COMMONWEALTH OF MASSACHUSETTS ENERGY FACILITIES SITING BOARD

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Milford Power, LLC Notice of Project Change

EFSB 17-04

FINAL DECISION

Robert J. Shea Presiding Officer October 1, 2018

On the Decision:

Charlene de Boer Dean Hazle John Young

APPEARANCES:

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The Energy Facilities Siting Board ("Board") hereby APPROVES, subject to conditions below, Milford Power, LLC's ("Milford Power" or the "Company") proposed project change including: (1) the addition of wet compression technology to the combustion gas turbine; (2) the addition of a nominal 500 MMBtu/hr (HHV)¹ natural gas fired duct burner; (3) a steam turbine upgrade; and (4) a facility-wide dual-function catalyst system.

I. <u>INTRODUCTION</u>

A. <u>Description of the Existing Facility as Approved</u>

On August 29, 1991, the Energy Facilities Siting Council ("Siting Council")² approved, subject to conditions, the petition of Enron Power Enterprise Corporation to construct a 146 megawatt ("MW") gas-fired, combined-cycle, power production facility on a 6.8-acre site located at 108 National Street, Milford, Massachusetts (the "Facility"). <u>Enron Power Enterprise</u> <u>Corporation, EFSC 90-101 (1991) ("Enron Power</u>" or "Original Decision").

As approved by the Siting Council, the proposed Facility was to include: (1) a single gas-fired turbine generator; (2) an exhaust heat recovery steam generator ("HRSG"); (3) a steam turbine generator; (4) a wet-cooled, mechanically induced draft cooling tower; (5) a 100-foot exhaust stack; (6) a 500,000-gallon city water storage tank; (7) a 300,000-gallon demineralized water storage tank; and (8) a 680,000-gallon stormwater detention pond. <u>Enron Power</u> at 2; Exh. MP-5, at 2-1. In addition, the Facility as approved was to include: (1) two 1,000-foot 115 kilovolt ("kV") electric transmission lines connecting the Facility to the local transmission system; (2) a 200-foot natural gas pipeline connecting the Facility to the natural gas distribution pipeline; (3) a 1,000-foot sewer line; (4) a 3,500-foot pipeline that would deliver treated effluent to the Facility from the Milford Wastewater Treatment Plant ("MWWTP"); and (5) an electrical switchyard. <u>Enron Power</u> at 2. The Facility has been in operation since 1994 (Exh. MP-1, at 4).

¹ The term "MMBtu" stands for "million British thermal units." The term "HHV" stands for "higher heating value."

² The Energy Facilities Siting Council was the predecessor to the Energy Facilities Siting Board. St. 1992, c. 141, § 53.

In the years since approval of the Facility, it has been owned first by Milford Power Limited Partnership and, since 2013, by Milford Power LLC (RR-EFSB-12; Tr. 2, at 281-281).³ The current owner of Milford Power LLC, Starwood Energy Group, acquired its interests in the Company on September 27, 2017 (RR-EFSB-12; Tr. 2, at 285). The day-to-day operation and maintenance of the Facility is handled by NAES Corporation pursuant to an asset management agreement with the Company (Tr. 2, at 283-285).

B. <u>Description of the Proposed Project Change</u>

On November 16, 2017, Milford Power submitted to the Siting Board a proposed project change ("Notice of Project Change" or "NOPC") (Exh. MP-1). The proposed changes include the addition of wet compression and duct burner technology that would increase the generation capacity of the Facility by a nominal 53 MW, along with related upgrades to the steam turbine, and the addition of new facility-wide air pollution control devices (collectively, the "Project Change"). The NOPC also identified certain changes that had been made to the Facility prior to the NOPC, which differed from the Facility as approved in the Original Decision.

The Company indicated that the Project Change is designed to address "a growing need for reliable energy supply in New England as older plants enter retirement" (Company Brief at 3). In February 2017, Milford Power was awarded a capacity supply obligation ("CSO") by ISO-New England ("ISO-NE") to provide 53 MW of increased capacity as part of the Forward Capacity Market Auction #11 (<u>id.</u>). Pursuant to the ISO-NE CSO, the additional capacity is required to be in commercial operation by June 2020 (Exh. MP-1, at 3).

The Company stated that the addition of wet compression technology would allow the Facility to produce approximately 13 MW of additional power at increased efficiency when demand is highest in the summer months (Company Brief at 5-6). Wet compression technology operates by injecting demineralized water into the inlet combustion air of the existing

³ The Original Decision states that during the course of the Siting Council's proceedings, the project proponent, Enron Power Enterprise Corporation, sold a portion of its interest in the Project to two other entities. <u>Enron Power</u> at 255 n.209. These three entities formed Milford Power Limited Partnership to develop the Project. <u>Id.</u> The Original Decision explicitly provides that its terms bind Milford Power Limited Partnership. <u>Id.</u> During evidentiary hearings, counsel for the Company acknowledged that all requirements imposed by the Siting Council in the Original Decision are binding on subsequent purchasers of the Facility, including Milford Power LLC (Tr. 2, at 298-299).

combustion turbine generator ("CTG") to increase combustion turbine output (<u>id.</u> at 6). According to the Company, this technology will operate only when ambient temperature is over 60 degrees Fahrenheit ("°F") and is anticipated to run no more than 2,000 hours per year (<u>id.</u>). The Company stated that by increasing output of the Facility by ten percent with only an 8.5 percent increase in natural gas use, wet compression improves the overall efficiency of the Facility (Exhs. MP-2, at 5; MP-7, at 2). The Company indicated that the maximum additional water use for wet compression would be approximately 108,000 gallons per day ("gpd") (Exh. MP-2, at 5).

The proposed duct burner addition would introduce an additional combustion source at the front end of the HRSG, capable of burning 500 MMBtu/hr HHV, thereby increasing high pressure steam flow to the existing steam turbine generators ("STG") and boosting capacity of the Facility by about 40 MW (<u>id.;</u> Exh. MP-5, at 1-1). The Company stated that use of the duct burner would be limited under a Massachusetts Department of Environmental Protection ("MassDEP") Final Air Plan Approval to the heat input equivalent of 2,000 full load hours per year (or approximately 1,066,000 MMBtu HHV), representing a maximum 23 percent capacity factor use of the duct burner (Exhs. EFSB-G-1(1) at 18, table 2A; MP-5, at 1-1, 3-9). The Company stated that the duct burner would provide peaking capacity that would be used on high-demand days, primarily in the summer season (Tr. 2, at 234-235). The Company anticipated that the duct burner would generally operate no more than twelve hours per day (Exh. MP-1, at 6).

In association with the duct burner installation, the internal turbine blades of the STG would be replaced as part of a required major overhaul in accordance with the manufacturer's schedule (Company Brief at 7). According to the Company, the existing electrical generator and electrical infrastructure as well as the existing condenser, cooling water pumps, and cooling tower can accommodate the Project Change without modification (<u>id.</u>). The Company indicated that the STG and generator are in a building that would not need material modification (Exh. MP-2, at 6).

The Company stated that the Facility's existing selective catalytic reduction ("SCR") catalyst in the HRSG, which currently controls only nitrogen oxides ("NO_X"), would be upgraded with a dual-function catalyst to control Facility-wide NO_X, carbon monoxide ("CO") and volatile organic compound ("VOC") emissions to levels below the current MassDEP

Air Plan Approval limits for the combustion turbine (Exhs. MP-5, at 2-2; EFSB-G-1(1) at 19, Table 2A; RR-EFSB-10; RR-EFSB-10(1) at 6). The Company indicated that the new dual-function catalyst would not only minimize air impacts of the proposed additional generation, but would also reduce emissions from the existing Facility operations (Company Brief at 7-8). The Company stated that the upgraded SCR would also allow for reductions in ammonia emissions, currently permitted at 10 parts per million ("ppm"), that would fall to 5 ppm in the first year of operation, and then to 2 ppm thereafter (Exhs. MP-5, at 4-1 to 4-3, 4-26; EFSB-G-1(1) at 18, Table 2A, 22, Table 2C).

C. <u>Changes to the Facility Prior to the Current Proceeding</u>

1. Description

The Facility, as built, differs in two significant respects from the Facility as it was approved in the Original Decision: the height of the stack has increased, and three bedrock wells have been drilled and are used as water sources. The Original Decision directed the petitioner "to notify the Siting Council of any changes other than minor variations to the proposal so that the Siting Council may decide whether to inquire further into that issue." <u>Enron Power</u> at 255. The Company was unable to produce any evidence of a project change notification or other filing with the Siting Board (or Siting Council), submitted prior to this NOPC petition, regarding the increased stack height or new water sources (Exhs. EFSB-G-5(R); EFSB-W-1; Tr. 2, at 294-298).⁴

2. <u>Company Position</u>

Due to the passage of time, the Company asserts it is not known whether the Siting Board was, in fact, previously notified of the change to the stack height or the installation of wells at the time those changes were made (Company Brief at 71). The Company represents that Starwood

⁴ The Original Decision described the stack as 100 feet high. <u>Enron Power</u> at 2, 8 n.5, 123. As built, however, the stack is 125 feet high (Exhs. MP-1, at 5 n.5; EFSB-G-5). As originally approved, the Facility was to obtain its potable water from the Milford Water Company ("MWC") and water for its cooling tower primarily from the MWWTP. <u>Enron</u> <u>Power</u> at 131, 134. In 2002, the prior owner of the Facility drilled three bedrock wells a short distance to the east of the Facility (Exhs. MP-1, at 10; MP-10, at 1-6; EFSB-W-1). The Facility currently uses an average of 37,000 gpd obtained from these wells for cooling purposes (Exh. MP-10, at 1-7).

Energy Group acquired its interest in the Company in September 2017, and thus may not have access to all written records, and does not have the institutional knowledge of non-written communications that may have occurred between the Company (or its predecessors) and the Siting Board (or Siting Council) since the early 1990s (<u>id.</u>). While the Company has not identified "any specific written communications regarding either of these issues" at the time, it contends that it is "certainly possible that they occurred" (<u>id.</u>).

With respect to project changes, in general, the Company also argues that "the standards for when the Siting Board must be notified and what must be in that notification are not always clear" (Company Brief at 70). In support of this argument, the Company states that there are "no provisions in the Siting Board regulations that relate to notices of project change" (<u>id.</u>). This dearth of relevant regulation, the Company argues, stands in contrast to "other state regulatory programs [that] provide substantially more guidance" (<u>id.</u> at 70 n.58). In particular, the Company cites to the regulations on notices of project change in regulations related to Massachusetts Environmental Policy Act ("MEPA") and the MassDEP (<u>id.</u>, <u>citing</u> for example 301 CMR 11.01(6), 301 CMR 11.10(1), 310 CMR 7.02(1)(b)).

Finally, the Company argues that it is possible that the owner of the Facility at the time the groundwater wells were drilled may have believed that this action constituted only a minor variation, not requiring notice (Company Brief at 73). The Company contends that no state permits were required, and that the volume of water withdrawn is small relative to overall Facility water use (id.). With regard to the stack height change, the Company maintains that the height was consistent with the 1991 Special Permit granted by the Town of Milford, which was explicitly included as Attachment A to the Original Decision, and further that compliance with the 1991 Special Permit was an obligation of the Original Decision. <u>Enron Power</u> at 231 (Condition 13).

3. <u>Analysis and Findings</u>

The Company's supposition that the Facility's prior owners may have provided some form of notification to the Siting Board (or Siting Council) regarding the stack height change and the installation of groundwater wells at the Facility, is speculative at best. Furthermore, this argument, even if true, does not relieve the Company of its burden to possess and maintain evidence that demonstrates compliance with the Original Decision. Accordingly, we do not find the Company's argument on this point persuasive, or deserving of consideration as a mitigating factor.

With regard to the stack height increase, the Siting Board notes that when the Original Decision was issued, the Council appeared to be aware that the stack height might need to be increased. The Company argues that previous owners of the Facility might have interpreted the attachment of the Milford Special Permit to the Original Decision as the Siting Council deferring to the MassDEP regarding the final stack height (Company Brief at 72; Exh. EFSB-G-5(R)). The Siting Board concurs that there may have been some ambiguity in the Original Decision regarding the Siting Council's specific intentions regarding the final stack height. Further, the record reveals no adverse impacts resulting from the stack height change. Accordingly, the Siting Board declines to take any further administrative action regarding this matter.

Milford Power's failure to notify the Siting Council that it planned to, and did, drill three additional wells is a more significant concern. The Original Decision devotes some 60 pages to water issues, and water clearly was a significant issue in the Original Decision. <u>Enron Power</u> at 131-184, 193-200. Therefore, any changes to the water supply made after the Facility was constructed should have been brought to the Siting Board's attention before the wells were drilled.

The Company points out that the wells provide only a small portion of necessary water for the Facility, that no state permits were required for these groundwater wells, and that the wells have caused no adverse environmental impacts in their years of operation. The record appears to support the Company's contentions, although this <u>ex-post</u> analysis does not excuse the procedural lapse on the part of the predecessor owners of the Facility – or the Company in its due diligence when it purchased the Facility – to notify the Siting Board of project changes that are more than minor variations. We remind the Company, and others, that the requirement to notify the Siting Board of significant proposed changes to approved facilities is an important safeguard to ensure that the Board's statutory obligations are realized, not just in a facility's initial approval but over its entire lifespan. Nevertheless, given the particular circumstances regarding this issue, the Siting Board will forego taking any administrative action at this time. Accordingly, the analysis of the NOPC below, assumes that these prior changes are part of the existing Facility.

II. <u>PROCEDURAL HISTORY</u>

On November 16, 2017, Milford Power filed with the Siting Board the NOPC, described above, along with the Environmental Notification Form ("ENF") that the Company filed with the MEPA Office (Exh. MP-2), and the Reclaimed Water Use Permit issued by the MassDEP on May 14, 2012 ("2012 Reclaimed Water Permit") (Exh. MP-6). The ENF includes a copy of the Non-Major Comprehensive Air Plan Approval Application ("Air Plan Application") (Exh. MP-5), which was submitted to the MassDEP, and a November 2017 report entitled "Environmental Assessment of Proposed Change in Milford Power Use of Cooling Water and Process Water on the Charles River" ("Water Report") (Exh. MP-4).

The proceeding initiated by the filing of the NOPC has been designated as EFSB 17-04 and is referred to as the "Project Change Proceeding." The Project Change Proceeding is a continuation of the EFSC 90-101 proceeding as it is a change to the Facility as originally approved (the "Original Proceeding"). Consequently, the parties and interested persons in the Original Proceeding continue to be parties and interested persons in the Project Change Proceeding.⁵

On January 10, 2018, the Company filed with the Siting Board an Agreement in Principle with the Charles River Watershed Association ("CRWA") (Exh. MP-9). In this agreement, CRWA agrees not to object to the construction and operation of the Project Change ("CRWA Agreement") (<u>id.</u> at 1). In return, the Company agrees to make certain "environmental betterment payments" and to implement certain mitigation measures (<u>id.</u> at 1-3). On the same date, the Company also filed the January 5, 2018, Certificate of the Secretary of the Executive Office of Energy and Environmental Affairs on Milford Power's ENF ("ENF Certificate") (Exh. MP-7). In the ENF Certificate, the Secretary found that the ENF "demonstrated that the project's environmental impacts will be avoided, minimized, and/or mitigated to the extent practicable" and, therefore, "no further MEPA review is required" (<u>id.</u> at 7).

On March 26, 2018, the Siting Board staff held a duly-noticed public comment hearing at Milford High School. Based on linguistic information derived from US census data, the

⁵ The intervenors in the Original Proceeding were: the Charles River Watershed Association; Concerned Citizens Against Pollution; Kathleen Toches, <u>pro se</u>; Joanne Tusino; and the Town of Bellingham. Distrigas of Massachusetts Corporation took part in the Original Proceeding as an Interested Person. <u>See</u> Appendix A.

Presiding Officer instructed the Company to translate the Siting Board's Notice of Public Comment Hearing and Notice of Adjudication ("Notice") and the summary Please Read document ("Notice Documents") into Spanish (Exh. MP-13) and Portuguese (Exh. MP-12) and to serve the English, Spanish, and Portuguese versions of the Notice Documents on owners of property located within one-half mile of the Facility. The Company complied with these requirements (Exhs. MP 14; MP-16; MP-17).⁶

In addition, the Presiding Officer directed the Company to publish a Spanish translation of the Notice in *El Mundo* and the Portuguese translation in *The Brazilian Times*, and the English version of the Notice in the Metro West Daily News and the Milford Daily News. Each publication was made twice in two consecutive weeks prior to the public comment hearing, with the first publication taking place at least 14 days before said hearing (Exhs. MP-14; MP-19). The Notice Documents, in all three languages, were served on the town clerks of Milford and Hopedale with a request that they be publicly posted (Exhs. MP-14; MP-18).

At the public comment hearing, two people provided oral comments. A representative of CRWA spoke in favor of the Project Change and a Milford resident asked about plant wastewater and plant safety (3/26/18 Public Comment Hearing Tr. at 26-29). No one filed written comments; no one moved to intervene or act as a limited participant. The Siting Board issued a preliminary set of Information Requests to the Company on March 7, 2018, and it issued a first set of Information Requests to the Company on May 18, 2018.

On June 28 and 29, 2018, the Siting Board conducted evidentiary hearings. The Company presented five witnesses: (1) James Carlton, of PurEnergy, LLC, responsible for Milford Power's asset management; (2) Dale Raczynski, principal of Epsilon Associates, Inc.; (3) Mark Gerath, associate vice president at Environmental Consulting & Technology, Inc.; (4) Kenneth Wagner, president of Water Resource Services; Inc.; and (5) Robert Michaud, managing principal of MDM Transportation Consultants, Inc. The Siting Board issued thirteen record requests to Milford Power during the evidentiary hearings; and Milford Power responded

⁶ The Project does not exceed ENF thresholds for air, solid and hazardous waste, wastewater and sewage sludge treatment and disposal. Therefore, the Project does not trigger enhanced public participation or analysis of impacts and mitigation under the Commonwealth's Environmental Justice ("EJ") Policy (Exhs. MP-7; EJ Policy §§ 16, 17; Company Brief at 68-69).

on July 5 and 9, 2018. The Company filed its brief on July 16, 2018. None of the parties to the Original Proceeding took part in the present matter.

Siting Board staff prepared a Tentative Decision and distributed it to the Siting Board members and the Company for review and comment on September 18, 2018. The Tentative Decision was sent to the parties to the original proceeding – EFSC 90-101 – on September 19, 2018, for review and comment. The Company was given until September 25, 2018, to file written comments; and the parties to the original proceeding were required to submit comments by September 26, 2018. The Siting Board received timely written comments from the Company. The Board conducted a public meeting to consider the Tentative Decision on October 1, 2018, at which the Company presented oral comments. After deliberation, the Board directed staff to prepare a Final Decision **approving** the Notice of Project Change, subject to conditions, as set forth below.

III. STANDARDS AND SCOPE OF REVIEW

As noted above, the Original Decision required the petitioner to "notify the Siting Council of any changes other than minor variations to the proposal so that the Siting Council may decide whether to inquire further." <u>Enron Power</u> at 255. The standard of review to determine whether further inquiry is warranted was first articulated by the Siting Board in <u>Berkshire Power Development, Inc.</u>, EFSB 95-1, at 10 (1997) ("<u>Berkshire Compliance</u> <u>Decision</u>"). In the <u>Berkshire Compliance Decision</u>, the Siting Board declined to make further inquiry regarding certain project changes if the changes did not alter in any substantive way either the assumptions or conclusions reached in its analysis of the project's environmental impacts in the underlying proceeding. <u>Id.</u> at 10-12; <u>see also Cape Wind Associates, LLC and NSTAR Electric Company, EFSB 02-2B/EFSB 07-8A (2014) ("<u>Cape Wind 2014 Project Change</u> <u>Decision</u>") at 5; <u>Colonial Gas Company d/b/a National Grid</u>, EFSB 05-02A, at 7-8 (2014) ("<u>Sagamore Project Change Decision</u>").</u>

Where the Siting Board determines that further inquiry is warranted, as in this case, the scope of the inquiry extends to, and is limited to, the issues raised by the proposed project change. See Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2A/D.T.E. 02-53, at 4-16 (2008) ("Cape Wind 2008 Project Change Decision"); Sagamore Project Change Decision at 8. The Siting Board will approve the

proposed project change if the Board determines that the project as modified, like the project as originally proposed, would contribute to a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost, as required by G.L. c. 164, § 69H.⁷ See Cape Wind 2008 Project Change Decision at 26.

In the present case, the proposed changes would result in increased water use, increased traffic, and increased emissions of particulate matter ("PM"), sulfur dioxide ("SO₂") and greenhouse gases, compared with the Original Decision. These are substantive changes, and consequently, the Siting Board finds that further inquiry regarding the Project Change is appropriate.

IV. ANALYSIS OF THE PROPOSED PROJECT CHANGE

A. <u>Environmental Impacts of the Proposed Project Change</u>

1. <u>Water Resource Impacts</u>

The Company estimated that the potential total annual water use for the Facility after the Project Change would be 489 million gallons per year ("MGY"), assuming 2,000 hours of duct burning and wet compression (Exh. MP-10, at 1-11). This represents an increase in annual water use at the Facility of 50 MGY (<u>id.</u> at 1-15).

The Company stated that the increase in water demand could be met by the following water sources currently in use: (1) treated effluent from the MWWTP; (2) potable water purchased from the MWC; (3) groundwater pumped from an on-site wellfield; (4) potable water purchased from offsite sources and trucked to the Facility; and (5) the on-site detention pond (<u>id.</u> at 1-1). The Company stated that the impact of increased water demand would be minimized because the Project Change does not require: (1) construction of any new water management infrastructure; (2) new permits or amendments to existing permits; or (3) changes in its long-term

⁷ In the Original Decision, the Siting Council applied the provisions of G.L. c. 164, § 69J to the petition to construct, which was the relevant statute at that time. <u>Enron Power</u> at 8, 12, 14, 69. After restructuring in 1997, G.L. c. 164, § 69J no longer governs the construction of generating facilities. Instead, construction of generating facilities is now governed by G.L. c. 164, § 69J¹/4. <u>See, e.g., NRG Canal 3 Development LLC, EFSB 15-06/D.P.U. 15-180 (2017); Exelon West Medway, LLC and Exelon West Medway II, LLC, EFSB 15-01/D.P.U. 15-25 (2016).</u>

agreements with the Facility's water suppliers (Exh. MP-10 at iii; Company Brief at 19, 25; see also Exh. MP-6(R)).

a. <u>Water Use of Existing Facility</u>

In the Original Decision, the Siting Council evaluated whether the proposed water supplies were capable of delivering the required amount of water, and whether the resulting impacts would be minimized. <u>Enron Power</u> at 131-173. The Siting Council found that: (1) the MWC was capable of meeting the Facility's potable water needs; and (2) that the MWWTP was capable of supplying effluent water in the necessary amount for cooling purposes. <u>Id.</u> at 133, 135. With respect to impacts to waterways, the Siting Council found that the Facility's use of diverted MWWTP effluent would have an acceptable impact on the streamflow, water quality, and ecology of the Charles River, and that water impacts would be minimized. <u>Id.</u> at 172-173.

The Company estimated that the total potential annual water use for the Facility, as currently configured is 439 MGY (Exh. MP-10, at 1-8, fig. 1-3).⁸ The Company stated that the Facility currently meets its water needs by sourcing the majority of its cooling water from MWWTP effluent, and the majority of its potable water needs from the MWC (<u>id.</u> at 1-5, Exh. MP-1, at 10). The Company stores water on site for cooling purposes in a 680,000-gallon on-site detention pond, and for process uses in a 500,000-gallon municipal water storage tank and a 300,000-gallon demineralized water storage tank (Exh. MP-1, at 11). With respect to cooling water needs, the Company stated that water sourced from the MWWTP can be supplemented, as needed, by groundwater from the on-site wellfield (<u>id.</u> at 10).⁹ When MWWTP effluent, MWC water, and wellfield water are together inadequate for the Facility's needs (either for process or cooling water), the Company can supplement these sources by purchasing trucked water from off-site sources (<u>id.</u> at 11).

The Company stated that because the Facility does not operate at full capacity, actual water use has been less than the potential maximum of 439 MGY (Exhs. MP-10, at 1-8). The Company indicated that recent water use is lower than when the plant operated as more of a base

⁸ The Company's figure of 439 MGY assumes 24 hours per day of operation at an average daily temperature of 59°F (Exh. MP-10, at 1-8, fig. 1-3).

⁹ The on-site wellfield consists of three bedrock wells (Exh. MP-10, at 1-5).

load or mid-merit type facility when it was initially commissioned (Tr. 1, at 128-129). For example, for the years 2010 to 2017, the lowest total annual water use was 37.6 million gallons in 2016 and the highest was 160.1 million gallons in 2015 (RR-EFSB-5(1)). The corresponding capacity factors were 7.1 percent in 2016 and 36.9 percent in 2015 (RR-EFSB-2(1)).

As noted above, treated effluent from the MWWTP is the Facility's primary source of cooling water (Exh. MP-10, at 1-5). The original petitioner estimated that the Facility would require approximately 1.02 MGD of MWWTP effluent, and total use of MWWTP effluent is limited to 1.5 million gallons per day ("MGD") by the Reclaimed Water Use Permit issued to the Town of Milford by MassDEP (Exhs. MP-1, at 10; MP-6(R) at 4). <u>See Enron Power</u> at 134. To protect Charles River stream flow, the Original Decision established that the Facility must cease use of all MWWTP effluent when flow in river drops below 3.0 cubic feet per second ("cfs").¹⁰ <u>Enron Power</u> at 173. The Siting Council determined that, with the 3.0 cfs flow limitation, the proposed effluent use would not cause significant changes in key water quality parameters, and would not have a negative impact on riverine ecology. <u>Id.</u>

With respect to daily MWWTP effluent use, the Company indicated that the Facility has consistently used less than the 1.5 MGD authorized in the Reclaimed Water Use Permit (Exh. MP-1, at 10). For example, annual total MWWTP effluent use from 2010 to 2017 ranged from approximately 15 million gallons in 2016 (<u>i.e.</u>, an annual average of 0.04 MGD) to approximately 85 million gallons in 2015 (<u>i.e.</u>, an annual average of 0.23 MGD) (RR-EFSB-5(1) at 1; Company Brief at 27). The Company explained that MWWTP effluent use has been considerably below the authorized level primarily because the Facility has not operated at its annual capacity due to market conditions and other factors (Exh. EFSB-W-2).

The original petitioner estimated that the Facility would require approximately 0.24 MGD of potable water from the MWC. <u>Enron Power</u> at 131. The Company stated that its use of potable water from the MWC has historically been less than the daily average evaluated by the Siting Council in the Original Decision (Exh. MP-1, at 10). The Company provided data for the total annual volume of water purchased from MWC for the years 2010 to 2017, which ranged from approximately 7 million gallons in 2016 (<u>i.e.</u>, an annual average of 0.02 MGD) to

¹⁰ The Company noted that, to ensure compliance with the 3.0 cfs limit in Original Decision, it ceases water diversion if flow drops below of 3.06 cfs (Exh. MP-10, at 1-17).

approximately 48 million gallons in 2015 (<u>i.e.</u>, an annual average of 0.13 MGD) (RR-EFSB-5(1) at 1; Company Brief at 26). The Company stated that it has an informal agreement with the Milford Water Company to purchase no more than 0.35 MGD (Exh. EFSB-W-6).

The Company stated that groundwater pumped from the Facility's on-site wellfield is currently used to supplement the cooling tower water on an as-needed basis (Exh. MP-1, at 10). The Company stated that withdrawals from the wellfield are maintained below the Water Management Act ("WMA") permitting threshold of 100,000 gpd on a rolling 90-day average (Exh. EFSB-W-4). Groundwater withdrawn from the wellfield for the years of 2010 to 2017 ranged from approximately 7 million gallons in 2016 (<u>i.e.</u>, an annual average of 0.02 MGD) to approximately 20 million gallons in 2014 (<u>i.e.</u>, an annual average of 0.05 MGD) (RR-EFSB-5(1)).

The Company stated that the bedrock groundwater wells were installed in 2002 and are located on a parcel owned by Milford Power east of the Facility (Exh. MP-10, at 1-6). The Company reported that a hydrogeological investigation was completed before the wells were installed, that the depth of the wells ranges from 500 to 600 feet, and that the water bearing zones are typically located between 250 and 350 feet below ground surface (<u>id.</u>). The Company stated that on June 9, 2003, it received an amendment to its original Special Permit from the Milford Zoning Board of Appeals granting authorization for the installation of the groundwater wells and related facilities (RR-EFSB-13; RR-EFSB-13(2) at 3).

Based on a 123-day pump test conducted on the wellfield in 2002, the Company maintained that the deep groundwater wells are hydraulically isolated from the Charles River and the over-burden aquifer used by the MWC (Exh. MP-10, at 1-6 to 1-7; Tr. 1, at 81). The Company further stated that the deep bedrock aquifer, which the on-site wells draw from, likely recharges over a broad geographic area (Exh. MP-10, at 1-6). The Company asserts that using its groundwater wells is beneficial to the watershed because it displaces use of MWWTP effluent, which is more directly tied to river flows, and is also beneficial for cooling efficiency due to its lower temperature relative to other water sources (Exh. EFSB-W-5; Tr. 1, at 114).

The Company identified the presence of methyl tert-butyl ether ("MTBE"), a volatile organic compound formerly used as a gasoline additive, in its wells in 2002 (Exh. MP-10, at 1-7;

RR-EFSB-6).¹¹ According to Milford Power, MassDEP, the MWC, and the Company agreed that the presence of MTBE in the bedrock aquifer did not present a risk to the MWC's wells because the overburden aquifer (used by MWC) and the bedrock aquifers (used by Milford Power's groundwater wells) are hydraulically isolated from one another, as demonstrated by the pump test (RR-EFSB-6).

The Company stated that trucked water has been used primarily for cooling tower makeup when MWWTP effluent is not available, though the Facility has also trucked in demineralized water during curtailment from the MWC, as was the case in 2016 (Exh. MP-10, at 1-8; RR-EFSB-5). The Company reported that it purchased an average of 3.7 MGY for the years 2012 to 2016 from trucked supplies, which represented approximately four percent of the Facility's overall water use (Exh. MP-10, at 1-8).

The Company stated that it optimizes the use of its available water resources through the use of its 500,000-gallon municipal water and 300,000-gallon demineralized water aboveground storage tanks, and its 680,000-gallon rubber-lined on-site detention pond (Exh. MP-1, at 11). The Company stated that the detention pond can be used to store stormwater, as well as blowdown from the demineralizer process and boiler blowdown, well water, or trucked water (Exh. MP-10, at 1-7). The Company stated that water in the detention pond can be used for cooling water, and that storing excess water in the detention pond provides a short-term buffer if other water sources are interrupted (<u>id.</u>).

¹¹ According to the Company, the existing Facility is not the source of the MTBE contamination, which is likely located to the west and south of the Facility (RR-EFSB-13(2) at 15). The Company stated that during a pumping test, the concentration of MTBE increased to a peak concentration of 40 parts per billion ("ppb"), but did not exceed MassDEP's reporting threshold of 70 ppb (RR-EFSB-6). The Company stated that after cessation of pumping, the concentration rapidly declined (RR-EFSB-6). Milford Power stated that it continues to monitor for MTBE concentrations in its on-site wells (RR-EFSB-6). Milford Power will notify MWC if MTBE concentrations exceed 30 ppb in its wells; if concentrations exceed 50 ppb, Milford Power will stop drawing from its wellfield except to monitor contaminant concentrations (RR-EFSB-6).

b. <u>Potential Change in Facility Water Use</u>

The Company stated that the operation of wet compression and duct burner technologies would increase the Facility's total daily water consumptions above current consumption levels, but would not require any new permits, amendments to existing permits, or new construction of infrastructure to accommodate the increased demand (Exh. MP-1, at 9). Both wet compression and duct burner technologies would require incremental process and cooling water when operating (Exh. MP-10 at iii).

The Company stated that, in accordance with the CRWA Agreement, it would take several steps to mitigate potential water use impacts (Company Brief at 37, <u>citing</u> Exh. MP-11). The Company indicated that the terms of the CRWA Agreement require Milford Power to: (1) provide financial support for projects that have an overall benefit to the water quality of the upper Charles River; (2) implement a Facility-wide cap on potable water use of 0.35 MGD, computed based on the number of days the Facility generates electricity in each quarter; and (3) make its stream gauge data available to the CRWA and other interested parties (Exh. MP-11, at 1-3; Company Brief at 38, <u>citing</u> Exh. EFSB-W-9).¹²

The ENF Certificate stated that projections of the MWC's future water demand exceed the MWC's supply, and that the MWC may not be able to meet the Company's water needs without water supply improvements at its Godfrey Brook wellfield (Exh. MP-7, at 6). The MWC stated in its comment letter to MEPA that it will continue to supply the 0.35 MGD to Milford Power, but reaffirmed its right to restrict supply to the Company when it sees fit (Exh. MP-8(R) at 17). The MWC further stated that it is committed to expanding the capacity of the Godfrey Brook wellfield; however, due to the significant capital investment, the project may take three to four years to complete (<u>id.</u>).

The Company indicated that, based on a review of MWC's MassDEP WMA Permit and its Annual Statistical Reports, the Facility's municipal water needs are a small percent of the

¹² The CRWA Agreement stipulates that the Company will make Environmental Betterment Payments to different recipients, including the CRWA, in the form of a \$50,000 planning grant for development of a sub-watershed restoration plan and a \$150,000 fund for stormwater recharge projects in the Upper Charles River Watershed (Company Brief at 37, <u>citing</u> Exhs. EFSB-W-9; MP-11, at 2).

MWC's total water supply, and that the MWC should have sufficient capacity to meet the Facility's potable water needs (Exh. EFSB-W-3). The Company acknowledged that the MWC reserves the right to restrict its supply to the Facility, and stated that the Company would purchase potable water from other sources if the Facility's demand exceeded the amount that the MWC is able or willing to supply (<u>id.;</u> Tr. 1, at 49).

The Company states that use of groundwater would increase marginally after the Project Change because of the physical and regulatory limits on the wellfield (Tr. 1, at 83; Company Brief at 31, <u>citing</u> Exh. MP-10 at fig. 1-6, RR-EFSB-5(1) at 1). The Company noted that using groundwater minimizes overall water impacts by displacing a fraction of cooling water that otherwise would have been sourced from MWWTP effluent (Exh. EFSB-W-5).

The ENF Certificate requested that the Company investigate whether increased reliance on its groundwater wells may have less impact on Charles River flows than the use of other sources (Exh. MP-7, at 7). Siting Board staff investigated this topic during evidentiary hearings in this proceeding. According to the Company, the maximum production of a single well during a short-term pump test was approximately 100 gallons per minute ("gpm"), or 0.144 MGD, and pumping rates higher than 100 gpm tend to draw down the aquifer very quickly, and are not sustainable (Tr. 1, at 81-82). The Company stated that, when the plant is operating, the wellfield typically draws approximately 70 gpm, which is equivalent to the WMA permitting threshold of 0.100 MGD (<u>id.</u> at 33-34). The Company asserted that because the physical limit of the aquifer appears to be approximately equivalent to the WMA permitting thresholds, it is not economically practicable to pursue authorization for increased withdrawals (<u>id.</u> at 115-116). The Company stated that it would continue its efforts to reasonably maximize the use of groundwater within the existing physical and regulatory limits (Company Brief at 22).

The Company also reported it would be not be economically practical to use the on-site wellfield as an additional source of process water (RR-EFSB-1). Milford Power stated that water from on-site wells would require significantly more treatment than potable water from the MWC before it was suitable for use as process water, and would potentially require construction of new storage tanks, piping, pumps, and other water management equipment (<u>id.</u>). The Company asserted that the cost of developing a groundwater treatment system is not warranted given the relatively limited amount of groundwater available from the wellfield (<u>id.</u>).

Milford Power stated that trucked water would continue to be purchased when other sources are insufficient to meet Facility needs (Exh. MP-10, at 1-7, 1-15).¹³ The Company estimated that, after the Project Change, twelve hours of duct burner operation and 24 hours of wet compression at an average daily ambient temperature of 80°F could require 0.15 MGD of trucked process water, with no interruption of other water sources (Exhs. MP-8(R) at 37; MP-10 at fig. 1-6). The Company predicted that the total amount of trucked water required by the Facility after the Project Change would continue to be approximately four percent of total annual water needs (Exh. MP-10, at 1-15). As stated above, the Company estimated that the Project Change would require an incremental 50 MGY of water; thus, about 2.0 MGY (averaging about 0.01 MGD) of additional trucked water would be expected on average (<u>id.</u>).

The Company stated that, as currently configured, the detention pond captures all of the Facility stormwater runoff (Exh. EFSB-W-8). Milford Power asserted that it would be impractical and cost prohibitive to expand the Facility's detention pond capacity; the Company testified that constructing a new pond would entail additional environmental impacts, and that maintaining the quality of stored water would be technically challenging (Tr. 1, at 105). The Company committed to continuing to capture and reuse stormwater that collects in the detention pond using the current arrangement without change (Company Brief at 32). Further, the Company expressed a willingness to maximize the use of stored well water by pumping groundwater into the detention pond when there is sufficient capacity available in the pond, and when there is sufficient groundwater available without exceeding the WMA thresholds (Tr. 1, at 121-122; RR-EFSB-9).

The Company asserts that existing limits on the use of MWWTP effluent, municipal water, and the on-site wellfield would minimize potential impacts of the Project Change (Company Brief at 20). The Company maintains that impacts from the incremental use of MWWTP effluent would remain minimized by the 1.5 million MGD limit established by the Original Decision and the MWWTP Reclaimed Water Use permit as well as the requirement to cease diversion from the MWWTP when Charles River flow drops below 3.0 cfs at the Company's downstream stream gauge (id. at 20, 27).

¹³ The Company provided data showing considerable variability in the amount of trucked water purchased over the last five years, with a maximum of 6.9 million gallons delivered in 2016, and no trucked water delivered in 2013 (RR-EFSB-5(1)).

The Company asserts that impacts related to the purchase of potable water from the MWC would be minimized by the 0.35 MGD cap established by the CRWA Agreement, and MWC's ability to restrict water supply to the Facility (<u>id.</u> at 20-21). Although the use of groundwater was not part of the Siting Council's original evaluation of environmental impacts, the Company asserts that impacts related to the increased use of its on-site wellfield would be minimized by maintaining the total withdrawal within the state WMA permitting threshold of 0.100 MGD (<u>id.</u> at 21, 32).

The Company argues that potential impacts from using trucked water would be minimized because the Company has an economic incentive to limit its use (Company Brief at 22, <u>citing</u> Tr. 1, at 64-65). The Company emphasizes that after the Project Change, it would continue to prioritize the use of other water sources over trucked water and, furthermore, would require its vendors supply incremental trucked water from outside the Charles River basin (Company Brief at 22, <u>citing</u> Tr. 1, at 61; Exh. EFSB-P-2). The Company reiterates that it would continue to minimize water impacts by using its on-site water storage facilities to capture and reuse stormwater and optimize the use of its water resources, as contemplated in the Original Decision (Company Brief at 28, 32). Traffic impacts related to the use of trucked water are discussed in Section IV.A.2, below.

c. Impact of Increased Water Usage on Waterways

While the Project Change would not increase effluent diversion from the Charles River above the diversions described in the Original Decision, the Company anticipates a net increase in MWWTP effluent use would occur after the Project Change, potentially increasing the number of days where flow in the Charles River approaches the diversion threshold of 3.0 cfs (Exh. MP-10, at 3-16; Tr. 1, at 69-73). Accordingly, Milford Power provided an analysis of the potential impacts to the Charles River from construction and operation of the proposed Project Change (Exh. MP-10, at 2-1 to 3-17). The Company determined that the proposed increase in water use is unlikely to have any negative impacts on the Charles River (<u>id.</u> at 4-1). To reach this conclusion, the Company modeled the effect of the expected increase in MWWTP effluent diversion associated with the Project Change (<u>id.</u> at 2-2). The model utilized data collected at the Company's downstream stream gauge, historic Facility operations, and the corresponding MWWTP effluent diversions from the years 2009 to 2016 (<u>id.</u>). The Company stated that it used these data, the operating rules established by the Original Decision, and the limitations of the existing water management equipment to create a predicted-flow record for the same period under the conditions of the Project Change (<u>id.</u>; Tr. 1, at 69-73).

The Company stated that it used the actual and predicted flow records to model whether increased use of MWWTP effluent would result in a significant change to key flow parameters including: (1) median flows on a monthly basis; (2) minimum and maximum flows in any year; (3) dates of lowest and highest flow in any year; (4) and the number and duration of high and low pulses (Exh. MP-10, at 3-8 to 3-9).¹⁴ According to the Company, the model output demonstrated that the loss of water to the Charles River from the proposed Project Change would not have a measurable impact on flow parameters or, where a change is predicted, the change would be within the normal fluctuation of the river flow (<u>id.</u> at 3-8). The Company postulated that, based on model results and considering the biota of the Upper Charles River, it is highly unlikely that there would be any detectable change to river ecology resulting from the incremental diversion of MWWTP effluent (<u>id.</u> at 3-16).

2. <u>Traffic Impacts</u>

As discussed above, implementation of the Project Change is expected to result in an increase in the amount of water trucked to the Facility.¹⁵ According to the Company, the specific amount of trucked water will depend on a variety of factors, including the amount of process water supplied to the Facility by the MWC, and the availability of MWWTP effluent (Exhs. MP-10, at 1-15; EFSB-T-21; Tr. 1, at 99-101). Milford Power maintains that the Project Change minimizes traffic impacts – including potential impacts from trucked water deliveries – consistent with the Siting Board's standard of review (Company Brief at 56-57).

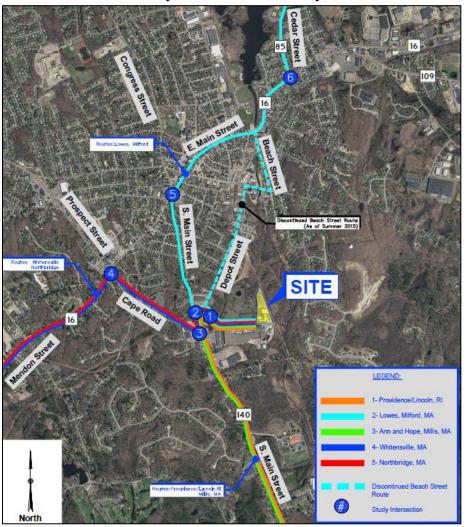
¹⁴ The Company established a low pulse threshold as the 25th percentile flow (7.7 cfs) and the high pulse threshold as the 75th percentile flow (25.5 cfs) (Exh. MP-10, at 3-9).

¹⁵ While the Original Decision contemplated the need for contingency measures (including purchases of additional potable water) when MWC and MWWTP water supplies were insufficient to meet Facility demand, the original petitioner did not specifically identify in its water supply plan the use of trucked water, and therefore did not perform an assessment of traffic impacts associated with trucked water deliveries to the Facility (Exh. EFSB-W-5). See Enron Power at 221-224, 226-227, 233.

Historically, for the years 2012 to 2016, an average of 3.7 MGY of trucked water (415 deliveries per year) was required to supplement the Facility's other water supply sources (Exh. EFSB-P-1(R)).¹⁶ On days when trucked water deliveries were needed, the Facility averaged about 22 deliveries (RR-EFSB-8). Peak trucked water deliveries occurred on September 6, 2014, when 67 truck deliveries provided a total of 603,000 gallons of water to the Facility (Exh. EFSB-P-1(R)). An additional 101 truck deliveries were made over the remainder of that month – on September 5, 7, and 8, specifically (Exh. EFSB-T-5). The Company reported that trucked water deliveries typically occurred during daylight hours, and not earlier than 7:00 a.m. and not later than 9:00 p.m. (Exhs. EFSB-P-1; EFSB-P-2).

Trucked water for the Facility is sourced from among six locations in Massachusetts and Rhode Island (Exhs. EFSB-P-1; EFSB-P-2). The delivery routes used by the Company are shown in Figure 1, below (Exhs. EFSB-P-1; EFSB-P-2). Milford Power described the delivery routes as arterial roadways that are designed specifically for carrying commercial traffic, with the exception of the Beach Street route, which the Company ceased using in 2015 (Exhs. EFSB-P-1; EFSB-P-2; Tr. 1, at 157-158, 185-186).

¹⁶ No trucked water deliveries were required in 2017, nor have any been required through June 2018 (Exh. EFSB-P-1(R); Tr. 1, at 153).





Source: Exh. EFSB-P-1(1).

To assess the potential traffic impacts from trucked water deliveries to the Facility post-Project Change, the Company analyzed two high-water-demand scenarios: (1) where all of the incremental water use associated with the Project Change on an 80°F day (614,700 gpd) would be supplied by truck; and (2) where 100 percent of the water demand associated with the existing Facility and the Project Change on an 80°F day (2.02 MGD) would be supplied by truck (Exh. EFSB-P-3(1) at 14).¹⁷ Under these conditions, approximately 69 and 226 daily truck

¹⁷ An 80°F day is defined by Milford Power as a 24-hour period in which the average air temperature at the air inlet is 80°F, which the Company characterized as a "pretty

deliveries would be required, respectively (Exh. EFSB-P-3(1) at 20).^{18,19} The Company maintains that it does not expect trucked water deliveries to be needed at these volumes, except under unusual circumstances (Tr. 1, at 182; Company Brief at 61). Milford Power also asserts that if, consistent with current operations, the Facility continues to meet about four percent of its total water needs with trucked water, less than one truck delivery per day would be required on an average annual basis (Exh. MP-10, at 1-15).

Milford Power analyzed the effect of the 614,700 gpd and 2.02 MGD scenarios on the level-of-service ("LOS")²⁰ at seven nearby intersections; the Company evaluated LOS for weekday morning and evening peak traffic hours and the Saturday midday peak traffic hour (Exh. EFSB-P-3(1) at 27-29). According to the Company, even under the most conservative water delivery scenario (2.02 MGD), water delivery traffic would result in inconsequential changes to intersection operations compared to baseline conditions: the LOS at all study intersections would remain at a level "D" or better, and for any individual intersection approach the worst-case increase in delay time would be a maximum of eight seconds (<u>id.</u> at 27-30). The Company further indicated that any traffic increases resulting from trucked water deliveries would be within the normal day-to-day variability of commercial truck activity, and would have a very limited impact to adjacent properties (Tr. 1, at 182-183).

With respect to construction traffic, the Company indicated that impacts would be minimal and limited in duration (Exh. MP-1, at 16). The Company anticipated that Project

extreme case" that was likely to occur less than one percent of the hours in the year (Tr. 1, at 98-101).

¹⁸ Sixty-nine water truck deliveries would necessitate a total of 138 truck trips to and from the Facility (Exh. EFSB-P-3(1) at 20). Similarly, 226 water truck deliveries would necessitate 452 truck trips (<u>id.</u>).

¹⁹ Milford Power stated that any trucked water necessary to meet incremental needs of the Project Change would be sourced from outside of the Charles River watershed, in effect limiting incremental truck traffic impacts to roads shown as routes 1, 4, and 5 in Figure 1, above (Exhs. MP-10, at 1-15; EFSB-P-3(1) at 105; Tr. 1, at 159-161).

²⁰ LOS is a measure of operating conditions based on several factors including roadway geometry, speeds, ambient traffic volumes, traffic controls, and driver characteristics (Exh. EFSB-P-3(1) at 17). Levels of service are reported on a scale of A to F, with "A" representing the best operating conditions and "F" representing the worst (<u>id.</u>).

Change equipment installation would take approximately one month, during which time the on-site work force would typically be about 30 individuals, with a peak work force of up to 50 individuals (Exh. EFSB-A-5; Tr. 1, at 132-133). The Company commits to coordinating with the Town of Milford to address any traffic concerns (Company Brief at 60). The Company reiterated that all delivery traffic to and from the Facility is banned from traveling on Beach Street (Tr. 1, at 187).

3. <u>Air Impacts</u>

In the Original Decision, the Siting Council found that potential air quality impacts from the Facility, including NO_X , CO, PM, VOC, and SO_2 emissions, would be acceptable. <u>See</u> <u>Enron Power</u> at 189-191, 193. The Company maintains that air impacts from the Project Change have been minimized and are consistent with those approved in the Original Decision (Company Brief at 39).

Following the Project Change, the Facility would emit air pollutants from both the CTG and the proposed duct burner when operating (Exh. MP-5, at 2-3). The Company stated that, generally, air emissions from power plant operations are lower when firing cleaner fuels like natural gas (which the Facility uses exclusively), and that post-combustion controls can be used to help manage emissions (id.). As part of the Project Change, the Company proposes to upgrade the Facility's existing pollution control equipment (Exh. MP-1, at 14). The Facility's current SCR catalyst, which is designed to control NO_X emissions only, would be replaced with a combined SCR/CO catalyst, which would control NO_X, CO, and VOCs (id. at 2-4). Milford Power stated that, because the upgraded pollution control equipment would operate whenever the Facility generates electricity (regardless of whether or not the duct burner and/or wet compression technologies are operating), the Project Change would result in a significant reduction in emissions of NO_X, CO, VOC, and ammonia (id. at 14; Company Brief at 39).²¹

²¹ The Company expects that the ammonia injection grid currently installed for emissions control is adequate to support the pollution control equipment upgrades while simultaneously minimizing ammonia slip (Exhs. MP-5; at 4-3; EFSB-A-1; Tr. 2, at 270-271). However, because retrofit applications pose some uncertainties relative to new construction, such that steady state limits of 2.0 ppm may not be reached for NO_X and ammonia immediately, Milford Power has proposed imposition of interim limits of 3 ppm and 5 ppm, respectively, for the first year of facility operations, applicable

Increased fuel combustion would result in an increase in PM, SO₂, and greenhouse gas ("GHG") emissions from the Facility; however, the Company asserted that operation of the Facility post-Project Change would displace operations at higher-emitting generators elsewhere in New England (Tr. 1, at 211-213; Tr. 2, at 232-239; RR-EFSB-10). Table 1, below, compares the Facility's existing permitted air emissions to those proposed for facility operation following completion of the Project Change.

Pollutant	Existing Permit	Proposed Permit
NO _X	190.0	49.4
СО	241.0	30.0
SO ₂	9.0	9.5
VOC	53.0	47.6
PM ²²	18.0	69.6
Ammonia	80.0	18.0
CO ₂ e	N/A	780,800

 Table 1. Existing and Proposed Facility Emission Permit Limits (tons per year)

Sources: EFSB-G-1(1) at 19; RR-EFSB-10.

With regard to GHG emissions, Milford Power stated that the Project Change would be subject to a number of regulatory structures designed to ensure the continued control and minimization of GHG emissions, including: (1) a review of Facility-specific carbon dioxide emissions by MassDEP; (2) the Regional Greenhouse Gas Initiative ("RGGI") (which imposes caps on GHG emissions from electricity generating sources in the northeast, including the Facility); and (3) Massachusetts regulations promulgated under the Global Warming Solutions Act ("GWSA"), including 3.10 CMR 7.74 (which impose statewide caps on emissions from electric generating units, including the Facility) (Exh. MP-1, at 16). Milford Power asserts that

following construction and testing of the Project Change (Exhs. MP-5, at 4-3; EFSB-A-1; Tr. 2, at 270-280).

²² Milford Power stated that the apparent increase in PM emissions shown in Table 1 is overstated because the proposed new limits include both filterable and condensable PM, whereas condensable PM was not included in the existing permit level for PM (Exh. EFSB-G-1(1) at 7-8; Tr. 1, at 212-213).

GHG impacts from the Project Change would also be minimized by limiting the number of hours the duct burner is permitted to operate, and through the addition of the wet compression technology to increase Facility efficiency (Exh. MP-5, at 1-1).

As the proponent of a modification to a fuel utilization emissions unit with a maximum energy input of more than 40 MMBtu per hour of natural gas, Milford Power was required to submit a Non-Major Air Plan Application to MassDEP for the proposed Project Change (<u>id.</u> at 1-6; EFSB-G-1(R)). The Company's Air Plan Application was submitted in October 2017 and approved by MassDEP on July 13, 2018 (Exhs. MP-5; EFSB-G-1(R)). MassDEP reviewed and approved the Project Change's compliance with air pollution control regulations (including the National Ambient Air Quality Standards, Significant Impact Levels,²³ Massachusetts Threshold Effects Limits, Ambient Air Limits, and New Source Performance Standards) and current air pollution control engineering practice (Exh. EFSB-G-1(1) at 1, 8-13).²⁴ MassDEP found that the Project Change represents best available control technology ("BACT") for NO_X, CO, PM, VOC, sulfur oxides, and ammonia (<u>id.</u> at 13). Furthermore, compliance with BACT policy, and measures proposed to minimize GHG emissions from the Facility were also discussed in the ENF Certificate issued for the Project Change on January 5, 2018 (Exh. MP-7, at 5).

²⁴ The Non-Major Air Plan approval notes that if during initial testing the Company cannot meet the NO_x and ammonia levels discussed above, the Company must notify MassDEP within five days of the finding and submit a written request to temporarily use the "first year" emissions of 3 ppm and 5 ppm, respectively (Exh. EFSB-G-1(1) at 32).

²³ The Company conducted cumulative air impact modeling for 24-hour PM_{2.5} and one-hour nitrogen dioxide (both "criteria" pollutants) because Facility-specific emissions of these pollutants were modeled as exceeding the respective Significant Impact Levels (Exh. MP-5, app. D, at 5-4). The cumulative air modeling showed that, with the Project Change, the maximum impacts from the Facility would be a fraction of background concentrations at MassDEP's closest air monitoring station, which is in Worcester, Massachusetts. The modeling also demonstrated that, in combination with other existing sources in the area, and inclusive of the Project Change, the Facility would not result in an exceedance of state and federal air standards for criteria pollutants (id., app. D, at 5-4, 5-10). The cumulative air impact modeling also evaluated air toxics in the form of trace organics, which were all shown to be small fractions of the Ambient Air Limits (AALs) and Threshold Effect Exposure Limits (TELs) established by MassDEP (Exh. MP-5, app. D, at 5-4; Exh. EFSB-G-1(1) at 9-10). Thus, the Company contends that both criteria air pollutants and non-criteria air toxics emissions associated with the Project Change have been minimized (id.).

Finally, with regard to construction-related air impacts, the Company stated that all diesel-powered, non-road construction equipment rated 50 horsepower or above to be used

during construction of the Project Change would be certified to USEPA Tier 4 standards or have USEPA-verified (or equivalent) emission control devices installed (Exh. EFSB-A-5).²⁵

4. <u>Noise Impacts</u>

In the Original Decision, the Siting Council assessed potential noise impacts from both construction and operation of the Facility, and found that the Facility would have an acceptable impact on community noise levels. <u>See Enron Power</u> at 205. The Company maintains that construction-related noise impacts from the Project Change would be significantly less than from construction of the original Facility, and also that the Project Change is not expected to create any perceptible increases in operational noise (Company Brief at 53). As such, the Company argues that the conclusions reached in the Original Decision with respect to noise are unaffected by the Project Change (<u>id.</u> at 54).

Milford Power stated that it would like to begin construction of the Project Change in January/February 2019 (Exh. EFSB-NO-1; Tr. 1, at 198). Initial construction activities would take place during normal operating hours (7:00 a.m. to 4:00 p.m., Monday through Friday), and would include installation of the burner management system on a concrete foundation, and completion of cable runs, piping, and terminal connections (Exh. EFSB-NO-1; Tr. 1, at 198). The majority of this work would be performed inside a sound-attenuated building (Exh. EFSB-NO-1; Tr. 1, at 198). According to the Company, in addition to equipment and material deliveries, the only significant noise emitting equipment to be used during construction of the Project Change would be a crane or man lift (Exh. EFSB-NO-2).²⁶

The Company has an ISO-NE approved outage for the Facility scheduled for March 17 to April 27, 2019, during which time, among other things, the existing STG would be disassembled

²⁵ The Company stated that it would only allow contractors to make an exception to this requirement if no other alternative is available that would meet construction schedule constraints (Exh. EFSB-A-5).

²⁶ Milford Power stated that there would be some other sporadic noise producing activities, but that these construction activities would typically be less noisy than a crane (Exh. EFSB-NO-2).

and upgraded, and the burner system and the new SCR/CO catalyst would be installed inside the HRSG (Tr. 1, at 198-199). The Company proposed 24-hour construction, seven-days-per-week, for approximately the first week of the scheduled outage while the STG is disassembled and inspected, followed by 12-hour shifts, seven-days-per-week until the end of the outage window (<u>id.</u> at 198-201; Exh. EFSB-NO-1).²⁷ The Company stated that none of the construction activities performed during the scheduled outage would be noticeable from outside of the Facility,²⁸ and that contactors would be instructed to use best efforts to minimize construction-related noise during early morning and evening hours (Exh. EFSB-NO-1; Tr. 1, at 200-201).

Overall, the Company stated that construction-related noise would be minimized: (1) due to the short duration of the construction window and the moderate level of construction activity necessary; and (2) through the use of equipment with appropriate exhaust mufflers, and scheduling the noisiest construction activities for daytime hours (to the extent feasible) (Exhs. EFSB-NO-1; EFSB-NO-3).

With respect to operational noise, Milford Power anticipates that the Project Change would not perceptibly increase noise from the Facility (Exh. MP-5, at 3-15).²⁹ Based on the increase in power output from the STG, the Company calculated an increase of 1.2 A-weighted decibels ("dBA") within the STG building (<u>id.</u>). Because noise from the STG was calculated to be at least 10 dBA lower than other original Facility sources, the Company stated that the 1.2 dBA increase inside the STG building would not create any increase in total offsite noise

²⁷ Milford Power stated that the 12-hour shifts would run from either 6:00 a.m. to 6:00 p.m. or from 7:00 a.m. to 7:00 p.m. (Exh. EFSB-NO-1; Tr. 1, at 198-201).

²⁸ The closest residential areas to the proposed construction site are approximately 1,000 feet away, with forested land between the Facility and residences (Exhs. MP-3, att. 2; EFSB-MF-1(1)).

²⁹ The Company stated that the water injection equipment proposed for installation requires relatively small pumps and that the pumps would be located within acoustically treated buildings (Exh. MP-5, at 3-15). Noise levels from the CTG would not increase (<u>id.</u>). The Company does not expect the gas supply to be a significant source of noise, and stated that duct burner operation will not increase the level of noise from the HRSG, and that cooling tower noise at full load will not increase (<u>id.</u>).

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(<u>id.</u>). The Company stated that it has a noise complaint response protocol in place for the existing Facility, and this protocol would be maintained going forward (Tr. 1, at 206).

5. <u>Analysis and Findings</u>

a. <u>Water Resources Impacts</u>

The record shows that the addition of wet compression and duct burner technologies would increase the Facility's total potential water use by approximately 50 MGY (0.14 MGD) over the current potential maximum use of 439 MGY. The incremental water demand would be met by the Company's existing sources, which include treated effluent from the MWWTP, potable water from the MWC, groundwater from an on-site wellfield, trucked water from sources outside of the Charles River basin, and an on-site detention pond.

The total annual amount of MWWTP effluent use would increase after the Project Change. However, the limitations established by the Original Decision and the Facility's existing permits would remain; that is, the maximum amount of MWWTP effluent authorized for the Facility would continue to be 1.5 MGD and the Facility would continue to cease diversion if flow in the Charles River drops below 3.0 cfs, measured at the Company's downstream stream gauge. In the Original Decision, the Siting Council found that these limitations were enough to prevent any detectable change to river ecology. The Siting Board concludes that by maintaining these limits, the incremental demand for MWWTP effluent associated with the Project Change remains unlikely to result in a detectable change to river ecology. Further, the Company has signed an agreement with CRWA that incorporates a number of terms to mitigate potential water impacts to the Charles River watershed. The Siting Board concludes that potential impacts to the Charles River resulting from the Project Change are consistent with the Original Decision, and have been minimized.

The record shows that municipal water purchased from the MWC will continue to be the Company's primary source of process water. The Company committed to a purchase limit of no more than 0.35 MGD, to be computed based on the number of days the Facility generates electricity in each quarter, in accordance with the terms of an informal agreement with the MWC and the CRWA Agreement. Although the record shows there is some uncertainty about the MWC ability to continue supplying 0.35 MGD to the Facility until water supply improvements are completed at the Godfrey Brook wellfield, the Company is prepared to purchase potable

water from other sources if the Facility's demand exceeds the amount that MWC is able or willing to supply.

Although the on-site wells installed in 2002 were not evaluated in the Original Decision, the Siting Board finds that environmental impacts from the use of the groundwater wells are minimal. A thorough hydrogeological investigation conducted in 2002 found that: (1) the bedrock aquifer is hydraulically isolated from the Charles River and overburden aquifer utilized by the nearby MWC wells; (2) the bedrock aquifer likely recharges over a broad geographic area; and (3) the practical yield of the aquifer is approximately equivalent to the permitting threshold of the WMA. The Siting Board notes that the on-site wellfield is beneficial because it increases the efficiency of the Facility's cooling system and it displaces a fraction of cooling water that otherwise would be diverted from the Charles River. In an effort to maximize the benefits of the on-site wellfield, the Company stated that it would pump well water into the detention pond when there is sufficient capacity in the pond, and when there is sufficient groundwater available without exceeding any WMA thresholds. The Company's compliance with WMA regulations minimizes the environmental impacts related to this source of water resource.

During periods of curtailment from the MWWTP or MWC, and during certain instances when the Facility's water demand is exceptionally high, the Company will continue to purchase trucked water. The Company will minimize the use of trucked water by continuing to prioritize the use of other available water sources ahead of trucked water use. The Siting Board notes that Company has an economic incentive to minimize trucked water purchases when other sources are available. The Siting Board finds that that water use impacts of the Project Change have been minimized.

b. <u>Traffic Impacts</u>

The record shows that construction-related traffic from the Project Change would be limited in volume and duration. While the Company committed to prohibiting all delivery traffic on Beach Street, the Siting Board also directs the Company to prohibit construction-vehicle traffic on Beach Street.

Ongoing operation of the Project Change, however, would result in an increase in the amount of trucked water necessary to meet Facility demand, and would result in a corresponding

increase in the amount of truck traffic traveling to and from the Facility. The record contains an evaluation of potential traffic impacts from trucked water deliveries under to two conservative, high-water-demand scenarios: (1) where all of the incremental water use associated with the Project Change on an 80°F day (614,700 gpd) would be supplied by truck; and (2) where 100 percent of the water demand associated with the existing Facility and the Project Change on an 80°F day (2.02 MGD) would be supplied by truck. Under these worst case assumptions, up to a maximum of 452 truck trips per day would be required. The record shows that this additional truck traffic would be within the normal day-to-day variability of truck traffic on the arterial roads used for water deliveries, and would not have a significant impact on the LOS of any area intersection. Furthermore, the record shows that this maximum traffic increase is likely to occur only rarely.

Within five years of the completion and initial operation of the Project Change, should trucked water deliveries to the Facility exceed 90 percent of the 2.02 MGD level evaluated for traffic impacts (<u>i.e.</u>, exceed 1.82 million gallons on any one day) on five or more days in a calendar year, the Company shall submit to the Siting Board an annual report by March 1 of the following year. The report shall detail the number of days that 1.82 million gallons of water or more was trucked to the Facility, the volume of truck traffic entering and exiting the Facility on an hourly basis for each day, and any traffic complaints the Company received. After five years, the Company shall consult with the Siting Board to determine whether the Board will require continued reporting, as it deems appropriate. The Siting Board finds that, with implementation of the above conditions, the traffic impacts of the Project Change would be minimized.

c. Air Impacts

In and of themselves, implementation of the proposed duct burner and wet compression technologies would allow more fuel to be combusted at the Facility, and all else equal, additional combustion would increase air pollutant emissions. However, the Company proposes to minimize air quality impacts from the Project Change by: (1) replacing the Facility's existing pollution control equipment (which addresses only NO_X emissions) with a dual-function catalyst that would further reduce NO_X, CO, and VOC emissions; and (2) limiting the number of hours the duct burner is permitted to operate to a heat rate equivalent of 2,000 hours per year. With these measures in place, maximum potential emissions of NO_X, CO, VOC, and ammonia from

the Facility would actually decline with the Project Change. While maximum potential SO₂, PM, and GHG emissions from the Facility would increase compared to existing levels,³⁰ the Company would minimize these impacts by using natural gas as the sole fuel source at the Facility, participating in RGGI, and complying with Massachusetts regulations promulgated under the GWSA, including 3.10 CMR 7.74. The Project Change would also improve the efficiency of the Existing Facility, with the wet compression technology increasing the electrical output of the plant by ten percent for an 8.5 percent increase in heat input. Furthermore, the Siting Board accepts the Company's assertion that, post-Project Change, the Facility is likely to displace operations at higher-emitting generators elsewhere in New England.

The record shows that MassDEP has approved the Company's Air Plan Application, finding that the Project Change complies with air pollution control regulations – including the National Ambient Air Quality Standards, Significant Impact Levels, Massachusetts Threshold Effects Limits, Ambient Air Limits, and New Source Performance Standards – and that the Project Change is consistent with current air pollution control engineering practice. In its approval, MassDEP found that the Project Change represents BACT for NO_X, CO, ammonia, PM, VOC, and sulfur oxides.

Construction-related air impacts from the Project Change would be minimized through the Company's stated commitment to ensure all diesel-powered, non-road construction equipment rated 50 horsepower or above to be used during construction would be certified to USEPA Tier 4 standards or have USEPA-verified (or equivalent) emission control devices installed, regardless of the duration of use. However, the Company has also identified an exemption from this requirement relating to construction schedule constraints that could affect the minimization of construction-related air impacts. The Siting Board therefore directs that all diesel-powered non-road construction equipment with engine horsepower ratings of 50 and

³⁰ The Company argues that the Siting Board should not apply the Technology Performance Standards ("TPS") analysis from Section $69J^{1}/_{4}$ to the Project Change because: (1) the Project Change in not a "generating facility" under G.L. c. 164, § 69G; and (2) it is not appropriate to apply TPS retroactively (Company Brief at 16-18). Nevertheless, the Company did provide some analysis of alternative technologies (see Company Brief at 50-52). The Siting Board concurs that, given the particular circumstances of the Project Change, importantly its sub-jurisdictional size of 53 MW, it would not be appropriate to apply TPS to the Project Change.

above that are to be used for 30 or more days over the course of Project construction have USEPA-verified (or equivalent) emission control devices, such as oxidation catalysts or other comparable technologies (to the extent that they are commercially available) installed on the exhaust system side of the diesel combustion engine. Therefore, with the implementation of the above condition, the Siting Board finds that air impacts of the proposed Project Change have been minimized.

d. Noise Impacts

Milford Power proposes to begin construction of the Project Change in January/February 2019, with work to be performed between the hours of 7:00 a.m. and 4:00 p.m., Monday through Friday, which the Company characterized as the Facility's normal operating hours. The record shows that initial construction activities would include installation of the burner management system on a concrete foundation, and completion of cable runs, piping, and terminal connections. The majority of this work would take place inside a sound-attenuated building.

Work on the most significant aspects of the Project Change would take place during an approximately one-month-long scheduled outage at the Facility. During this time the existing STG would be disassembled and upgraded, and the burner system and the new dual-function catalyst would be installed inside the HRSG. The Company proposes 24-hour construction, seven-days-per-week, for approximately the first week of the scheduled outage, followed by 12-hour shifts, beginning at 6:00 a.m. or 7:00 a.m., seven-days-per-week, thereafter. While this is an aggressive construction schedule, the record shows that work would take place over a limited period of time (March 17 to April 27, 2019), and that none of the construction activities proposed would be noticeable from residential areas. Furthermore, construction-related noise impacts would be minimized through the Company's commitment to use construction equipment with appropriate exhaust mufflers, and to schedule the nosiest construction activities for daytime hours, to the extent feasible.

Finally, the record shows that operation of the Project Change is not expected to result in any perceptible increase in noise levels outside of the Facility, and that the Company would maintain its existing noise complaint response protocol following construction of the Project Change. Therefore, the Siting Board finds that noise impacts from the Project Change have been minimized.

e. <u>Summary of Project Change Environmental Impacts</u>

As described above, the Siting Board has found that water impacts, air impacts, traffic impacts, and noise impacts from the Project Change have been minimized. The Siting Board finds therefore that the environmental impacts of the Project Change have been minimized.

B. <u>Consistency with the Policies of the Commonwealth</u>

In the Original Decision, the Siting Council assessed the Facility's compliance with the broad resource use and development policies of the Commonwealth, and found that the proposed project approach would be consistent. <u>See Enron Power</u> at 79-83. In accordance with the Original Decision, the Company argues that the proposed Project Change would be consistent with the Commonwealth's current health and environmental protection policies, including the Restructuring Act, the GWSA, and the Massachusetts Executive Office of Environmental Affairs' Environmental Justice ("EJ") Policy, and with such energy policies as adopted by the Commonwealth for the specific purpose of guiding the decisions of the Siting Board (Company Brief at 62).

1. <u>Health Policies</u>

The Legislature declared in Section 1 of the Electric Utility Restructuring Act of 1997, that electric service is of the "utmost importance to the safety, health and welfare of the Commonwealth's citizens." <u>See</u> St. 1997, c. 164. The Company states that the Project Change would be designed, constructed, and operated in accordance with applicable governmental and industry standards, and will not create adverse health effects to workers or the surrounding community (Company Brief at 63-64, <u>citing</u> Exh. EFSB-G-7). Milford Power further states that during construction and operation of the Project Change, the Company would handle, store, and dispose of hazardous waste in compliance with all applicable federal, state, and local regulations (Company Brief at 64, <u>citing</u> Exh. EFSB-G-7).

As discussed in Section IV.A.3, above, the air impacts that would result from the Project Change have been minimized. The Company anticipates that the total concentration of all criterial air pollutants would be below the National Ambient Air Quality Standards, that air toxics in the form of trace organics would be a small fraction of the Ambient Air Limits and Threshold Effect Exposure Limits established by MassDEP, and that the Project Change would reduce ground level impacts from nitrogen dioxide and CO (Company Brief at 63, <u>citing</u> Exh. MP-5, app. D, at 5-3, 5-11, Table 14).

2. <u>Environmental Protection Policies</u>

Milford Power argues that the Project Change, as proposed, is designed to meet all applicable environmental laws and regulations (Company Brief at 64). According to the Company, the analysis and modeling of operations after the Project Change demonstrate that the proposed upgrades would achieve an appropriate balance of environmental impacts, and that the incremental environmental impacts of the Project Change would be minimized in accordance with best engineering practices (<u>id.</u>). The Company further notes that a major component of the Project Change would be to install a new air pollution control system that meets modern-day BACT standards (id., citing Exhs. EFSB-G-1(1) at 13-14, MP-2, at 7).

The Restructuring Act requires that a project's design must minimize environmental impacts while also minimizing the cost of mitigation, control, and reduction of environmental impacts. St. 1997, c. 164, § 210. The Company states that the Project Change is consistent with the Restructuring Act's policy of minimizing environmental impacts and minimizing cost (Company Brief at 65). As discussed above, Milford Power would take specific steps to mitigate incremental environmental impacts related to the Project Change. For example, the Project Change would upgrade air control technology to minimize air impacts, and the Company has committed to making environmental betterment payments to mitigate potential impacts from increased water use (id., citing Exhs. EFSB-G-4, MP-11, at 2-3).

The GWSA, enacted in August 2008, is a statutory framework designed to address climate change in Massachusetts. Specifically, the GWSA mandates that the Commonwealth reduce its GHG emissions by 10 to 25 percent below 1990 levels by 2020, and by at least 80 percent below 1990 levels by 2050. G.L. c. 21N, § 3(b). In accordance with GWSA regulations, 310 C.M.R. 7.74 – Reducing Greenhouse Gas Emissions from Electricity Generating Stations, the Company states that the Project Change would provide ISO-NE greater flexibility to incorporate and manage intermittent renewable resources (Company Brief at 65-66, <u>citing</u> Exh. MP-2, at 26). The Facility as modified by the Project Change would also be subject to RGGI. Milford Power states that the Project Change would help the Company maintain

compliance with the GWSA and RGGI by maximizing energy efficiency onsite through technology such as wet compression (Company Brief at 66, <u>citing Exh. MP-2</u>, at 26).

The Company argues that the proposed Project Change does not trigger enhanced public participation or analysis of impacts and mitigation under the Environmental Justice Policy of the Executive Office of Energy and Environmental Affairs, issued on January 31, 2017. The Company asserts that the Project Change complies with the EJ Policy because no EJ Policy thresholds were triggered, and because the Project has been designed to minimize environmental impacts (Company Brief at 68). Furthermore, as discussed above, the Company has complied with all notification, publication, translation, and interpretation requirements imposed by the Siting Board.

3. <u>Energy Policies</u>

Through construction and operation of the Project Change, the Company proposes to add 53 MW of electrical generating capacity to the Facility (Company Brief at 3, 63). According to the Company, this additional capacity is needed to help meet the demand for electricity in the ISO-NE Southeast New England capacity zone (<u>id.</u>). Milford Power states that the proposed capacity increase was selected by ISO-NE as a necessary component of ensuring a reliable electricity supply to the region's electrical grid, and is the minimum size necessary to meet the Facility's 2020 forward capacity auction obligation (<u>id.</u>, <u>citing</u> Exh. MP-1, at 3). Furthermore, Milford Power indicates that the Project Change would enable the growth of renewable energy in Massachusetts by providing back-up for intermittent renewable energy resources such as solar and wind (Company Brief at 3, 63). The Company argues that, consistent with the Commonwealth's policies, the Project Change is an efficient means of providing additional electrical reliability without the construction of a new facility and all of the associated environmental impacts new construction entails (<u>id.</u>).

4. <u>Conclusion on Consistency with the Policies of the Commonwealth</u>

The record shows that the Company has designed the Project Change to maintain compliance with its regulatory and legal obligations. Based on evaluation of the Company's proposed modifications, the Siting Board finds that, upon compliance by the Company with the conditions in this Decision, the Project Change is consistent with the current health, environmental protection, and energy policies as adopted by the Commonwealth.

V. <u>DECISION</u>

Based on the Original Decision and the record of this project change proceeding, the Siting Board finds that upon compliance by the Company with conditions in this Decision, the Company's plans for implementation of the Project Change would contribute to a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. G.L. c. 164, § 69H. The Siting Board approves the proposed changes, <u>i.e.</u>, the addition of wet compression technology to the combustion gas turbine; the addition of a nominal 500 MMBtu/hr (HHV) natural gas fired duct burner; the proposed steam turbine upgrade; and the proposed facility-wide dual-function catalyst upgrade as set forth in the NOPC and supported by the record in this case, subject to the following conditions.

- A. The Siting Board directs the Company to prohibit construction-vehicle traffic on Beach Street.
- B. Within five years of the completion and initial operation of the Project Change, should trucked water deliveries to the Facility exceed 90 percent of the 2.02 MGD level evaluated for traffic impacts (<u>i.e.</u>, exceed 1.82 million gallons on any one day) on five or more days in a calendar year, the Company shall submit to the Siting Board an annual report by March 1 of the following year. The report shall detail the number of days that 1.82 million gallons of water or more was trucked to the Facility, the volume of truck traffic entering and exiting the Facility on an hourly basis for each day, and any traffic complaints the Company received. After five years, the Company shall consult with the Siting Board to determine whether the Board will require continued reporting, as it deems appropriate.
- C. The Siting Board directs that all diesel-powered non road construction equipment with engine horsepower ratings of 50 and above that are to be used for 30 or more days over the course of Project construction have USEPA-verified (or equivalent) emission control devices, such as oxidation catalysts or other comparable technologies (to the extent that they are

commercially available) installed on the exhaust system side of the diesel combustion engine.

Because issues addressed in this Decision relative to this facility are subject to change over time, construction of the project must be commenced within three years of the date of this Decision.

In addition, the Siting Board notes that the findings in this Decision are based upon the record in the Original Proceeding and the record in this case. The Company and its successors in interest have an absolute obligation to construct and operate the Project Change in conformance with all aspects of the Project Change as presented to the Siting Board. Therefore, the Siting Board requires the Company and its successors in interest to notify the Siting Board of any changes other than minor variations to the Project Change so that the Siting Board may decide whether to inquire further into a particular issue. The Company and its successors in interest are obligated to provide the Siting Board with sufficient information on any modifications to the proposed Project Change in order to enable the Siting Board to make these determinations.

Robert). Shea

Robert J. Shea Presiding Officer

Dated this 1st day of October, 2018

EFSB 17-04

APPROVED by a vote of the Energy Facilities Siting Board at its meeting on October 1, 2018, by the members present and voting. Voting for the Tentative Decision as amended: Patrick Woodcock, Assistant Secretary of Energy, Executive Office of Energy and Environmental Affairs, Acting Chairman of the Siting Board; Angela M. O'Connor, Chairman of the Department of Public Utilities; Cecile M. Fraser, Commissioner of the Department of Public Utilities; Judith Judson, Commissioner of the Department of Energy Resources; Jonathan Cosco, Senior Deputy General Counsel and designee for the Secretary of the Executive Office of Housing and Economic Development; Gary Moran, Deputy Commissioner and designee for the Commissioner of Massachusetts Department of Environmental Protection; and Glenn Harkness, Public Member.

Patrick Woodcock, Acting Chairman Energy Facilities Siting Board

Dated this 1st day of October, 2018

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Appendix A – Parties to Enron Power Enterprise Corporation, EFSC 90-101 (1991)

Appeal as to matters of law from any final decision, order or ruling of the Siting Board may be taken to the Supreme Judicial Court by an aggrieved party in interest by the filing of a written petition praying that the order of the Siting Board be modified or set aside in whole or in part. Such petition for appeal shall be filed with the Siting Board within twenty days after the date of service of the decision, order or ruling of the Siting Board, or within such further time as the Siting Board may allow upon request filed prior to the expiration of the twenty days after the date of service of said decision, order or ruling. Within ten days after such petition has been filed, the appealing party shall enter the appeal in the Supreme Judicial Court sitting in Suffolk County by filing a copy thereof with the clerk of said court. Massachusetts General Laws, Chapter 25, Sec. 5; Chapter 164, Sec. 69P.