

TECHNICAL REPORT TO THE  
CITY OF BRIDGEPORT

TECHNICAL REPORT ON THE NEED AND  
ENVIRONMENTAL EFFECTS OF A  
PROPOSED COMBINED CYCLE POWER  
GENERATION FACILITY AT BRIDGEPORT  
HARBOR STATION  
1 ATLANTIC STREET,  
BRIDGEPORT, CT

REPORT PREPARED BY:

PSEG Power Connecticut LLC

Holland & Knight LLP  
Attn: Stephen J. Humes  
31 W 52<sup>nd</sup> Street  
New York, NY 10019  
(212) 513-3473  
Steve.humes@hkllaw.com

Report Date: November 13, 2015

Prepared for: City of Bridgeport

EXHIBIT H  
Municipal Consultations: Technical  
Report, November 13, 2015

TABLE OF CONTENTS

I. INTRODUCTION .....4

II. SUMMARY OF PROPOSAL .....4

III. CONNECTICUT SITING COUNCIL JURISDICTION .....10

IV. ENVIRONMENTAL JUSTICE ACT COMPLIANCE .....11

V. THE NEED FOR THE FACILITY .....13

VI. SITE SELECTION .....13

VII. LOCAL ZONING CONSIDERATION .....14

VIII. ENVIRONMENTAL COMPATIBILITY .....15

IX. CONCLUSION .....23

LIST OF EXHIBITS

**EXHIBIT A** Land Use and Environmental Information Report Prepared by AKRF dated November 11, 2015, with figures attached therein.

## **INTRODUCTION**

PSEG Power Connecticut LLC (hereinafter “PSEG” or the “Applicant”), an indirect subsidiary of PSEG Power LLC and the owner and operator of the Bridgeport Harbor Generating Station at 1 Atlantic Street, Bridgeport, Connecticut (the “Site”), is proposing to install and operate a new combined cycle electric generating facility (the “Project” or “Facility”) at the Site, an existing electric generating station that has been operating continuously to supply electric power to the region since 1957. The facility will be operated as an independent power production facility (i.e., a non-utility wholesale generator) in the wholesale electric power markets operated by ISO New England, Inc.

This report is submitted to the City of Bridgeport pursuant to the pre-filing requirements specified in Connecticut General Statutes (“Conn.Gen.Stat.”) § 16-50*l*. The purpose of this report is to provide technical information to the City of Bridgeport regarding the need, site selection process and potential environmental effects of a proposed Facility with an electrical generating capacity of approximately 480 Megawatts (“MW”) at the Site.

The Applicant plans to submit a petition (the “Petition”) to the Connecticut Siting Council (the “Council”) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed installation of the Facility, which would approve PSEG’s proposal for the construction, operation and maintenance of the Facility.

### **I. SUMMARY OF PROPOSAL**

PSEG operates Bridgeport Harbor Station (“BHS”) and other generating facilities at New Haven Harbor Station in the wholesale capacity and energy markets operated by ISO-NE, which also operates the regional electric transmission system throughout New England, often referred

to as the “grid.” PSEG has determined that there is a need for additional power generating capacity in the region, as current market signals indicate that new generating capacity is required to ensure electric system reliability and to replace recently retired system assets. ISO-NE operates annual forward capacity auctions (“FCAs”) to solicit generating resources to meet its anticipated need and PSEG is preparing to participate in the next FCA to be conducted by ISO-NE in February, 2016. If PSEG’s bid clears in the FCA, PSEG will be awarded a capacity obligation that will require that PSEG complete construction of the Facility and achieve commercial operation by June 1, 2019. PSEG is proceeding with plans to obtain all necessary regulatory permits and approvals to ensure that it can commence and complete construction in time to meet its wholesale obligations in the FCA.

The Site consists of approximately 84 acres on Bridgeport Harbor just south of Bridgeport’s transportation center and ferry terminal. See Exhibit A, Figures 1-1 and 1-2. About 22 acres of the Site are below the mean water line. Two existing generating stations at the Site supply ISO-NE with about 400 MWs of power (current summer rating), or enough power to supply approximately half a million residential customers. BHS’s existing operating units include Unit 3, which can run on coal or oil, and uses fuel oil for startup, and a jet-fueled combustion turbine peaking unit, each of which also supplies wholesale power in ISO-NE markets.

The Facility will consist of one combined cycle facility, including one gas turbine and one steam turbine. The new plant will be dual-fuel capable using natural gas and ultra low sulfur distillate (“USLD”) fuel, the cleanest fuels available in the market today. Natural gas will be used as the primary fuel, with provisions to use ULSD for up to 60 days per year. Providing dual

fuel capability enhances reliability of the Project. See Exhibit A, Figure 1-4 for a preliminary site development plan for the proposed Facility and related improvements.

As a separate project, PSEG plans to demolish and remove the existing #6 fuel oil tanks at the tank farm and replace them with a new fuel oil storage tank that will be constructed at the Site to the north of the Facility. The existing tank farm will be demolished and the area, located at the proposed new Project site, will be remediated prior to implementation of the Project. (See Exhibit A, Figure 1-3a and Figure 1-3b).

The new Project's generating equipment will be installed on approximately 16 acres of previously disturbed land within the Site. As the Project is proposed on the property of an existing generating station on a previously disturbed industrial site, environmental impacts are minimized as compared with the development of a similar project on a "greenfield" site. The construction of the Project is contingent on PSEG successfully clearing the February, 2016 or a future ISO-NE auction.

The Facility design will be based on good engineering practice, using state-of-the-art air quality control technology and using natural gas as the Facility's primary fuel source to minimize potential impacts to air quality. Additionally, the design incorporates an air-cooled condenser to minimize the Facility's operational water requirements and eliminates surface water impacts. As a further reliability measure and to provide for storm hardening for this critical waterfront energy infrastructure, the elevation of the Project site will be raised by approximately 7 to 10 feet, at approximately the 500-year flood level. Grade changes will be accomplished through use of structural retaining walls and import of fill. Remedial activities will occur as part of a separate

project within the proposed areas of development in accordance with the state of Connecticut cleanup regulations, known as the Remediation Standard Regulations.

All construction will be in accordance with applicable local and state construction standards and conditions of the regulatory approvals to be obtained for the Project. The scope of the construction includes all site preparation, installation of subsurface utilities and foundations, installation of the new combined cycle Facility equipment and required ancillary equipment, including required electrical and municipal interconnections.

Southern Connecticut Gas Company (“SCG”) operates an existing high pressure natural gas distribution pipeline connection to the adjacent Emera Bridgeport Energy power plant at 10 Atlantic Street, which is capable of delivering the natural gas requirements to the new Project through a new service lateral. PSEG is negotiating appropriate natural gas service arrangements with SCG and expects to secure the appropriate capacity if the Project clears in the ISO-NE auction. The Site is already connected to The United Illuminating Company’s (“UI”) substation for convenient electrical interconnection. While connecting to UI’s substation may require some limited construction to install the generator lead underground in the public right of way, PSEG will obtain the necessary street opening permit from the City of Bridgeport and agreement from UI to allow such installation.

Potential impacts from the proposed Facility will be minimized and made insignificant by good engineering practice and Facility design, installation of state-of-the-art air quality control technology for air emissions, best management practices for reducing potential impacts on water resources and water quality, minimizing truck traffic as much as possible through nearby residential neighborhoods, mitigation measures for noise, and using natural gas when feasible

and ULSD fuel. The potential for environmental impacts and impacts on the nearby community will also be reduced by locating the Facility at the Site of an existing power generating station. The selected location for the Facility allows the Project to take advantage of existing infrastructure, thereby reducing potential construction emissions and impacts. The Facility is not expected to cause any health-related impacts because the Facility will be designed, permitted and operated to comply with ambient air quality and water quality standards promulgated to protect human health, including the sensitive subpopulations of children and the elderly, and the environment.

The proposed Facility will be located within a heavy industrial zone surrounded by other energy infrastructure, including the Emera Bridgeport Energy project and UI substation.<sup>1</sup> To the south of the Site is a recreational park owned by the City of Bridgeport (Seaside Park) with several playing fields and recreation areas. North of the Site is the Harbor Yard Ballpark and Arena at Harbor Year, which includes several parking lots occupying city blocks.

The potential environmental and health impacts of the proposed Facility have been minimized by the following efforts and actions:

- Locating the Facility at the site of an existing power generating station that is zoned for industrial activity. This location will allow the Facility to benefit from existing Site infrastructure thereby minimizing the need for extensive off-site improvements and reducing potential construction impacts.
- Employing the advanced state-of-the-art and efficient electric generation technology, which will emit less per MWh produced than older, less efficient units;

---

<sup>1</sup> See Exhibit A, Figure 2-2a and Figure 2-2b for a depiction of the land uses surrounding the Bridgeport Harbor Station.

- Use of natural gas fuel with ULSD fuel as backup;
- Installation of state-of-the-art air quality emission control technology to substantially reduce air emissions;
- Design of the exhaust stack to increase atmospheric dispersion and reduce potential ground-level air quality impacts to comply with all applicable state and National Ambient Air Quality Standards (“NAAQS”);
- Use of an air cooled condenser to eliminate the need for surface water withdrawals from Bridgeport Harbor and provide cooling for the steam turbine and eliminate the potential for thermal discharge of heated cooling water to Bridgeport Harbor;
- Barge delivery of materials, where practicable, during construction, to reduce truck travel through nearby residential neighborhoods. Delivery of ULSD by barge is anticipated; and
- Design and operation of the Facility to meet applicable State of Connecticut and City of Bridgeport noise regulations.

Access to the Site is limited for security reasons with routine traffic entering through the gate at Atlantic Street. Vehicle traffic (including heavy trucks and employee commuters) accessing the Site will most likely use Interstate 95 at Interchanges 26 or 27. Traffic accessing the site and traveling on I-95 northbound will exit the Interstate and enter the industrial area by heading south on either Lafayette Street or Broad Street. In addition, traffic traveling on I-95 southbound to the Site will exit at Interchanges 26 or 27 and head south on Broad Street before entering the heavy industrial area. During the construction phase of this project, truck traffic could potentially increase along Broad Street, Lafayette Street and Atlantic Avenue depending on which direction vehicles will travel to and from the Site.

Existing ambient background noise levels in the direct vicinity of the Site are typical for heavy industrial areas with significant industrial activity including a large amount of heavy truck activity throughout the day and substantial background traffic noise from Interstate 95. Within the nearby residential neighborhoods, ambient background noise levels are typical of suburban areas. Noise sources identified in the area include industrial activity, vehicle traffic along I-95 and local roadways and Bridgeport-Port Jefferson Ferry operations at the waterfront, among other marine activities.<sup>2</sup>

## **II. CONNECTICUT SITING COUNCIL JURISDICTION**

Pursuant to the Public Utility Environmental Standards Act, Conn. Gen. Stat. § 16-50g *et seq.*, the Council has jurisdiction over all “facilities” as defined by Conn. Gen. Stat. § 16-50i(a), including electric generating facilities. The Facility is eligible to be approved by the Council by declaratory ruling pursuant to Conn. Gen. Stat. § 16-50k(a) because it is an electric generating facility that will be located at a site where an electric generating facility existed prior to July 1, 2004. In addition, due to its location, configuration, low emissions from use of natural gas or ULSD fuel and modern emission control technology, the Project will not have substantial adverse environmental effects.

Because the Facility qualifies for approval by Petition pursuant to Conn. Gen. Stat. § 16-50k(a), it is not necessary for PSEG to obtain a Certificate of Environmental Compatibility and Public Need (“Certificate”) for the construction, operation and maintenance of this Facility. Nonetheless, PSEG has decided to provide the City of Bridgeport with the full notice and municipal consultation considerations that would apply if a Certificate were necessary and, therefore, this Technical Report complies with the requirements of Conn. Gen. Stat. § 16-50l(e),

---

<sup>2</sup> See Exhibit A, Figure 6-1 for a depiction of noise survey locations.

which specifies that, at least sixty (60) days prior to filing an application for a Certificate with the Council, the application is required to: (1) consult with the municipality in which a facility will be located regarding the selected site; and (2) provide technical reports to municipal officials. The municipality may choose to conduct public hearings and meetings as it deems necessary for it to advise the applicant of its recommendations concerning the proposed facility.

**You are hereby notified that this Technical Report filing commences the sixty (60) day municipal consultation period.**

Within sixty (60) days of this initial consultation, the municipality may issue its recommendations to the applicant. Within fifteen (15) days of the filing of an application for a Certificate with the Council, an applicant is required to provide the Council with (1) the technical report submitted to the municipality; and (2) a summary of the municipality's comments and recommendations, if any. Upon receipt of the application, the Council will process the application as it deems appropriate and the municipality may participate in the process if it chooses to do so.

### **III. ENVIRONMENTAL JUSTICE ACT COMPLIANCE**

The Facility requires approval of the Council and environmental permits from the Connecticut Department of Energy and Environmental Protection ("DEEP"), both agencies of which are mandated by Public Act 08-94, as codified at Conn. Gen. Stat. § 22a-20a, to ensure that environmental justice requirements are met. PSEG has complied with both the Council's and DEEP's implementation of this law. Specifically, prior to issuing this Technical Report to the City of Bridgeport, PSEG submitted an Environmental Justice Public Participation Plan ("EJ Plan") to the DEEP, which approved the EJ Plan on August 15, 2014. PSEG implemented the EJ Plan, which included extensive community outreach and an informal public meeting on October

27, 2014 (the “Informal Public Meeting”). PSEG conducted follow-up outreach with the community groups interested in the Project and responded at various times over the many months since to address concerns that were raised. PSEG filed its EJ Plan Final Report (“Final Report”) with DEEP on August 11, 2015. The Final Report describes the results of the public outreach efforts, including the details of the Informal Public Meeting and a list of concerns raised at the meeting, a list of the individuals and groups notified of the Project, results of meetings with municipal officials and neighborhood community groups as well as a description of other public outreach methods utilized including the development of a Project website and telephone hotline. While the proposed combined cycle Project was not selected as a capacity resource in the FCA conducted by ISO-NE in February, 2015, PSEG continues to develop the Project in preparation for future market opportunities for new power generation. PSEG has met the obligations of the approved EJ Plan and remains committed to maintaining the on-going dialogue with the community and to responding to further inquiries as necessary to address community issues and requests. PSEG is also prepared to enter into a community environmental benefit agreement with the City of Bridgeport and interested environmental and community groups, assuming that mutually acceptable arrangements can be negotiated, and those discussions are ongoing. As PSEG has already explained in many meetings with the City of Bridgeport and the community groups, it welcomes the opportunity to discuss its EJ Plan, Final Report, its compliance with Conn. Gen. Stat. § 22a-20a, and community environmental issues relevant to the Project with the City of Bridgeport and the various interested community groups upon request.

#### **IV. THE NEED FOR THE FACILITY**

The need for additional electric generating capacity is a well known fact throughout New England and the market value of capacity is showing the obvious impacts of supply and demand economics on price signals sent to the wholesale power generation industry. Based on capacity selected by the ISO-NE in the FCA conducted in February, 2015, capacity prices are already committed to rising by more than 400% from approximately \$10 per kW-month now to \$52 per kW-month beginning in June, 2018. Market forces that are driving the capacity shortfall and the rising prices include, but are not limited to, recently announced nuclear power plant closures in Vermont and Massachusetts along with other fossil generating station retirements. Additional retirements in the region are foreseeable. The clear market signals are sending a message to the industry that additional clean power generation is needed to meet market demand. The 2014 Integrated Resource Plan for Connecticut (the “2014 IRP”), dated March 17, 2015, forecasts that capacity resources in the New England region are dwindling rapidly and that, beginning in 2017, the region will face a capacity shortfall of 143 MW, due primarily to the announced retirements of 4,100 MW of non-gas generation resources and a reduction in capacity imports.<sup>3</sup>

#### **V. SITE SELECTION**

As indicated above, PSEG selected the Site for the proposed Facility based on the space available at the existing BHS and the other appropriate site characteristics, including convenient access to a natural gas supply, existing electric transmission system interconnection capabilities, and liquid fuel delivery facilities that offer ample supply resources for ULSD. The Site’s geological and surficial characteristics also show that the Site is suitable for the proposed

---

<sup>3</sup> The 2014 IRP was drafted before the owners of Pilgrim Nuclear Power Station announced on October 13, 2015 that the 680 MW power station planned to close. See “Costs Lead Officials to Pull the Plug on Pilgrim,” *Boston Globe*, October 13, 2015. <https://www.bostonglobe.com/metro/2015/10/13/entergy-close-pilgrim-nuclear-power-station-nuclear-power-plant-that-opened/fNeR4RT1BowMrFApb7DqQO/story.html>

Facility.<sup>4</sup> Local heavy industrial land use characteristics and waterfront access, with the potential for barge access of fuel and materials used during construction, also support the site selection as the Facility will be located within a heavy industrial zoned area surrounded by other industrial sites including other electric generating resources.

## **VI. LOCAL ZONING CONSIDERATION**

The industrial nature of the Project is compatible with the zoning for the Site. The northern portion of the proposed Project Site is located within an Industrial-Heavy (I-H) Zone and the southern portion of the Site within an Industrial-Light (I-L) Zone. According to the City of Bridgeport Zoning and Subdivision Regulations, the I-H Zone is intended to reserve appropriate areas of the city for those industries which, due to impacts in terms of dust, traffic, hazards, appearance or intensity of industrial development, are not desirable in or adjacent to non-industrial areas. Development and performance standards are intended to recognize the operational needs of high impact industries while setting minimum standards to promote safe, functional, efficient, and environmentally-sound development and operation. The I-L Zone is intended to promote industrial uses having minimal off-site impacts. The zone is intended to be in an area where most industrial uses may be located, but where development and performance standards, which are stricter than those in the I-H Zone, promote uses which are compatible with non-industrial areas. West of BHS is a Mixed Use Waterfront (MU-W) Zone, an Office Retail (OR) Zone, Mixed Use Educational/Medical (MU-EM) Zone, as well as residential zones (from single family to residential high density zones). North of the Site are a Downtown Village District Waterfront (DVD-WF) Zone and a Downtown Village District Transit-Oriented Development (DVD-TOD) Zone.

---

<sup>4</sup> See Exhibit A, Appendix A for soil survey map of the Site.

Any potential environmental impacts caused by the Facility will be compatible with existing zoning requirements and minimized by good engineering practice and site design, installation of state-of-the-art air quality control technology for air emissions, best management practices for reducing potential impacts on water resources and water quality, minimizing truck traffic through surrounding residential neighborhoods, mitigation measures for noise, and using natural gas and ULSD fuel. Again, as indicated above, the potential for environmental impacts and impacts on the surrounding community will be reduced by locating the Facility at the Site of an existing electric generating infrastructure, thereby reducing potential construction emissions and impacts. The Facility will have a minimal potential to cause any health-related impacts because the Facility will be designed, permitted and operated to comply with ambient air quality and water quality standards promulgated to protect both human health and the environment.

Existing ambient background noise levels in the direct vicinity of the Site are typical for industrial areas with significant industrial activity, including a large amount of heavy truck activity throughout the day. Within the surrounding neighborhoods, ambient background noise levels are typical of urban areas. Noise sources identified in the areas include industrial activity, vehicle traffic along I-95 and local roadways, railroad operations from the Metro-North and Amtrak systems and marine activity, including the Bridgeport-Port Jefferson ferry terminal.

## **VII. ENVIRONMENTAL COMPATIBILITY**

The design of the proposed Facility has been developed to meet the public need for electric generation capacity and energy supplies for the wholesale power markets while minimizing any potential adverse environmental impacts. PSEG selected the proposed location to minimize any potential visual impacts and designed the equipment layout to further reduce the potential environmental impacts. As an example of such design considerations, while the

proposed stack height will be no taller than approximately 300 feet above the Site design grade,<sup>5</sup> the Facility's new stack will be significantly lower than the existing 498-foot stack height of BHS Unit 3.

Primary Facility structures, including the proposed turbine building, Heat Recovery Steam Generator (HRSG) building, and air-cooled condenser are anticipated to have heights of approximately 95, 127, and 125 feet above the proposed site design grade, respectively. The new exhaust stack will be the most prominently visible new structure.

A total of four exhaust stacks are currently located at the site, the tallest of which is 498 feet above grade. Therefore, the proposed combined cycle Facility and related improvements will be located on a developed property that is the location of existing generating units, including all visible appurtenances such as the existing exhaust stacks, boilers, oil tanks, and barge docks.

In light of this existing industrial development, the proposed addition of the equipment required in support of the combined cycle Facility, including the proposed 300-foot exhaust stack, will result in an incremental but not material change in the appearance of the BHS. The proposed 300-foot stack will be lower than the existing 498-foot stack at the site (tallest of four existing exhaust stacks at site) and the remaining Facility structures will be generally consistent with the height of the other structures at the BHS site.

The five vantage points from which the viewshed photographs were taken are shown in Exhibit A, Figure 5-2 to Figure 5-6. Exhibit A, Figure 5-1 depicts the vantage point locations. The existing view and photosimulation from Soundview Drive are shown in Exhibit A, Figure 5-

---

<sup>5</sup> Exact stack height has not yet been determined pending completion of certain air modeling studies that are still ongoing.

2. The existing view and photosimulation from Broad Street and University Avenue are shown in Exhibit A, Figure 5-3. The view and photosimulation from Newfield Avenue boat ramp are shown in Exhibit A, Figure 5-4. The view and simulation from the new ferry site are shown in Exhibit A, Figure 5-5. The view and simulation from the corner of Soundview Drive and Cove Road are shown in Exhibit A, Figure 5-6.

As shown in the photosimulations, the new Project, where visible, will not be substantially different from the existing BHS, nor would it be in sharp contrast with the area surrounding the Site. Thus, the proposed Project will not significantly impair the visual landscape from any of the area resources of potential concern, nor will the Project interfere with or reduce the public, or area residents', enjoyment and/or appreciation of the appearance of any open space or other scenic resources. In addition, residents and visitors to the area will not experience a significant change in the visual character of the area. Overall, the new Project will be visible, but will not be out of character or proportion with the views of the existing BHS or other energy infrastructure in the immediate area. Thus, there will be no significant adverse visual impacts as a result of the Project.

**A. Summary of Environmental Compatibilities**

Overall, the potential environmental and health impacts of the proposed Facility will be mitigated by the following efforts and actions:

- Locating the Facility at the site of a major generating station that is zoned for industrial activity and that is not immediately adjacent to residential properties or sensitive receptors;
- Use of natural gas fuel and ULSD fuel;

- Installation of state-of-the-art power generation and air quality emission controls to substantially reduce air pollutant emissions;
- Design of exhaust stack to minimize potential ground-level air quality impacts so as not to cause a violation of any applicable state or national ambient air quality standard;
- Elevating the Site grade to enhance reliability and harden for resiliency during major storm events;
- Implementing good site design and best management practices to mitigate any potential impacts on water resources and water quality, which design includes no direct process water discharges to surface or groundwaters;
- Use of barge transportation, where practicable, and minimizing, as much as possible, truck transportation through surrounding residential neighborhoods during construction and for plant operations (such as fuel oil deliveries) and;
- The Facility will be designed and operated to meet applicable State of Connecticut and City of Bridgeport noise regulations.

**B. Air Emissions**

In a combined cycle facility, hot gasses from the Combustion Turbine Generator (CTG) are exhausted through ductwork to the Heat Recovery Steam Generator (HRSG), where energy is extracted and used to generate high pressure steam. The HRSG also contains a duct burner (exclusively natural gas-fired) which can be used to provide additional heat energy to the HRSG to increase steam production under certain operating conditions. Exhaust gas flow from the HRSG is discharged to the atmosphere through an approximately 300-foot tall stack. The CTG

produces electricity directly and the exhaust heat from the CTG produces steam in the HRSG, which drives the steam turbine generator to produce additional electricity.

The proposed unit will be equipped with state-of-the-art air emissions control technology, including:

- A combination of dry low oxides of nitrogen (NO<sub>x</sub>) combustors, a selective catalytic reduction system, and water injection to reduce NO<sub>x</sub> emissions.
- An oxidation catalyst to reduce carbon monoxide (CO) and volatile organic compound (VOC) emissions.
- An air-cooled condenser which avoids particulate emissions associated with evaporative (i.e. “wet”) cooling systems.

An initial air quality impact study has been completed and was submitted to DEEP on April 7, 2015. This study used the EPA-developed and preferred dispersion model, known as AERMOD, to evaluate the ground-level impact of Unit 5 stack emissions. Various operating conditions were studied including different ambient temperatures (which affect CTG performance), various CTG loads, firing on both fuels (natural gas and ULSD), and both steady-state CTG operation and transient CTG operation.

Steady-state operation characterizes “normal” operation and is the usual state of the unit. Transient operating conditions characterize start-up and shutdown activities. The study concluded that the impacts from the Unit 5 emissions, as proposed and after inclusion of a representative monitored background concentration to account for emissions of other sources in the region, do not exceed the NAAQS, the Connecticut state ambient standards or the PSD Class II increments. The impact study, however, did predict potential Significant Impact Level (SIL) exceedances for three pollutants: particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and nitrogen dioxide

(NO<sub>2</sub>). The prediction of a SIL exceedance means only that further analysis is required for these three pollutants in the form of a cumulative impact study, which has not yet been performed.

On July 24, 2015, EPA posted a notice of a revision to the AERMOD model and to its meteorological preprocessor.

As a result, PSEG is planning to re-perform the dispersion modeling study of the proposed emissions from new plant using the updated EPA model. The re-modeling is expected to confirm previous results that no ambient standards are exceeded by the combination of new unit impacts plus measured background concentrations. While exact results will not be known until after the study is completed, it is also expected that the number of predicted SIL exceedances and the magnitude of those exceedances will either be eliminated or substantially reduced with use of the updated model.

The Project's potential environmental impacts are further minimized through the use of the proposed fuels, natural gas and ULSD, which are the cleanest available in the market today. Use of these fuels will meet the EPA and DEEP requirements for Lowest Achievable Emission Rate ("LAER") and Best Available Control Technology ("BACT"), as applicable for control of particulate matter ("PM<sub>10</sub>" and "PM<sub>2.5</sub>") and sulfur dioxide ("SO<sub>2</sub>") emissions. Based on recently issued Connecticut permits to construct and operate, the permit limits that are expected for PM<sub>10</sub> and PM<sub>2.5</sub> and for SO<sub>2</sub> can be achieved through the use of pipeline quality natural gas that has a low sulfur content and ULSD with a maximum sulfur content of 0.0015 percent, by weight as proposed by PSEG. The final LAER and BACT determinations are made by DEEP during the formal technical review process in the review of the air permitting package.

Together, the use of state-of-the-art turbine design and air emission controls ensure that the Project combines high energy efficiency with very low emission rates.<sup>6</sup>

**C. Other Potential Impacts**

PSEG engaged the services of technical consultants with substantial experience in planning and permitting power plant facilities, including AKRF, Inc. (“AKRF”). Attached as Exhibit A is the Land Use and Environmental Information Report prepared by AKRF, which reviews all of the potential environmental impacts and efforts by PSEG to mitigate such impacts.

**1. Noise Impacts**

Chapter 6 of Exhibit A describes the various noise sources proposed for the Facility. As discussed by AKRF in its report, the preliminary noise analysis confirms that the surrounding area is characterized by high background noise in part due to heavy industrial activities in the area, among other sources. The noise analysis predicts that the noise level from the proposed Facility will be in compliance with existing State of Connecticut and City of Bridgeport noise standards.

**2. Visual Impacts**

AKRF conducted a visual impact analysis, as discussed in Exhibit A, Chapter 5 and depicted in Exhibit A, Figure 5-1 to Figure 5-6. As described by AKRF, the proposed Facility would be visible, but the visual impacts are expected to be minor, especially given the current prominent visibility of the existing stack and structure that comprises the existing BHS.

**3. Traffic Impacts**

AKRF evaluated the potential effect of the proposed Project on traffic during Project construction and during Project operation. Traffic impacts are expected to be limited to the

---

<sup>6</sup> See Exhibit A, Chapter 9.

construction time frame for the Project. Temporary increases in traffic levels from construction vehicles may be experienced in the nearby neighborhoods. Where practicable, barges will be used to deliver materials and equipment to the site, including large equipment and bulk deliveries of materials such as backfill and aggregates. These potential impacts will be temporary in nature. After construction is completed, the number of additional vehicle trips for delivery of supplies and worker commutes will be comparable to that experienced for the existing BHS Site. During Project operations, AKRF anticipates that vehicle trips will not result in excessive traffic in the vicinity of the site.

#### **4. Historic and Archaeological Resources**

AKRF evaluated potential effects of the proposed combined cycle Project on historic and archaeological resources. The proposed generating equipment will be installed on approximately 16 acres of previously disturbed land at the existing BHS. The new combined cycle Project will be sited in an area where four above-ground fuel oil storage tanks are currently located. These existing oil storage tanks, which were installed in 1968, will be removed in advance of the proposed Project. As the Project development will occur within a previously disturbed industrial site, environmental impacts to historical or archaeological resources are minimized as compared with the development of a similar project on a greenfield site. As indicated in Exhibit A, Appendix A, the State Historic Preservation Office determined on February 5, 2015 that no historic properties will be affected this project and no further review is requested.

#### **5. Natural Resources**

The analyses conducted by AKRF on various geological, ecological and biological resources in the area confirmed that the Site and surrounding vicinity is characterized by important natural resources, including Long Island Sound, but that the Project, especially as

designed, is not expected to have adverse environmental impacts on these resources. See Exhibit A for details. During construction, appropriate soil erosion and sediment control measures (e.g., silt fence, turbidity curtains, etc.) will be installed to prevent loose sediment from entering the onsite wetland area. Prior to commencement of work, PSEG will consult with DEEP to avoid or minimize impacts to any nesting osprey near the site.

## **5. Water Resources**

The Project engineers have designed the proposed Facility to have a minimal impact on water resources, including minimizing the need for potable water and the wastewater process. The water analysis also includes a water balance, which shows the Facility's water inputs and outputs and indicates minimal water outputs, with discharges to be limited to the existing sanitary sewer system located on Site. In addition, engineers have prepared site plans that feature a grading and drainage plan designed to manage and reduce stormwater runoff.

## **VIII. CONCLUSION**

PSEG's proposed Facility will provide a new, state of the art, combined cycle electric generation resource in southwest Connecticut and the New England region that satisfies an important need. By siting the Facility at an existing generating location, PSEG has further advanced an important public policy goal of expanding electric generation in Connecticut wherever possible at existing generation locations. Based upon the analyses and reports referenced above, PSEG has not identified any substantial adverse environmental impacts that will result from the construction, operation or maintenance of the proposed Facility.

Correspondence and/or communications regard this report may be addressed to the attorneys for PSEG:

For PSEG Power Connecticut LLC

Holland & Knight LLP  
Attn. Stephen J. Humes, Esq.  
31 W 52 Street  
New York, NY 10019  
P: (212) 513-3473  
F: (212) 385-9010  
e-mail: [steve.humes@hklaw.com](mailto:steve.humes@hklaw.com)

Respectfully submitted by,

PSEG Power Connecticut LLC

By: \_\_\_\_\_  
Stephen J. Humes  
Its Attorney