Commonwealth of Massachusetts
Executive Office of Environmental Affairs ■ MEPA Office

ENF Environmental Notification Form

For Office Use Only
Executive Office of Environmental Affairs
EOEA No.: 14017
MEPA Analyst: Aisling Eglington
Phone: 617-626-1024

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Brockton Power		
Street: Oak Hill Way		
Municipality: Brockton	Watershed: Taunton River	
Universal Tranverse Mercator Coordinates:	Latitude: 42° 03′ 02″ N	
UTM (Zone 19) 333618.5, 4657345.6	Longitude: 71° 0′ 38″ W	
Estimated commencement date: Feb 2008	Estimated completion date: mid-2010	
Approximate cost: $200 million	Status of project design: 10 % complete	
Proponent: Brockton Power Company LLC, an affiliate of Advanced Power Services (NA) LLC		
Street: 21 Custom House Street, Suite 230		
Municipality: Boston	State: MA	Zip Code: 02110
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Corinne Snowdon		
Firm/Agency: Epsilon Associates, Inc.	Street: 3 Clock Tower Place, Suite 250	
Municipality: Maynard	State: MA	Zip Code: 01754
Phone: 978-897-7100	Fax: 978-897-0099	E-mail: csnowdon@epsilonassociates.com

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)? ☒Yes ☐No

Has this project been filed with MEPA before? ☐Yes (EOEA No.) ☒No

Has any project on this site been filed with MEPA before? ☒Yes (EOEA No. 11753) ☐No

Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:

a Single EIR? (see 301 CMR 11.06(8))	☐Yes	☒No
a Special Review Procedure? (see 301CMR 11.09)	☐Yes	☒No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	☐Yes	☒No
a Phase I Waiver? (see 301 CMR 11.11)	☐Yes	☒No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres):

The project will be privately funded.

Are you requesting coordinated review with any other federal, state, regional, or local agency? ☐Yes (Specify*) ☒No

List Local or Federal Permits and Approvals: FAA Notice of Proposed Construction or Alteration, EPA Prevention of Significant Deterioration (possible), EPA Stormwater Permit for Construction and Operation, City Brockton Wastewater Pretreatment Permit, City of Brockton Conservation Commission Order of Conditions, City of Brockton Site Plan Approval from the Planning Board, Height Variances from Zoning Board of Appeals, Special Permit for Work in Floodplain from Zoning Board of Appeals, and Building Permit.

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- ☐ Land
- ☐ Water
- ☒ Energy (EIR, >100 MW)
- ☐ ACEC
- ☐ Rare Species
- ☒ Wastewater (ENF)
- ☒ Air (ENF)
- ☐ Regulations
- ☒ Wetlands, Waterways, & Tidelands
- ☐ Transportation
- ☐ Solid & Hazardous Waste
- ☐ Historical & Archaeological Resources

Summary of Project Size & Environmental Impacts	Existing	Change	Total
Total site acreage	13.2[1]		
New acres of land altered		~0 site (all previously disturbed) approx 1.4 acres for transmission ROW	
Acres of impervious area	0.0	~3.05 ac (site)	~3.05 ac (site)
Square feet of new bordering vegetated wetlands alteration		Project site: None Transmission Line ROW: ~22,000 s.f. (temporary alteration of Bordering Vegetated Wetlands associated with tree clearing and trimming in ROW)[2]	
Square feet of new other wetland alteration		0.0	
Acres of new non-water dependent use of tidelands or waterways		0.0	
Gross square footage *(includes tanks and ancillary facilities)*	0	101,200 sf	101,200 sf
Number of housing units	0	0	0
Maximum height (in feet)	0	130 feet (building) 250 feet (stack) (subject to DEP approval)	130 feet (building) 250 feet (stack) (subject to DEP approval)

State Permits & Approvals

- ☒ Order of Conditions
- ☐ Superseding Order of Conditions
- ☐ Chapter 91 License
- ☐ 401 Water Quality Certification
- ☐ MHD or MDC Access Permit
- ☐ Water Management Act Permit
- ☐ New Source Approval
- ☒ DEP or MWRA Sewer Connection/ Extension Permit
- ☒ Other Permits (*including Legislative Approvals*) – Specify:

MA EFSB Approval to Construct a Bulk Electric Generating Facility, Massachusetts Department of Public Utilities Petition for Exemption from Zoning Bylaws; Section 72 approval to construct a transmission line, MA DEP Major Comprehensive Air Plan Approval, MA DEP Operating Permit, MA DEP Cross Connection Permit, MA DEP Wastewater Permit and MA DPS Storage Tank Permit

1 The transmission right of way at approximately 3,000 feet long and 100 feet wide will be approximately 6.9 acres.

2 Potential temporary wetland resource area impacts at the proposed transmission line interconnection point (see Figure 5) are being evaluated in consultation with the current property owner and his representatives. Additional information will be provided in the Draft Environmental Impact Report.

TRANSPORTATION			
Vehicle trips per day (operational phase)	0	~50	~50
Parking spaces	0	24	24
WATER/WASTEWATER			
Million Gallons/day (MGD) of water use (recycled water from Brockton AWRF, 100% power plant capacity factor, 24 hr/day)	0	2.0-2.1 (average) 2.4-2.5 (peak)	2.0-2.1 (average) 2.4-2.5 (peak)
Million Gallons/day (MGD) water withdrawal (city system, 100% power plant capacity factor, 24 hr/day)	N/A	City: 0.1-0.3	City: 0.1-0.3
MGD wastewater generation/ treatment (100% power plant capacity factor, 24 hr/day)	0	0.3-0.5 to AWRF	0.3-0.5 to AWRF
Length of water/sewer mains (in miles) (recycled water supply line and wastewater line, AWRF to project)	N/A	recycled water: 0.2 wastewater: 0.2, city water: <0.1	recycled water: 0.2 wastewater: 0.2, city water: <0.1

CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

☐Yes (Specify_____) ☒No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

☐Yes (Specify_____) ☒No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

☐Yes (Specify_____) ☒No

HISTORICAL /ARCHAEOLOGICAL RESOURCES: Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

☐Yes (Specify_____) ☒No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

☐Yes (Specify_____) ☒ No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

☐Yes (Specify_____) ☒No

PROJECT DESCRIPTION: The project description should include **(a)** a description of the project site, **(b)** a description of both on-site and off-site alternatives and the impacts associated with each alternative, and **(c)** potential on-site and off-site mitigation measures for each alternative (*You may attach one additional page, if necessary.*)

Project Description

Brockton Power Company LLC (an affiliate of Advanced Power Services (NA), LLC) proposes to construct *Brockton Power*, a state of the art 350-MW combined cycle power plant on an industrially zoned vacant 13.2 acre parcel in the Oak Hill Industrial Park off of Route 28 in southern Brockton. The proposed project will help to meet, ISO New England's (ISO-NE) the grid operator, goals to provide cost-effective new capacity.

Brockton Power will be a nominal 300-MW gas turbine combined cycle (GTCC) power plant, using the Siemens SGT6-PAC 5000F[3] turbine. The project will be equipped with duct firing (*i.e.*, supplemental firing of the Heat Recovery Steam Generator (HRSG)) and evaporative cooling (*i.e.*, injection of water to the turbine to increase power output) to increase power output to a nominal 350 MW. The project will also include three 2,000-kW emergency generators to enable the plant to start up and generate electricity without the need for outside power in the event of a power system failure (i.e. "black start capability"). Other plant features will include a gas compressor, an auxiliary boiler, a fire pump, transformers, water and wastewater treatment equipment, storage tanks, and a ULSD unloading station. The gas turbine, the HRSG, the steam turbine and ancillary equipment will be housed in an acoustically treated building (see Figure 1). The gas compressor will be housed in a separate acoustically treated building while the black start diesel generators will be housed in acoustical enclosures.

The gas turbine will be capable of burning natural gas or Ultra-Low Sulfur Distillate (ULSD) oil (sulfur content of 15 ppm) while the duct burners will fire only natural gas. Natural gas will be supplied to the site via a new connection with the Algonquin Gas Transmission Company (AGT) natural gas pipeline, approximately 1,500 feet to the north on Oak Hill Way. ULSD will be stored on-site in a fully diked 750,000-gallon above ground tank. The tank has been sized to provide storage for two days of full load operation and minimize the need for deliveries during ULSD operations. The facility will be permitted to fire the equivalent of two months of ULSD.

The project will use dry low-NO_x burners during natural gas firing, while water injection will be used during ULSD-firing. To minimize emissions, the plant will be equipped with Selective Catalytic Reduction (SCR) for NO_x control and an oxidation catalyst for control of CO and VOC emissions. The SCR system will use aqueous ammonia, a common industrial reagent, to react with the NOx to form nitrogen and water. The use of very clean fuels, highly efficient combustion and state of the art control systems will limit emissions to Lowest Achievable emission Rate (LAER) or Best Available Control Technology (BACT) levels.

The plant will be equipped with a seven-cell wet mechanical cooling tower to dissipate the waste heat generated by the steam turbine. The wet mechanical cooling tower will be more efficient, will require significantly less space, and be quieter than would an air-cooled condenser. The wet mechanical cooling towers will be equipped with high efficiency drift eliminators. Cooling tower makeup water for the project will be recycled water from the adjacent Brockton Advanced Water Reclamation Facility (AWRF). Prior to use in the facility, the treated recycled water will be further treated using clarification and filtration. The Brockton AWRF has a current capacity of 18-million gallon per day (MGD) and is in the process of being increased to 20.48 MGD. Limited volumes of process water for the project will be supplied by the City of Brockton water system. Via the City of Brockton system, the project will use some of Brockton's purchased allocation from the Inima USA desalinization plant. The Inima project is presently under construction in Dighton, MA. Cooling tower blowdown and other low volume treated wastewater flows will be returned to the Brockton AWRF. The recycled water has a Total Dissolved Solids (TDS) concentration of up to 500 ppm. The cooling towers will only concentrate the TDS currently in the water and return the TDS to the AWRF in the cooling tower blowdown.

Electricity from the new unit will be fed to the transmission network via a new connection with existing

---

3 The SGT6-PAC 5000F was formerly known as the 501F.

National Grid 115-kV transmission lines approximately 3,000 feet southeast of the project site (See Figure 2). The transmission line will head south down Oak Hill Way, onto a right of way of a private landowner, to the ring-bus, located at the intersection of the rail line and transmission line. A new two-acre switching station/ring-bus will be constructed at the interconnection site.

Project Site

The project is proposed at the same location as a 1998 proposal for a power plant (Brockton Power Project, EOEA #11753) that was permitted but not built due to changed market conditions. The previously disturbed, but vacant, project site is a 13.2-acre parcel on the west side of Oak Hill Way, just north of the Brockton AWRF. The site is zoned Industrial I-3, in which a power plant is an approved land use. To the north of the project site are an F.W. Webb plumbing supply company and a Zoots dry cleaning facility. To the east are an auto body business, a pharmaceutical facility, and a bus depot on Oak Hill Way, an undeveloped wooded area, and an active rail line. Beyond the rail line, there are homes along Appleby Street, approximately ¼ mile from the plant. To the south is the Brockton AWRF and the associated residuals landfill. To the west are the Salisbury Plain River, an undeveloped wooded area, the commercial area of Route 28, and a small number of houses on Hayward Street. Figure 3 is the USGS locus map showing the site and its surroundings. Figure 4 shows the overall area with respect to southeastern Massachusetts.

Project Benefits

The proposed project will result in important benefits for the Commonwealth, southeastern Massachusetts and the City of Brockton, including the following:

- The project will be one of the most efficient and cleanest power stations in the region.
- The project will provide ISO-New England with greater flexibility, additional capacity and a more reliable generation network.
- The project will provide approximately 250 construction jobs, 20 to 25 long-term jobs and more than $30 million in tax revenue for the city over 30 years.
- The purchase of recycled water from the City's AWRF as well as water from the City of Brockton system.
- Significant secondary economic benefits from local material purchases during plant construction and operation.

Mitigation Measures

The proposed project will employ all practicable measures to minimize environmental impacts and will include measures to reduce air quality impacts, noise, wetlands impacts, wastewater impacts, stormwater runoff, and visual impacts. To minimize air quality impacts, the proposed project will employ a full array of emission controls to meet Best Available Control Technology (BACT) and Lowest Achievable Emissions Rate (LAER) requirements. These levels will be finalized in the project's Plan Approval from the Department of Environmental Protection (DEP).

A principal project environmental mitigation measure is the reuse of approximately 2 MGD of recycled water from the Brockton AWRF. Water for plant potable and process uses (typically ~0.1 MGD) will be provided via the Brockton municipal system which has sufficient capacity. A demineralizer system will be used to provide the very high quality water required for use in the HRSG and turbine water injection during ULSD operations. The demineralizer system/resins will be periodically trucked offsite for regeneration. Brockton Power will discharge its wastewater (blowdown from the cooling towers, process and potable uses) to the adjacent AWRF.

With regard to wetland resource areas, no impacts are proposed on the power plant site including Riverfront Area and Bordering Land Subject to Flooding (i.e., 100-year floodplain) associated with the Salisbury Plain River (elevation 72.5 feet NGVD). Temporary Bordering Vegetated Wetland impacts associated with the off-site transmission line and interconnection have been avoided and minimized wherever feasible by 1) selecting a transmission line route that largely follows an existing paved roadway and previously disturbed areas; 2) locating all support poles outside of wetlands resource areas; 3) minimizing the width of the right-of-way; and 4) limiting the extent of selective tree cutting and tree trimming along the right-of-way. Hay bales and silt fence will be installed along the proposed limits of work.

See discussions of alternatives in Attachment 1.