage system
- Improvements to electric grid system and power infrastructure
- These improvements will help attract more industries to the area
- Approximately 250 peak construction jobs during the 28 month construction schedule
- Approximately 20 permanent high paying jobs and several indirect jobs will be created
- The Project will be a customer for numerous local vendors and services