

Decisions and Orders

Massachusetts Energy Facilities Siting Board

VOLUME 17

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COMMONWEALTH OF MASSACHUSETTS
Energy Facilities Siting Board

Petition of Russell Biomass, LLC. and
Western Massachusetts Electric Company

EFSB 07-4/D.P.U. 07-35/07-36

FINAL DECISION

Stephen H. August
Presiding Officer
April 21, 2009

On the Decision:
William Febiger
Enid Kumin
John Young

ABBREVIATIONS

alternative route underground design	underground construction in Russell Village and along U.S. Route 20
Companies	Russell Biomass, LLC and Western Massachusetts Electric Company
CSX Route	Route Alternative 3, along the CSX railroad line
Department	Department of Public Utilities
kV	kilovolt
kV/m	kilovolts per meter
MADEP	Massachusetts Department of Environmental Protection
MADFW	Massachusetts Division of Fish and Wildlife
MEPA	Massachusetts Environmental Policy Act
mG	milligauss
MHC	Massachusetts Historical Commission
MHD	Massachusetts Highway Department
Montgomery underground design	underground construction of the portion of the route in Montgomery
MW	megawatt
NHESP	Massachusetts Natural Heritage and Endangered Species Program
Northern Approach	Connection at 115 kV to existing WMECo substation in Blandford
Petitioners	Russell Biomass, LLC and Western Massachusetts Electric Company
primary route underground design	underground construction of the entire 5.3 miles of primary route
Project	5.3-mile transmission line plus switching station
ROW	right-of-way
Russell Biomass	Russell Biomass, LLC
Siting Board	Energy Facilities Siting Board
Southern Approach	Connection at 115 kV to WMECo's #1512 line in Westfield
WMECo	Western Massachusetts Electric Company
<u>Berkshire Gas Decision</u>	<u>Berkshire Gas Company, 25 DOMSC 1 (1992)</u>
<u>Berkshire Power</u>	<u>Berkshire Power Development, Inc., D.P.U. 96-104 (1997)</u>
<u>Boston Gas</u>	<u>Boston Gas Company, D.T.E. 00-24 (2001).</u>

<u>Braintree</u>	<u>Planning Board of Braintree v. Department of Public Utilities</u> , 420 Mass. 22 (1995).
<u>Cape Wind Decision</u>	<u>Cape Wind Associates, LLC/Commonwealth Electric Company d/b/a NSTAR Electric Company</u> , 15 DOMSB 1 (2005).
<u>CELCO Decision</u>	<u>Cambridge Electric Light Company</u> , 12 DOMSB 305 (2001).
<u>MECo (2002)</u>	<u>Massachusetts Electric Company</u> , D.T.E. 01-77 (2002).
<u>MMWEC Decision</u>	<u>Massachusetts Municipal Wholesale Electric Company</u> , EFSB 07-6 (2008).
<u>New York Central Railroad</u>	<u>New York Central Railroad v. Department of Public Utilities</u> , 347 Mass. 586 (1964).
<u>Nextel Decision</u>	<u>Dispatch Communications of New England d/b/a Nextel Communications, Inc.</u> , D.P.U./D.T.E. 95-59-B/95-80/95-112/96-113 (1998).
<u>Save the Bay</u>	<u>Save the Bay, Inc. v. Department of Public Utilities</u> , 366 Mass. 667 (1975).
<u>Tennessee Gas (2002)</u>	<u>Tennessee Gas Pipeline Company</u> , D.T.E. 01-57 (2002)
<u>Town of Truro</u>	<u>Town of Truro v. Department of Public Utilities</u> , 365 Mass. 407 (1974).
<u>1997 BECo Decision</u>	<u>Boston Edison Company</u> , 6 DOMSB 208 (1997).
<u>1998 NEPCo Decision</u>	<u>New England Power Company</u> , 7 DOMSB 333 (1998).

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Pursuant to G.L. c. 164, § 69J, the Energy Facilities Siting Board hereby approves, subject to the conditions set forth below, the joint petition of Russell Biomass, LLC and Western Massachusetts Electric Company for approval to construct a 115 kV transmission line, approximately 5.3 miles in length, and an associated 115 kV switching station, for the purpose of interconnecting a proposed 50 megawatt wood-burning generating facility in Russell, Massachusetts, with the regional electric grid in New England. The Siting Board also grants the Petitioners exemptions from certain provisions of the Zoning By-Laws of the Towns of Russell and Montgomery and the City of Westfield, and denies exemptions from other Zoning By-Law provisions of these municipalities. The Siting Board grants the Petitioners' request for approval pursuant to G.L. c. 164, § 72.

I. INTRODUCTION

A. Summary of the Proposed Project

The proposed project ("Project") consists of (1) an approximately 5.3-mile, 115 kilovolt ("kV") transmission line from the proposed Russell Biomass generating facility in Russell to Western Massachusetts Electric Company's ("WMECo") transmission system in Westfield, and (2) a new switching station facility in Westfield. The transmission line would travel through Russell, Montgomery and Westfield to the proposed new switching station in Westfield, which would be connected to the existing 115 kV WMECo #1512 transmission line in Westfield (Exh. JP-1, at 1-1). The Project would be constructed by Russell Biomass, LLC ("Russell Biomass"), and owned and operated by WMECo.

B. Procedural History

On May 7, 2007, pursuant to G.L. c. 164, § 69J, Russell Biomass and WMECo, a subsidiary of Northeast Utilities (together, "Petitioners" or "Companies") jointly filed a petition with the Energy Facilities Siting Board ("Siting Board") for approval to construct an approximately 5.3-mile 115 kV transmission line and ancillary facilities in the Towns of Russell and Montgomery and in the City of Westfield, and ancillary facilities, including a switching station, in Westfield. This matter was docketed as EFSB 07-4.

On May 10, 2007, the Petitioners filed with the Department of Public Utilities (“Department”): (1) a petition for individual zoning exemptions and a comprehensive zoning exemption, pursuant to G.L. c. 40A, § 3, from Russell, Montgomery and Westfield for the proposed Project; and (2) a petition, pursuant to G.L. c. 164, § 72, for authority to construct and operate the Project. The Department docketed the zoning exemption petition as D.P.U. 07-35, and docketed the § 72 petition as D.P.U. 07-36.

On May 30, 2007, pursuant to G.L. c. 25, § 4, the Department issued a Consolidation Order, which referred the two Department dockets to the Siting Board for review together with the Siting Board docket, and consolidated the three dockets into a single proceeding, Russell Biomass/Western Massachusetts Electric Company, EFSB 07-4/D.P.U. 07-35/07-36. Accordingly, the Siting Board conducted a single adjudicatory proceeding, and a single evidentiary record was established.

On August 24, 2007, the Presiding Officer granted the petitions to intervene of the Town of Montgomery, the City of Westfield, Christian Lent, Thomas and Elizabeth O’Connor, Brian Janik, and Richard and Brenda Scott. The Presiding Officer also granted limited participant status to Sarah Underwood, James E. and Robin L. Unger, Christopher R. Davis, and the Jacob’s Ladder Scenic Byway Advisory Board.

The Siting Board held evidentiary hearings on January 15, January 22, January 24, January 25, and February 26, 2008. The Petitioners presented the testimony of eight witnesses: James Ramsey, a partner in Russell Biomass, who presented testimony regarding project development and permitting issues; Robert Fralley, Jr., President of Fralley Electric Utility Consultants, who presented testimony on technical and engineering aspects of the Project as they relate to the Petitioners’ project approach analysis, route and site selection process, electric and magnetic field levels, and the cost and reliability analysis of the primary and noticed alternative routes; Rebecca L. Sherer, P.E., an associate at Tighe & Bond, Inc., who testified with respect to environmental issues concerning the Petitioners’ project approach analysis, route and site selection process, and the environmental analysis of the primary and noticed alternative routes; Daniel E. Peaco and Mon-Fen Hong, consultants with LaCapra Associates, who testified with respect to public benefits of the proposed project; Kenneth B. Bowes, vice-president of operations for Northeast Utilities, who testified on technical and engineering aspects of the

proposed project; Eric J. Las, an associate with Beals and Thomas, Inc., who testified regarding rare species and wetlands issues; and Tracy J. Adamski, a senior environmental scientist and planner with Tighe & Bond, Inc., who testified with respect to land use and zoning issues.

The City of Westfield presented two witnesses: Thomas E. Converse, a vice-president of New England operations for SourceOne, who provided testimony on project approach analysis and analysis of switching station sites; and Lawrence B. Smith, a city planner for the City of Westfield, who testified concerning the City of Westfield's zoning ordinance.

Over 200 exhibits were entered into the evidentiary record. On April 11, 2008, the City of Westfield and the Town of Montgomery filed initial briefs, followed by the initial brief of the Petitioners on April 18, 2008. The City of Westfield and the Town of Montgomery filed reply briefs on April 25, 2008, and the Petitioners filed their reply brief on May 2, 2008.

The Siting Board staff issued a bench memorandum on September 19, 2008. The Siting Board met on September 25, 2008, and October 2, 2008, to consider the Petitioners' petition. At the meeting on October 2, 2008, the Siting Board, by a unanimous vote, directed the staff to draft a Tentative Decision approving, with conditions, the petition of Russell Biomass and WMECo (October 2, 2008, Siting Board meeting, Tr. at 5-46).

C. The Northern Approach and the Southern Approach

Among potential approaches to interconnect to the Russell Biomass facility, the Petitioners described possible construction of 115 kV transmission lines originating at the Russell Biomass facility and going either south or north. The approach favored by the Petitioners would consist of an approximately 5-mile, overhead, transmission line from the Russell Biomass facility to a new switching station connecting with WMECo's #1512 existing transmission line in Westfield ("Southern Approach") (Exh. JP-1, at 3-4). The alternative approach would consist of an approximately 10-mile overhead radial 115 kV line from the proposed generating facility in Russell to an existing WMECo substation in Blandford, Massachusetts ("Northern Approach") (*id.* at 3-1 to 3-15).

D. The Primary Route and Alternative Route

Among potential routes that could be used for the Southern Approach, the Petitioners provided public notice of two route alternatives, the Companies' preferred route ("primary

route”) and the noticed alternative route¹ (“Alternative Route”). The primary route begins at the proposed Russell Biomass facility location, extends 5.3 miles south and east through Russell, Montgomery, and Westfield on a route which is east of both the Westfield River and the CSX railway line, crossing over the Massachusetts Turnpike and continuing eastward on a cleared utility right-of-way (“ROW”) to an interconnect with WMECo’s #1512 line in Westfield (Exh. JP-1, at 1-1).

The Alternative Route extends within the U.S. Route 20 ROW, which generally parallels the west bank of the Westfield River and is designated the Jacob’s Ladder Trail Scenic Byway through a portion of this route (*id.* at 1-13). The Alternative Route passes through Russell and Westfield, but does not enter Montgomery. The transmission line would cross the Westfield River from the Russell Biomass site and pass through the residential neighborhoods of Russell Village to intersect with U.S. Route 20. The line would then continue south and easterly along U.S. Route 20 to the intersection with the WMECo #1512 transmission line (*id.*). There is currently an active above-ground distribution line within the U.S. Route 20 ROW. The Alternative Route is approximately 5.2 miles long (*id.* at 1-14).

E. Primary Route Variations

The primary route initially included three variations (“route variations”) within the northern portions of the route in Russell and Montgomery, as well as two possible switching station sites at the southern terminus of the route in Westfield. The route variations were designated as Route Variations 1a, 1b, and 1c. Route Variation 1a was later modified because the Petitioners were unable to reach an agreement with the CSX Railroad (becoming “Route Variation 1a modified”) and Route Variation 1b subsequently was withdrawn by the Petitioners. The switching station sites were designated S-1 and S-2.

Route Variation 1a modified and Route Variation 1c, the two variations of the primary route, travel distinct paths along Shatterack and Tekoa Mountains between the proposed Russell

¹ A Siting Board petition to construct a jurisdictional transmission line must present both the applicant’s primary route and at least one alternative to that route (alternative route). Published notice of each route is required, and only a route that has been noticed may be approved by the Siting Board.

Biomass facility and an intermediate route point where the two remaining variations converge in Montgomery about 700 feet north of the Massachusetts Turnpike, from which the remainder of the primary route continues along an existing WMECo right-of-way to WMECo's #1512 line in Westfield, a distance of approximately 1.9 miles (Exh. EFSB-SS-11). An active 23 kV distribution line is located along approximately the last mile of this common segment. A map showing the primary route variations is attached as Figure 1.

F. Switching Stations

The Petitioners presented two alternative sites, Switching Station S-1 and Switching Station S-2, for the proposed switching station associated with the primary route (Exh. JP-1, at 4-17). The ultimate switching station site for the primary route would be the same regardless of whether Route Variation 1a modified or Route Variation 1c of the primary route is used for the Project.

Switching Station S-1 would be located on a 2.1-acre site located slightly northwest of the interconnection of the proposed transmission line with WMECo's existing 115 kV #1512 transmission line for this alternative (*id.*). Access to this location would be from the east and would require the use of an existing private road, approximately 1800 feet from the end of Furrowtown Road. No residences or other developments are located in the vicinity of Switching Station S-1 (*id.* at 4-17, 4-18).

Switching Station S-2 would be located on a 7.8 acre site located approximately 700 feet west of the interconnection of the existing WMECo easement and the 115 kV #1512 transmission line (Exh. JP-1, at 4-18). The proposed switching station would be located to the south of the proposed transmission line and north of the existing #1512 line. Access to this location would be either the same as the access for Switching Station S-1 or from the southwest from Pochassic Road. No residences or other developments are located in the vicinity of Switching Station S-2 (*id.*). The Petitioners seek Siting Board approval for both switching station alternatives (Exh. JP-1, at 1-14).

G. Jurisdiction and Scope of Review

The Petitioners filed their petition to construct the proposed transmission project pursuant to G.L. c. 164, § 69H, which requires the Siting Board to implement its statutory authority so as

to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost, and pursuant to G.L. c. 164, § 69J, which requires a project applicant to obtain Siting Board approval for the construction of proposed energy facilities before a construction permit may be issued by another state agency.

As a new electric transmission line with a design rating of 69 kV or greater and a length in excess of one mile, the Company's proposed project falls within the definition of "facility" set forth in G.L. c. 164, § 69G, which provides that the definition of a "facility" includes:

a new electric transmission line having a design rating of 69 kV or more and which is one mile or more in length on a new transmission corridor.

In accordance with G.L. c. 164, § 69J, before approving a petition to construct facilities, the Siting Board requires an applicant to justify its proposal in three phases. First, the Siting Board requires the applicant to show that additional energy resources are needed (see Section II.A, below). Next, the Siting Board requires the applicant to establish that, on balance, its proposed project is superior to alternative approaches in terms of cost, environmental impact, reliability and ability to address the identified need (see Section II.B, below). Finally, the Siting Board requires the applicant to show that it has considered a reasonable range of practical facility siting alternatives and that the proposed site for the facility is superior to a noticed alternative site in terms of cost, environmental impact, and reliability of supply (see Sections III.C and III.D, below).

II. PROPOSED PROJECT

A. Need

1. Standard of Review

The Siting Board's review of proposed transmission facilities is conducted pursuant to G.L. c. 164, § 69J. The Siting Board requires an applicant seeking to construct a transmission line to interconnect a new or expanded generating facility to show: (1) that the existing transmission system is inadequate to interconnect the new or expanded generator; and (2) that the new or expanded generator is likely to be available to contribute to the regional energy supply.

Cape Wind Associates, LLC/Commonwealth Electric Company d/b/a NSTAR Electric

Company, 15 DOMSB 1, at 29 (2005) (“Cape Wind Decision”).² If the new or expanded generator exists, or is under construction, the availability showing will be deemed to have been made. If the generator is planned, and is subject to the Siting Board’s jurisdiction, that showing may be made by obtaining the Siting Board’s approval of the generating facility. Cambridge Electric Light Company, 12 DOMSB 305, at 316-317 (2001) (“CELCo Decision”); ANP Blackstone Energy Company, 8 DOMSB 1, at 201-203 (1999). If the generator is planned, and not subject to the Siting Board’s jurisdiction, the showing may be made on a case-by-case basis based on indicators of project progress (e.g., progress in permitting or in obtaining project financing). Cape Wind Decision at 28-29.

2. Adequacy of Existing Transmission System

The Petitioners stated that, without the proposed transmission line, there would be no means by which to deliver energy from the proposed 50 megawatt (“MW”) (nominal net design output) Russell Biomass generating facility to potential customers (Exh. JP-1, at 1-1, 2-3). The Petitioners stated that existing circuits that supply Russell customers are not adequate to deliver the energy from the proposed generating facility (Exhs. EFSB-N-1; EFSB-N-3).

3. Permitting Status of Proposed Generating Facility

The Petitioners stated that Russell Biomass is in the process of obtaining the permits and approvals necessary to construct and operate the proposed Russell Biomass generating facility (Exh. JP-1, at 2-6). As of May 2007, Russell Biomass had filed an air permit application with the Massachusetts Department of Environmental Protection (“MADEP”), a permit application for water withdrawal with the MADEP, and a National Pollutant Discharge Elimination System (“NPDES”) permit with the U.S. Environmental Protection Agency (*id.* at 2-8). The Petitioners indicated that there are a number of other required permits for the proposed generating facility, including a wetlands Order of Conditions from the Russell Conservation Commission, a Beneficial Use Determination from the MADEP for ash reuse, a Section 404 Clean Water Act

² The Cape Wind Decision was affirmed on appeal in Alliance to Protect Nantucket Sound v. Energy Facilities Siting Board, 448 Mass. 45, at 53 (2006).

permit from the U.S. Army Corps of Engineers, a Chapter 91 License from the MADEP for an intake/discharge structure at the Westfield River, and stack registration with the Federal Aviation Administration (*id.* at 2-6). In January 2008, the Petitioners indicated that they were in the midst of working with the MADEP in furthering air, water, and wetlands permitting (Tr. 1, at 25-28). On March 28, 2008, the project received a Certificate on its Final Environmental Impact Report (Exh. EFSB-G-5(S)2).

The Department recently issued orders conditionally granting in part, but denying in part, the request of Russell Biomass for a zoning exemption from certain Town of Russell zoning by-laws for the generation portion of the project. Russell Biomass, D.P.U. 06-60 (2008); Russell Biomass, D.P.U. 06-60-A (2009). However, the Department's decision, while granting only some exemptions, did not preclude the siting, construction, or operation of the proposed Russell Biomass generating facility project; the Petitioners may ultimately obtain outstanding zoning approvals and reach an agreement concerning fire response, traffic and other matters for the project to the satisfaction of the Town of Russell. Russell Biomass, D.P.U. 06-60, at 82.

4. Analysis

Pursuant to the standard of review set forth above, the Siting Board requires an applicant seeking to construct a transmission line to interconnect a new or expanded generating facility to show: (1) that the existing transmission system is inadequate to interconnect the new or expanded generator; and (2) that the new or expanded generator is likely to be available to contribute to the regional energy supply.

With respect to the first element of the standard of review, the record indicates that Russell Biomass is proposing to build a 50 MW electric generating facility in Russell, Massachusetts. The record indicates that there is insufficient transmission capacity to transmit the output of the proposed generating facility to the regional transmission grid. The Siting Board therefore finds that the existing transmission system is inadequate to interconnect the proposed Russell Biomass generating facility.

The proposed Russell Biomass generating facility has not yet obtained all necessary project permits, and is not yet under construction. Therefore, to establish that the facility is likely to be available to contribute to the regional energy supply, the Siting Board directs the

Petitioners to submit to the Siting Board copies of all permit approvals required for the Petitioners to begin construction of the proposed generating facility in Russell. Consistent with our standard of review, the Siting Board finds that at such time as the Petitioners comply with this condition, the Petitioners will have demonstrated that there is a need for additional transmission resources to interconnect the Russell Biomass facility with the regional transmission grid. The Petitioners may not commence construction of the proposed transmission project until they have complied with this condition.

B. Comparison of the Proposed Project and Alternative Approaches

1. Standard of Review

General Laws, c. 164, § 69H requires the Siting Board to evaluate proposed projects in terms of their consistency with providing a reliable energy supply to the Commonwealth with a minimum impact on the environment at the lowest possible cost. In addition, G.L. c. 164, § 69J requires a project proponent to present “alternatives to planned action” which may include: (a) other methods of generating, manufacturing, or storing electricity or natural gas; (b) other sources of electrical power or natural gas; and (c) no additional electric power or natural gas.³ Cape Wind Decision at 21, citing CELCo Decision at 321; Boston Edison Company, 6 DOMSB 208, at 252 (1997) (“1997 BECo Decision”).

In implementing its statutory mandate, the Siting Board requires a petitioner to show that, on balance, its proposed project is superior to alternative approaches in terms of cost, environmental impact, and ability to meet the identified need. Cape Wind Decision at 21, citing CELCO Decision at 321; 1997 BECo Decision at 252. In addition, the Siting Board requires a petitioner to consider reliability of supply as part of its showing that the proposed project is superior to alternative project approaches. Cape Wind Decision at 21-22.

³ General Laws, c. 164, § 69J also requires a petitioner to provide a description of “other site locations.” The Siting Board reviews the Petitioners primary route, as well as other possible routes, in Section III, below.

2. Identification of Project Approaches for Analysis

The Petitioners considered options for interconnecting with the regional grid by extending a transmission interconnection in several different directions from the Russell Biomass site. The Petitioners identified six other substations within a 10-mile radius of the proposed Russell Biomass generating facility site (Exhs. EFSB-PA-5; EFSB-PA-2; Tr. at 255).⁴ The Petitioners evaluated each of these possible substations based on various selection criteria including the existence of current easements; significant topographical features; proximity to private homeowners; and the presence of natural features such as protected species and habitat, drinking water supply watersheds, and recreational/conservation open areas (Exh. EFSB-PA-5). Based on this evaluation, the Petitioners concluded that only one of these substations (the Blandford Substation) would offer a feasible interconnection point (*id.*).⁵

We find the Petitioners' conclusion reasonable, and with the exception of the Blandford Substation, other interconnection points do not warrant further consideration. The Siting Board also finds that the interconnection via either the proposed approach, or via an alternative approach that would connect to the Blandford Substation would meet the identified need, and these approaches may provide potential tradeoffs between reliability, environmental impacts and cost worthy of further analysis. Therefore, in the following sections, the Siting Board compares the two approaches with respect to reliability, environmental impacts, and cost.

The proposed approach would consist of an approximately 5-mile, overhead, radial 115 kV transmission line from the proposed biomass generating facility in the Town of Russell

⁴ The six substations within a ten-mile radius of the Russell Biomass facility are Blandford 19J to the west, Cobble Mountain 18F to the south, and Buck Pond 34B, Gunn 15A, Elm 22G and Pochassic 37R substations to the east (Exh. EFSB-PA-2). The Cobble Mountain and Elm substations are not owned by WMECo (*id.*).

⁵ The Petitioners indicated that voltages other than 115 kV were considered for the proposed project, and stated that a 46 kV or 69 kV line could be adequate to carry power from a 50-MW generator (Exh. EFSB-PA-1; Tr. 2, at 253-254). However, the Petitioners stated that only the 115 kV transmission system in the region is extensive enough to provide a robust set of electrical pathways for the power that would be produced (Tr. 2, at 255). The Petitioners indicated that using a 46 kV or 69 kV transmission voltage for the proposed Project would require installation of a step-up transformer where the proposed Project meets existing 115 kV transmission lines (Exh. EFSB-PA-1; Tr. 2, at 252-253).

to a switching station connecting with WMECo's #1512 existing transmission line in Westfield (the Southern Approach)⁶. The Southern Approach would include the construction of a new switching station as well as new transmission to connect the generating project with WMECo's existing 115 kV #1512 transmission line (Exh. JP-1, at 3-4, 3-6). As noted on page 5, above, the switching station would be located at proposed Switching Station S-1, a 2.1-acre site in Westfield, or proposed Switching Station S-2, a 7.8-acre site in Westfield. The alternative approach would consist of an approximately 10-mile overhead radial 115 kV line from the proposed generating facility in Russell to an existing WMECo substation in Blandford, Massachusetts (the Northern Approach) (Exh. JP-1, at 3-1 through 3-15).

The Northern Approach would follow an existing easement northerly and westerly from the proposed biomass generating facility approximately 10 miles to connect with an alternative existing 115 kV transmission line, the #1421/1512 line, at an existing substation in Blandford (Exh. JP-1, at 3-6, 3-11). The Northern Approach would extend northerly from the Russell Biomass project, to the east of Montgomery Road in Russell and Carrington Road in Montgomery (*id.* at 3-7, 3-11). The approach would then follow the existing easement westerly, crossing the Westfield River Main Stem and the West Branch in Huntington, then turning southerly into Blandford (*id.*). Approximately 6 miles of the existing easement contains an active 23-kV distribution line (Exh. COW-RR-2). Of these 6 miles, 0.7 miles of existing easement would require the acquisition of an additional 50 feet of right-of-way to accommodate both the 23 kV and new 115 kV lines. (*id.*).

The Petitioners also considered an alternative design involving underground construction of the Southern Approach under two different scenarios, an underground alternative where (1) the entire route would be constructed underground, and (2) only a portion of the route, on Tekoa Mountain in Montgomery, would be constructed underground. We consider these underground design alternatives in Section III.D.2.g and III.D.2.i.i below.

⁶ The Southern Approach is not a single specific route, but instead is intended to encompass the several different possible "southern" routes, including: (1) the Petitioners' primary routes along the west side of the Shatterack and Tekoa Mountains, then over the Massachusetts Turnpike to a new switching station in Westfield; and (2) the Alternative Route along U.S. Route 20 (Exh. JP-1, at 1-10 through 1-14).

a. Reliabilityi. Arguments of the Parties

The Petitioners argue that the 5-mile Southern Approach is more reliable than the 10-mile Northern Approach because it is only one-half as long (Petitioners Brief at 20-21). According to the Petitioners, a longer route would “inherently result in lower reliability of service” (Exh. COW-TI-4). Westfield’s witness, Mr. Converse, testified that both lines would be classified as short lines that would have equal reliability (Tr. at 806). The Petitioners argued that the Siting Board has previously held that when comparing interconnect approaches, there is a reliability advantage associated with a shorter line. (Petitioners Brief at 22, citing Cape Wind Decision at 39-41). In response, Westfield asserted that the Siting Board’s comment in Cape Wind Decision did not relate to a shorter overhead line, but rather was directed to a length of submarine cable that was both shorter and less complex than the proffered alternative (Westfield Reply Brief at 15).

ii. Analysis

The Siting Board found in the Cape Wind Decision that the 32-mile length of the New Bedford marine line may make it a less reliable alternative than the use of a 9-12 mile submarine cable that would interconnect with the Barnstable Switching Station. Cape Wind Decision at 22-23. The Siting Board did not find, however, that a longer transmission line is inherently less reliable as a general principle. Every proposed transmission line and its alternatives raise their own unique facts and circumstances that must be evaluated on a case-by-case basis for the Siting Board to make appropriate findings concerning reliability. In this case, the record shows that the Southern Approach would be more reliable than the Northern Approach, due to the difference in their lengths, but that both routes are fairly short so this reliability difference would be small. Therefore, the Siting Board finds that the Southern Approach would be slightly advantageous to the Northern Approach with respect to reliability.

b. Environmental Impacts

Siting Board precedent requires a reasoned analysis of project approach alternatives, but does not prescribe the level of detail or methodology to be used by a petitioner to evaluate

project approach alternatives.⁷ Initially, the Petitioners qualitatively compared the Northern and Southern Approaches with respect to: (i) impacts to vegetation/trees; (ii) wetlands; (iii) previously undisturbed soils; (iv) historic land and/or buildings; (v) rare or endangered species; (vi) state conservation lands; and (vii) scenic views and viewsapes (Exh. EFSB-PA-7-S). However, in response to a City of Westfield information request, the Petitioners provided a site selection screening analysis that included a comparison of the Northern Approach to the Southern Approach alternative routes, including Route Variation 1a modified (Exh. COW-SS-11). In this screening analysis the Petitioners assigned a numerical value to a set of screening criteria including: (1) technical feasibility; (2) land use/human environment; (3) natural environment; and (4) cost. Of these four categories, the specific criteria relating to environmental impacts are the following: (1) proximity to residences; (2) proximity to sensitive receptors; (3) historic/archeological; (4) open space/parklands; (5) hazardous and solid waste sites; (6) switching station impacts on the human environment; (7) visual impacts; (8) wetland resource areas; (9) rare and endangered species; (10) drinking water supplies; (11) tree and vegetation clearing; and (12) switching station impacts to the natural environment (Exh. COW-SS-11-1). Using these twelve criteria, the Petitioners calculated a score for the Northern Approach of 54, compared to the score of 33 calculated for Route Variation 1a modified within the Southern Approach (*id.*). As designed, a lower score represents less environmental impact from the Project than a higher score (Exh. JP-1, at Table 4-1). Table 1 sets forth the individual scores assigned by the Petitioners to the twelve criteria.

⁷

It would be difficult to create a single set of screening criteria that could be applied to project approaches that may differ significantly from each other. For example, if a petitioner were to compare a demand-side management alternative to the construction of a transmission line, the two approaches would share few characteristics (other than cost) that would permit selected criteria to be compared between the two project approaches.

Table 1. Transmission Route Scoring for Environmental Criteria

Screening Criteria	Southern Approach (Route Variation 1a modified)	Northern Approach
Proximity to residences	2	4
Proximity to sensitive receptors	2	2
Visual impacts	3	9
Historic/Archeological	2	4
Open space/parklands	2	2
Hazardous and solid waste sites	1	2
Switching facility impacts to human environment	2	2
Wetland resource areas	4	6
Rare and endangered species	6	6
Drinking water supplies	1	9
Tree and vegetation clearing	6	6
Switching Station impacts to natural environment	2	2
TOTAL	33	54

Exh. COW-SS-11-1.

i. Petitioners' Position

The following is a summary of the Petitioners' comparison of the impacts for each of these environmental elements.

Impacts to Vegetation/Trees

The Petitioners stated that the Northern Approach would require more extensive tree clearing along greater lengths of the utility corridor than would the Southern Approach (Exh. EFSB-PA-7-S at 2). The Southern Approach experienced a significant forest fire that resulted in the loss of a significant number of mature trees (id.). According to the Petitioners, as a result of the forest fire the Southern Approach would require clearing of successional trees and shrubs for

approximately 3 miles. By comparison, the Northern Approach will require the clearing of an additional 40 feet of vegetation for four miles of the corridor (id.).

Wetland Impacts

According to the Petitioners, the Southern Approach would require the crossing of four perennial streams: Shatterack Brook, Cooley Brook, Moose Meadow Brook, and an unnamed perennial stream (Exh. EFSB-PA-7-S at 2). The Northern Approach would cross nine perennial streams including the West and Main branches of the Westfield River, Beardon Brook, Roaring Brook, Gibbs Brook, Bedlam Brook, and three unnamed perennial streams (id.). Given that the Northern Approach is twice as long as the Southern Approach, and that there are significantly more perennial stream systems and proportionately more wetland resource areas, the Petitioners argue that the Northern Approach would have significantly more intersecting wetlands and correspondingly greater wetland impacts (id. at 3).

Historic Land and/or Buildings

The Petitioners stated that no historical buildings are likely to be affected by either route because both routes are located in areas where a minimal number of buildings are located (Exh. EFSB-PA-7-S at 3).

Rare or Endangered Species

The Massachusetts National Heritage and Endangered Species Program (“NHESP”) mapping indicates that much of the Southern Approach is located within areas mapped for rare and endangered species, including much of its corridor from the proposed generating facility site to the proposed switching station area (Exh. EFSB-PA-7-S at 4). The Northern Approach also has mapped rare and endangered species in the corridor associated with and immediately adjacent to the Westfield River (id.). The Petitioners noted that since species mapped within the Northern Approach are associated only with the Westfield River, only temporary impacts to species, related to construction, are anticipated (id.). In contrast, the Petitioners stated that it is anticipated that some permanent impacts to species may result on the Southern Approach, and that a conservation management plan would be implemented with NHESP to mitigate these impacts (id.). Although the Petitioners gave the same score to both routes, the Petitioners stated that the impacts associated with the Southern Approach would be slightly more significant than those associated with the Northern Approach (id.).

State Conservation Lands

The Petitioners indicated that state conservation lands and protected lands are located along both routes (Exh. EFSB-PA-7-S at 4). The Southern Approach (on the primary route) is located within conservation land owned by the Massachusetts Division of Fish and Wildlife ("MADFW") (id.). The Northern Approach east of U.S. Route 20 and the Westfield River is within protected lands associated with Outstanding Resource Waters that are tributaries to public drinking water supplies (id. at 5). The Northern Approach intersects tributaries that feed the Black Brook Reservoir, a drinking water source for the Town of Russell (id. at 6). According to the Petitioners, the Northern Approach also intersects tributaries that feed Cobble Mountain Reservoir, a water supply for the City of Springfield, Massachusetts (id. at 5).

Scenic Views and Viewscapes

The Petitioners stated that the Northern Approach crosses both the West and Main branches of the Westfield River just south of the village of Huntington, where it is designated as a National Wild and Scenic River (Exh. EFSB-PA-7-S at 5). According to the Petitioners, the Northern Approach would also cross U.S. Route 20, which is designated as Jacob's Ladder Scenic Byway (id.). There are forty or more homes along the Northern Approach that are within 500 feet of the easement (id.). The Petitioners maintained that there are approximately 12 homes within the same proximity along the Southern Approach (id.).

According to the Petitioners, leaves will significantly obscure the view of the Southern Approach during the summer months, and it will also be difficult to see during the spring and fall for the same reason (Exh. EFSB-V-1). The corridor would become more visible in certain areas during the winter (id.). The elevation and location of the corridor would also affect its visibility (id.). The Petitioners state that portions of the Southern Approach may be visible during the winter months by residents in an estimated 50-75 homes primarily located in Woronoco Village and the easterly roadways of Russell Village, adjacent to the proposed biomass generating facility (Exh. EFSB-V-1). According to the Petitioners, a portion of the Southern Approach would be visible crossing West Road, in Westfield, and the Massachusetts Turnpike (Exh. EFSB-V-2). The Petitioners maintained that greater impacts are expected with respect to scenic views and viewscapes for the Northern Approach because the utility corridor along this

route crosses both a Wild and Scenic River and a Scenic Byway, and will be visible to significantly more homes along the route (Exh. EFSB-PA-7-S at 5).

Summary

Overall, the Petitioners maintained that the Northern Approach has greater environmental impacts than the Southern Approach with respect to vegetation/tree clearing, wetlands, drinking water resources and scenic views and viewscapes (Exh. EFSB-PA-7-S at 6). The Petitioners stated that among the potential environmental impacts, the Northern Approach would be preferable only with respect to rare or endangered species (id.).

With respect to the use of the Petitioners' screening analysis, which included a comparison of the Northern and Southern Approach alternatives, the Petitioners noted that screening criteria, weighting system, and ranking system were originally designed specifically to analyze and compare the route alternatives available along the Southern Approach (Exh. COW-SS-11). The Petitioners stated that "[t]here are significant differences" between the Northern Approach and the routes analyzed for the Southern Approach and that the screening criteria, weighting system and ranking system used in the Petition to study only Southern Approach alternatives do not "completely capture," such as the crossing of a designated National Wild and Scenic River (id.).

ii. Westfield's Position

Westfield acknowledged that the Northern Approach would cross branches of the Westfield River; however, Westfield maintained that the crossing would occur in a location where there is already a 23-kV distribution line crossing the river (Exh. COW-RR-2; Tr. at 554-555). Westfield argued that the addition of the Northern Approach line across the river is unlikely to be any more noticeable in the area than the present distribution line (Westfield Brief at 20). Westfield agreed with the Petitioners that the Northern Approach crosses tributaries to drinking water supplies, which the Southern Approach does not (id. at 21). But, according to Westfield, the portion of the Northern Approach where those tributaries are located is already home to the 19J 23 kV WMECo distribution line (id.). Westfield contended that both alternatives run through areas with mapped rare and endangered species (id. at 21). Westfield argued that the weighted score of 9 for the Northern Approach's visual impacts was

inappropriate because such a score required that the route be “visually prominent in an historic district,” which it is not (Westfield Reply Brief at 28-29). Westfield objected to the scoring methodology used for open space/parklands because it relies too heavily on the number of parcels rather than the size of the land parcels along the route of the easement (*id.* at 29).

Westfield argued that the results of the screening analysis that incorporates scoring for the Northern Approach are unreliable because the scoring criteria were not originally designed to include the Northern Approach (Westfield Brief at 27). According to Westfield, the scoring of the Northern Approach was incorrect based on a variety of purported flaws and errors in the Petitioners’ analysis (Westfield Reply Brief at 19-31). The Petitioners did not reply to Westfield’s critique of the route selection analysis because the Petitioners maintained that Siting Board precedent does not require the application of route selection analysis to the Northern Approach (Petitioners’ Reply Brief at 10, n.8).

iii. Analysis

Using the specific criteria relating to environmental impacts in the Petitioners’ screening analysis, the Northern Approach received a score of 54, which is less desirable than the score of 33 received for the Southern Approach. Westfield argues that several of the scores assigned by the Petitioners should be adjusted to reflect various countervailing considerations or methodological errors. We need not analyze the merit of Westfield’s arguments for individual score changes because if we accept them here, the result is little changed.⁸

As we find in our later discussion of the route selection analysis for the Southern Approach alternatives in Section III, the results of a petitioner’s screening matrix are an

⁸ In response to Westfield’s arguments, the staff considered the effect of adjusting the weighted score for the Northern Route’s visual impacts from 9 to 3 and the open space/parklands weighted score from 2 to 1. The staff also considered the effect of adjusting the rare and endangered species weighted score for the Southern Approach from 6 to 9 because the Petitioners stated that a greater portion of the Southern Approach would run through areas with mapped rare and endangered species than would the Northern Route. These adjustments would have resulted in a total weighted score for the Southern Approach of 36, and a total weighted score for the Northern Route of 47 (*see* Table 1 above).

instructive tool, but are not properly used as a single determinative measure of which route is superior and should ultimately be selected.

We do not agree with Westfield's argument that the results of the screening analysis are unreliable as applied to the Northern Approach because the scoring criteria were not originally designed to include the Northern Approach. The fact that the Northern Approach and the Southern Approach are reasonably similar transmission lines that would travel through reasonably similar terrain supports the application of the same criteria to the Northern Approach. In this case we identify no additional considerations that would suggest that the Northern Approach is superior to the Southern Approach with respect to environmental impacts.

The record indicates that the Southern Approach would be superior to the Northern Approach regarding environmental impacts based on the advantages of the Southern Approach with respect to: the number of residences along the route, the number of stream crossings, its avoidance of surface drinking water resources, and less vegetation and tree clearing requirements. Accordingly, the Siting Board finds that the Southern Approach is superior to the Northern Approach with respect to environmental impacts.

c. Cost

i. Argument of the Parties

The Petitioners maintained that the estimated cost of the Northern Approach (\$40.2 million) is significantly higher than the estimated cost for the Southern Approach (\$25.3 million) (Exh. JP-1, at 23). The Petitioners cost comparison includes the cost of a new substation for both the Northern and Southern Approach because, according to the Petitioners, either a new substation or a reconfigured substation would be required at the existing Blandford Station for the purpose of completing the Northern Approach alternative (Tr. 1, at 129). According to the Petitioners, the Project cost estimate shows that the cost of constructing the transmission line (without substation costs) for the approximately 10-mile transmission line required for the Northern Approach (\$32.1 million) is almost double the construction cost of the line required for the Southern Approach (\$17.2 million) (Exh. JP-1, at 3-13, Table 3-1).

Westfield argued that the Petitioners' evidence is insufficient to demonstrate that the cost of the Southern Approach is less than the cost of the Northern Approach (Westfield Reply Brief

at 15). In particular, Westfield argued that the failure to include land acquisition costs in the Petitioners' cost estimate is not reasonable (Westfield Brief at 24). According to Westfield, the Petitioners' cost estimate also failed to include the costs associated with the necessary easement swap for the Southern Approach, which would include expenses associated with an Article 97 legislative action to allow such a swap (*id.* at 25). Westfield argues that these costs are easily quantified and should be included in the cost analysis to provide a fair comparison between the Northern and Southern Approach alternatives (*id.*).

The Petitioners acknowledged that there would be land acquisition costs for the Southern Approach to construct the proposed substation, but argued that the Northern Approach would also require land acquisition costs even though the Blandford Substation already exists (Petitioners Brief at 25). According to the Petitioners, Westfield provided no evidence indicating whether the necessary land for the substation expansion is available and what it would cost (*id.*). As a mitigating consideration in the cost comparison between the two routes, the Petitioners maintained that even though they assumed equal construction costs for both alternatives, in fact the cost of reconfiguring the Blandford Substation would actually be more expensive than the construction costs for the new switching station for the Southern Approach (Petitioners' Reply Brief at 8-9). Citing Berkshire Gas Company, 25 DOMSC 1, at 44, fn.62 (1992) ("Berkshire Gas Decision"), the Petitioners also argued that Siting Board precedent does not require that land acquisition costs be addressed at the project-approach level (Petitioners Brief at 26).

ii. Analysis

The record demonstrates that the Northern Approach would be approximately \$15 million more expensive than the Southern Approach. However, the Petitioners' estimate does not include necessary land acquisition costs or costs associated with obtaining legislative Article 97 approval needed for a land swap involving the Southern Approach. The Petitioners' assertion that land acquisition costs need not be included in the cost estimate is not an accurate assessment of Siting Board precedent. The Siting Board recognizes that a petitioner may not be able to provide a detailed cost estimate for land acquisition costs at an early stage in a project's development, but a petitioner should be able to establish a basic estimate using reasonable assumptions for recent comparable land purchases. If the land needed for construction is

significantly more expensive than the land cost for an alternative route, then this information should be factored into the comparative cost analysis. Similarly, a cost estimate for efforts made to obtain legislative Article 97 approval, if substantial, could have affected the total cost comparison between the Northern and Southern Approaches because the Northern Approach does not require any legislative action.

The Petitioners' reliance on Berkshire Gas Decision is misplaced because a difference in land acquisition costs was not at issue in the Berkshire Gas Decision. Rather, the underlying assumption in that case was that the alternatives would all require a meter facility of comparable cost. Here, however, the assumption of similar costs for alternative routes was challenged by Westfield and the Petitioners should have been prepared to provide a basic land acquisition cost comparison.

The proponents of a project bear the burden of proof to demonstrate that another route is not clearly superior as a result of cost. Such a showing can only be made where all the primary elements of construction, including land acquisition costs, are considered. We recognize, however, that costs of land acquisition are but one component of the total cost of a project, and may constitute a relatively small portion of total project cost in many cases.

Land acquisition costs appear to be the vast majority of any costs that might increase the cost of the Southern Approach. The land acquisition costs for the Southern Approach would have to be larger than any cost differential including any land acquisition attributable to using the Northern Approach in order to have the Northern Approach be less costly overall. Based on the proximity of land in the two alternative approaches, we do not believe it is reasonable to conclude that the costs of purchasing either the 2.1 acre or 7.8 acre switching station site or other additional costs for the Southern Approach would be so large as to offset the estimated \$14.9 million cost differential for using the Northern Approach. Based on the foregoing, we find that the proposed Southern Approach is superior to the Northern Approach with respect to total cost.

3. Conclusions: Weighing Need, Reliability, Environmental Impacts and Cost

As stated above, Siting Board precedent requires a petitioner to present alternative project approaches to demonstrate that the petitioner's proposed project approach is, on balance,

superior to alternative approaches in terms of cost, environmental impact, and ability to meet the identified need. Cape Wind Decision at 21. The Siting Board places the burden of proof on the Petitioners, in this case to demonstrate that, on balance, the Southern Approach is superior to alternative approaches.

Once a general project approach is chosen, a route selection analysis then examines alternative routes or sites to implement that approach. The two separate analyses (project approach and route selection) are intended to accomplish complementary objectives. Project approach analysis is a broader review of different ways to accomplish a similar objective. As set forth in Section III below, once a particular approach (e.g., transmission at a particular voltage to a particular end point) is identified as the best approach, route selection analysis establishes that a clearly superior alternative route has not been overlooked.

The Siting Board has found that the Southern Approach would be slightly advantageous to the Northern Approach with respect to reliability. The Siting Board also found that the Southern Approach is superior to the Northern Approach with respect to environmental impacts and cost. Accordingly, the Siting Board finds that the Southern Approach would be preferable to the Northern Approach with respect to providing a reliable energy supply to the Commonwealth, with a minimum impact on the environment at the lowest possible cost.

III. ANALYSIS OF THE PRIMARY AND ALTERNATIVE ROUTES

A. Site Selection

1. Standard of Review

G.L. c. 164, § 69J provides that a petition to construct a proposed facility must include “a description of alternatives to [the applicant’s] planned action” including “other site locations.” In past reviews of alternative site locations identified by an applicant, the Siting Board has required the applicant to demonstrate that it examined a reasonable range of practical siting alternatives. Cape Wind Decision 15 DOMSB 1, at 45; CELCo Decision, 12 DOMSB 305, at 326; New England Power Company, 7 DOMSB 333, at 374 (1998) (“1998 NEPCo Decision”). In order to determine whether an applicant seeking to construct a non-generating facility (e.g., a transmission facility) has considered a reasonable range of practical alternatives, the Siting Board has required the applicant to meet a two-pronged test. First, the applicant must establish

that it developed and applied a reasonable set of criteria for identifying and evaluating alternative sites in a manner that ensures that it has not overlooked or eliminated any sites which, on balance, are clearly superior to the proposed site. Second, the applicant must establish that it identified at least two noticed sites or routes with some measure of geographic diversity.

2. Site Selection Process

The Companies indicated that they evaluated three Southern Approach route alternatives between the proposed Russell Biomass plant and the existing WMECo 115 kV #1512 line in Westfield (Exh. JP-1, at 4-1 to 4-4). These were: (1) Route Alternative 1, which became the primary route, comprising three variations; (2) Route Alternative 2, along U.S. Route 20, which became the alternative route; and (3) Route Alternative 3, along the CSX railroad line (“CSX route”) (Exh. JP-1, at 4-1).

The Companies indicated that these routes were identified by applying a number of threshold criteria to a study area bounded by Main Street in Russell to the north, the peaks of the Shatterack and Tekoa Mountains to the west, additional mountains to the west, and the WMECo 115 kV line to the south (*id.* at 4-4). The Companies stated that these limits were established to avoid the visual and environmental impacts of clearing the right-of-way over the crests of the ridges located east and west of the narrow Westfield River Valley (*id.* at 4-4).

The threshold criteria by which the routes were evaluated included the following: using existing routes; avoiding close contact with railroad tracks; avoiding, to the extent feasible, residential, school, and hospital areas; avoiding, as practicable, private property; minimizing turning points; minimizing impacts to environmentally sensitive areas; and minimizing impacts to endangered species and their habitats (Exh. JP-1, at 4-5). The Companies stated that they solicited route selection input from the Massachusetts Department of Fish and Wildlife (“MADFW”), NHESP, Massachusetts Highway Department (“MHD”), Massachusetts Turnpike Authority, and CSX (*id.* at 4-6). As a result of this process, three routes within the study area including one with three variations were identified (*id.*).

The three identified routes were next subjected to an extensive screening analysis. The routes were screened on the basis of technical feasibility criteria (railroad encroachment, roadway crossings, transmission robustness, steep terrain, access, and property ownership);

human impact criteria (including proximity to residences and other sensitive receptors, visual impacts, and historic/archaeological impacts); natural environment impacts (including rare and endangered species, wetlands, and vegetation clearing); and costs (including construction, operation, and maintenance costs) (Exh. JP-1, at 4-26 to 4-35). These criteria were weighted (1, 2, or 3) based on their relative importance, and routes were scored (1, 2, or 3) on each of the criteria (resulting in weighted scores of 1, 2, 3, 4, 6, and 9 for each criteria), with lower scores being preferred. As screened, the original three Route 1 variations scored 76 to 87,⁹ Route Alternative 2, along U.S. Route 20, scored 106, and Route Alternative 3, along the CSX railway, scored 113 (*id.* at 4-41).

Route Alternative 3 involved conflicts with CSX stemming from its proposed location in an active railroad right-of-way (Exh. JP-1, at 4-24, 4-6, 4-26, 4-27). Potential concerns include safety during transmission line construction and maintenance activities, and the interference with railroad activities that a damaged transmission structure could pose to railroad operations (*id.* at 4-6). The Petitioners indicated that, in the future, CSX (1) anticipates constructing a second set of tracks in this ROW and therefore wants to retain sufficient ROW width for this purpose; and (2) may wish to use its rails to carry electrical signals, an activity with which a transmission line might interfere (*id.* at 4-8). The Petitioners also indicated that CSX would charge annual permit fees for a transmission line located in the CSX right-of-way (*id.*). Finally, the Companies stated that language in the standard CSX draft aerial occupancy agreement gives CSX the right to require a lessee to vacate the easement with 60 days' notice (*id.*). The Companies state that transmission facilities cannot be moved in a 60-day period (*id.*). On the basis of these conflicts, the Companies eliminated Route Alternative 3 from further consideration (*id.* at 4-9).

In past decisions, the Siting Board has found various types of criteria to be appropriate for identifying and evaluating route options for transmission lines and related facilities. These types of criteria include natural resource issues, land use issues, community impact issues, cost and reliability. Cape Wind Decision at 45-49; Boston Edison Company d/b/a NSTAR Electric, 14 DOMSB 233, at 277 (2005); New England Power Company, 4 DOMSB 109, at 167 (1995).

⁹ The Company subsequently provided an analysis showing that the score for Route Variation 1a modified (described below in Section III.B) is 72 under the same scoring regimen (Exh. EFSB-SS-31(1)).

The Siting Board also has found the specific design of scoring and weighting methods for chosen criteria to be an important part of an appropriate site selection process, and in some cases has identified the appropriate allocation of weights among the broad categories of environmental concerns, cost and reliability. CELCo Decision, 12 DOMSB 305, at 331; 1997 BECo Decision, 6 DOMSB 208, at 285; Boston Edison Company, 19 DOMSC 1, at 38-42 (1989).

Here, the Petitioners developed 22 screening criteria, which it used to evaluate the routing options. These criteria generally encompass the types of criteria that the Siting Board previously has found to be acceptable.¹⁰ The Petitioners also developed a quantitative system for ranking routes based on compilation of weighted scores across all criteria; this is a type of evaluation approach the Siting Board previously has found to be acceptable.

The record shows that the Petitioners evaluated a small number of routes within a study area selected for the project. The record shows that Route Alternative 3 scored poorly and is relatively infeasible. While Route Alternative 2 was scored as inferior to Route Alternative 1, with respect to environmental impacts, cost, and reliability factors, the Companies' selection of Route Alternative 1 and Route Alternative 2 for further analysis was reasonable.

Accordingly, the Siting Board finds that the Petitioners have developed and applied a reasonable set of criteria for identifying and evaluating alternative routes in a manner which ensures that the Petitioners have not overlooked or eliminated any routes which are clearly superior to the proposed project.

B. Geographic Diversity

Of the three routes evaluated by the Petitioners, one is to the west of the CSX right-of-way and the Westfield River, one is to the east of CSX and the Westfield River, and one follows CSX in its entirety, east of the Westfield River (Exh. JP-1, at fig. 5-1, fig. 5-2). Although all the routes generally follow the Westfield River valley, the extent to which the routes physically overlap is very small (id.). One route follows a road, one follows a railroad, and one partly

¹⁰ For example, the CELCo Decision, 12 DOMSB 305, at 331, the Company used weighted scores to balance the community/environmental impacts, technical issues and costs, and the Siting Board stated that the allocation of approximately half of the overall weight to community/ environmental and half to technical/cost was reasonable.

follows an existing distribution line and partly goes through the woods (*id.*). No other existing corridors were identified within the corridor study area (*id.*).

Thus, the Petitioners considered three geographically diverse transmission line routes to connect the Russell Biomass facility site and the existing WMECo 115 kV #1512 line in Westfield. Consequently, the Siting Board finds that the Companies have identified a range of practical route alternatives with some measure of geographic diversity.

C. Description of the Primary and Alternative Routes

The primary route originally was presented with a total of three variations, 1a, 1b, and 1c (Exh. JP-1, at 4-9 to 4-25). Among these, Route Variation 1a was later modified to accommodate restrictions imposed by CSX, and Route Variation 1b was eventually dropped because it had no identified advantages compared to Route Variation 1a modified (Exhs. EFSB-G-5(S) at 4-34 to 4-39; EFSB-3; EFSB-RR-3). The Petitioners requested that the Siting Board approve both Route Variation 1a modified and Route Variation 1c because the Companies could not be assured that MADFW, as land manager, would be able to finalize the authorizations needed to allow the use of Route Variation 1a modified. The Companies provided maps showing these routes (Exhs. EFSB-G-1(1), EFSB-G-1(2), EFSB-G-1(3), EFSB-G-1(4)).

Route Variation 1c follows an existing 100-foot-wide electric transmission easement from the proposed Russell Biomass generating facility, south and east across the slopes of Shatterack and Tekoa Mountains in Russell, crossing through a corner of Montgomery, to a crossing of the Massachusetts Turnpike (Exh. JP-1, at 4-13, 4-15, 4-16, 5-36). South of the Turnpike, Route Variation 1c continues eastward within the easement for approximately 1 mile in Westfield to a crossing of West Road (*id.*). Route Variation 1c then continues along the easement another approximately 1 mile to an interconnection with the existing WMECo 115 kV #1512 line (*id.* at 4-17). Up to the crossing of West Road, the transmission easement is not occupied by any transmission line nor is it fully cleared, former lines having been removed years ago (Exhs. EFSB-RV-21(1); EFSB-RV-21(2); TOM-RV-1(1)). The easement from West Road to the interconnection point already carries a lower voltage distribution line operated by Westfield Gas and Electric Company (Exh. EFSB-RV-21(2); Tr.1, at 91-92). South of the Turnpike, Route Variation 1c passes through an active gravel pit operation, farmlands, and

forested lands (Exh. JP-1, at 4-13, 4-15, 4-16, 5-36). Other than the Massachusetts Turnpike, the only street crossed by Route Variation 1c is West Road in Westfield (Exh. EFSB-RV-21(2)).

Route Variation 1a modified follows a new course, lower on the slopes of Shatterack and Tekoa Mountains than Route Variation 1c, and generally several hundred yards to the west of it (Exh. EFSB-SS-13). It skirts above CSX properties along the Westfield River, and curves uphill around the one residence in Russell east of the railroad in this area (id.). Route Variation 1a modified and Route Variation 1c are close together where they cross through Montgomery, although the proposed pole placements differ (id.). From the Massachusetts Turnpike crossing to the existing WMECo 115 kV #1512 line, Route Variation 1a modified follows the same route as for Route Variation 1c (id.).

For either Route Variation 1a modified or Route Variation 1c, the Companies expect to establish a construction staging yard south of the Massachusetts Turnpike, and another construction staging yard north of the Massachusetts Turnpike (Exh. EFSB-G-9). The Companies stated that they are considering using a gravel pit area just south of the Massachusetts Turnpike, and the Russell Biomass site itself, as the two construction staging areas (id.).

As noted, Route Variation 1a modified and Route Variation 1c end at the existing WMECo 115 kV #1512 line at the same location (Exhs. JP-1, at 1-11, 1-12; EFSB-G-1(4)). The Companies would construct a switching station to the side of the ROW near this intersection. The Companies have identified two specific locations for such a switching station (Exh. JP-1, at 4-17 through 4-18). Switching Station S-1 would be on land currently owned by the Westfield Sportsmen's Club; Switching Station S-2 would be on land currently owned by the Boys & Girls Club of Greater Westfield (Exh. EFSB-G-7). The Companies indicated a modest preference for Switching Station Alternative S-2, but requested flexibility to use either (Exh. EFSB RR-4; Tr. 1, at 48-49). For either switching station location, the existing WMECo #1512 115 kV line would be split and looped in and out of the switching station (Exh. EFSB-G-8). The looped line would cross above the existing Westfield Gas and Electric Company 69 kV line, which is located to the north of the existing WMECo 115 kV #1512 line (id.). A permanent fence would be installed around the switching station (Exh. JP-1, at 1-10). The Companies stated that an access road would be built to the switching station site (id.). A staging yard would be established near the switching station for construction purposes (Exh. EFSB-G-9).

The alternative route would follow U.S. Route 20 to a switching station that would be constructed west of the location where the existing WMECo 115 kV #1512 line crosses U.S. Route 20 (Exh. JP-1, at 1-13). At the northern end, the alternative route would start at the Russell Biomass facility location, cross the Westfield River, and follow streets through the residential neighborhoods of Russell Village to reach U.S. Route 20 (*id.*). The alternative route is 5.2 miles long; it is located in Russell and Westfield and does not enter Montgomery (*id.* at 1-13, 1-14, 5-36).

D. Environmental Impacts, Cost and Reliability of the Proposed and Alternative Facilities

1. Standard of Review

In implementing its statutory mandate to ensure a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost, the Siting Board requires a petitioner to show that its proposed facility is sited at a location that minimizes costs and environmental impacts while ensuring a reliable energy supply. To determine whether such a showing is made, the Siting Board requires a petitioner to demonstrate that the proposed site for the facility is superior to the noticed alternatives on the basis of balancing cost, environmental impact, and reliability of supply. Cape Wind Decision at 64; CELCo Decision at 334; MMWEC Decision at 127.

An assessment of all impacts of a proposed facility is necessary to determine whether an appropriate balance is achieved both among conflicting environmental concerns as well as among environmental impacts, cost and reliability. A facility that achieves the appropriate balance thereby meets the Siting Board's statutory requirement to minimize environmental impacts at the lowest possible cost. Cape Wind Decision at 64; CELCo Decision at 335; MMWEC Decision at 128.

The Siting Board recognizes that an evaluation of the environmental, cost and reliability trade-offs associated with a particular proposal must be clearly described and consistently applied from one case to the next. Therefore, in order to determine if a petitioner has achieved the proper balance among various environmental impacts and among environmental impacts, cost and reliability, the Siting Board must first determine if the petitioner has provided sufficient

information regarding environmental impacts and potential mitigation measures to enable the Siting Board to make such a determination. The Siting Board then can determine whether environmental impacts would be minimized. Similarly, the Siting Board must find that the petitioner has provided sufficient cost and reliability information in order to determine if the appropriate balance among environmental impacts, cost, and reliability would be achieved. Cape Wind Decision at 53; CELCo Decision at 336; MMWEC Decision at 128.

Accordingly, in the sections below, the Siting Board examines the environmental impacts, reliability, and cost of the proposed facilities along the Petitioners' primary and alternative route to determine: (1) whether environmental impacts would be minimized; and (2) whether an appropriate balance would be achieved among conflicting environmental impacts as well as among environmental impacts, cost and reliability. In this examination, the Siting Board compares the primary and alternative routes to determine which is superior with respect to providing a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

2. Environmental Impacts

a. Land Resources

Use of the primary route would require removal of trees to create a 100-foot corridor along the rocky slopes of Shatterack and Tekoa Mountains (Exh. JP-1, at 5-22). South of the Massachusetts Turnpike, the primary route runs along an existing easement approximately 1.9 miles from the edge of the Massachusetts Turnpike to the vicinity of switching stations S-1 and S-2 (id. at 5-23). Of this route segment, approximately 0.6 miles are cleared to a width of 100 feet and 0.7 miles are cleared to a width of 70 feet (Exh. EFSB-LU-1). Another 0.5 miles were cleared at one time but would require re-clearing; 0.1 miles would require initial clearing (id.). The Petitioners indicated that they would also remove so-called "danger" trees, trees that might fall on or near the proposed 115 kV transmission line (id.). The Petitioners explained that removal of such trees would occur based on safety and at the discretion of the arborist, to the extent that the Petitioners had rights to control trees located outside their easement (id.).

With respect to land resource impacts along Route Variations 1a modified and 1c, the Petitioners indicated that Route Variation 1c would require less tree clearing, and would have

slightly less impact on water and wetlands, compared to Route Variation 1a modified; however, Route Variation 1a modified would have fewer visual and aesthetic impacts, and slightly less impact with respect to archaeological resources (Exh. EFSB-SS-12).

The Petitioners stated that portions of the primary route are mapped as rare and endangered species habitat by the NHESP (Exh. JP-1, at 5-28). Protected species in this general area include four species found in the Westfield River, plus Houghton's flat sedge, smooth rock-creep, spiked false-oats, eastern box turtle, and another vertebrate species (Exhs. JP-1, at 5-26; EFSB-LU-4; Tr. 3, at 423-431). The Petitioners indicated that Route Variation 1a modified was developed in consultation with NHESP to minimize impacts to rare and endangered species (Exh. EFSB-SS-14). Based on consultation with NHESP, the Petitioners stated that construction of the proposed project along the primary route would avoid areas frequented by endangered species (Tr. 1, at 94-95). The Petitioners also asserted that clearing transmission line corridors could enhance habitat quality for rare species that rely on meadow and scrub habitats (Exh. JP-1, at 5-27).

The Companies indicated that NHESP was concerned that if Route Variation 1c were selected, the transmission corridor would attract increased usage by off-road vehicles, which could have an adverse impact on endangered species located on the slopes of Shatterack Mountain and Tekoa Mountain (Exh. JP-1, at 5-28 to 5-29). The Petitioners indicated that NHESP's concern is lessened with route variations lower on the mountain slopes, such as Route Variation 1a modified (Exhs. JP-1, at 5-31; EFSB-RV-23, at 2). The Companies stated that they propose installation of gates, boulders, and barriers to discourage unauthorized off-road vehicle use (Exh. EFSB-LU-7).

The Companies also stated that there are no mapped protected species and habitat at the switching station sites proposed for the primary route (Exh. JP-1, at 5-30).

With respect to the alternative route, the Companies asserted that habitat of creeper mussel in the Westfield River could be affected by a loss of tree canopy cover along the edges of U.S. Route 20 (*id.*).

The Massachusetts Historical Commission ("MHC") stated that a Native American archaeological site has been recorded within the primary route along the existing transmission line ROW in Westfield (Exh. PA-7(S)(1)). MHC has requested that the Petitioners conduct an

archaeological survey for the Project, results of which would be used in order to avoid, minimize, or mitigate adverse effects to any significant archaeological resources identified (*id.*). The Companies stated that Route Variation 1a modified is not expected to have associated archaeological resources and that disturbance to archaeological resources along Route Variation 1c can be avoided (Exhs. JP-1, at 5-54; EFSB-RV-23, at 4; Tr. 3, at 435-436). In a May 10, 2008 communication, the MHC indicated three recorded ancient Native American archaeological sites along the alternative route (Exh. JP-4, at App. L). The alternative route would also affect the Russell Village Historic District (Exh. JP-1, at 5-52). The Petitioners asserted that the primary route would therefore be preferable to the alternative route with respect to impacts to historical or cultural resources (Exh. JP-1, at 5-54).

The Petitioners stated that Shatterack and Tekoa Mountains are historically prone to fire and that some of these fires have apparently been caused by CSX railroad activity (Exhs. EFSB-LU-3; EFSB-RR-15). The Petitioners stated that fire damage to transmission lines is very unusual in the eastern United States (Tr. 3, at 460-462). According to the Petitioners, the cleared right-of-way, which would remove surrounding wood fuel, would reduce any expected damage to poles in case of fire (Exh. EFSB-LU-3).

b. Wetlands and Water Resources

The Companies stated that the primary route crosses a number of small, flashy stream channels (where significantly increased flows follow a precipitation event, with return to pre-event state immediately thereafter), including Shatterack Brook on the slopes of Shatterack and Tekoa Mountains (Exh. JP-1, at 5-8). Prominent wetlands along other portions of the primary route, south of the Massachusetts Turnpike, include Moose Meadow Brook, Cooley Brook, and several vegetated wetlands areas (*id.* at 5-9). No poles would be placed in wetlands, and the Companies presented plans to minimize wetlands impacts from accessing pole locations (EFSB-RR-5; Tr. 1, at 53-54, 94).¹¹ The Companies indicated that there are existing access roads that could be used to cross all but two of the vegetated wetlands located between the Turnpike and West Road in Westfield (Exh. JP-1, at 5-11). The Companies anticipated that at Shatterack

¹¹ The proposed transmission line would include single and multiple pole structures, spaced 300 to 500 feet apart (Exh. JP-3, at 3).

Brook, Moose Meadow Brook, and the additional intermittent streams along the primary route, equipment access could be accomplished with timber mats or similar devices; they asserted that construction equipment would thereby be able to cross without impacting stream bottoms or banks (*id.* at 5-10). The Companies also stated that both switching station locations for the primary route have adequate upland on which to construct a switching station (*id.* at 5-12).

The Companies stated that next to the Russell Biomass site the alternative route would cross the Westfield River and its floodplain as well as Riverfront Area; vegetation management in the Riverfront Area would be required at the river crossing (Exh. JP-1, at 5-12). In addition, trees located within the Riverfront Area of the Westfield River along U.S. Route 20 would be cleared and vegetation management would be required there (*id.* at 5-24). The Companies stated that the alternative route would have impact on more wetland resource acreage than the primary route, and therefore asserted that the alternative route would have greater impacts than the primary route (*id.* at 5-15). With respect to water supplies, the Companies asserted that neither the primary route nor the alternative route would affect drinking water supplies (*id.* at 5-17).

c. Visual Impacts

The Petitioners asserted that the transmission line along the primary route may be visible at various locations along the sideslopes of Shatterack and Tekoa Mountains parallel to the Westfield River, both by residents and from areas along U.S. Route 20 (Exh. EFSB-PA-7, at 5). The Companies stated that due to the high percentage of deciduous forest in the area, visual impacts would be more prevalent during the late fall through late spring seasons (*id.*).

The Companies indicated that Tekoa Mountain in Russell and Montgomery presents a dramatic view, seen from the Massachusetts Turnpike (Exh. JP-1, at 5-49; Tr. 1, at 82). The Westfield River valley is valued for its aesthetic qualities; the section of U.S. Route 20 extending north of the Massachusetts Turnpike is designated as Jacob's Ladder Trail, a National Scenic Byway ("Scenic Byway") (Exh. JP-1, at 5-49, 5-50; Tr. 1, at 82). The Companies indicated that the Jacob's Ladder Trail Scenic Byway, Inc. had expressed concern about the visual impact on the people in Russell and the Scenic Byway resulting from clearance of vegetation for the proposed transmission line along the primary route (Exh. JP-4, at App. L).

The Petitioners stated that transmission structures would be all or mostly wooden, approximately 60 to 110 feet tall (Exh. EFSB-V-3). The Companies maintained that, in the Tekoa Mountain area, trees adjacent to the route would provide some visual screening for the transmission lines, and added that route variations lowest on the mountain slopes (e.g., Route Variation 1a modified) would have less visual impact than routes higher on the slope (Exh. JP-1, at 5-50). The Companies estimated that in the winter, when deciduous trees are in leaf-off condition, the transmission line might be visible through adjacent trees from 50 to 75 homes in Russell, mostly in Woronoco Village and the east side of Russell Village (Exhs. EFSB-V-1; EFSB-V-2). According to the Petitioners, the line section close and parallel to the Massachusetts Turnpike on Tekoa Mountain in Montgomery would be well screened by taller trees (Exh. JP-1, at 5-50). The transmission lines would be visible, however, where they cross over the Massachusetts Turnpike (Tr. 1, at 83).

South of the Massachusetts Turnpike, the line would be visible from twelve homes in Westfield, near West Road (Exh. EFSB-V-2). The Companies indicated that the route near the line's terminus, whether at Switching Station S-1 or Switching Station S-2, would be in an undeveloped area, surrounded by forested land (Exh. JP-1, at 5-50). The Companies therefore anticipated no visual impacts from the switching station (id.).

With respect to the alternative route, the Petitioners asserted that from the perspective of an observer following the Scenic Byway directly along U.S. Route 20, the line would likely have more severe visual impacts than with use of the primary route (Exh. JP-1, at 5-51).¹² The alternative route would also visually impact residential areas including Russell Village and built-up segments of U.S. Route 20, notably from the Russell-Westfield line to the southern terminus (id.). The Companies asserted that the primary route, along any variation, is significantly superior to the alternative route with respect to visual impacts (id. at 5-52).

¹² There is an existing distribution line along U.S. Route 20, but the Companies assert that industry practice requires separate structures for the transmission line (Exh. JP-1, at 5-51).

d. Noise

Construction of the proposed Project would have potential noise impacts. The Petitioners indicated, however, there are few homes near the primary route, and only six within 250 feet (Exh. EFSB-A-3). Of residences close to the primary route, one is in Russell, east of the CSX Railroad; others are east of the Westfield River, separated from the primary route by the railroad, which is heavily used (Exh. JP-1, at 5-47, 5-49). In addition, there are four homes adjacent to the existing right-of-way of the primary route where it crosses West Street in Westfield (Exh. JP-1, at 5-47). Switching Station sites S-1 and S-2 are in undeveloped areas of Westfield, distant from any residences (Exh. JP-1 at 5-50). The Companies stated that work would normally be restricted to 7 a.m. to 5 p.m. on weekdays, and that equipment would be maintained in good working order (Exh. EFSB-A-2).

According to the Petitioners, construction on the primary route would likely entail helicopter use for three or four days (Exh. EFSB-T-3; Tr. 2, at 316-319). The Companies asserted that tree clearing and blasting in remote areas would result in low volume noise in residential and community areas, compared to other noise sources in the valley (Tr. 2, at 316-320).

The Companies would limit noise from off-road vehicles along the primary route by discouraging their use along the ROW with measures such as gates, boulders, and barriers (Exhs. EFSB-LU-7; EFSB-G-5(S) at App. F).¹³

The Petitioners indicated that the alternative route traverses more populated and developed areas than the primary route, including those in Russell Village and along U.S. Route 20 (Exh. JP-1, at 5-36, 5-37). These areas include residences, businesses, industries, a former golf course, and forest lands (*id.*). The alternative route also crosses the CSX railroad (*id.* at 5-45). The Petitioners stated that residences would be subject to construction noise during normal daytime work hours (*id.* at 5-48). The switching station for the alternative route would also be located adjacent to residences (*id.* at 5-37). The Companies stated that construction noise impacts would be greater along the alternative route than the primary route (*id.* at 5-49).

¹³ WMECo would, however, maintain authorized access to the ROW area for wildfire control (Exh. EFSB-G-5(S) at App. F).

The Petitioners asserted that operational noise impacts from the transmission lines and switching stations would be minor (id.).

e. Traffic

The proposed Project along the primary route would cross two roadways – the Massachusetts Turnpike and West Road (Exh. JP-1, at 5-44). The Companies stated, however, that significant coordination with the Massachusetts Turnpike Authority would be required to install structures and wires at that crossing (id.). The Companies stated minimal impacts are anticipated to traffic flow on West Road (id.). The primary route does not cross the CSX railroad, but construction access across the CSX railroad would be required (id.). The Companies stated that access to proposed Switching Station S-1 would be from the east via Furrowtown Road and part of which is owned by the Westfield Sportsmen's Club (id. at 5-45). Access to proposed Switching Station S-2 would either be via Furrowtown Road or from Pochassic Road to the southwest (id.). The Companies stated that minor local traffic impacts are anticipated from construction access to either of the switching station locations (id.).

With respect to the alternative route, the Companies stated that construction activities at the railroad crossing would have to conform to CSX construction and access requirements (Exh. JP-1, at 5-46). The Companies stated that construction along U.S. Route 20 would significantly affect traffic, with reduced speeds, restriction of travel lanes, and a police detail required over the anticipated eight-month construction period (id. at 5-46, 5-47). The Companies stated that, compared to the primary route, the alternative route would have significantly greater traffic impacts (id.).

f. Electric and Magnetic Fields

The Companies estimated the strength of electric and magnetic fields along the primary route that would result (a) for the portion of the ROW to be occupied by the proposed transmission line only, and (b) for the portion where the proposed line would parallel the existing 23 kV transmission line (Exhs. JP-1, at 5-55; EFSB-E-1; EFSB-E-1(1)).¹⁴ The Companies'

¹⁴ The Petitioners provided their estimates based on the following assumptions: a radial line configuration of a single circuit 115 kV line plus five percent variation for assumed

analysis showed maximum edge-of-ROW EMF impacts along the segment of the ROW to be occupied by both lines with the proposed 115 kV line 40 feet from the north edge, including the crossing of West Street in Westfield (Exhs. EFSB-E-1; EFSB-E-1(1); EFSB-E-2). Based on estimates provided by the Petitioners, maximum electric fields along the ROW segment occupied by both lines would be approximately 0.375 kilovolts/meter (“kV/m”) and edge-of-ROW maximum magnetic fields would be 16.384 milligauss (“mG”) (Exhs. EFSB-E-1; EFSB-E-1(1)). The Companies indicated that EMF extending away from the proposed transmission line would be the same along the alternative route as the primary route (Exh. JP-1, at 5-53 to 5-54).

The Companies also provided magnetic field level estimates for four homes located at distances ranging from 19 to 172 feet from WMECo’s ROW in Westfield (Exh. EFSB-E-2). The closest home to the ROW would be approximately 47 feet from the proposed 115 kV transmission line (*id.*). According to the EMF estimates provided by the Petitioners, magnetic fields would be 10.32 mG at the closest home; the maximum magnetic fields at the other homes would range from 0.61 mG to 2.41 mG (*id.*).

g. Underground Design Alternative

The Petitioners considered the design alternative of underground construction of the primary route under two different scenarios: (1) underground construction of the entire 5.1 miles of the primary route (the “primary route underground design”); and (2) underground construction of the approximately 1000 foot portion of the primary route located in Montgomery (the “Montgomery underground design”). The Petitioners also considered the design alternative of underground construction of the alternative route along streets in Russell Village and U.S. Route 20 (the “alternative route underground design”).

voltage levels; a Russell Biomass projected load of 50 MW (maximum net output) assuming a ninety percent power factor; the two transmission lines separated within the ROW by 35 feet, with the 115 kV circuit approximately 40 feet from the edge of the 100-foot ROW; and a 70-foot-or-higher pole for the 115 kV transmission line, with the lowest arm at least 22 feet above ground (Exh. EFSB-E-1). The Companies stated that they performed calculations using Southern Californian Edison’s Fields 2.0 Program at 3.28 feet above ground (*id.*).

i. Position of the Companies Regarding Underground Design of the Primary and Alternative Routes

The Petitioners considered and rejected the primary route underground design based on cost, environmental, maintenance and other impacts (Exh. EFSB-PA-4).

The Petitioners identified some advantages of the primary route underground design, including: the ability to install line in locations with space constraints for overhead construction; minimization of visual impacts; and reduction of required ROW and ROW clearing (Exh. EFSB-PA-4). The Petitioners asserted, however, that the underground design would be disadvantageous in that: construction and maintenance would be more difficult; costs of transmission construction would be five to ten times more expensive; faults would be more difficult to detect, and more costly and time-consuming to repair; and disturbances to wetlands and rare plant and endangered species would be more difficult to avoid and greater overall (Exh. EFSB-PA-4; Tr. 2, at 274). With respect to an underground line along Route Variation 1a modified, the Petitioners asserted that they would need to return to NHESP to discuss impacts of underground construction on two endangered species in particular, a “data-sensitive” invertebrate and the eastern box turtle (Tr. at 379-380, 491-492).

The Petitioners identified similar advantages and disadvantages for the alternative route underground design (Exhs. EFSB-PA-4; EFSB-PA-7). As an added advantage, they indicated that vegetation management requirements would be reduced or eliminated (*id.*). As added disadvantages, however, they stated that traffic management concerns would be greater with respect to both crossing the Westfield River, which would require use of an underground directional bore, and construction and maintenance of an underground line (Exhs. EFSB-PA-4; EFSB-RR-8).

ii. Arguments of the Parties Regarding the Montgomery Underground Design

(A) Position of the Town of Montgomery

The Town of Montgomery argued for mitigating impacts of the proposed Project by requiring that the transmission line be placed underground for the approximately 1000 feet of the primary route that would run through Montgomery (Montgomery Initial Brief at 2).

Montgomery indicated that, if not built underground in Montgomery, 75-to-100 foot poles and 1000 feet of transmission line for the proposed project would affect views across the southern ridge of Tekoa Mountain, a strikingly scenic wildlife area (Exhs. TOM-RV-1-1; TOM-RV-2; TOM-V-7(1); Tr. 1, at 81). Montgomery stated that other scenic impacts would occur due to the clearing in Montgomery of a 100-foot-wide easement corridor over Tekoa Mountain and the clearing of 12,000 square feet of vegetation, including “danger trees” – trees that could fall onto a transmission line and cause an outage -- outside the corridor (Tr. 2, at 385; Tr. 3, at 502).

Montgomery cited testimony from the Companies’ witnesses in arguing that an underground line in Montgomery would reduce visual impacts and tree clearing there (Exh. EFSB-V-1; Tr. 2, at 385; Tr. 4, at 641-644). Again citing the Petitioners’ testimony, Montgomery asserted that there would be no impact to wetlands or to rare or endangered species in Montgomery regardless of whether the transmission line were placed above or below ground (Tr. 3, at 483, 485). Montgomery also questioned the proposed use of herbicides and pentachlorophenol for control of vegetation under the proposed overhead transmission line and preservation of supporting wood poles, respectively (Exhs. TOM-W-3-1; EFSB-W-4; EFSB-LU-3; Tr. 3, at 518-523).¹⁵ Montgomery asserted that undergrounding the transmission line in Montgomery would avoid potential environmental impacts from the use of herbicides and pentachlorophenol (Montgomery Initial Brief at 9-10).

Montgomery argued that testimony by the Companies’ witnesses indicated that placing the line underground in Montgomery would not change the cost ranking of the proposed Project; that underground construction in Montgomery would add \$2,370,000 to the \$17,000,000 cost for constructing the entire line overhead; and that certain cost savings – such as saving on vegetation management expenditures -- would be realized with an underground line (Exh. JP-1, at 5-59; Tr. 2, at 384-385; Tr. 4, at 742-743; Tr. 5, at 871). Montgomery also argued that the cost of underground construction in Montgomery should be reviewed in light of the fact that it would be

¹⁵ The Town noted that the Companies’ witnesses were uncertain whether the application of herbicides would harm endangered plant species within Montgomery or whether pentachlorophenol is harmful to rare and endangered plant or animal species (Tr. 3, at 5-18-523; Montgomery Initial Brief at 9). The Town also expressed concern about the environmental impacts of pentachlorophenol in the event of a fire (Exh. EFSB-LU-3; Montgomery Initial Brief at 9).

built as part of Route Variation 1a modified, a relatively low cost route among the route alternatives considered (Montgomery Initial Brief at 11).

Montgomery also asserted, based on the testimony of the Petitioners' witnesses, that constructing the transmission line underground in Montgomery would not jeopardize financing of the proposed project or harm the public interest or public convenience as it relates to the instant case (Exh. EFSB-T-8; Tr. 4, at 645-647; Montgomery Initial Brief at 11). Montgomery argued, in addition, that even if the cost increase were passed on to the rate payers indirectly, the increase would be sufficiently spread out over time and number of customers so as to cause no appreciable public detriment (Exh. EFSB-T-8; Montgomery Initial Brief at 11).

With respect to reliability, Montgomery argued that placing as much of the proposed transmission line as possible underground would enhance the overall reliability of the system (Tr. 2, at 386-387). According to Montgomery, an underground transmission system would be less prone to damage from the elements, lightning or vegetation (*id.*). Montgomery also asserted that maintenance was not a significant issue when considering whether to place only the Montgomery portion of the proposed line underground (*id.*). Montgomery based its assertion on testimony that having a small portion of the line underground would reduce the time necessary to detect and address faults (*id.*). Montgomery further noted testimony that if an underground line in Montgomery failed, the location of the failure would be known (*id.*). WMECo would not have to excavate the line; rather, by way of replacement, it could pull a new cable kept on hand (*id.*). Montgomery also asserted that an underground line would limit fire damage and thus contribute to public safety (*id.*).

Finally, Montgomery addressed whether the transmission line easement granted to WMECo for use of land in Montgomery would allow for the construction of an underground line (Exh. TOM-RR-1-2; Montgomery Initial Brief at 14). Montgomery asserted that the instant case parallels another case, Western Massachusetts Electric Co. v. Sambo's of Massachusetts, Inc., 8 Mass. App. Ct. 815 (1979), in which WMECo's right to lay underground lines in an easement corridor was ultimately protected against interference from a servient landowner (Montgomery Initial Brief at 14). Montgomery argued that, therefore, the Massachusetts Appeals Court had already resolved the Petitioners concerns with respect to constructing underground in its transmission line easement (*id.*).

(B) Position of the Companies

The Petitioners asserted that the disadvantages identified for the underground primary route alternative all apply within the Montgomery segment (Exhs. EFSB-PA-4; EFSB-PA-12; Tr. 379-380; Companies Brief at 35-43). The Petitioners asserted that constructing the Montgomery portion of the proposed line underground would add several million dollars to costs based on their estimates for the underground cable and trenching and the need for two additional termination structures (Tr. 2, at 388-389). According to the Petitioners, per foot estimates for the Montgomery segment of the proposed line would be greater than those for the entire line: the Montgomery segment would not benefit from the same economies of scale (EFSB-RR-7; Tr. 5, at 867-873).

With respect to visual impacts, the Companies argued that the two above-ground transition structures for an underground build would be larger and less aesthetically acceptable than typical overhead transmission line structures which, along Route Variation 1a modified, would largely be shielded by trees (*id.*). In further argument that the impacts associated with the proposed overhead line were minimized, the Companies asserted that (a) no environmental impacts to wetlands or from herbicide or preservative use were anticipated, and (b) the current proposal was consistent with historic use of the proposed construction location in Montgomery because a WMECo line had gone along the Tekoa Mountain through Montgomery for many years (Exh. JP-1, at Fig. 1-1, 1-2; Companies Initial Brief at 42). The Companies also asserted that clearing vegetation along its ROW for the proposed overhead line would remove a potential source of combustion and reduce the likelihood of fire damage (Exh. EFSB-LU-3(c)). Finally, the Companies cited Costello v. Department of Public Utilities, 391 Mass. 527, 540-41 (1984) to support its position that the Massachusetts Supreme Judicial Court has previously held that a decision by the Department not to require underground construction of a proposed transmission line is neither arbitrary nor capricious given ample record evidence that constructing the line underground would be prohibitively costly (Companies Initial Brief at 42).

h. Companies' Summary of Environmental Impacts of the Primary and Alternative Routes

According to the Companies' evaluation, the alternative route would have more environmental impacts than the primary route, including: more wetland resource impacts; more visual impact from tree clearing impacts; more land use impacts and conflicts with residential areas, significantly greater traffic impacts, construction noise impacts for more residents, greater visual impacts from transmission structures, and greater impacts on the Russell Village Historic District (Exh. JP-1, at 5-15, 5-25, 5-34, 5-38, 5-46, 5-49, 5-52). In addition, the Companies anticipated greater chance of encountering hazardous release sites along the alternative route (*id.* at 5-58). On the basis of its evaluation, the Companies concluded that any of the variations of the primary route would be superior to the alternative route with respect to environmental impacts (*id.*).

i. Analysis of the Environmental Impacts of the Primary and Alternative Routes

i. Analysis of Underground Design Alternatives

The record shows that use of an underground design has been considered as a means to mitigate environmental impacts of the proposed overhead line on part or all of the primary route, and on the alternative route. With respect to the primary route, the Montgomery underground design would avoid a length of overhead line in a prominent view of Tekoa Mountain. However, much of the line length would be at least partially screened if built overhead, and the two overhead-underground transition structures required for this alternative would be potentially intrusive. In addition, the record shows that underground construction would be disadvantageous based on its potentially greater disturbance to wetlands, rare plants and endangered species. Thus, the record shows that overall, constructing the proposed transmission line underground in Montgomery would not significantly reduce its associated environmental impacts, although some impacts might be increased or decreased relative to impacts of the same portion of the Project constructed overhead. The record shows that, with respect to the full primary route design, the above analysis of environmental effects with use of the Montgomery underground design applies equally, and would affect a more extended area. Based on the record, the Siting Board concludes

that constructing the proposed transmission line underground along part or all of the primary route would not significantly reduce its associated environmental impacts, despite the possibility that some impacts might be less compared to those of constructing overhead along the same route.

With respect to the alternative route, the Siting Board notes that the choice of underground design versus the proposed overhead route raises some different trade-offs. The record shows that relative to the primary route (with overhead construction), the alternative route underground design would provide both visual impact advantages based on avoidance of visible overhead lines, and land resource advantages based on avoidance of a separate new permanent overland ROW. We note that the land resource advantage of the alternative route is similar with use of either an overhead or underground design. Any visual advantage of this route, however, is possible only with an underground design, given that with use of the alternative route on-street overhead lines would run proximate to residences and a Scenic Byway. The alternative route underground design also would provide some benefits over the primary route with respect to temporary construction impacts, including impacts on land and water/wetland resources. The alternative route underground design would likely entail greater construction and maintenance traffic impacts, however, offsetting construction period benefits to land and water/wetland resources. Overall, given its permanent impact advantages, the alternative route underground design would be preferable to the primary route with respect to environmental impacts.

The record shows underground alternatives would be more costly, and added costs for the partial undergrounding with the Montgomery underground design would be an estimated \$2,370,000. The cost increment to construct completely underground along either the primary or alternative route would be \$68,000,000 or more – that is, a five-fold or more increase in the cost for overhead transmission along the primary route. Compared to a total cost of \$24,900,000 to \$28,500,000 for the proposed transmission and transfer facility facilities using the primary route, the Montgomery underground alternative would increase cost by less than 10%, while the primary route and alternative route underground designs would increase costs by at least 200%.

The Siting Board recognizes that added costs for underground construction, particularly within the range of the Montgomery underground alternative, could be found to be consistent with the Siting Board's standard of review if warranted due to environmental or reliability

advantages. Here, however, the record shows neither the primary route underground design nor the Montgomery underground design would provide clear net environmental advantages over use of an overhead design on the primary route. The record further shows that the alternative route underground design may provide some net environmental benefits over use of an overhead design on the primary route; however, the impacts avoided would not be severe and the added costs would be very substantial. Thus, the benefits of underground construction do not rise to the level of requiring the Petitioners to construct their proposed transmission line underground along any route, in its entirety or in Montgomery alone. Consequently, the Siting Board finds that constructing the proposed transmission line without use of any alternative underground design would be consistent with the minimization of environmental impacts, consistent with minimizing costs.

ii. Analysis of the Primary and Alternative Routes with Overhead Design

With respect to land resource impacts, the record shows that the primary route would require clearing all of the proposed 100-foot ROW for approximately 3 miles, extending from the proposed biomass generating facility site in Russell to the gravel pit south of the Massachusetts Turnpike in Westfield. In addition, existing cleared ROW would be widened to 100 feet in some portions of the remaining two miles of the route in Westfield, where woodlands are present. Clearing requirements would be comparable for Route Variations 1a modified and 1c, although Petitioners observed that use of Route Variation 1c would entail clearing trees that are less mature based on the route's historical use for a ROW and past fire loss. In terms of permanent impact, the result of establishing new project ROW would be replacement of the cleared woodland habitat with low vegetation.

The record indicates that, while the primary route traverses habitat of some endangered species, any such species along the route would be minimally affected by the project. Further, in response to landowner concerns about overall habitat impacts, the Petitioners agreed to pursue a route variation – Route Variation 1a modified – that would run near the existing CSX line at the base of the mountainside, to avoid or limit possible habitat disturbance from traversing a more remote upslope area. With respect to historic resources, the record indicates the primary route

would contain one archaeological resource site with use of Route Variation 1a modified, and two such sites with use of Route Variation 1c, and for either variation the Petitioners would work with MHC to ensure the project does not compromise archaeological resources.

The alternative route along U.S. Route 20 would require clearing overland ROW at limited locations -- the crossing of the Westfield River in Russell and the off-road location of the transfer facility in Westfield. Predominantly following streets, the alternative route also would require clearing and trimming of roadside trees and vegetation. Although requiring substantially less ROW clearing than the primary route, the alternative route is proximate to the Westfield River at some points and, like the primary route, traverses habitat of endangered species. Regarding land use impact, the alternative route, with the overhead design the Petitioners present, would have some impact relating to incompatibility with adjacent uses -- both residential use and use as a Scenic Byway along U.S. Route 20. The alternative route also traverses a historical area, Russell Village Historic District, while the primary route affects no such area. We note that the land use impact of running overhead lines in residential, historic or scenic byway areas relates primarily to the lines' visibility, which is further addressed in our review of visual impacts, below. Overall, with use of overhead construction as presented, the greater ROW clearing impacts of the primary route would be largely offset by greater land use incompatibility impacts of the alternative route. Accordingly, based on the use of an overhead design, the Siting Board finds the land resources impacts of the primary route and the alternative route would be comparable.

As discussed, habitat impacts of the primary route would be less with use of Route Variation 1a modified, and landowner MADFW favors use of that line location. The Siting Board directs the Petitioners to pursue actively the use of Route Variation 1a modified; however, the Petitioners may use Route Variation 1c if use of Route Variation 1a modified is infeasible. With this condition, the Siting Board finds that the land resource impacts of the proposed facilities along the primary route with overhead design would be minimized.

With respect to water resources and wetlands, the record indicates that use of the primary route would include some impact from construction equipment crossing intermittent streams. The record shows that the Companies would avoid stream and wetland crossings to the extent possible, and would use swamp mats or other devices to cross resource areas where unavoidable.

The alternative route would require vegetation cutting at one location along the Westfield River, including within Riverfront Area, but would have no water resources impacts. The Companies' assertion that the primary route would have less water resources impact than the alternative route is not persuasive. While the acreage of affected Riverfront Area may be higher along the alternative route, the primary route work would include vehicles crossing streambeds.

The Siting Board finds that the wetlands and water resources impacts of the primary route and the alternative route would be comparable. The Siting Board finds that wetlands and water resources impacts of the proposed facilities along the primary route with overhead design would be minimized.

With respect to visual impacts, the proposed facilities along the primary route would include 60-110 foot high transmission structures of predominantly wooden, monopole design, together with a switching facility, sited in largely undeveloped areas. North of the Massachusetts Turnpike, the route would traverse lower slopes of the Shatterack and Tekoa Mountains, and the new ROW and line would be closely visible only to users of adjacent MADFW land. The record shows the line also would be visible in the distance or through trees from some local viewpoints, including two residential neighborhoods in Russell as well as the scenic approach toward Tekoa Mountain on the Massachusetts Turnpike. At the same time, the line generally would be screened by adjoining woods from areas of Russell and Westfield along the river valley, including U.S. Route 20 and adjoining land uses. The record indicates Route Variation 1a modified would be located at lower elevation and amid more mature woods, compared to Route Variation 1c, and therefore would have a lower visual profile. Continuing south along the remainder of the primary route in Westfield, visual impacts would include some open views of the proposed line – notably at the new transmission crossing of the Massachusetts Turnpike, and within the segment of the route running parallel to an existing distribution circuit, an area of open land with some residences near West Road.

The record shows that the alternative route, with the construction of an on-street overhead line as proposed by the Companies, would have direct visual impacts for much of its length on U.S. Route 20, a recognized scenic corridor, and at residential locations adjacent to U.S. Route 20. If constructed along the primary route, on the other hand, the proposed facilities would affect a noted scenic view of Tekoa Mountain from the heavily traveled Massachusetts Turnpike;

relative to the alternative route, however, fewer locations would be affected and impacts would be mitigated by distance and partial screening. Thus, there would be different, but comparable visual impacts with construction of the proposed facilities along either the primary or alternative routes. The Siting Board therefore finds, based on use of an overhead design, that the visual impacts of the primary route and the alternative route would be comparable.

As discussed, visual impacts of the primary route would be less with use of Route Variation 1a modified, and landowner MADFW favors use of that line location. The Siting Board notes the proposed line would be visible at residences along the route near West Road in Westfield. The Siting Board directs the Petitioners to offer to provide vegetative plantings in edge-of-ROW or off-ROW locations on residential properties near West Road, where effective to screen views of the proposed transmission line. With the above conditions related to use of Route Variation 1a modified, and provision of requested vegetative plantings near West Road, the Siting Board finds that the visual impacts of the proposed facilities along the primary route with overhead design would be minimized.

The record shows that construction noise would have more impact along the alternative route than the primary route. Use of helicopters would create the most noticeable noise on the primary route, but is warranted as a cost-effective measure that would likely minimize impacts from use of more ground level equipment. The Siting Board finds that the primary route is preferable to the alternative route with respect to noise impacts, and that noise impacts of the proposed facilities along the primary route would be minimized.

The record shows that almost all of the work on the primary route would be away from traveled roads, while work on the alternative route would interfere with the flow of traffic on U.S. Route 20 for the duration of project construction. Therefore, the Siting Board finds that the primary route is preferable to the alternative route with respect to traffic impacts, and that traffic impacts of the proposed facilities along the primary route would be minimized.

The record indicates that electric and magnetic fields at the edge of the ROW of the transmission line would be approximately 0.375 kV/m and 16.384 mG, respectively. In a previous review of proposed transmission line facilities, the Siting Board accepted edge-of-ROW levels of 85 mG for magnetic fields. 1985 MECo/NEPCo Decision, 13 DOMSC 119, at 228-242. The Siting Board has used this edge-of-ROW level in subsequent facility reviews to

determine whether anticipated magnetic field levels are unusually high. See Massachusetts Municipal Wholesale Electric Company, EFSB 07-6, at 57-58 (2008) (“MMWEC Decision”); Cape Wind Decision, 15 DOMSB, at 131 (2005); CELCo Decision, 12 DOMSB 305, at 348, 349; Norwood Municipal Light Department, 5 DOMSB 109, at 145 (1997).

The Companies maintained that EMF levels at particular distances from the transmission line would be similar along the primary or alternative route, but provided no estimates specific to the location of the current roadway or residences along the alternative route. We note, however, the proposed transmission line along the alternative route would be proximate to numerous homes, while the proposed line along the primary route would be within 47 feet of one home on West Road and otherwise at significantly greater distances from any homes.

The Siting Board notes that the primary route is located predominately away from developed areas; furthermore, edge-of-ROW electric and magnetic field levels of 0.375 kV/m and 16.384 mG estimated for the proposed project would be well within edge-of-ROW electric and magnetic field levels of 1.8 kV/m and 85 mG previously accepted by the Siting Board. The Siting Board therefore finds that the primary route is preferable with respect to this issue and that electric and magnetic fields of the proposed facilities along the primary route would be minimized.

j. Conclusions on Environmental Impacts of the Primary and Alternative Routes

The Siting Board finds that the Petitioners have provided sufficient information regarding environmental impacts and potential mitigation measures to determine whether the appropriate balance among environmental impacts, cost, and reliability would be achieved. The Siting Board has found, above, that constructing the proposed transmission line without use of any alternative underground design would be consistent with the minimization of environmental impacts, consistent with minimizing cost. The Siting Board has also found, above, that the primary and alternative routes, with use of an overhead design, are comparable with respect to land resources impacts, water resources and wetlands impacts, and visual impacts. The Siting Board has found that the primary route is preferable to the alternative route with respect to noise impacts, traffic impacts, and electric and magnetic field impacts. Considering all these environmental impacts,

the Siting Board finds that the primary route is preferable to the alternative route with respect to environmental impacts. Based on the findings above that each set of environmental impacts would be minimized, the Siting Board finds, with the conditions stated above, that environmental impacts of the proposed facilities along the primary route would be minimized.

3. Costs

The Companies estimated that the primary route would cost from \$24,900,000 to \$28,500,000, depending on the variation, including \$8,100,000 for the switching station and \$18,800,000 to \$20,400,000 for the transmission line (Exh. JP-1, at 5-59 to 5-61). The alternative route would cost \$33,450,000, including \$8,050,000 for the switching station and \$25,400,000 for the transmission line (*id.*). Accounting for much of the added \$5 to \$8 million costs for the alternative route are (1) a line item of \$2,300,000 for traffic control to construct along U.S. Route 20, and (2) a cost of \$8,200,000 for transmission structures including excavation, exceeding by up to \$2,800,000 the corresponding cost for the primary route (*id.*).

The Siting Board finds that the Petitioners have provided sufficient cost information to determine whether the appropriate balance among environmental impacts, cost, and reliability would be achieved. The record shows that costs for the alternative route would be 17% to 34% above costs for the primary route. Accordingly, the Siting Board finds that the primary route is preferable to the alternative route with respect to costs.

4. Reliability

The Companies asserted that the primary route would be preferable to the alternative route with respect to reliability (Exh. JP-1, at 5-68). The Companies stated that work along some segments of the primary route, regardless of variation, would require CSX and Massachusetts Turnpike Authority permissions for access, but that the transmission lines themselves would be

outside active transportation corridors; the Companies therefore anticipated limited constraints on access to its transmission facilities (id. at 67).¹⁶

The Petitioners indicated that maintenance and repair of the proposed transmission line on the alternative route would require access from the active U.S. Route 20 ROW; in addition, access would require placement of vehicles and equipment in the travel way of U.S. Route 20, requiring coordination with MHD to ensure traffic and worker safety (id. at 5-67 to 5-68). The Petitioners also expressed concern that the location of the alternative route on the side of U.S. Route 20 and secondary roads would more likely subject facility structures to damage from traffic accidents (id. at 68).

The Siting Board finds that the Petitioners have provided sufficient reliability information to determine whether the appropriate balance among environmental impacts, cost, and reliability would be achieved. The record shows that the alternative route would pose more reliability concerns than the primary route -- along any variation considered -- due to the likely increased exposure of proposed facility structures to damage from traffic accidents. The records shows that the increased risk of facility structural damage along the alternative route would result from its location within the travel way of U.S. Route 20 and secondary roads. The record also shows that the location of the alternative route would complicate repair and maintenance of the proposed transmission line, reducing reliability. The Siting Board therefore concludes that the proposed facilities would be more reliable along the primary route than along the alternative route. Accordingly, the Siting Board finds that the primary route is preferable to the alternative route with respect to reliability.

5. Conclusion

The Siting Board has found that the primary route is preferable to the alternative route with respect to environmental impacts. The Siting Board has also found that, with the stated conditions, environmental impacts of the proposed facilities along the primary route would be

¹⁶ The Companies indicated that Route Variation 1c might be less reliable than other variations of the primary route due to its location in relatively more mountainous terrain (Exh. JP-1, at 5-64).

minimized. In addition, the Siting Board has found that the primary route is preferable to the alternative route with respect to costs, and preferable to the alternative route with respect to reliability. Therefore, the Siting Board finds that the primary route is preferable to the alternative route with respect to providing a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. The Siting Board also finds that the proposed project along the primary route would achieve an appropriate balance among conflicting environmental concerns as well as among environmental impacts, reliability, and cost.

With respect to route variations, the record shows that Route Variation 1a modified and Route Variation 1c are generally similar with respect to environmental impacts. Based on the preference of MADWF, Route Variation 1a modified would be preferable, if use of the route is feasible. In Section III.D.2.i, the Siting Board directed the Petitioners to pursue actively the use of Route Variation 1a modified; the Petitioners may use Route Variation 1c if use of Route Variation 1a modified is infeasible. However, since use of Route Variation 1a modified is not wholly within the control of the Companies, the Siting Board recognizes the utility of approving both Route Variation 1a modified and Route Variation 1c.

The record shows that Switching Stations S-1 and S-2 are similar with respect to environmental impacts; they are both generally suitable for the proposed transmission line project. The Companies have indicated a preference for Switching Station S-2, but have not acquired the right to use either location. The Siting Board finds it reasonable given the particulars of the instant case to approve both Switching Station S-1 and Switching Station S-2.

IV. CONSISTENCY WITH THE POLICIES OF THE COMMONWEALTH

A. Standard of Review

G.L. c. 164, § 69J requires the Siting Board to determine whether the plans for construction of a proposed facility are consistent with current health, environmental protection, and resource use and development policies of the Commonwealth. Health, environmental protection, and resource use and development policies applicable to the review of a transmission facility may include existing regulatory programs of the Commonwealth relating to issues such as wetlands protection, rare and endangered species, historic preservation, and noise. Therefore,

in this section, the Siting Board summarizes the health, environmental protection, and resource use and development policies of the Commonwealth that are applicable to the proposed transmission Project and discusses the extent to which the proposed facility complies with these policies.

B. Analysis

In Sections II and III, above, the Siting Board has reviewed the need for the proposed Project, the process by which the Petitioners sited and designed the proposed facility, and the environmental and health impacts of the proposed facility as sited and designed. As part of this review, the Siting Board has identified a number of Commonwealth policies applicable to the design, construction, and operation of the proposed facility. These are briefly summarized below.

As discussed in Section III.D.2.a, above, the NHESP maintains maps of rare and endangered species in the Commonwealth and provides comments on the potential impacts of projects on rare and endangered species. The Companies have demonstrated that construction of the project would avoid areas frequented by rare and endangered species. In addition, as discussed in Section III.A, the record indicates that the Petitioners solicited input on route selection from MADFW, which is responsible for implementing Commonwealth policies regarding habitat preservation. As further discussed in Section III.D.2.a, the record indicates that the proposed project is not likely to adversely impact historical and archaeological resources. The Companies have thereby demonstrated that they expect to comply with policies of the MHC. Accordingly, based on its review above, the Siting Board finds that plans for construction of the proposed facility are consistent with current health and environmental protection policies of the Commonwealth and with such energy policies of the Commonwealth as have been adopted for the specific purpose of guiding the decisions of the Siting Board.

V. ZONING EXEMPTION AND SECTION 72

Pursuant to G.L. c. 40A, § 3, the Petitioners have requested a number of individual zoning exemptions for the proposed transmission line from the Towns of Russell and Montgomery and the City of Westfield as well as zoning exemptions for the proposed switching

station from the City of Westfield. The Petitioners are also seeking comprehensive zoning exemptions from each municipality for the Project. In addition, the Petitioners are seeking, in accordance with G.L. c. 164, § 72, a determination that the proposed transmission line is necessary and will serve the public convenience and be consistent with the public interest.

A. Standard of Review

1. G.L. c. 40A, § 3

G.L. c. 40A, § 3 provides, in relevant part, that:

Land or structures used, or to be used by a public service corporation may be exempted in particular respects from the operation of a zoning ordinance or by-law if, upon petition of the corporation, the [Department] shall, after notice given pursuant to section eleven and public hearing in the town or city, determine the exemptions required and find that the present or proposed use of the land or structure is reasonably necessary for the convenience or welfare of the public . . .

Thus, a petitioner seeking exemption from a local zoning by-law under G.L. c. 40A, § 3 must meet three criteria. First, the petitioner must qualify as a public service corporation. Save the Bay, Inc. v. Department of Public Utilities, 366 Mass. 667 (1975) (“Save the Bay”). Second, the petitioner must establish that it requires exemption from the zoning ordinance or by-law. Boston Gas Decision at 3. Finally, the petitioner must demonstrate that its present or proposed use of the land or structure is reasonably necessary for the public convenience or welfare. Massachusetts Electric Company, D.T.E. 01-77, at 4 (2002) (“MECo (2002)”); Tennessee Gas Pipeline Company, D.T.E. 01-57, at 3-4 (2002) (“Tennessee Decision (2002)”).

a. Public Service Corporation

In determining whether a petitioner qualifies as a “public service corporation” (“PSC”) for the purposes of G.L. c. 40A, § 3, the Massachusetts Supreme Judicial Court has stated:

among the pertinent considerations are whether the corporation is organized pursuant to an appropriate franchise from the State to provide for a necessity or convenience to the general public which could not be furnished through the ordinary channels of private business; whether the corporation is subject to the

requisite degree of governmental control and regulation; and the nature of the public benefit to be derived from the service provided.

Save the Bay at 680. See also, Boston Gas Decision at 3-4; Berkshire Power Development, Inc., D.P.U. 96-104, at 26-36 (1997) ("Berkshire Power").

The Department interprets this list not as a test, but rather as guidance to ensure that the intent of G.L. c. 40A, § 3 will be realized, i.e., that a present or proposed use of land or structure that is determined by the Department to be "reasonably necessary for the convenience or welfare of the public" not be foreclosed due to local opposition. See Berkshire Power at 30; Save the Bay at 685-686; Town of Truro v. Department of Public Utilities, 365 Mass. 407 (1974) ("Town of Truro"). The Department has interpreted the "pertinent considerations" as a "flexible set of criteria which allow the Department to respond to changes in the environment in which the industries it regulates operate and still provide for the public welfare." Berkshire Power at 30; see also Dispatch Communications of New England d/b/a Nextel Communications, Inc., D.P.U./D.T.E. 95-59-B/95-80/95-112/96-113, at 6 (1998) ("Nextel Decision"). The Department has determined that it is not necessary for a petitioner to demonstrate the existence of "an appropriate franchise" in order to establish PSC status. See Berkshire Power at 31.

b. Exemption Required

In determining whether exemption from a particular provision of a zoning by-law is "required" for purposes of G.L. c. 40A, § 3, the Department looks to whether the exemption is necessary to allow construction or operation of the petitioner's proposed project. See MECo (2002) at 4-5; Tennessee Decision (2002), D.T.E. 01-57, at 5; Western Massachusetts Electric Company, D.P.U./D.T.E. 99-35, at 4, 6-8 (1999); Tennessee Gas Company, D.P.U. 92-261, at 20-21 (1993). It is the petitioner's burden to identify the individual zoning provisions applicable to the proposed project and then to establish on the record that exemption from each of those provisions is required:

The Company is both in a better position to identify its needs, and has the responsibility to fully plead its own case . . . The Department fully expects that, henceforth, all public service corporations seeking exemptions under c. 40A, § 3 will identify fully and in a timely manner all exemptions that are necessary for the

corporation to proceed with its proposed activities, so that the Department is provided ample opportunity to investigate the need for the required exemptions.

New York Cellular Geographic Service Area, Inc., D.P.U. 94-44, at 18 (1995).

c. Public Convenience or Welfare

In determining whether the present or proposed use is reasonably necessary for the public convenience or welfare, the Department must balance the interests of the general public against the local interest. Save the Bay at 680; Town of Truro at 407. Specifically, the Department is empowered and required to undertake "a broad and balanced consideration of all aspects of the general public interest and welfare and not merely [make an] examination of the local and individual interests which might be affected." New York Central Railroad v. Department of Public Utilities, 347 Mass. 586, 592 (1964) ("New York Central Railroad"). When reviewing a petition for a zoning exemption under G.L. c. 40A, § 3, the Department is empowered and required to consider the public effects of the requested exemption in the State as a whole and upon the territory served by the applicant. Save the Bay at 685; New York Central Railroad at 592.

With respect to the particular site chosen by a petitioner, G.L. c. 40A, § 3 does not require the petitioner to demonstrate that its primary site is the best possible alternative, nor does the statute require the Department to consider and reject every possible alternative site presented. Rather, the availability of alternative sites, the efforts necessary to secure them, and the relative advantages and disadvantages of those sites are matters of fact bearing solely upon the main issue of whether the primary site is reasonably necessary for the convenience or welfare of the public. Martarano v. Department of Public Utilities, 401 Mass. 257, 265 (1987); New York Central Railroad at 591.

Therefore, when making a determination as to whether a petitioner's present or proposed use is reasonably necessary for the public convenience or welfare, the Department examines: (1) the present or proposed use and any alternatives or alternative sites identified; (2) the need for, or public benefits of, the present or proposed use; and (3) the environmental impacts or any other impacts of the present or proposed use. The Department then balances the interests of the general public against the local interest, and determines whether the present or proposed use of

the land or structures is reasonably necessary for the convenience or welfare of the public. Boston Gas Decision at 2-6; MECo (2002) at 5-6; Tennessee Decision (2002) at 5-6; Tennessee Gas Company, D.T.E. 98-33, at 4-5 (1998).

2. G.L. c. 164, § 72

General Laws c. 164, § 72, requires, in relevant part, that an electric company seeking approval to construct a transmission line must file with the Department a petition for “authority to construct and use . . . a line for the transmission of electricity for distribution in some definite area or for supplying electricity to itself or to another electric company or to a municipal lighting plant for distribution and sale . . . and shall represent that such line will or does serve the public convenience and is consistent with the public interest. . . . The [D]epartment, after notice and a public hearing in one or more of the towns affected, may determine that said line is necessary for the purpose alleged, and will serve the public convenience and is consistent with the public interest.”¹⁷

The Department, in making a determination under G.L. c. 164, § 72, is to consider all aspects of the public interest. Boston Edison Company v. Town of Sudbury, 356 Mass. 406, 419 (1969). Section 72, for example, permits the Department to prescribe reasonable conditions for the protection of the public safety. Id. at 419-420. All factors affecting any phase of the public interest and public convenience must be weighed fairly by the Department in a determination under G.L. c. 164, § 72. Town of Sudbury v. Department of Public Utilities, 343 Mass. 428, 430 (1962).

As the Department has noted in previous cases, the public interest analysis required by G.L. c. 164, § 72, is analogous to the Department’s analysis for the “reasonably necessary for the convenience of the or welfare of the public” standard under G.L. c. 40A, § 3. See New England Power Company; D.P. U. 89-163, at 6 (1993); New England Power Company, D.P.U. 91-

¹⁷ Pursuant to G.L. c. 164, § 72, the electric company must file with its petition a general description of the transmission line, a map or plan showing its general location, an estimate showing in reasonable detail the cost of the line, and such additional maps and information as the [Siting Board] requires.

117/118, at 4 (1991); Massachusetts Electric Company, D.P.U. 89-135/136/137, at 8 (1990). Accordingly, in evaluating petitions filed under G.L. c. 164, § 72, the Department relies on the standard of review for determining whether the proposed project is reasonably necessary for the convenience or welfare of the public under G.L. c. 40A, § 3, as set forth above.

B. Public Service Corporation Status

The Petitioners maintained that Russell Biomass qualifies as a public service corporation because WMECo is a regulated Massachusetts electric company, pursuant to G.L. c. 164, § 1 (Petitioners Brief at 108). The Petitioners argued that “there is no need to address Russell Biomass’ public service corporation status” given that WMECo is a public service corporation (Petitioners Brief at 108, n.40). In the alternative, the Petitioners contended that Russell Biomass qualifies as a public service corporation because it is a corporation that owns generating assets in Massachusetts and will make the assets available to serve the New England market (id.).

WMECo is an “electric company” as defined in G.L. c. 164, § 1. Western Massachusetts Electric Company, D.P.U. 90-174/90-175/90-176/90-177, at 5 (1990). Accordingly, the Siting Board finds that WMECo qualifies as a public service corporation for the purposes of G.L. c. 40A, § 3. We do not agree with the Petitioners’ argument that there is no need to address the qualifications of Russell Biomass as a public service corporation. As a joint petitioner, Russell Biomass must also meet the qualification standards for obtaining a zoning exemption pursuant to G.L. c. 40A, § 3. Notably, a finding in this regard has already been made in Russell Biomass, LLC, D.T.E./D.P.U. 06-60, at 15 (2008). Accordingly, we find that Russell Biomass is a public service corporation.

C. Need for the Requested Individual Zoning By-Law Exemptions

1. Petitioners Position

The Petitioners identified fifteen sections of the Russell, Montgomery and Westfield Zoning By-Laws from which they specifically seek an exemption in order to construct and operate the Project (Exh. JP-2, at 10-18). The Petitioners sought zoning exemptions for the following zoning by-law sections.

Municipality	Title and Section Number	Asserted Need for the Requested Exemption
Russell	Use (§3.0, 6.4)	All variations of the primary route run through either Rural Residential (“RR”) or the Industrial District. Petitioners argue that utility uses are not allowed in either case. The Petitioners indicate that it is conceivable that a special permit could be obtained for a “general manufacturing” use in the Industrial District, but there is no relief for the RR District (Petitioners Brief at 110, fn. 41).
Russell	Dimensional and Density Regulation (§ 3.2)	Petitioners maintain that the transmission towers will range from 60-110 feet, exceeding the 35 foot height restriction (Petitioners’ Brief at 114). It is unclear whether a variance could be issued (<i>id.</i>).
Russell	Earth Removal (§ 5.2)	Petitioners state that an earth removal special permit would be required from the zoning board of appeals, and that there is no guarantee that Petitioners would receive the special permit. Moreover, Petitioners argue that it would be subject to appeal if they were to obtain the permit (Petitioners Brief at 116).
Russell	Enforcement (§ 6.1)	Petitioners would need to obtain a permit from the selectmen and building inspector. Petitioners are uncertain whether they would receive permit and whether it would be appealed (Petitioners Brief at 114-115).
Montgomery	Establishment of Districts (Article 2)	Entire Town of Montgomery is zoned as Agricultural Residential. Petitioners argue that absent exemption the Project would not be an allowed use in Montgomery (Petitioners Brief at 110).
Montgomery	Use Regulations (Article 3)	Petitioners argue that absent an exemption the Project would not be allowed in Montgomery (Petitioners Brief at 110).
Montgomery	Area, Yard, Floor Area and Coverage Regulations (Article 4)	Petitioners argue that they could not meet these requirements, which typically apply to residences (Petitioners Brief at 116-117).

Municipality	Title and Section Number	Asserted Need for the Requested Exemption
Montgomery	Driveway Standard (Article 6)	Petitioners maintain that these requirements should not apply to the Project, but argue it is needed because Montgomery asserts that driveway requirements should apply to Project (Petitioners' Brief at 117-118).
Westfield	Rural Residential District/Use Dimension Requirements (§ 3-40)	Portions of the switching station would exceed the 35-foot height limit and the 50-foot exception for structures like chimneys (Petitioners Brief at 118).
Westfield	Prohibited Uses and Performance Standards (§ 4-120).	Petitioners argue that they may "run afoul" of some of these requirements during construction. Petitioners assert that it is unclear how provisions would be enforced (Petitioners Brief at 119-120).
Westfield	Movement or Removal of Earth Materials (§5-10).	Petitioners maintain that there is no guarantee that an earth removal permit would issue or, if issued, that no appeal would be filed (Petitioners Brief at 121).
Westfield	Off-Street Parking and Loading Requirements (§ 7-10).	Petitioners assert that literal reading could require 350 parking spaces; no parking is planned for the Project (Petitioners Brief at 121).
Westfield	Site Plan Approval (§6-10)	Petitioners maintain that the Project could not obtain site plan approval because the Project is not in conformance with the intent of the zoning district. Approval could also be appealed (Petitioners Brief at 123).
Westfield	Zoning Permit (§ 1-10.4)	Petitioners argue that there is no guarantee that the Project would receive a permit, or that no appeal would be filed (Petitioners Brief at 123).

The Petitioners acknowledged that they did not seek any local zoning relief from Russell, Montgomery or Westfield before filing their zoning exemption petition in this case (Tr. at 36, Siting Board Meeting September 25, 2008). The Petitioners indicated that it would be typical to assess community opposition as part of the site selection process (Tr. 4, at 663). Nevertheless, the Petitioners acknowledged that they did not engage in any consultations with officials from

either Montgomery or Westfield as part of the initial screening for the proposed transmission route (Tr. 4, at 663-664).

According to the Petitioners, applying to the three municipalities for special permits or variances should not be a necessary prerequisite for the filing of their zoning exemption petition because such a requirement would be contrary to law, would result in unacceptable delays, and would in some cases be futile (Petitioners Brief at 124). In particular, the Petitioners make the following arguments in support of their position:

1. The Petitioners assert that the Supreme Judicial Court and the Department have specifically held that G.L. c. 40A, § 3 contains no requirement that local relief be sought before a public service corporation seeks a zoning exemption (Petitioners Brief at 124, citing Planning Board of Braintree v. Department of Public Utilities, 420 Mass. 22, 32 (1995) (additional cases omitted) (“Braintree”);
2. There is no guarantee that the Petitioners would obtain the available relief requested. The Petitioners maintain that this is particularly true in this case where Westfield and Montgomery are opposed to the Project (Petitioners Brief at 124);
3. The time associated with the variance and special permit processes in three different municipalities would result in unacceptable delays (id.); and
4. Even if the Petitioners were able to obtain some zoning relief, opponents could appeal to the Massachusetts Land Court or Superior Courts pursuant to G.L. c. 40A, § 17. Such an appeal would stop the Project because an appeal of a variance stays the issuance of the variance (id. at 125, citing G.L. c. 40A, § 11).

2. Westfield and Montgomery Positions

Westfield argues as a general matter that the Petitioners have not demonstrated that the proposed project is in the public interest, and therefore should not receive any zoning exemptions (Westfield Brief at 31-32). More specifically, Westfield maintained that the site plan review process is clear, designed to reasonably regulate a project, and is typically completed within 35 days, and cannot be used to prohibit a proposed use (Exh. COW-LBS at 3). Westfield also

argued that the process associated with obtaining a zoning permit under Section 1-10.4 is completed within 30 days (*id.* at 3-4).¹⁸

Montgomery argues that the only zoning exemption “necessary” for the construction of the Project pertains to the Use Regulations under Article 3, which would prohibit the Project (Montgomery Brief at 18). Other than Article 3, Montgomery maintains that each of the other articles are either irrelevant to the Project or have not been shown to constitute a prohibition to its construction such that an exemption would be required (*id.*).

3. Analysis

Chapter 40A, § 3 does not explicitly address whether petitioners should be required to seek permits, special permits or variances before seeking relief pursuant to G.L. c. 40A, § 3. The Department has long favored such an approach, although it has not required it.¹⁹ Given the complexities of local zoning ordinances and their application in particular circumstances, the ability of the Department to know when a public service corporation’s actions will conflict with local interests often cannot be known with certainty. Historically, the Department has addressed this uncertainty by granting zoning exemptions, not only where a direct conflict in the zoning law was evident, but on some occasions where it was found that some delay might occur or uncertainty exist about the application of a particular zoning by-law to a particular project. New England Power Company/Massachusetts Electric Company, D.T.E. 04-66/04-81, at 23-24 (2005); USGen New England, Inc., D.T.E. 03-83, at 19 (2004); New York Cellular Geographic Service Area, Inc., D.P.U. 94-44, at 18-19 (1995).

¹⁸ According to Westfield, a roundtable permit review process takes place every week in Westfield where the City’s department heads, including public works, engineering, conservation, water/sewer and the board of health, meet with developers to review projects in a “one-stop shopping” format to identify local concerns and to try to address them satisfactorily to all parties before a formal permitting process is commenced (Tr. at 826). According to Westfield, these meetings are intended to facilitate an efficient permitting process (*id.*).

¹⁹ The Supreme Judicial Court has not decided the issue. The Court in Braintree did state that the zoning exemption available under G.L. c. 40A, § 3 is intended “to assure utilities’ ability to carry out their obligation to serve the public when this duty conflicts with local interests.” Braintree at 27.

At the same time, the Department's past cases have recognized the legitimacy of maintaining local control over land use decisions in municipalities under home rule authority. For example, in Tennessee Decision (2002), the Department stated that it is neither sound public policy nor a good use of Department and Company resources for a public service corporation "to seek a zoning exemption without first consulting with the municipality." Tennessee Decision (2002) at 19.

[T]he Department is cognizant of the inherent tension between the Home Rule authority of municipalities to enact local zoning codes, and the statutory authority of the Department, pursuant to G.L. c. 40A, s. 3, to grant public service corporations exemptions from these codes. *The Department favors the resolution of local issues on a local level whenever possible to reduce local concern regarding any intrusion on Home Rule authority.* The Department urges future petitioners to seek a zoning exemption from the Department only after consulting with municipal officials, and then only if the municipality is unable to grant the necessary zoning approval, or if it encounters difficulties in obtaining municipal zoning approvals within a reasonable period of time.

Id. (emphasis added). See also Nextel Decision at 46) ("To the extent that [public service] providers may in the future avoid controversy and litigation by working with municipalities, we encourage them to do so").

We affirm the commitment, as stated in the Tennessee Decision (2002) and the Nextel Decision, to favor the resolution of local issues on a local level whenever possible to reduce local concern regarding any intrusion on home rule. We believe that the most effective approach in this regard is for public service companies to consult with local officials regarding zoning issues, to take reasonable steps to ascertain whether local zoning approvals will be available, and to obtain them if this appears to be feasible, before seeking zoning exemptions pursuant to G.L. c. 40A, § 3.

We are troubled that the Petitioners did not engage in any consultations with officials from either Montgomery or Westfield as part of the Petitioners' initial screening of potential transmission routes. We are concerned that the Petitioners did not discuss or seek zoning relief relating to the proposed transmission lines from Russell, Montgomery or Westfield (to the extent

that it was legally available).²⁰ Communication between the Petitioners and Montgomery and Westfield, in particular, was plainly absent in this case. We reaffirm our view that such communication should take place in advance of seeking exemption from municipal zoning regulation.

Therefore, we set forth the following approach to be used by public service companies when seeking zoning exemptions pursuant to G.L. c. 40A, § 3. First, in cases where (1) a local zoning provision would on its face preclude construction and operation of a proposed energy facility, and (2) there is no provision in a local zoning by-law for a special permit, variance or other relief, relief under G.L. c. 40A, § 3 could be considered without further consultation with the local zoning authority. Second, if relief appears to be available, but consultations with the local zoning authority demonstrate that a petitioner is unlikely to obtain that relief, relief under G.L. c. 40A, § 3 could be considered without further local efforts. Absent such circumstances, it is our expectation that a project proponent will make a good faith effort to consult with local zoning authorities and apply for necessary zoning approvals or other relevant relief, as appropriate.

We recognize that there may be particular circumstances when the additional time necessary to obtain local approvals may not be consistent with the avoidance of substantial public harm. Our approach is to consider such circumstances on a case by case basis. Where, as here, it appears that the Companies have had ample opportunity to consult with the municipalities and that no particular urgency prevented them from doing so, it is reasonable to expect that they would have pursued local zoning approvals.

This approach is consistent with the language of G.L. c. 40A, §3, where the Department must determine that the requested exemptions are *required*. Although the obligation to serve the public is a critical one, the issue of whether a particular exemption is *required* should generally be apparent before authority is exercised under G.L. c. 40A, § 3. Where it is possible to obtain the necessary zoning relief, a zoning exemption pursuant to G.L. c. 40A, § 3 would not be

²⁰ In this regard, the roundtable permit review process, which takes place every week in Westfield, is particularly well suited to the review of a project in a “one-stop shopping” format to identify local concerns and to try to address them satisfactorily to all parties before a formal permitting process is commenced.

required. Where no particular urgency exists, efforts to pursue local zoning approvals are reasonable and consistent with the language of G.L. c. 40A, § 3.

Based on the above discussion, we make the following finding concerning the Petitioners' individually requested zoning exemptions. The exemptions fall into one of three categories: (1) exemptions that the Petitioners have shown are needed to allow Project construction; (2) exemptions that the Petitioners have not shown to be necessary for Project construction; and (3) exemptions that could be unnecessary if the Petitioners consult with the municipality for the permit or other relief.

Municipality	Title and Section Number	Finding
Russell	Use (§3.0, 6.4)	The Siting Board finds that this exemption is required within the meaning of G.L. c. 40A, § 3.
Russell	Dimensional and Density Regulation (§ 3.2)	The Siting Board finds that this exemption is required within the meaning of G.L. c. 40A, § 3.
Russell	Earth Removal (§ 5.2)	Petitioners should first consult with the relevant zoning authority in an effort to obtain an appropriate permit or relief.
Russell	Enforcement (§ 6.1)	Petitioners should first consult with the relevant zoning authority in an effort to obtain an appropriate permit or relief.
Montgomery	Establishment of Districts (Article 2)	The Siting Board finds that this exemption is required within the meaning of G.L. c. 40A, § 3.
Montgomery	Use Regulations (Article 3)	The Siting Board finds that this exemption is required within the meaning of G.L. c. 40A, § 3.
Montgomery	Area, Yard, Floor Area and Coverage Regulations (Article 4)	The Petitioners have not demonstrated the need for this exemption (see discussion below).
Montgomery	Driveway Standard (Article 6)	The Siting Board finds that this exemption is required within the meaning of G.L. c. 40A, § 3. See discussion in Section V.D.

Municipality	Title and Section Number	Finding
Westfield	Rural Residential District/Use Dimension Requirements (§ 3-40)	Petitioners should first consult with the relevant zoning authority in an effort to obtain a special permit regarding height restrictions pursuant to § 3-40.6. With the exception of § 3-40.6 (Heights), the Siting Board finds that this exemption is required within the meaning of G.L. c. 40A, § 3.
Westfield	Prohibited Uses and Performance Standards (§ 4-120).	The Petitioners have not demonstrated the need for this exemption (see discussion below).
Westfield	Movement or Removal of Earth Materials (§5-10).	Petitioners should first consult with the relevant zoning authority in an effort to obtain an appropriate permit or relief.
Westfield	Off-Street Parking and Loading Requirements (§ 7-10).	The Petitioners have not demonstrated the need for this exemption (see discussion below).
Westfield	Site Plan Approval (§6-10)	Petitioners should first consult with the relevant zoning authority in an effort to obtain an appropriate permit or relief.
Westfield	Zoning Permit (§ 1-10.4)	Petitioners should first consult with the relevant zoning authority in an effort to obtain an appropriate permit or relief.

We find that the Petitioners have not demonstrated the need for an exemption from three by-law provisions. The Petitioners have failed to show the need for an exemption from Article 4 (Area, Yard, Floor and Coverage Regulations) of the Montgomery By-Law, because of inapplicability to the proposed transmission facilities (i.e., Article 4 applies to dwellings). We find that the Petitioners have not demonstrated the need for an exemption from § 4-120 of the Westfield By-Law (Prohibited Uses and Performance Standards). We are not persuaded that an exemption is required based on the Petitioners' argument that it is unclear how such a provision would be enforced or that the Petitioners may "run afoul" of some of the provision's requirements during construction. We also find that the Petitioners have not demonstrated the need for an exemption from Article 7 (Off-Street Parking and Loading) of the Westfield By-Law because of its inapplicability to the proposed transmission facilities.

We find that the Project requires a zoning exemption from six zoning provisions. We agree with the Petitioners that there is no conceivable zoning provision that would allow the Project in the Russell RR District, and therefore find that an exemption is required from the Use provision (§ 3.0, 6.4). A zoning exemption is also required for Russell's Dimensional and Density Regulation (§3.2) because a variance would otherwise be necessary, and the power to grant variances is sparingly to be exercised and only under exceptional circumstances. Russell Biomass, D.T.E./D.P.U. 06-60-A at 10 (2008), citing Gamache v. Town of Acushnet, 14 Mass. App. Ct. 215, 217, n.6 (1982). Exemptions from Montgomery Zoning By-laws, Articles 2 and 3 are required because public utility uses are not permitted in Montgomery's Agricultural-Residential District. Similarly, we find that an exemption is required from Rural Residential District/Use Dimension Requirements (§ 3-40) because the public utility use is otherwise not permitted.

We find it reasonable for the Petitioners to consult with the relevant zoning authorities with respect to six of the Petitioners' requested exemptions. Accordingly, as a condition of any further Siting Board review of those six requested exemptions, the Petitioners shall first consult with the local zoning authority and file for relevant zoning approvals, permits or other relief. The Petitioners shall report back to the Siting Board with an update on their efforts to obtain the relevant approvals within fourteen (14) days of any termination of the consultations regarding one or more relevant approvals, and either the receipt of a denial or arrival at a point where it appears reasonably likely that the relevant approvals at issue will not be available. The Petitioners shall also report back to the Siting Board with an update on their efforts to obtain the relevant approvals within fourteen (14) days of the filing by either the Petitioners or a third party of any applicable appeal of a local zoning decision. In any case, however, the Petitioners shall provide a status report to the Siting Board within six months. The Petitioners shall also submit to the Siting Board a copy of all zoning approvals received. After the Petitioners have proceeded in accordance with our holding above, the Siting Board will review any outstanding requests for zoning exemption.

D. Montgomery Driveway By-Law

1. Petitioners' Request for Exemption

The Petitioners seek a zoning exemption from Article 6 of the Montgomery's Zoning By-Laws, which imposes a common driveway standard in Montgomery. Article 6 defines a driveway as "the portion of a lot which is prepared for vehicular access to and from a public way" (Exh. JP-2, Attachment 1B, Article 6). The Petitioners argued that Article 6 "should not apply to the Project" (Petitioners' Brief at 117). The Petitioners maintain that the driveway standards are designed for allowed uses such as residential and offices, not transmission lines located on a right-of-way (*id.*, citing Tr. 5, at 768). In addition, the Petitioners contended that the transmission line's access road will not connect to any public way in the Town of Montgomery, and therefore cannot meet the definition of a driveway in Article 6 (Petitioners Brief at 117). The Petitioners sought an exemption from Article 6 because the Town of Montgomery has expressed the position that Article 6 would otherwise apply to the Project (*id.* at 118).

2. Montgomery's Position

Montgomery maintained that its driveway standards are intended to ensure that public safety vehicles can adequately access land in Montgomery (Montgomery Reply Brief at 10). According to Montgomery, it makes no sense to limit the application of Article 6 to driveways in Montgomery that are reached only from Montgomery public ways (*id.*). Montgomery stated that the relevant provision of its by-law does not require that the public way be located within Montgomery (Montgomery Reply Brief at 9). Further, Montgomery argued that the driveway requirements "must be met" since the by-law provision does not allow a waiver (*id.* at 11 (emphasis in original)).

3. Petitioners' Reply

The Petitioners contended that even if Article 6 applies to the Project, the Project cannot meet the Article 6 standards, including a requirement that the access road be 24 feet wide, be constructed using less than a 6 percent grade, and be built with an allowable angle from the public way that is also acceptable to the Massachusetts Turnpike Authority (Petitioners Reply

Brief at 20). The Petitioners argued that Montgomery's statement that Article 6 cannot be waived is itself further reason for the need for an exemption (id. at 20-21).

4. Analysis

The Town of Montgomery, in the first instance, is charged with the responsibility of interpreting its own zoning by-laws. The Town of Montgomery's position is clear in this proceeding -- Article 6 of the Montgomery Zoning By-Law, containing its Driveway Standards, is legally applicable to the proposed right-of-way that would contain the proposed transmission line. The Petitioners disagreed, but argued in the alternative that if Article 6 does apply, the Siting Board should grant the Project a zoning exemption from this provision.

It is difficult for us to determine whether Article 6 applies to the proposed Project as matter of law. However, setting aside Article 6's legal applicability, Montgomery has not persuaded us that it would be appropriate in this case to impose Montgomery's driveway requirement on the Project. Transmission line rights-of-way are not generally designed for ongoing access by municipal emergency vehicles, such as must occur where there are dwellings or staffed operations present. Accordingly, we believe that in this case a use such as the proposed Project should not be held to the requirements of Article 6. Accordingly, we find that an exemption from Article 6 is necessary.

E. Public Convenience or Welfare

1. Need for or Public Benefit of Use

The Petitioners argued that the proposed transmission line and switching station are needed and will benefit the public because they are necessary to connect the proposed Russell Biomass generating facility to the regional electric grid (Petitioners Brief at 130). The Petitioners maintained that without the interconnection, the public will be unable to receive the benefits associated with this generating facility if the facility is constructed and operated (id.). In addition to the direct benefit that the proposed transmission line would provide by facilitating the interconnection of a proposed generating facility to the grid, the Petitioners contend that the proposed transmission line would provide benefits to the public resulting from the proposed biomass generating facility. According to the Petitioners, the proposed biomass generating

facility will help: (1) address the need for new generating capacity in Massachusetts and the New England region; (2) decrease the Commonwealth's dependence on natural gas and oil for power supply; and (3) meet the need in Massachusetts and the region for electric generation using renewable resources (*id.*).

Westfield argued in response that it is not at all clear that Massachusetts consumers will ever be the beneficiaries of the power generated by Russell Biomass and sent to market over the proposed transmission line (Westfield Brief at 30). According to Westfield, the evidentiary record demonstrated that Russell Biomass has executed a power purchase agreement with a single unnamed customer not based in Massachusetts, and one which does not sell to Massachusetts power customers (*id.*). Westfield acknowledged that in considering the convenience and welfare of the public, regional benefits may be considered (*id.* at 29, citing Save the Bay at 685 (1975)). However, according to Westfield, the interests of the Commonwealth's citizens "must be given appropriate weight" (*id.* at 29-30).

In Section II.A, we found a need for a transmission line to interconnect the proposed Russell Biomass generating facility with the regional transmission grid. We stated that the proposed Russell Biomass generating facility could not supply energy to the region in the absence of an adequate and reliable energy facility to interconnect the proposed generating facility to the transmission system (see Section II.A.4). We also found that, to establish that the proposed generating facility is likely to be available to contribute to the regional energy supply, the Petitioners are required to submit to the Siting Board copies of all permits required for the Petitioners to begin construction of the proposed generating facility (see Section II.A.4). For purposes of G.L. c. 40A, § 3 review, the Siting Board finds that the proposed transmission facility at issue in this case would serve the need for transmission to interconnect the proposed Russell Biomass generating facility.

Our decision in this case is similar to the Cape Wind Decision, EFSB 02-2A/DTE 02-53 (2008), which involved our review of the need for a jurisdictional transmission line that interconnected a proposed non-jurisdictional generation facility, pursuant to G.L. c. 164, § 69J and § 72. In this case, in addition to reviewing need in the context of these statutory provisions, we also examine the need for the facility in the context of the Petitioners' request pursuant to G.L. c. 40A, § 3, for a zoning exemption. In this case, in order to make a finding of need for

purposes of G.L. c. 40A, § 3, we also rely on indicators of generator project progress to establish the need for the transmission line, rather than a consideration of the underlying need for the power that would be made available. Accordingly, we decline to consider Westfield's arguments concerning the need for generating capacity and actual beneficiaries, if any, of the proposed generating facility.

2. The Proposed Project and Alternatives

In Sections II and III, we conducted a comprehensive analysis of the reliability, cost and environmental impacts of a number of project approach and site alternatives for interconnecting the proposed Russell Biomass generating facility with WMECo's transmission system. These alternatives include connecting Russell Biomass via: (1) one of several variations of a proposed overland 115 kV transmission line terminating at one of two different possible switching station in Westfield, combining one of two route variations (Route Variation 1a modified and Route Variation 1c) and one of two switching station locations (S-1 and S-2); (2) a proposed transmission line along U.S. Route 20 terminating at a separate switching station (the noticed route alternative); and (3) an alternative interconnection project approach along the Northern Approach. We found that the Southern Approach would be preferable to the Northern Approach with respect to providing a reliable energy supply to the Commonwealth, with a minimum impact on the environment at the lowest possible cost. We found that the primary route would be preferable to the alternative route with respect to environmental impacts. Further, we found that the primary route would be preferable to the alternative route with respect to cost, and that the primary route and the alternative route would be comparable with respect to reliability. Accordingly, we found that the primary route was preferable to the alternative route with respect to providing a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. See Section III.D.

With regard to the analysis used to select a route, the Siting Board found that the Petitioners developed and applied a reasonable set of criteria for identifying and evaluating any routes that are clearly superior to the proposed route; and that the Petitioners identified a noticed alternative transmission line route with sufficient geographic diversity. See Section III.B.

3. Impacts of the Proposed Project

In Section III, we conducted a detailed analysis of the cost and environmental impacts of the proposed transmission line along primary routes, including route variations 1(a) modified and 1(c). We found that the Petitioners provided sufficient information concerning cost, reliability and environmental impacts to allow us to determine whether they have achieved the proper balance among environmental impacts, cost and reliability. See Section III.D.5. We imposed conditions on the proposed transmission line, and found that with the implementation of those conditions, environmental impacts would be minimized.

We also found that the proposed transmission line would be generally consistent with the identified requirements of related regulatory and other programs of the Commonwealth, specifically programs supervised or regulated by MADFW, NHESP, MHC, and MADEP. Based on the foregoing, the Siting Board finds that the proposed facility may result in some local adverse environmental impacts primarily with respect to land resources and visual impact, but generally would result in minimal impacts.

4. Conclusion

The Siting Board has found a need for a transmission line to interconnect the proposed Russell Biomass generating facility with the regional transmission grid. The Siting Board has also found that the Petitioners established, through the range of their siting analysis and comparison of identified alternatives, that their proposed transmission line route is advantageous. We also found that the proposed facility may result in some local adverse impact, primarily with respect to land resources and visual impacts, but would generally result in minimal environmental impacts. Based on the foregoing, the Siting Board finds that the general public interest in constructing the proposed facility would outweigh any adverse local impacts of the project. Accordingly, the Siting Board finds that the proposed facility is reasonably necessary for the convenience or welfare of the public.

F. Need for Requested Comprehensive Zoning Exemption

In addition to the Petitioners' request for individual zoning by-law exemptions, the Petitioners have requested a comprehensive zoning exemption that would exempt the Project

from all provisions of the zoning by-laws of Russell, Montgomery and Westfield. As grounds for their request, the Petitioners maintain that such an exemption would avoid uncertainty and the possibility that the zoning by-laws could be used to delay or prevent the project from being built (Petitioners Brief at 125-126). The Petitioners indicated that there is some level of uncertainty whether local zoning by-laws would apply to transmission lines, and that municipalities or third parties may hold differing views on the applicability of by-laws to the proposed Project (*id.* at 127). The Petitioners also argued that it cannot be the case that a project proponent carries the burden of having to anticipate or guess any conceivable zoning by-law provision that a project opponent might try to use against a project (*id.*).

Westfield argued that the Petitioners have not met the standard of review for comprehensive zoning exemption relief, which requires a showing that the issuance of a comprehensive exemption could avoid substantial public harm by serving to prevent a delay in the construction and operation of the proposed use (Westfield Brief at 32). Westfield maintained that there is no evidence that a substantial public harm could result from a delay in construction of the transmission line (*id.*).

Montgomery contended that the Petitioners have failed to meet their burden to demonstrate the need for a comprehensive zoning exemption from the Montgomery Zoning By-Laws (Montgomery Brief at 17-18). According to Montgomery, the only exemption from its zoning by-laws necessary for the construction of the Project pertains to the Use Regulations under Article 3, which would prohibit the Project. Montgomery maintained that the other articles are either irrelevant or have not been shown to constitute a prohibition to the construction of the Project such that an exemption would be required (*id.* at 18).

In analyzing the Petitioners' request for a comprehensive zoning exemption, we reiterate the Department's previous finding that the Legislature's enactment of the Zoning Act, St. 1975, c. 808, § 3, conferred broad decision-making powers on local authorities under home rule. New England Power Company/Massachusetts Electric Company, D.T.E. 03-128, at 24-25 (2005). We do not lightly set these decision-making powers aside. *Id.* at 25. In D.T.E. 03-128, the Department noted that:

almost all regulatory processes are subject to delay and to subsequent appeal, and that the probability of delay and appeal cannot always be accurately assessed in advance. Thus, almost any petitioner proposing a time-sensitive project can

advance an argument for exemption from process-oriented provisions of a zoning code, such as site plan review.

Id. at 24. Accordingly, a concern as to possible delay, by itself, is not a sufficient basis to obtain a comprehensive zoning exemption. In the absence of a showing that substantial public harm will be avoided by granting a comprehensive zoning exemption, the granting of such extraordinary relief is not justifiable. NSTAR Electric, D.P.U. 07-60/07-61, at 51 (2008).

We decline to grant the Petitioners' request for a comprehensive zoning exemption in this case because the Petitioners have not persuaded us that substantial public harm would be avoided as a result. There will inevitably be some additional time needed to seek various permits from the local zoning authorities which, we observe, could have been minimized had the Petitioners consulted with the towns from the start. In this particular case, we believe that this additional time is not unreasonable when balanced against the important public policy of allowing an opportunity for local zoning authority to exercise its home rule authority whenever practicable. New England Power Decision at 24. As we noted above, almost all regulatory processes are subject to possible delay and to subsequent appeal, and the probability of delay and appeal cannot always be accurately assessed in advance. We are unable to find any substantial public harm that would be avoided in this case by granting a comprehensive zoning exemption.

G. Is "Permitted Use" a Prerequisite For the Applicability of Other Zoning Provisions

The "use" provisions of the Russell, Montgomery and Westfield Zoning By-Laws (and other municipal zoning by-laws more generally) require that any building or structure be a permitted "use" in the district in which it is to be located. For example, Russell Zoning By-Law Section 2.0 divides the Town into five classes of districts, including Residential, Rural Residential, Business, Industrial and Floodplain (Exh. JP-2, at Tab A). Various identified "uses," such as general manufacturing, restaurants, or detached one-family dwellings, are then designated as permitted, prohibited, or allowed by special permit within each of the districts. The Petitioners argue that all of the remaining non-use zoning by-law provisions require, as a threshold matter of law, that the underlying use be a "permitted use" (Petitioners Brief at 111-113). According to the Petitioners, the Department's granting of an exemption from the use provisions of a zoning by-law does not convert the use into a "permitted" use under the local by-

law. The result of granting an exemption under G.L. c. 40A, § 3 from a use by-law, therefore, would not convert what is otherwise a non-permitted use into a permitted use (*id.* at 112). Because the use continues to be non-permitted, it cannot meet any of the other provisions of the by-law (*id.*). Based on this argument, the Petitioners maintain that they must be exempted from the remaining non-use zoning by-law provisions (*id.*).

Montgomery rejected the Petitioners argument as inherently contradictory (Montgomery Reply Brief at 7, n.1). Montgomery reasoned that if the non-use provisions of the by-law are truly inoperable, then the Petitioners request for a blanket exemption would be unnecessary because the non-use provisions would be irrelevant (*id.*). Montgomery also replied that there are certain uses that are allowed in a district according to state law (*e.g.*, child care facilities) even though they are not specifically listed in the by-laws (*id.* at 7). Therefore, Montgomery argued the fact that those uses are not listed does not mean that they are not otherwise allowed in a district, and it certainly does not mean that they are automatically exempt from the non-use zoning standards that all other uses must meet (*id.*).

The Petitioners have made a novel legal argument to support the need for a comprehensive zoning exemption. They have offered no case law to support their position, and candidly acknowledge that this issue has never been raised or decided by the Supreme Judicial Court or any other appellate court in Massachusetts (September 25, 2008 Siting Board meeting; Tr. at 25).

In previous Department orders there appears to be an implicit assumption that granting a use exemption would convert what was otherwise a non-permitted use into a permitted use for purposes of the remaining non-use provisions. *See, for example, Tennessee Decision (2002)* at 7-9 (2002) (Department granted agricultural district use exemption, but denied non-use exemption for site plan review). *New England Power Company/Massachusetts Electric Company, D.T.E. 04-66/04-81, at 18-24 (2005)* (Department granted use exemption from residential district, but denied non-use exemption for provision requiring building permit). Whether, as a matter of law, the Department's granting of an exemption from the use provisions of a zoning by-law converts a prohibited use into a permitted use for purposes of the non-use provisions has never been definitively established. However, we believe that the logic of the implicit assumption that it does so is sound because by granting a use exemption to a petitioner

we intend to establish that the proposed use is a “permitted” use as a result of our action for all relevant purposes under the zoning by-law. Thus, we reject the argument that obtaining an exemption from a use provision does not automatically transform a non-permitted use to a permitted use for purposes of the non-use provisions of a local zoning bylaw. We agree with Montgomery that the Petitioners’ argument is inherently contradictory because if the non-use provisions of the by-law are truly inoperable, then the Petitioners’ request for a blanket exemption would be unnecessary as the non-use zoning by-law provisions would therefore be irrelevant.

H. G.L. c. 164, § 72

As stated above, in evaluating petitions filed pursuant to G.L. c. 164, § 72, the Department relies on the standard of review established for G.L. c. 40A, § 3 for determining whether the proposed project is reasonably necessary for the convenience or welfare of the public. Based on the record in this proceeding and the above analysis, and with the implementation of mitigation measures proposed by the Companies and directed by the Siting Board, the Siting Board finds pursuant to G.L. c. 164, § 72, that the proposed transmission line and ancillary equipment are necessary for the purpose alleged, will serve the public convenience, and are consistent with the public interest.

The Siting Board directs the Petitioners to serve a copy of this decision on the Town of Russell Board of Selectmen, the Town of Russell Planning Board, the Town of Russell Zoning Board, the Montgomery Board of Selectmen, the Montgomery Planning Board, the Montgomery Zoning Board, the Westfield City Council, the Westfield Planning Board, and the Westfield Zoning Board within five business days of its issuance. The Siting Board further directs the Petitioners to certify to the Secretary of the Department within ten business days of its issuance that such service has been made.

I. Section 61 Findings

The Massachusetts Environmental Policy Act (“MEPA”) provides that “[a]ny determination made by an agency of the Commonwealth shall include a finding describing the environmental impact, if any, of the project and a finding that all feasible measures have been taken to avoid or minimize said impact.” G.L. c. 30, § 61. Pursuant to 301 CMR § 11.01(3),

these findings are necessary when an Environmental Impact Report (“EIR”) is submitted by a petitioner to the Secretary of Energy and Environmental Affairs, and should be based on such EIR. Where an EIR is not required, G.L. c. 30, § 61 findings are not necessary. The record indicates that an EIR was required for the Petitioners’ proposed generation facility and associated transmission line. Therefore, a finding under G.L. c. 30, § 61 is necessary for the Petitioners’ zoning exemption petition and its Section 72 petition.

In Section III.D., above, the Siting Board conducted a comprehensive analysis of the environmental impacts of the proposed transmission project and found that the temporary and permanent impacts of the proposed transmission project along the primary route would be minimized and that the proposed project along the primary route would achieve an appropriate balance among conflicting environmental concerns as well as among environmental impacts, reliability and cost. Accordingly, the Siting Board finds that all feasible measures have been taken to avoid or minimize the environmental impacts of the proposed Project.

VI. DECISION

The Siting Board’s enabling statute directs the Siting Board to implement the energy policies contained in G.L. c. 164, §§ 69H to 69Q, to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. G.L. c. 164, § 69H. In addition, the statute requires that the Siting Board determine whether plans for the construction of energy facilities are consistent with current health, environmental protection, and resource use and development policies as adopted by the Commonwealth. G.L. c. 164, § 69J.

In Section II.A, above, the Siting Board found that the existing electric transmission system is inadequate to interconnect the proposed Russell Biomass generating facility, and that the proposed Project is needed if the Petitioners establish that the proposed Russell Biomass generating facility is likely to be available to contribute to the regional energy supply.

In Section II.B, above, the Siting Board found that the proposed Southern Approach for the transmission facility is preferable to the Northern Approach with respect to providing a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

In Section III.A, above, the Siting Board found that the Petitioners developed and applied a reasonable set of criteria for identifying and evaluating alternatives to the proposed project in a manner which ensures that they have not overlooked or eliminated any routes which are clearly superior to the proposed project. The Siting Board also found that the Petitioners have identified a range of practical transmission line routes with some measure of geographic diversity. Consequently, the Siting Board found that the Petitioners have demonstrated that they examined a reasonable range of practical siting alternatives.

In Section III.D.5, above, the Siting Board found that the primary route is preferable to the alternative route with respect to providing a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. The Siting Board also found that the proposed project along the primary route would achieve an appropriate balance among conflicting environmental concerns as well as among environmental impacts, reliability, and cost.

In Section IV, above, the Siting Board reviewed environmental impacts of the proposed transmission project in light of related regulatory or other programs of the Commonwealth. As evidenced by the above discussions and analyses, the proposed transmission line along the primary route generally would be consistent with the identified requirements of all such programs.

Accordingly, the Siting Board APPROVES the Petitioners' petition to construct the proposed 115 kV transmission line using the Petitioners' primary route, and either proposed Switching Station S-1 or S-2, subject to the following conditions:

- (a) To establish that there is a need for additional transmission resources to interconnect the Russell Biomass generating facility with the regional transmission grid, prior to the construction of the transmission line, the Petitioners shall submit to the Siting Board copies of all permits required for Russell Biomass to begin construction of the Russell Biomass generating facility.
- (b) To ensure that the visual impacts of the proposed transmission project are minimized, the Petitioners shall offer to provide vegetative plantings in edge-of-

ROW or off-ROW locations on residential properties near West Road, where effective to screen views of the proposed transmission line.

- (c) The Petitioners shall pursue actively the use of Route Variation 1a modified; however, the Petitioners may use Route Variation 1c if use of Route Variation 1a modified is infeasible. The Petitioners shall notify the Siting Board in writing if they determine for any reason that the use of Route Variation 1a modified is infeasible and the reasons for that determination.

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

In addition, the Siting Board has found pursuant to G.L. c. 164, § 72 that the Petitioners' proposed transmission line is necessary for the purpose alleged, and will serve the public convenience and is consistent with the public interest.

In addition, the Siting Board has found pursuant to G.L. c. 40A, § 3 that construction and operation of the Petitioners' proposed facility is reasonably necessary for the public convenience or welfare. However, the Siting Board is directing the Petitioners to consult with the relevant zoning authorities concerning a number of the zoning exemption requests. Accordingly, the Siting Board GRANTS in part, DENIES in part, and CONTINUES in part, the Petitioners' request for an exemption from certain provisions of the Town of Russell, the Town of Montgomery, and the City of Westfield Zoning By-laws. Specifically, the Petitioners shall be exempt from those sections of the relevant by-laws enumerated in Section V above. The Siting Board continues the portion of the case involving the six requested exemptions enumerated in Section V above where the Siting Board has directed that further consultations with the relevant zoning authorities first take place before further consideration by the Siting Board. The Siting Board denies the Petitioners' request for a comprehensive zoning exemption from the Town of Russell, the Town of Montgomery and the City of Westfield.

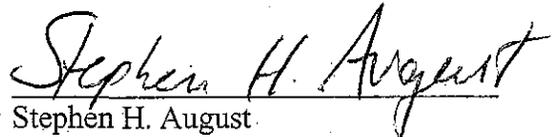
The Siting Board notes that the findings in this decision are based on the record in this case. A project proponent has an absolute obligation to construct and operate its facility in conformance with all aspects of its proposal as presented to the Siting Board. Therefore, the

Siting Board requires the Petitioners to notify the Siting Board of any changes other than minor variations to the proposal so that the Siting Board may decide whether to inquire further into a particular issue. The Petitioners are obligated to provide the Siting Board with sufficient information on changes to the proposed project to enable the Siting Board to make these determinations.

The Siting Board's decision in EFSB 07-4 to approve, with conditions, the proposed 115 kV transmission line using the Petitioners' primary route and either proposed switching station S-1 or S-2, pursuant to G.L. c. 164, § 69J is a final decision pursuant to G.L. c. 30A, § 14.

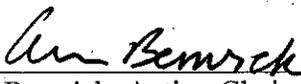
The Siting Board's decision in D.P.U. 07-36, pursuant to G.L. c. 164, § 72, that the Petitioners' proposed transmission line is necessary for the purpose alleged, and will serve the public convenience and is consistent with the public interest is a final decision pursuant to G.L. c. 30A, § 14.

The Siting Board's decision in D.P.U. 07-35, pursuant to G.L. c. 40A, § 3, is final for purposes of G.L. c. 30A, § 14, except with respect to the six requested exemptions where the Siting Board has directed that Petitioners should first consult with the relevant zoning authority in an effort to obtain an appropriate permit or relief.


Stephen H. August
Presiding Officer

Dated this 21st day of April 2009

APPROVED by the Energy Facilities Siting Board at its meeting of April 15, 2009, by the members and designees present and voting. **Voting for** approval of the Tentative Decision, **as amended:** Ann Berwick (Acting EFSB Chair/Designee for Ian A. Bowles, Secretary, Executive Office of Energy & Environmental Affairs); Rob Sydney, (Designee for Commissioner, DOER); James Colman (Designee for Commissioner, DEP); Paul J. Hibbard, Commissioner DPU; Tim Woolf, Commissioner DPU ; and Dan Kuhs, Public Member.



Ann Berwick, Acting Chair
Energy Facilities Siting Board

Dated this 15th day of April, 2009

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).

EFSB 07-3/07-5

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I. INTRODUCTION

From May 1, 1977, until April 30, 2007, the petitioner in these two proceedings, the Mobil Pipe Line Company (“Mobil” or the “Company”), leased an easement (“Easement”) from Providence and Worcester Railroad Company (“P&W”) (Exh. MPL-2,¹ Memorandum in Support of Mobil Pipe Line Company’s Petition for Determination of Jurisdiction, Tab A, Superior Court’s Findings and Order on Plaintiff’s Motion for Preliminary Injunction at 2). The Easement allowed Mobil to operate approximately 120 feet of pipeline (“Pipeline”) that had been laid underneath P&W railroad tracks. Said railroad tracks are located on land owned by P&W in the Town of Oxford, Massachusetts (“P&W Property”). The Pipeline was used to transport petroleum products from East Providence, Rhode Island, to Springfield, Massachusetts (*id.*).

On April 27, 2007, a few days before the Easement was to expire, Mobil filed a petition with the Energy Facilities Siting Board (“Siting Board”), pursuant to Massachusetts G.L. c. 164, § 69S, seeking the acquisition by eminent domain of a permanent easement for operation of the Pipeline on the P&W Property (“Eminent Domain Petition”). The Eminent Domain Petition was docketed as case number EFSB 07-3 (Docket, EFSB 07-3). P&W was granted status as a party intervenor in this proceeding.

On May 1, 2007, the day the Easement expired, Mobil commenced an action against P&W Railroad in Worcester Superior Court seeking injunctive relief. The Superior Court held that the lease of the Easement had terminated (Exh. MPL-2, Superior Court’s Findings and Order on Plaintiff’s Motion for Preliminary Injunction, Tab A). Furthermore, the Superior Court stated that P&W “views the plaintiff [Mobil] as a trespasser with no right to hold over, and has made demand upon it to cap the pipeline and terminate its continued use of the defendant’s land” (*id.*). Consequently, Mobil sought an injunction from the Superior Court in order to continue “the status quo pending action on” the Eminent Domain Petition by the Siting Board (*id.*).

The Worcester Superior Court granted Mobil’s request for a preliminary injunction

¹ The exhibits referred to are taken from the “Final Combined Exhibit List” issued in EFSB 07-3 (the “Eminent Domain Petition”) and EFSB 07-5 (the “Jurisdiction Petition”).

enjoining P&W from taking any action to interfere with the operation of the pipeline, including commencing any proceeding to evict Mobil pending the conclusion of the Eminent Domain Petition proceedings before the Siting Board (*id.*). The injunction also required that Mobil file with the Siting Board either a petition for determination of jurisdiction, pursuant to 980 CMR 2.08, or a petition for an advisory opinion (*id.*). The court stated that either of these petitions must request a response from the Siting Board regarding the applicability of M.G.L. c. 164, § 69S, to the situation presented (*id.*).

On July 10, 2007, Mobil properly filed a Petition for Determination of Jurisdiction with the Siting Board ("Jurisdiction Petition"). This petition sought a ruling as to whether the Siting Board had jurisdiction to hear and decide the Petition for Eminent Domain (Exh. MPL-2). The Siting Board docketed this case as EFSB 07-5. Again, P&W was granted status as a party intervenor.

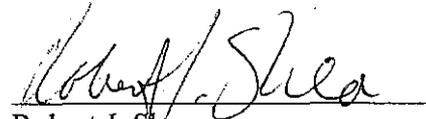
Mobil asserted that G.L. c. 164, § 69S, empowered the Siting Board to take land by eminent domain in order to preserve existing pipelines as well as in order to allow new pipelines to be laid (*id.*). P&W disagreed, asserting that G.L. c. 164, § 69S, empowered the Siting Board to take land by eminent domain for the construction of new pipelines only (*id.*). In its decision on the Jurisdiction Petition dated January 28, 2008, the Siting Board agreed with Mobil Pipe Line and held that it had jurisdiction to take an easement in land owned by P&W in order to allow Mobil's existing pipeline to stay in place. P&W took an appeal from this decision to the Supreme Judicial Court.

On January 27, 2009, the Supreme Judicial Court issued an opinion in the case of Providence and Worcester Railroad Company v. Energy Facilities Siting Board, 453 Mass. 135 (2008). In that opinion, the Court reversed the Siting Board's decision in the Jurisdiction Petition and remanded the case to the Siting Board for further proceedings consistent with the Court's opinion. 453 Mass. at 146. The Supreme Judicial Court held that the Siting Board had no jurisdiction to take an easement from P&W by eminent domain because the statute limited the Siting Board's eminent domain powers to new pipelines only. *Id.*

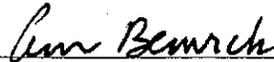
II. REQUEST FOR DISMISSAL

On April 7, 2009, Providence and Worcester Railroad Company ("P&W"), the intervenor in both of the above-captioned cases, moved to dismiss the petitions of Mobil Pipe Line Company in these two cases based upon the ruling of the Supreme Judicial Court in the appeal. On April 13, 2009, Mobil Pipe Line Company wrote to the Presiding Officer in these cases. In this letter, Mobil Pipe Line represented that it would not be filing an opposition to P&W's motion to dismiss. The letter also recognized that the petition should be dismissed in light of the above-referenced Supreme Judicial Court decision.

THEREFORE, acting pursuant to 980 CMR 2.08 and 980 CMR 2.05, the Petition of Mobil Pipe Line Company for Approval to Exercise The Power of Eminent Domain with Respect to an Oil Pipeline in the Town of Oxford, Massachusetts (EFSB 07-3), and Mobil Pipe Line Company's Petition for Determination of Jurisdiction (EFSB 07-5) are hereby DISMISSED.


Robert J. Shea
Presiding Officer

APPROVED by the Energy Facilities Siting Board at its meeting of May 21, 2009, by the members and designees present and voting. **Voting for** approval of the Order of Dismissal, as amended: Ann Berwick (Acting EFSB Chair/Designee for Ian A. Bowles, Secretary, EOEEA); Rob Sydney (Designee for Commissioner, DOER); Robert Mitchell (Designee for Secretary, EOHED); Laurie Burt, Commissioner, DEP; Paul J. Hibbard, Commissioner DPU; Tim Woolf, Commissioner DPU; Penn Loh, Public Member.



Ann Berwick, Acting Chair
Energy Facilities Siting Board

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).

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The Energy Facilities Siting Board hereby GRANTS (1) the Initial Petition and (2) the Application of Cape Wind Associates, LLC for a Certificate of Environmental Impact and Public Interest for the construction of two new 115 kV electric transmission lines in Nantucket Sound and in the Towns of Barnstable and Yarmouth, Massachusetts.

I. INTRODUCTION

Pursuant to G.L. c. 164, §§ 69K-69O, Cape Wind Associates, LLC ("Cape Wind" or "Company") has filed with the Massachusetts Energy Facilities Siting Board ("Siting Board" or "Board") an Initial Petition and an Application seeking a Certificate of Environmental Impact and Public Interest ("Certificate"). Cape Wind seeks the Certificate to construct two new 115 kV electric transmission lines in Nantucket Sound and in the Towns of Barnstable and Yarmouth, in connection with the denial by the Cape Cod Commission of the Company's application for Development of Regional Impact approval for the project. The Certificate, appended to this Decision as Exhibit A, has the effect of granting: (1) Development of Regional Impact Approval; and (2) eight additional state and local permits for the project.

A. Summary of the Proceeding

1. Project Description

Cape Wind proposes to construct two new 115 kV electric transmission lines, partly undersea beneath Nantucket Sound and Lewis Bay and partly on-land and underground in the Towns of Yarmouth and Barnstable on Cape Cod ("transmission project"). The purpose of the transmission project is to interconnect a proposed offshore wind-powered electric generating facility in Nantucket Sound ("wind farm") with the regional electric grid (Exh. CW-2, at 2-3).

The transmission line route is approximately 18.4 miles in length. The route begins at the proposed wind farm on Horseshoe Shoal in Nantucket Sound, travels approximately 12.5 miles beneath Nantucket Sound and Lewis Bay, comes ashore at the southern end of New Hampshire Avenue in Yarmouth, and then travels approximately 5.9 miles underground through Yarmouth and Barnstable to an existing switching station in Barnstable (Exh. CW-2, at 2-3).¹ The

¹ As discussed in Section I.C.3, below, the scope of the current proceeding does not include the proposed wind farm, because the wind farm will be located in federal waters. Federal review and permitting of the wind farm is currently ongoing.

transmission project was approved by the Siting Board on May 11, 2005. Cape Wind Associates LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2, 15 DOMSB 1 (May 11, 2005). That approval was upheld by the Massachusetts Supreme Judicial Court in 2006. Alliance to Protect Nantucket Sound v. Energy Facilities Siting Board, 448 Mass. 45 (December 18, 2006). The Siting Board approved the transmission project a second time in 2008. Cape Wind Associates LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2A/D.T.E. 02-53 (May 1, 2008).

2. Relief Requested

On October 18, 2007, the Cape Cod Commission (“Commission”) denied Cape Wind’s application for Development of Regional Impact (“DRI”) approval, which the transmission project requires under the Cape Cod Commission Act (“CCC Act”).² Cape Wind subsequently filed an Initial Petition followed by an Application with the Siting Board pursuant to G.L. c. 164, §§ 69K-690 (“Certificate statute”).³ In its Application, Cape Wind has asked the Siting Board to grant a Certificate containing the equivalent of a DRI approval and of eight additional state and local permits identified by Cape Wind as necessary for project construction (Exh. CW-2, at 7-8). Specifically, the Company requested that the Siting Board issue a Certificate containing the equivalent of each of the following:

1. A DRI approval, ordinarily issued by the Commission pursuant to Sections 12 and 13 of the CCC Act, for construction and operation of the transmission project within Barnstable County (“DRI approval”);
2. A Chapter 91 License, ordinarily issued by the Massachusetts Department of Environmental Protection (“DEP”) pursuant to G.L. c. 91, for the placement of cables under submerged lands and flowed tidelands of Lewis Bay and Nantucket

² Pursuant to the CCC Act, any proposed development project for which an Environmental Impact Report (“EIR”) is required under the Massachusetts Environmental Policy Act (“MEPA”) is deemed to be a development of regional impact requiring Commission review and approval. See CCC Act, c. 716 of the Acts of 1989, as amended, Section 12(h) and 13; Cape Cod Commission Enabling Regulations, Section 6. Cape Wind’s transmission project required the preparation of a Draft EIR and a Final EIR (Exh. CW-1, Atts. B,C). Thus, the project requires DRI approval.

³ Both the Company’s Initial Petition and its Application are under review in this proceeding. See Sections II and III, below.

Sound, including the intertidal shoreline area of Lewis Bay up to mean high water at the proposed cable landfall ("Chapter 91 License");

3. A Section 401 Water Quality Certification, ordinarily issued by DEP pursuant to 314 CMR 9.00, for dredging activities and for the laying by jet-plow of undersea cables from the landfall in Lewis Bay to the Commonwealth's three-mile jurisdictional boundary ("Section 401 Certification");
4. An approval ordinarily issued by the Massachusetts Highway Department ("MHD") for access to state highways at two locations in Yarmouth and one location in Barnstable ("MHD Access Permit");
5. An approval ordinarily issued by the Massachusetts Executive Office of Transportation and Public Works ("EOT") to cross under an existing rail line located on EOT property in Yarmouth ("EOT License");
6. A wetlands Order of Conditions, ordinarily issued by the Barnstable Conservation Commission pursuant to G.L. c. 131, §40 and the Barnstable wetlands bylaw, for construction of undersea portions of the project within coastal wetlands resources in Barnstable ("Barnstable Order of Conditions");
7. A wetlands Order of Conditions ordinarily issued by the Yarmouth Conservation Commission pursuant to G.L. c. 131, §40 and the Yarmouth wetlands bylaw, for construction of undersea and on-land portions of the project within wetlands resources in Yarmouth ("Yarmouth Order of Conditions");
8. A road opening permit, ordinarily issued by the Barnstable Department of Public Works, to place on-land cables within certain public ways in Barnstable ("Barnstable road opening permit") and
9. A road opening permit, ordinarily issued by the Yarmouth Department of Public Works, to place on-land cables within certain public ways in Yarmouth ("Yarmouth road opening permit").(Exh. CW-1, at 7-8).

B. Jurisdiction

Cape Wind filed its Initial Petition and Application for a Certificate under G.L. c. 164, §§ 69K- 69O. Pursuant to these provisions, an electric, gas or oil company that proposes to construct or operate a jurisdictional energy facility in Massachusetts may seek a Certificate of Environmental Impact and Public Interest from the Siting Board, if the company is prevented or hindered from building the facility because of an adverse state or local agency permitting decision or undue agency delay. The Certificate, if granted, has the legal effect of granting the permit in question, and may grant additional project permits as well. The Siting Board makes a decision on a Certificate Application in accordance with G.L. c. 164, § 69L, which requires that an Application contain certain information and representations; with G.L. c. 164, § 69O, which requires the Siting Board to make four specific findings and opinions; and with

G.L. c. 164, § 69H, which requires the Siting Board to implement the energy policies in its statute to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

C. Procedural History

1. Previous Proceedings

On May 11, 2005, the Siting Board issued a final decision approving construction of the transmission project pursuant to G.L. c. 164, § 69J. Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2, 15 DOMSB 1 (May 11, 2005) ("2005 Decision"). That approval was upheld by the Massachusetts Supreme Judicial Court in 2006. Alliance to Protect Nantucket Sound v. Energy Facilities Siting Board, 448 Mass. 45 (December 18, 2006). On May 1, 2008, the Siting Board issued a final decision approving certain project changes, granting a three-year extension for commencement of project construction and, pursuant to G.L. c. 164, § 72, finding that the project is necessary, would serve the public convenience, and is consistent with the public interest. Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2A/D.T.E 02-53 (May 1, 2008) ("2008 Decision") As discussed further, below, the Siting Board relies substantially on its analyses and findings in these decisions in the instant proceeding.⁴

2. Current Proceeding

This proceeding commenced with the filing by Cape Wind of an Initial Petition for a Certificate with the Siting Board on November 21, 2007, pursuant to G.L. c. 164, §69K (Exh. CW-1). Cape Wind then filed its Application for a Certificate on December 28, 2007, pursuant to G.L. c. 164, §69L (Exh. CW-2). The Initial Petition and Application were consolidated for review, consistent with Siting Board practice. In its Application, Cape Wind seeks from the Siting Board a Certificate granting the equivalent of (1) a DRI approval for the transmission project, and (2) eight additional state and local permits required for construction of the project ("eight additional approvals")

⁴ The 2005 Decision and 2008 Decision are included in the record of this decision and are incorporated by reference herein. See Exhs. CW-2(N); EFSB-1.

Eight parties intervened in the proceeding: three environmental organizations, and the five governmental entities whose permits are the subject of the proceeding. The environmental groups are the Conservation Law Foundation ("CLF"), Clean Power Now, Inc. ("Clean Power Now"), and the Alliance to Protect Nantucket Sound ("Alliance"). The permit-issuing authorities are the Cape Cod Commission, the Massachusetts Department of Environmental Protection ("DEP"), the Massachusetts Executive Office of Transportation and Public Works ("EOT"), and the Towns of Barnstable and Yarmouth. Two parties received limited participant status: the Martha's Vineyard Commission and the Town of Edgartown.

Beginning in August 2008 and continuing through October 2008, the Siting Board and the parties conducted written discovery. In August, 2008, the Company submitted prefiled direct testimony of two witnesses: Craig Olmsted, Vice President of Projects at Energy Management, Inc., the principal member of Cape Wind; and Christopher G. Rein, Senior Vice President and Principal at ESS Group, Inc., the Company's environmental consultant. In early September 2008, the Commission submitted the prefiled direct testimony of two witnesses: Phil Dascombe, Senior Community Design Planner for the Commission, and John S. Ramsey, Senior Coastal Engineer at Applied Coastal Research and Engineering, Inc., coastal resources consultant for the Commission. DEP presented the testimony of Alex Stryksy, Environmental Analyst in the DEP Waterways Program. Approximately 330 exhibits were entered into the record, consisting primarily of responses by the Company and the intervenors to information requests and record requests issued by Siting Board staff and the parties. Adjudicatory hearings were conducted on November 12 and 14, 2008. The parties filed initial briefs on December 23, 2008, and reply briefs on January 6, 2009.

Siting Board Staff prepared a Bench Memorandum that the Siting Board considered at a public meeting of the Board on March 12, 2009 ("March 12 Board meeting"). The Siting Board directed Staff to prepare a Tentative Decision granting the Certificate, and granting all nine state and local permits requested by the Company. See, Transcript of the Public Meeting of the Energy Facilities Siting Board (March 12, 2009) ("March 12 Tr."). The Siting Board further directed Cape Wind and the Towns of Barnstable and Yarmouth to attempt to agree on conditions to be included in wetlands Orders of Conditions and street opening permits, so that the Board could consider including those conditions in the wetlands and road opening approvals to be issued in the Certificate. The Board directed the three parties to file a status report within 45 days. The Siting

Board directed, as an overall timeline, that Cape Wind and the Towns should provide agreed-upon permit conditions within 45 days of the date on which a Tentative Decision was issued. In their status reports, neither Town nor Cape Wind reported progress in reaching agreement on permit conditions. On May 11, 2009 a tentative decision was issued. On May 18, 2009, Cape Wind and the Town of Barnstable indicated that they had reached agreement with respect to road opening matters⁵. On May 21, 2009, the Siting Board considered and unanimously approved the Tentative Decision with amendments.

3. Intervenor Jurisdictional Motions

a. Cape Cod Commission DRI Decisions

A necessary prerequisite for the institution of a Certificate proceeding is a permitting decision by "a state or local agency" that would hinder or preclude the construction of an energy facility jurisdictional to the Siting Board. G.L. c. 164, § 69K; 980 CMR 6.01. In the instant proceeding, the permitting decision that was the basis for the filing of Cape Wind's Certificate Application was the October 18, 2007 DRI denial issued by the Commission.

On March 18, 2008, two of the intervenors, the Commission and the Alliance, filed partial motions to dismiss the Company's Certificate Application. One ground asserted was that DRI decisions do not fall within the scope of the Siting Board's jurisdiction under the Certificate statute. The Commission and Alliance advanced two principal arguments: (1) that the Commission is not a "state or local agency" as provided in the statute; rather, it is a Legislatively-created regional planning body; and (2) that the CCC Act provides that DRI decisions are appealable exclusively to Barnstable Superior Court or the Land Court.

In a ruling issued on July 28, 2008 ("July 28 Jurisdictional Ruling")⁶, the presiding officer denied the motions to dismiss, finding that DRI decisions issued by the Commission are decisions within the scope of the Siting Board's Certificate authority. The July 28 jurisdictional ruling found

⁵ See May 20 letter from D. Rosenzweig to K. Sedor, and attached letter dated April 30, 2009, from R. Donahoe to R. Burgmann. A copy of the April 30 letter is attached to, and is incorporated as part of, the Approval in Lieu of Barnstable Road Opening Permit. The Approval is Att. 4 to the Certificate that is appended to this Decision.

⁶ Cape Wind Associates, LLC, EFSB 07-8, Ruling on Motions re EFSB Jurisdiction Relative to DRI decisions and Motions re Scope of Proceeding (July 28, 2008). The Siting Board hereby adopts and incorporates this ruling into this decision by reference.

that: (1) no evidence exists of an express or implied exemption by the Legislature of DRI decisions from operation of the Certificate statute; (2) statutory language in the Certificate statute and in the Siting statute supports the conclusion that a DRI decision is a decision of a local government body as defined therein; and (3) the institution of a Certificate proceeding under the Certificate statute does not constitute the filing of a judicial appeal of a DRI decision. July 28 Jurisdictional Ruling at 2-5. At the March 12 Board meeting, the Siting Board expressly adopted the finding that the Board's jurisdiction under the Certificate statute extends to Commission DRI decisions (March 12 Tr. at 97-98)^{7, 8}

b. Proposed Wind Farm

The Commission, the Alliance, and the Town of Barnstable filed motions asserting that the scope of this proceeding should not be limited to the transmission project, portions of which are located in Massachusetts and Massachusetts waters, but should include the impacts within Massachusetts of the proposed wind farm, even though the wind farm will be located entirely

⁷ On March 14, 2009, the Commission filed a second motion to dismiss based on the assertion that the Siting Board lacked jurisdiction over Commission decisions. The Commission also filed a motion to supplement the closed record with documents pertaining to asserted wind farm impacts on aviation ("March 14 motions"). The presiding officer denied similar motions during the proceeding, as did the Siting Board at the March 12 Board meeting. Consistent with these prior rulings, the March 14 motions are denied. On April 30, 2009, the Commission filed a second post-hearing motion attempting to supplement the record with information regarding asserted wind farm impacts. This motion also is denied, on the grounds that the record is closed and that, pursuant to earlier rulings, the proffered information is not relevant to this proceeding.

⁸ The Commission also asserted that the DRI denial could not serve as the basis for a certificate proceeding because (1) the DRI denial was not a final agency decision, but rather a procedural denial issued without prejudice; and (2) the DRI denial therefore does not prevent Cape Wind from proceeding with project construction. The presiding officer found that the DRI possessed several indicia of finality, that it was a final agency decision, and that its issuance bars development of the transmission project. July 28 Jurisdictional Ruling at 5-6. The Commission asserted additionally that Cape Wind did not make a good faith effort to obtain DRI approval, as it did not provide the Commission with sufficient information regarding the project. Based on the significant factual record developed in the Commission proceeding, which is part of the record in this proceeding, the Siting Board finds that Cape Wind made a good faith effort to obtain DRI approval. See also, July 28 Jurisdictional Ruling at 6-7. The Siting Board finds further that Cape Wind made a good faith effort to obtain all nine of the approvals it has requested. See Section III.C.1, below.

within federal waters. Cape Wind, CLF, Clean Power Now, and DEP asserted that the scope of the proceeding is appropriately limited to the transmission lines, consistent with extensive legal precedent including decisions of the federal courts and the Siting Board's decisions in the 2005 Decision and 2008 EFSB Decision. In the July 28 Jurisdictional Ruling, the Presiding Officer denied the intervenors' motions and, consistent with applicable precedent, limited the scope of the proceeding to the transmission lines. The Siting Board expressly adopted this jurisdictional limitation at the March 12 Board meeting (March 12 Tr. at 98).

c. Non-Final Agency Permits

The Alliance and the Town of Barnstable filed motions to dismiss that included the assertion that the Siting Board lacks jurisdiction over the eight additional permits because, at the time of the parties' motions to dismiss, no final decisions on those permits had yet been issued by the relevant agencies. The intervenors relied primarily on an interlocutory ruling in an earlier Certificate proceeding, in which the presiding officer determined that the issuance of a final agency permitting decision for each requested permit is a necessary prerequisite to the filing of a Certificate application with respect to that permit.⁹ The interlocutory ruling was not adopted -- or rejected -- by the Board. In this proceeding, the presiding officer deferred decision on this issue until the evidentiary record had been developed. See, July 28 Jurisdictional Ruling at 2, n.3. At the March 12 Board meeting, the Siting Board determined that the issuance of a final agency decision for permits other than the triggering permit is not a jurisdictional prerequisite to the filing of a Certificate Application seeking multiple permits (March 12 Tr. at 99-100). The matter of non-final agency permits is discussed further in Section III.D.2, below.

d. DEP Chapter 91 License

The Alliance's motion to dismiss included the assertion that the Siting Board lacks authority to include a Chapter 91 License in a Certificate. The Alliance asserted primarily that (1) a Chapter 91 License conveys a property interest in tidelands held in trust for the public, and the Siting Board lacks the necessary statutory authority to convey such an interest; and (2) the Certificate statute itself precludes the Board from issuing a Certificate "with respect to any lands or

⁹ See Colonial Gas Company d/b/a KeySpan Energy Delivery New England, EFSB 06-1, Ruling on Motions for Partial Dismissal (May 10, 2007).

interests therein, excluding public ways, owned or managed by any state or local government.” G.L. c. 164, § 69K. Cape Wind countered that (1) pursuant to G.L. c. 164, § 69K, the Board’s Certificate authority extends to “all” project permits, and there is no exemption for Chapter 91 Licenses; (2) in this particular case, a Certificate would not override DEP’s authority under Chapter 91, as the Certificate would incorporate DEP’s Written Determination and, pursuant to G.L. c. 164, § 69K, DEP retains responsibility for enforcement of the License; (3) the cited language is inapplicable because a Chapter 91 License does not convey a property interest; and (4) the cited language applies only to the agency action that triggers an application for a Certificate application, not to agency decisions that subsequently may be included in a Certificate.

The Siting Board finds nothing in the Certificate statute indicating that the Legislature intended to exclude any state or local permits, including Chapter 91 Licenses, from the scope of the Board’s authority under the Certificate statute. To the contrary, the statute mandates that a Certificate issued by the Board contain “all” necessary project permits. G.L. c. 164, § 69K. The Siting Board declines to create an implied exclusion of Chapter 91 Licenses from the scope of the Certificate statute in the absence of a clear showing of Legislative intent to do so. The Siting Board also finds inapplicable the cited language regarding the transfer of land owned or managed by a state or local government. Read in context, the language in Section 69K means that a petitioner may not rely upon a state agency or local government refusal with respect to public lands as a basis to file an initial petition. However, this language does not govern the scope of the Certificate, which is addressed in the third paragraph of section 69K, and which states that a Certificate takes the place of “all” state or local permits. Finally, the Siting Board notes that DEP has not objected to inclusion of the Written Determination in the Certificate to serve as the final Chapter 91 License for the project (March 12 Tr. at 89). Consequently, the Siting Board finds that its authority under G.L. c. 164, §§ 69K-69O extends to permits issued pursuant to G.L. c. 91.

II. CAPE WIND'S INITIAL PETITION

A. Standard of Review

Pursuant to the regulations implementing the Certificate statute, obtaining a Certificate is a two-step process. First, the applicant must file an Initial Petition. G.L. c. 164, § 69K; 980 CMR 6.02. For facilities other than generating facilities, the Certificate statute provides that the Siting

Board shall consider an Initial Petition if: (1) the applicant asserts at least one of the six grounds for a Petition set forth in G.L. c. 164 § 69K; and (2) the Siting Board determines that, on the merits, at least one of the asserted grounds constitutes a valid basis for granting the Initial Petition. Id.

B. Analysis and Findings

Cape Wind asserted in its Initial Petition four of the six statutory grounds upon which an Initial Petition may be based.

1. Denial Precluding Facility Construction

Cape Wind asserts that the transmission project “cannot be constructed due to any disapprovals, conditions or denials by a state or local agency or body” (Exh. CW-1, at 29); G.L. c. 164, § 69K; 980 CMR 6.02(f). As previously noted, on October 18, 2007, the Commission issued a decision denying Cape Wind's application for DRI approval (“DRI denial”) and the project cannot be constructed without such approval (Exh. CW-2, Att. M). Accordingly, the Siting Board finds that Cape Wind has raised a valid basis for the Board's consideration of the Company's Initial Petition pursuant to G.L. c. 164, § 69K and 980 CMR 6.02(f).¹⁰

2. A Burdensome Condition

Cape Wind asserts that the Commission's DRI denial “has imposed a burdensome condition or limitation on any license or permit which has a substantial impact on the responsibilities of the board as set forth pursuant to section 69H” (Exh. CW-1, at 28-29). G.L. c. 164, § 69K; 980 CMR 6.02(e).

The Siting Board's primary mandate is to implement the energy policies contained in its enabling legislation “so as to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.” G.L. c. 164, § 69H; 980 CMR

¹⁰ The Commission argued that it only denied the DRI due to lack of information, rather than due to an affirmative finding of non-compliance with the DRI standards. The Siting Board disagrees with that characterization, as the denial at least partially rested on non-compliance with certain MPS, as discussed in Section III.B. 3, below. Even if it were a procedural denial exclusively, the Board does not believe that this is a distinction with a difference; the statute does not exempt denials due to lack of information from its reach, except perhaps in cases in which the proponent's failure to supply necessary information constitutes a failure to apply in good faith under Section 69L, which is not the case here.

2.02(1). In accordance with that mandate, the Siting Board has previously approved Cape Wind's proposed transmission project under G.L. c. 164, § 69J, finding that the project is needed to interconnect the proposed wind farm to the regional electric grid (Exh. CW-2, Att. N at 118). However, the transmission project cannot be constructed or operated due to the Commission's DRI denial. The denial of a permit may constitute a burdensome condition or limitation. 980 CMR 6.02(2)(e).

The Siting Board finds that the Commission's denial of the project has a substantial impact on the Siting Board's primary responsibility under G.L. c. 164, §§ 69H and 69J to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. Accordingly, the Siting Board finds that Cape Wind has raised a second valid basis for the Board's consideration of the Company's Initial Petition, in accordance with G.L. c. 164, § 69K and 980 CMR 6.02 (2)(e).

3. Inconsistencies Among Resource Use Permits

Cape Wind asserts that "there are inconsistencies among resource use permits issued by . . . state or local agencies" for a proposed project (Exh. CW-1, at 24). G.L. c. 164, § 69K; 980 CMR 6.02 (2)(c). Cape Wind asserts that the Commission's DRI denial for the project is inconsistent with the Siting Board's approval of the project in the 2005 Decision and 2008 Decision and with the Secretary's Certificate on the project's FEIR under MEPA (Exh. CW-1, at 24).

The Siting Board and the Commission each has issued a resource-use permitting decision for the transmission project. The Siting Board's 2005 Decision, supplemented by the 2008 Decision, allows Cape Wind, subject to conditions, the use of certain land, water, wetlands, and other natural resources for the transmission of electricity. The Commission's DRI decision denies Cape Wind the use of these natural resources; it thus is inconsistent with the Siting Board's original decisions. Accordingly, the Siting Board finds that Cape Wind has raised a third valid basis for the granting of its Initial Petition, in accordance with G.L. c. 164, § 69K and 980 CMR 6.02 (2) (c).

4. Nonregulatory Issues or Conditions

Cape Wind asserts that the Commission's DRI denial imposes non-regulatory issues or conditions on the transmission project (Exh. CW-1, at 25-28). G.L. c. 164, § 69K; 980 CMR 6.02 (2)(d). A non-regulatory issue or condition "relates to matters not within the jurisdiction of the

agency in question." 980 CMR 6.02(2)(d). Cape Wind asserts that the Commission exceeded its regulatory jurisdiction by basing its DRI denial, in part, on the status of property rights held by Cape Wind relative to the upland portion of the project, and by requiring and considering evidence pertaining to the wind farm (Exh.CW-1, at 25-28).

The Siting Board makes no determination regarding substantive limitations on the jurisdiction of the Cape Cod Commission under the CCC Act and its implementing regulations. That is a matter better left to the courts. Moreover, it is not necessary in this proceeding to reach that issue. Cape Wind has asserted three valid bases for its Initial Petition and the assertion of one is sufficient for the Board to consider an Initial Petition. Accordingly, the Siting Board makes no finding regarding the Company's assertion that the Commission's DRI Decision was based on a non-regulatory issue or condition as provided by G.L. c. 164, § 69K and 980 CMR 2.02 (2)(d).

C. Decision on the Initial Petition

As noted in Section II.B, above, the Company asserted in its Initial Petition four of the six grounds on which Siting Board jurisdiction to consider an Initial Petition may be based. The Siting Board has found that Cape Wind has raised three substantively valid bases for consideration of the Company's Initial Petition. Any one of these grounds alone would be sufficient to support the granting of an Initial Petition.

Accordingly, the Siting Board GRANTS the Company's Initial Petition.

III. THE APPLICATION

A. Standard of Review

Pursuant to G.L. c. 164, § 69O, if the Siting Board issues a Certificate for a non-generating facility, the Certificate must include the Siting Board's findings and opinions with respect to the following: (1) the need for the facility to meet the energy requirements of the applicant's market area taking into account wholesale bulk power or gas sales or purchases or other cooperative arrangements with other utilities and energy policies as adopted by the Commonwealth; (2) the compatibility of the facility with considerations of environmental protection, public health, and public safety; (3) the extent to which construction and operation of the facility will fail to conform with existing state or local laws, ordinances, by-laws, rules and regulations and the reasonableness of exemption thereunder, if any, consistent with the implementation of the energy policies in the

Siting statute to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost; and (4) the public interest, convenience and necessity requiring construction and operation of the facility. G.L. c. 164, § 69O. See Keyspan EFSB 06-1, at 12; Berkshire Power Development, Inc., 8 DOMSB 1, at 291 (1999) (“Berkshire Power”); IDC Bellingham, 13 DOMSB 1, at 20 (2001) (“IDC Bellingham”).

In order to provide a full review of a non-generating facility previously approved by the Siting Board in a proceeding under G.L. c. 164, § 69J, the Siting Board also (1) reviews the decision from the underlying EFSB proceeding and (2) determines the extent to which new information has been developed or the circumstances of a project may have changed in the intervening period. Additionally, the Siting Board verifies that issues raised by the state or local agency or agencies whose actions are the subject of the Application have been addressed in a comprehensive manner by the Board, either in its review of the facility under G.L. c. 164, § 69J and/or in its review under G.L. c. 164, § 69K.

B. Opinions and Findings

The four specific findings the Siting Board must make to support the issuance of a Certificate of Environmental Impact and Public Interest for a facility are discussed below.

1. Need for the Facility

Pursuant to G. L. c. 164, § 69O, the Siting Board must make a finding with respect to “the need for the facility to meet the energy requirements of the applicant’s market area taking into account wholesale bulk power or gas sales or purchases or other cooperative arrangements with other utilities and energy policies as adopted by the Commonwealth.”

In the 2005 Decision, the Siting Board found need for additional transmission resources to interconnect the proposed wind farm with the regional transmission grid. 2005 Decision at 20. The Siting Board found that Cape Wind and NSTAR had established that the existing transmission system was inadequate to support the proposed wind farm. Id. This finding was based on a showing by Cape Wind and NSTAR that an electric interconnection was required for Cape Wind to transmit the output of the proposed wind farm to contribute to the regional energy supply. Id. The Siting Board found that, to establish that the transmission line is needed, the wind farm must be reasonably likely to be available to contribute to the regional energy supply. Id. To establish that the wind farm is likely to be available, Cape Wind is required to submit to the Siting Board

copies of all permits required to begin installation of wind farm equipment in Nantucket Sound. *Id.* at 21. The Siting Board affirmed this need analysis in the 2008 Decision approving the Company's petition for a Section 72 determination of public interest and necessity. *Id.* at 21. In the current proceeding, Cape Wind indicated that there are no material changes with respect to the need for the project (Exhs. CW-2, at 31; APNS-CW-9). Therefore, the Siting Board finds that the proposed project is needed in accordance with G.L. c.164, §§ 69J and 69O.¹¹

¹¹ The Commission and the Alliance argue that establishing need under Section 69J does not establish need under Section 69O. Citing the language of Section 69O, they assert that the Siting Board must determine the need for the transmission project based on "the need for the [project] to meet the energy requirements of the applicant's market area, taking into account wholesale bulk power or gas sales or purchases." This argument is tantamount to insisting that Section 69O requires the Board to determine whether the *wind farm*, as opposed to the *cable* is needed. There are two serious flaws with this argument. First, the Siting Board has no jurisdiction over the wind farm; yet denying an approval of the cable because the *wind farm* is not needed is, in effect, exercising jurisdiction over the wind farm itself. Second, even if the wind farm were in state waters, as a result of the 1997 Electric Restructuring Act, the Siting Board may no longer look at the need for generating facilities, either in a facility approval proceeding under Section 69J or in a Certificate proceeding. See G.L. c. 164, § 69J1/4; § 69O1/2. It is not reasonable to assume that the legislature intended to prohibit the Board from directly assessing the need for generation facilities when such facilities apply for Siting Board approvals, yet intended for the Board to perform a "backdoor," indirect assessment of need for the generating facility when the Board considers a Certificate for a transmission line. At the very least, the statute is ambiguous as to this issue, and the Siting Board therefore exercises its discretion to interpret the statute in a manner that achieves the underlying purpose of the 1997 Electric Restructuring Act, which was to allow the marketplace, rather than a state regulatory body, to determine the need for generation facilities. Indeed, as discussed above, the Siting Board in the 2005 Decision addressed these issues and created a new standard of review specifically for determining the need for proposed transmission lines, like the Cape Wind lines, intended to interconnect a new or expanded generator. This new standard expressly rejected the former standard, which required looking at the need for the generating facility that would be interconnected. 2005 Decision at 16-17. The Supreme Judicial Court has affirmed the Board's new standard of review for transmission facility need. See Alliance to Protect Nantucket Sound v. Energy facilities Siting Board, 448 Mass. 45 (December 18, 2006).

2. Compatibility With Environmental Protection, Public Health and Safety

Pursuant to G. L. c. 164, § 69O, the Siting Board must make a finding with respect to the compatibility of the facility with considerations of environmental protection, public health, and public safety.

a. Prior Siting Board Review

As indicated above, the Siting Board approved construction of the transmission project in the 2005 Decision and granted the project Section 72 and project change approvals in the 2008 Decision. The Siting Board conducted a comprehensive review of the environmental impacts of the proposed transmission lines in the 2005 Decision, and updated the review based on new information regarding some issues in the 2008 Decision. In undertaking the initial and updated reviews, the Siting Board considered: (1) the construction impacts associated with installing the proposed underwater portion of the transmission lines on the marine environment for sand and sediment disturbance, eelgrass and other submerged vegetation, shellfish, fish, protected marine species, protected coastal shorebirds, marine archeology and navigation; (2) the construction impacts associated with installing the proposed upland portion of the transmission lines on land for wetlands and water resources, land resources, traffic and noise; and (3) the permanent impacts associated with the construction and operation of the proposed transmission line with regard to land use and visual impacts, and electric and magnetic fields. 2005 Decision at 53 to 95, 96 to 119. The Siting Board found that with conditions relating to eelgrass, protected coastal shorebirds, navigation, traffic and historic preservation, the environmental impacts would be minimized. 2005 Decision at 132-134.

The Siting Board compared alternatives to the proposed transmission lines, as part of (1) project approach analysis, (2) route selection analysis, and (3) comparison of primary and alternative routes. The Siting Board found that the proposed transmission lines were preferable to all alternatives with respect to environmental impacts. The Company initially identified six routes and of those selected two routes, a primary route and an alternative route. 2005 Decision at 34, 40. The Siting Board found that the Company had not overlooked or eliminated any routes which are clearly superior to the proposed project, had identified a range of practical transmission line routes with some measure of geographic diversity, and consequently, that the Company had demonstrated that it examined a reasonable range of practical siting alternatives. 2005 Decision at 50.

b. Commission

In its denial of Cape Wind's DRI application, the Commission focused on three environmental aspects of the transmission project for which it asserts that additional information, additional mitigation, or a project change was needed: (1) the general impacts of undersea cable installation using jet-plowing; (2) the impacts of undersea cable installation on eelgrass; and (3) the appropriateness of locating the project's transition vault in a FEMA V-zone and within 100 feet of a coastal bank.

First, the Commission expressed concern with the potential of jet-plowing to directly and indirectly effect eelgrass and shellfish beds (Exh. CW-2(M) at 40). The Commission referred to Minimum Performance Standard ("MPS") 2.2.3.6, which prohibits new dredging unless it is needed to accomplish a substantial public benefit and no feasible alternative exists (*id.* at 40).¹² The Commission stated that more sediment core samples and analyses were necessary to determine that the cable installation would not adversely affect eelgrass or shellfish resources (*id.*).

Next the Commission referred to MPS 2.2.3.7 which provides that development shall have "no significant adverse direct or indirect effect on eelgrass beds, unless there is no feasible alternative and the project is necessary to accomplish a public benefit" (Exh. CW-2(M) at 42). The Commission indicated that it needed more information on the location of eelgrass along the entire route (*id.* at 42; Exh. EFSB-CCC-1, at 8, 9). Specifically, the Commission asked Cape Wind to perform diver surveys extending to the entire length of the undersea cables within Massachusetts waters (approximately six miles), in addition to the diver surveys already performed by the Company within Lewis Bay (Exh. CW-2(M) at 43).

Finally, the Commission had concerns about the location of the transition vault that would connect the submarine and upland cables (Exhs. CW-2(M) at 37; EFSB-CCC-1, at 5-6). The transition vault would be located south of Shore Road under the existing pavement at New Hampshire Avenue, which is within a FEMA V-zone (Exh. EFSB-CCC-1, at 5).¹³ According to

¹² The Minimum Performance Standards are contained in the Commission's 2002 Regional Policy Plan ("RPP"), approved by the Cape Cod Commission on January 10, 2002, and adopted as Ordinance 02-03 by the Barnstable County Assembly of Delegates on March 20, 2002.

¹³ The FEMA V-zone refers to a Velocity Zone subject to wave action from a hundred-year storm (*i.e.*, a storm with 1% chance of occurring each year) (Exh. EFSB-CCC-9).

the Commission, MPS 2.2.2.1 prohibits development in a V-zone in order to ensure that new structures are not constructed in areas vulnerable to potentially damaging wave and wind action during a significant storm event or seismic event (Exh. EFSB-CCC-9; Tr. 2, at 219-220).¹⁴ The Commission stated that locating the transition vault out of the FEMA V-zone would eliminate the risk of damage to the transition vault and avoid potential redirection of floodwaters during a 100-year storm event (Exh. EFSB-CCC-9). The Commission also noted that the transition vault should be located a minimum of 100 feet landward of the coastal bank to meet requirements of MPS 2.2.2.4, which specifically prohibits any new non-water dependent development within 100 feet of the coastal bank, dune or beach (Exhs. CW-2(M) at 39; EFSB-CCC-1, at 6). Although the Commission does permit water-dependent structures and uses in the V-zone and within 100 feet of coastal resources if there is no feasible alternative, the Commission determined that the transition vault did not meet its Regional Performance Plan definition of a water-dependent use (Exh. CW-2(M) at 37, 39).¹⁵

Commission staff recommended relocating the transition vault out of the V-zone in order to comply with MPS requirements (Exhs. CW-2(M) at 37; EFSB-CCC-9). In order to relocate the transition vault outside of the V-zone, the vault would need to be moved approximately 225 feet landward (Exh. EFSB-CW-2). The Commission asserted that Cape Wind's arguments pertaining to the increased excavation associated with the relocation, as well as unsafe cable placement in a dry environment, are erroneous since if the vault were moved there would still be excavation in the same area and the cables would remain below sea-level (Exhs. EFSB-CCC-9; CCC-JR, at 5).

c. Cape Wind

The Company asserted that there is ample evidence in the record regarding the project's potential environmental impacts, including eelgrass impacts and impacts associated with

¹⁴ The DEIR and the FEIR for the project did not address the transition vault with regard to its location in the V-zone, nor did any of the intervenors in the underlying decision. The Commission submitted comments on the expanded ENF, DEIR and the FEIR, and did not discuss the location of the transition vault in the V-zone or in the coastal bank buffer zone (Exhs. CW-1(E); CW-1(F); CW-1(G)).

¹⁵ Of relevance to the transition landfall, the DEP's Waterways Regulation Program in review of the Company's application for a Chapter 91 license has determined that the proposed Cape Wind project is water dependent under the waterways regulations (Exh. APNS-CW-40(S)).

placement of the transition vault in a the V-zone, to support a finding that environmental impacts of the project would be minimized (Exhs. CLF-CW-2; CLF-CW-3; Company Initial Brief at 66). Cape Wind further asserted that the overall findings by the Commission, and its denial of Cape Wind's DRI Application are in conflict with the determinations of both MEPA and the Siting Board that environmental impacts would be minimized (Exh. CW-2, at 28).

With respect to dredging impacts, Cape Wind asserted that jet-plowing is necessary to accomplish the interconnection of the wind farm to the grid, and further asserted that no feasible alternative to the transmission project exists to accomplish that goal (Company Initial Brief at 83). Cape Wind asserted that jet-plowing is the state-of-the-art technology for the installation of underwater cables, and is recognized as having significantly lower environmental impacts than other installation methods, such as trenching (Exh. APNS-CW-20; Tr. 1, at 93). The Company stated that it performed 19 core samples in state waters, and this sampling has been deemed adequate by other permitting agencies such as DEP (Tr. 1, at 157).

The Company reiterated that its overall plan to install the submarine cables using jet-plowing has been favorably reviewed and conditioned in comprehensive reviews by the Siting Board (in the 2005 Decision and in the 2008 Decision), and by the Secretary of Environmental Affairs (in the Certificates on the DEIR and FEIR). The project also received issue-by-issue permits from DEP (in the Section 401 Water Quality Certification and the Chapter 91 Written Determination) (Exhs. EFSB-DEP-4(a); APNS-CW-24(S)). Cape Wind will be required to comply with a number of mitigation measures for minimizing jet-plowing impacts, such as time-of-year restrictions and use of a turbidity curtain during jet-plowing (Exh. EFSB-DEP-4; Tr. 2, at 408). Further, the Company will be required to monitor turbidity during jet-plowing and dredging in accordance with "The Turbidity Monitoring Plan for Massachusetts Coastal Waters" (see Section 401 Water Quality Certification) (Exh. EFSB-DEP-4, Att. B; Tr. 2, at 408-409).

Cape Wind asserted that the project will not affect eelgrass beds and noted that the Company has conducted pre-construction reconnaissance regarding existing eelgrass beds in the project area (Exh. EFSB-CW-5). The Company has committed to extensive conditions pertaining to the protection of eelgrass during cable installation, such as prohibitions on the anchoring of vessels and performance of cable work near Egg Island where eelgrass beds are located, use of turbidity curtains, pre-and post construction monitoring to include pre-aerial photographs of the entrance to Lewis Bay, an eelgrass survey two-years post-construction, and the replanting of

eelgrass if necessary (Exh. EFSB-CW-5; Tr. 1, at 187-188, 191-192). Cape Wind stated that it has performed side-scan sonar of the entire cable route as well as site-specific visual inspection by divers (Exhs. CCC-CW-15; CLF-CW-4; CLF-CW-5). Cape Wind explained that only the area off Egg Island was identified to have the potential to support eelgrass, and the eelgrass in this area will be avoided by the cable route (Exhs. EFSB-CW-5; CCC-CW-15). Cape Wind reported that it will aerially photograph the entire cable route in state waters in the month of July immediately prior to jet-plowing to confirm that the proposed route remains clear of eelgrass and to finalize the exact location of the jet-plowing (Exh. EFSB-CW-5). Further, diver surveys will be conducted during construction to ensure there are no impacts to eelgrass around Egg Island in Lewis Bay, and will be deployed elsewhere if additional eelgrass beds are identified through photography or geophysical or geotechnical investigation (*id.*; Exh. CLF-CW-5).

Cape Wind asserted that the underground transition vault, as proposed, would be designed and constructed to withstand inundation from floodwaters, and that the concrete seawall and pavement at the end of New Hampshire Avenue would protect the vault and roadway from significant erosion from floodwaters (Exhs. EFSB-CW-2, at 3; CLF-CW-2; Tr. 1, at 17). Cape Wind explained that in order to relocate the transition vault outside of the V-zone, the submarine cable would need to be extended upland approximately 225 feet from its terminus under the current design (Exh. EFSB-CW-2 at 2). The Company asserted that adding 225 feet of cable designed for marine use in an upland area, to cable that is designed to be used in a saturated environment, would have a negative impact on long-term cable reliability (*id.*). Further, the Company explained that installation of a longer section of cable would require a wider and deeper trench, 20 feet wide by 11 feet deep, versus the original design of 10 feet wide by 7 feet deep (*id.*).¹⁶

Cape Wind estimated that relocating the transition vault outside of the V-zone would increase project costs by \$500,000 (Exh. EFSB-CW-2, at 2). The Company calculated that the construction time at the landfall site would increase by approximately four to six weeks due to the increased excavation and dewatering necessary to install the longer cable (*id.*). The Company indicated that relocating the cable would also increase noise and air emissions associated with

¹⁶ According to the Company, the trench is wider to accommodate the extension of the 10-inch diameter conduits that would be installed at landfall to the relocated vault (Exh. EFSB-CW-2).

additional dewatering and excavation, and would increase traffic impacts on the neighboring residences (id. at 2-3).

With regard to locating the transition vault outside of the 100 feet of buffer zone to the coastal bank, the Company stated that the vault is proposed within existing pavement approximately 50 feet behind the coastal bank at New Hampshire Avenue (Exhs. EFSB-CW-2(a) at 8; CLF-CW-2). Cape Wind points out that the coastal bank consists of a concrete revetment and does not serve as a sediment source for coastal beaches or coastal dunes, that this revetment would protect the transition vault from wave action, and that this coastal area would not be altered by the horizontal directional drilling (“HDD”) operation as the conduits will pass beneath the resource area (Exhs. EFSB-CW-2; EFSB-CW-3). Cape Wind noted that in order to relocate the transition vault outside of the 100-foot buffer of the coastal zone and the V-zone, it would be necessary to relocate the transition vault approximately 525 feet landward, which would increase neighborhood impacts and project costs while decreasing project reliability (Exh. EFSB-CW-3; Tr. 1, at 12, 173-175).¹⁷

d. Other Intervenors

Clean Power Now asserts that with respect to eelgrass impacts and the transition vault issues, the Company has demonstrated that the cable route was carefully selected to avoid eelgrass beds, and that all unavoidable impacts from the cable installation would be indirect and minimized and/ or mitigated to the maximum extent practicable (Clean Power Now Initial Brief at 27). Further, Clean Power Now argues that none of the opponents demonstrated that Cape Wind’s studies or methodologies were flawed or inaccurate in any way or that the proposed mitigation measures were somehow individually inaccurate or collectively insufficient to protect eelgrass (id. at 28). Finally, Clean Power Now also points out that none of the opponents rebutted Cape Wind’s showing that locating the transition vault outside the V-zone would create greater and more intense environmental impacts and be more costly while decreasing reliability (id.).

¹⁷ It would be necessary to move 525 feet landward along New Hampshire Avenue to be 100 feet from coastal bank because, besides its location at the seawall, coastal bank extends at another point to a beach area east of New Hampshire Avenue, near a route segment further landward from the seawall than the selected vault location (Tr. 1, at 12).

CLF states that if Cape Wind complies with the conditions contained in its 401 Water Quality Certification, and adheres to the monitoring and mitigation plans, the project may avoid impacts to eelgrass and at the least will have no permanent impacts (CLF Initial Brief at 23). CLF asserts that neither the Commission nor any other party has refuted Cape Wind's strong showing that impacts on eelgrass will be avoided or appropriately mitigated, and that the project meets the requirements of § 690 with respect to environmental compatibility (CLF Reply Brief at 5). CLF also asserts that Cape Wind has demonstrated that the project is water dependent pursuant to the Chapter 91 regulations (CLF Initial Brief at 22). Further, CLF states Cape Wind has established that relocation of the transition vault is not feasible because it would increase environmental impacts and costs as well as reduce reliability of the cables (*id.*). Finally, given the above factors, CLF argues that the project qualifies for an exemption from the MPS's pertaining to location in a V-zone and within 100 feet of coastal bank (*id.* at 21-23).

e. Analysis

The substantive issues raised by the Commission related to questions of project impacts have been reviewed by the Siting Board in the two underlying EFSB proceedings and in the present proceeding, and the Board has re-examined these issues based on evidence that was adduced in this proceeding. With respect to marine construction impacts, the Siting Board, in the 2005 Decision found that, with implementation of conditions regarding eelgrass documentation, protected birds, and navigation, the environmental impacts of the proposed transmission lines would be minimized. 2005 Decision, 15 DOMSB 1, at 95-96. With respect to land construction impacts, the Siting Board found that, with implementation of a construction traffic condition and historic preservation condition, land construction impacts of the proposed transmission lines would be minimized. *Id.* at 109. Finding further that permanent impacts would also be minimized, the Siting Board made an overall finding that environmental impacts of the proposed transmission lines along the primary routes would be minimized. *Id.* at 120, 125. In the 2008 Decision, the Siting Board affirmed its analysis from the 2005 Decision. 2008 Decision at 23.

With regard to use of jet plowing and impacts to eelgrass, as discussed in Section III.B above, the proposed project as approved by the Siting Board in the 2005 Decision and the 2008 Decision, has not materially changed. As noted above, Cape Wind has not presented any substantive updates to the proposed project in this proceeding. Further, parties to this proceeding

have provided no significant new information. In addition, as noted above, there have been favorable reviews of the project, including the undersea and landfall cable installation methodologies, by DEP and MEPA. Finally, the Company is required through the various approvals to significant mitigation measures to protect eelgrass.

The Commission favors relocating the transmission vault outside the V-zone and also outside the buffer to the coastal bank. The Siting Board notes that the 2005 Decision and the 2008 Decision both contained descriptions, and approvals, of the landfall and the transition vaults in the same location as that analyzed and addressed in this proceeding.¹⁸ In all three reviews, the transition vault was to be located on New Hampshire Avenue, south of Shore Road. 2005 Decision at 51; 2008 Decision at 11, 13. In the 2005 Decision, the transition from the submarine to upland installation was to be accomplished using jet-plow methodology, while the later 2008 Decision approved the use of HDD technology instead of jet-plowing.

In the 2005 Decision, the Company presented, but did not favor, an alternative to the proposed method of transition vault installation. The alternative would have entailed using a 800-foot HDD rather than jet plow, with the transition vault located north of Shore Drive adjacent to the Englewood Beach recreation area, rather than south of Shore Drive. 2005 Decision at 121-125. In the 2005 Decision, the Siting Board concluded, based on the proposed location of the HDD alternative north of Shore Road, that any advantages of HDD in terms of lowered marine impacts would be minor, compared to the increased noise and traffic impacts projected for use of HDD in that location. 2005 Decision, at 122-125. The 2005 Decision therefore contained conditions directing the Company to file a project change if the landfall methodology should change from jet plow to HDD. 2005 Decision at 124, 125.

In the 2008 Decision, the Siting Board approved a change of the installation method at the landfall to a modified version of the HDD plan, which would reduce the HDD length to 200 feet and would locate the transition vault in the same location for jet-plowing, south of Shore Road. The Siting Board found that the Company's use of HDD, rather than jet-plowing for landfall construction, while keeping the transition vault south of Shore Road, would not alter in any substantive way either the assumptions or conclusions reached in the Siting Board's analysis of the project's environmental impacts in the underlying proceeding. 2008 Decision at 17. Thus, the

¹⁸ This is also the same location reviewed by the Commission.

2008 Decision approved the use of HDD, but retained approximately the same transition vault location, south of Shore Road, as approved for jet-plowing in the 2005 Decision, and as reviewed by the Siting Board in this proceeding and by the Commission in its DRI review.

In this proceeding, relocating the transition vault out of the V-zone would require moving 225 feet further landward on New Hampshire Avenue, north of Shore Road, essentially similar to the location of the HDD alternative construction method in the 2005 Decision, with attendant increase in traffic and noise impacts. In addition, in order to relocate the transition vault outside of the 100-foot buffer of the coastal bank, the transition vault would need to be placed further north along New Hampshire Avenue, further increasing traffic impacts.

The argument made by the Commission that locating the transmission vault in the V-zone would create risk to the transition vault and to the surrounding area due to wave action associated with a 100-year storm, is not persuasive. The Siting Board notes that the transition vault would not be an above-ground structure subject to unprotected wave action, rather it is to be located under the pavement; further, the homes in the area are set back from the street landward of a concrete seawall that stands between the transition vault and Lewis Bay. While the Commission in raising concerns about placement of structures in the V-zone does not distinguish above-ground and below-ground structures, it appears to the Siting Board the risks of such placement related to wave action would differ substantially for structures above and below ground. Although scour would be possible, subjecting the underground vault to wave action, the Commission failed to present evidence that scour around the transition vault would possibly damage it, or cause it to adversely affect the homes in the area, which are set back from the pavement. In sum, even in the event storms overtopped the concrete wall and eroded the pavement, it does not seem reasonable that diversion of water by an underground vault would significantly affect nearby buildings. Therefore, the impacts identified above, including increased noise, traffic, reduced reliability, and higher costs with locating the transition vault out of the V-zone and buffer of the coastal bank further north on New Hampshire Avenue, outweigh any benefits associated with avoiding the V-zone and buffer to the coastal bank.¹⁹

¹⁹ The Siting Board notes that, in raising concerns about placement of the transition vault, the Commission cites MPS 2.2.2.1 (prohibiting development in V-zones) and MPS 2.2.2.4 (prohibiting non-water dependent development in the 100-foot buffer zone to coastal bank); however, as discussed in Section III.B.3. below, the Commission may exempt a structure from such restrictions where, as here, the structure is part of a water-dependent use. The

Therefore, the Siting Board finds that construction and operation of the transmission project is compatible with considerations of environmental protection, public health and public safety.

3. Conformance with Laws and Reasonableness of Exemption Thereunder

Pursuant to G. L. c. 164, § 69O, the Siting Board must make a finding with respect to the extent to which construction and operation of the facility will fail to conform with existing state or local laws, ordinances, by-laws, rules and regulations and the reasonableness of exemption thereunder, if any, consistent with the implementation of the energy policies in the Siting statute to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

The Siting Board acknowledges that the granting of a Certificate in this proceeding would allow the Company to construct the transmission project, notwithstanding the Commission's DRI denial and in absence of four locally issued permits: a wetlands Order of Conditions from Barnstable and Yarmouth, and a road opening permit from each Town. Since the Commission has denied the project, the Siting Board recognizes that the transmission lines may not wholly comply with the Cape Cod Commission Act or the Commission's Regional Policy Plan.²⁰ The record in this proceeding does not demonstrate any other area of actual or potential non-conformance with local or state laws, ordinances, by-laws, rule or regulations.

Regarding state and local laws, the Siting Board reviewed, in the 2005 Decision, the environmental impacts of the transmission project in relation to regulatory programs related to wetlands protection, water supply, wellhead protection, rare and endangered species, tidelands and waterways, water quality certification, marine fisheries, coastal zone management, ocean sanctuaries, historic preservation and underwater archeology. The Siting Board found that the proposed project along the primary route would be generally consistent with the identified

project is a water-dependent use under the DEP waterways regulations (310 CMR 9.12(2)(b)(10)), and would appear to be so under the Commission's definition as well (2002 RPP at 13). In fact, the Commission's definition specifically includes as water dependent uses "those uses identified by MGL Chapter 91 regulations."

²⁰ Specifically, the project may not comply with MPS 2.2.3.6, 2.2.2.1, and 2.2.2.4. However, as discussed in Sections III.B.2. and in this Section, below, the Siting Board also considers it reasonable that the project falls into the exceptions to these performance standards.

requirements of such programs. 2005 Decision at 145. Consequently, the Siting Board found that the construction of the proposed project is consistent with current health, environmental protection, and land resource and development policies as adopted by the Commonwealth. *Id.* As discussed in Section III.B, above, the Company has stated that the project as presented in this proceeding has not been materially changed since the Siting Board's approval of the project in the 2008 Decision. Therefore, the Siting Board's finding in the 2005 Decision and the 2008 Decision that the proposed project is consistent with Commonwealth policies under those programs is still applicable.

Further, the transmission project has received required state regulatory approvals including: (1) a Section 401 Certification from DEP; (2) a highway access permit from EOT; (3) a license agreement from EOT, allowing the Company use and occupancy of EOT rail property; and (4) a favorable Chapter 91 Written Determination, which DEP has agreed to have included as the project's final Chapter 91 License in the Certificate to be issued in this proceeding. Therefore, the Siting Board opines that, having obtained these four state approvals, the proposed transmission project conforms to the laws or related regulatory provisions pursuant to which the approvals were issued.

The record also shows with respect to local laws that, absent DRI approval of the transmission lines, Cape Wind cannot obtain the two local approvals from the Town of Yarmouth and the two local approvals from the Town of Barnstable. However, if a Certificate is granted, the identified obstacle to pursuit and potential receipt of these four local approvals (the Commission's DRI denial) will be removed. There is no indication in the record that, with this obstacle removed, Cape Wind would be unable to obtain the required local approvals, or that any non-conformance with the laws or related regulatory provisions applicable for those approvals would exist.²¹

With respect to the reasonableness of exempting the transmission project from the need to obtain DRI approval from the Commission, such exemption would be consistent with, and is necessary to, the full implementation of the Siting Board's findings and decision in the underlying EFSB proceedings. As reasons for project approval, the Siting Board cited its finding that, upon compliance with specified mitigation measures and conditions, the construction and operation of

²¹ In fact, the record shows that Barnstable and Yarmouth each has issued a positive Order of Conditions, and Barnstable has issued a road opening permit, for a very similar project: a 34-mile underwater transmission cable between Nantucket and the Cape. See n.27, below.

the transmission project were needed, and would provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. 2005 Decision at 131-132. In the 2008 Decision, the Siting Board found that the project is necessary, will serve the public convenience, and is consistent with the public interest. 2008 Decision at 23.

The record shows that, as reasons for denying DRI approval for the transmission project, the Commission cited its finding that it could not determine the project to be consistent with certain MPS, including MPS 2.2.3.6 related to dredging prohibitions, MPS 2.2.3.7 related to avoidance of adverse effect on eelgrass beds, and MPS 2.2.2.1 and 2.2.2.4 related to prohibited uses in V-zones and coastal bank buffer.²² As discussed in Section III.B.2.a. above, the Commission maintained that to determine that the project is consistent with these above MPS, additional information, additional mitigation or project changes were needed. However, based on the record, the Siting Board finds no evidence to support non-compliance of the project with MPS 2.2.3.7, and concludes that under a reasonable interpretation of MPS 2.2.3.6, 2.2.2.1, and 2.2.2.4, the project may be exempt from these standards. The Siting Board notes that the project is a water-dependent use under the DEP waterways regulations (310 CMR 9.12(2)(b)(10)), and would appear to be so under the Commission's definition as well (2002 RPP at 13). In fact, the Commission's definition specifically includes "those uses identified by MGL Chapter 91 regulations."

With respect to project benefits, a need for the proposed project was found in the 2005 Decision and in the 2008 Decision, and no new need information was provided in the present proceeding. The Siting Board's finding that the project is needed thus remains unchanged.

With respect to project impacts, the Siting Board reviewed in detail both in the 2005 Decision, 2008 Decision, and as part of updated analysis in Section III.B, above, the wetland, water resources, and habitat impacts including impacts related to the areas that encompass MPS

²² The Company's use of jet-plowing also may be exempt from MPS 2.2.3.6 as this MPS contains an exemption for dredging when it "is necessary to accomplish a substantial public benefit and no feasible alternative exists." In Section III.B.4. below, the Siting Board finds that the transmission project is in the public interest and in Section III.B.2. above, found that jet-plowing is the state of the art method for undersea cable installation, and minimizes environmental impacts more than other alternatives such as open trenching.

issues cited by the Commission. Specifically, concerns the Commission raised with respect to marine dredging, eelgrass impacts, and siting of the transition vault in a V-zone and coastal bank buffer area fall within the scope of issues the Siting Board has reviewed. Of importance to such concerns, the project seabed construction will be based on methods of in-water construction that are common for such projects, with impacts that are temporary in nature, and with adequate mitigation provisions to avoid eelgrass and monitor conditions prior to and during construction. Further, the landfall design uses state-of-the-art construction methods, minimizes both human and environmental impacts, avoids above-ground structures and is consistent with landfall designs and construction for other similar projects, including the second (2004) Nantucket cable project.

Thus, the record contains no new information to alter the view of the Siting Board that the project is needed and that project impacts would be minimized, as discussed above in Section III.B.2. In the absence of a DRI approval and the four local approvals, or a Certificate which serves in the place of such an approval, the Company cannot implement the transmission project as reviewed and approved by the Siting Board in the 2005 Decision and the 2008 Decision. The Siting Board finds that the transmission project may not comply with the Cape Cod Commission Act or 2002 RPP as interpreted by the Commission, but there is no evidence of non-compliance with any other applicable state and local laws. The Siting Board further finds, pursuant to G.L. c. 164, § 690, that exempting the Company from the need to obtain DRI approval from the Commission for the transmission project is reasonable, and would be consistent with the Siting Board's implementation of the energy policies in G.L. c. 164 so as to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

4. Public Interest or Convenience

Pursuant to G. L. c. 164, § 690, the Siting Board must make a finding with respect to the public interest, convenience and necessity requiring construction and operation of the facility.

After conducting an extensive review of the need for the transmission project, alternative routes, and potential environmental impacts, the Siting Board found in the two underlying proceedings that upon compliance with specific conditions set forth in its 2005 Decision, construction and operation of the transmission lines along the primary route is needed, and will provide a reliable energy supply for the Commonwealth with a minimum impact on the

environment at the lowest possible cost, in keeping with the Siting Board's statutory obligations under G.L. c. 164, § 69H. 2005 Decision at 131. The Siting Board found in the 2008 Decision, that the project is necessary, will serve the public convenience and is consistent with the public interest, under G.L. c. 164, §72. Nothing in the record of the instant proceeding changes any of the Siting Board's findings in the underlying proceedings.

Accordingly, the Siting Board finds, that pursuant to G. L. c. 164, § 69O, the public interest and convenience requires the construction and operation of the transmission project as described in this proceeding.

5. Good Faith Representation

Pursuant to G.L. c. 164, § 69L, one of the required elements of an Application is:

a representation by the applicant as to the good faith effort made by the applicant to obtain from state agencies and local governments the licenses, permits, and other regulatory approvals required by law for the construction or operation of the facility

G.L. c. 164,,§ 69 L (4).

The Siting Board has not previously been presented with the occasion to address the good faith requirement of G.L. c. 164, § 69L (4). There are two aspects of this requirement that the Board wishes to clarify here: (1) the necessity of including a written representation of good faith efforts in a Certificate Application and (2) the necessity of including such a representation not only with respect to the permit decision on which the Initial Petition and Application are based, but with respect to each permit sought by the applicant.

The record of the Commission's DRI proceeding, appended to Cape Wind's Certificate Application, indicates, and the Board finds, that Cape Wind made a good faith effort to obtain DRI approval from the Commission.²³ With respect to the eight additional permits, Cape Wind included in its Application a table of all project permits showing that each of these permits was applied for prior to the filing of the Company's Application in December 2007 (Exh. CW-2(C)).

²³ Cape Wind included, in its Initial Petition, a copy of the entire record of the Cape Cod Commission DRI proceeding (Exhs. CW-1, Att. E through H; CW-2, Att. O). Based on a review of that record, and the description of the DRI process in the Company's Application, the Board finds that the Company provided sufficient information to the Commission regarding the transmission project to constitute a good faith effort to obtain DRI approval for the transmission project (Exh. CW-2, at 5-7, 16-28, and Att. O).

Cape Wind provided copies of each permit application (Exhs. CW-2(D) 1 through 4). As the proceeding progressed, Cape Wind succeeded in obtaining the four state permits it had applied for; with respect to the four local permits, the Company specifically noted that it made a good faith effort to obtain them, but was precluded by operation of law from doing so. See Exh. CW-2, at 38. Thus, the Board finds that Cape Wind made a good faith effort to obtain the nine permits it has requested from the Board in this proceeding.

The Siting Board has not previously addressed the good faith requirement of Section 69L(4) with any specificity. For purposes of this proceeding, the Board therefore has accepted as demonstrative of a good faith permitting effort the Company's permit table, accompanying permit applications, and actual success in obtaining permits. The Board would expect to see similar evidence of good faith permitting efforts in future Certificate Applications. Going forward, the Siting Board asks that applicants also provide, in a single and clearly marked section of, or attachment to, an Application, a written affirmation by the applicant that, by the time the Application was filed, the applicant had made a good faith effort to obtain each permit it is requesting from the Board. Such an affirmative statement of good faith efforts to obtain necessary state and local permits is consistent with the statute and with Board's view that permitting decisions should be made, to the extent feasible, by the state and local agencies with original jurisdiction to make those decisions, unless to do so would frustrate the central goal of the Certificate statute, *i.e.*, the removal of permitting-related obstacles to the timely development of needed new energy infrastructure.

6. Findings

The Siting Board has made the four findings that it must include in a Certificate pursuant to Section 69O, in order to issue a Certificate. Specifically, the Siting Board has found: (1) that the transmission project is needed; (2) that granting a Certificate containing approvals for the project is compatible with considerations of environmental protection, public health and safety; (3) that the project may not conform to certain aspects of the Cape Cod Commission Act and the Commission's 2002 RPP, as interpreted by the Commission, but it is reasonable to exempt the project from these requirements; and (4) that issuing such a Certificate would serve the public interest and convenience. The four findings made by the Board support the granting of a

Certificate for the transmission project so that it may go forward, and the Siting Board hereby grants such a Certificate.

C. Scope of the Certificate

As noted in Section I.A.2, above, Cape Wind has requested that the Certificate include nine separate permits identified by the Company as necessary for project construction and operation. The Siting Board considers below which of these permits should be included in the Certificate.

1. DRI Approval

On October 18, 2007, the Commission denied Cape Wind's application (Exh. CW-2, Att. M). Pursuant to the CCC Act, Cape Wind cannot proceed with development of the transmission project while the Commission's DRI denial remains in effect. Specifically, the CCC Act provides that:

the commission may approve, approve with conditions, or disapprove the development of regional impact. If the commission disapproves the development of regional impact no further work may be done on the development (emphasis added).

CCC Act, Section 13(e); Tr. 2, at 383.

The Commission's DRI denial is a complete bar to project development. Additionally, as discussed in Section D.2, below, the existence of the DRI denial precludes Cape Wind from obtaining other necessary local permits. Accordingly, the Siting Board hereby determines that the Certificate in this proceeding shall include the equivalent of a DRI approval for the transmission project. This approval is included in Exhibit A hereto, as Attachment 1.²⁴

2. The Four Local Permits

As noted above in Section I.A.2, above, Cape Wind has requested that four local permits be included in the Certificate: Unlike the Commission's DRI decision, the four local permits have not

²⁴

The Siting Board during the proceeding asked the Commission to identify appropriate conditions for inclusion in a DRI approval for the project, were such an approval to be issued by the Board. The Commission declined to provide the Board with suggested conditions (Exh. EFSB -CCC-8).

yet been reviewed or decided by the permitting bodies with original permitting jurisdiction: The four permits are:

1. a wetlands Order of Conditions under G.L. c. 131, § 40 and the local Barnstable wetlands bylaw, ordinarily issued by the Barnstable Conservation Commission;
2. a wetlands Order of Conditions under G.L. c. 131, § 40 and the local Yarmouth wetland bylaw, ordinarily issued by the Yarmouth Conservation Commission;
3. a road opening permit from the Town of Barnstable, ordinarily issued by the Barnstable Department of Public Works; and
4. a road opening permit from the Town of Yarmouth, ordinarily issued by the Yarmouth Department of Public Works.

Just as the Commission's DRI denial bars work on the transmission project, it also prevents Cape Wind from obtaining the four local permits. Specifically, pursuant to Section 12 (h) of the CCC Act ("Section 12(h)"):

Municipal agencies shall refer any proposed development which meets the standards and criteria set out by the commission for developments of regional impact to the commission for review, at which point the municipal agency's review shall be suspended until the commission has reviewed the proposed development (emphasis added).

Cape Wind applied for each of the four local permits but, pursuant to CCC Act Section 12(h), none of the four could be issued (Exhs. RR-EFSB-CW-2; RR-EFSB-TOB-1; RR-EFSB-YAR-1).²⁵ In accordance with Section 12 (h) of the CCC Act and at the request of Yarmouth, Cape Wind withdrew the two Yarmouth applications; the two Barnstable applications remain pending and have been subject to no formal action by Barnstable (Exhs. EFSB-YAR-1; EFSB-TOB-1(d)). Without a favorable DRI decision, Cape Wind is prevented from obtaining the four local permits, which the Company has duly applied for. The Siting Board finds that Cape Wind has made a good faith effort to obtain the four local approvals, as required by G.L. c. 164, § 69 L(4), and it was precluded from obtaining them not by any act or omission on the Company's part. The Board also finds that requiring Cape Wind to now commence the applicable process with the Towns would be

²⁵ The Company filed its Notices of Intent with Barnstable and Yarmouth on November 15, 2007. The Company filed its applications for road opening permits with the two towns on November 13, 2007 (*id.*).

contrary to the underlying purpose of Section 69K through Section 69O, which is to streamline the permitting of jurisdictional energy facilities. Thus, the four local permits shall be included in the Certificate issued in this proceeding.

As the Siting Board has done previously, the Board could have relied on our granting of DRI approval for the project to free Cape Wind to re-apply with Barnstable and Yarmouth for the four local permits. This approach was used successfully in the KeySpan proceeding, where the applicant was able to obtain the local permits it required by applying to the relevant Town boards after issuance of a Final Decision granting DRI approval.²⁶ However, as set forth below, while the Siting Board does not reject this approach for use in future cases, the Board does not employ it here, primarily (1) because the record developed in this proceeding is considerably more comprehensive than the record developed in KeySpan relative to the un-issued local permits, and (2) because of the additional delay that could be involved were the Company required to go through the full permitting process at the local level.

In this case, each of the Towns is an intervenor in the proceeding, and thus has had the opportunity to develop the record with respect to the four outstanding local permits. See, Memorandum to Parties re Potential Involvement of Certain State and Local Entities in Cape Wind Override Proceeding (January 18, 2008); Ruling on Intervention (February 15, 2008). Early in the proceeding, the presiding officer expressly indicated to the parties that the Board wished to develop a record with respect to each of the eight additional permits. With such a record, the Board could better consider the issue of whether the Board's jurisdiction extended beyond the DRI denial to include the eight additional permits, and the Board would have a record to support issuance of one or more of those permits should the Board determine that it had the jurisdiction to do so.²⁷ Each Town was issued specific discovery requests asking it to identify permit conditions it felt should be included in the wetlands and road opening permits if they were to be issued by the Board (Exhs. RR-EFSB-TOB-1; RR-YAR-1).²⁸ Each Town was given an additional post-hearing

²⁶ Colonial Gas Company d/b/a KeySpan Energy Delivery New England, EFSB 06-1 (June 22, 2007) ("KeySpan").

²⁷ See July 28 Jurisdictional Ruling at 2, n.2.

²⁸ Barnstable proposed additional eelgrass conditions (Exh. RR-EFSB-TOB-1) As discussed in Section III.B.2, above, the Siting Board reviewed eelgrass impacts comprehensively in the 2005 Decision, and included protective conditions therein. The Company also has

opportunity to develop such conditions collaboratively with the Company (March 12 Tr. at 100-102).

Additionally, each of the Towns was asked for, and provided, examples of wetlands Orders of Conditions and road opening permits it had issued. Among these examples were the actual Orders of Conditions and a road opening permits issued by each of the Towns for the Nantucket cable project, which each Town identified as similar to an Order of Conditions and road opening permit that would be issued for the Cape Wind transmission project (Exhs. EFSB-TOB-2(a); EFSB-TOB-5; EFSB-YAR-2-2(a); EFSB-YAR5).^{29, 30}

Each of the Towns also provided evidence regarding the amount of time that would be necessary for it to issue an Order of Conditions and a road opening permit for the proposed Cape Wind project. Each Town estimated that a minimum of approximately 2 months would be required for its Conservation Commission to review the Company's NOI, issue an Order of Conditions, and allow the close of the 21-day period for appeal of the permit to DEP under the

committed to extensive eelgrass protection and mitigation measures in its Section 401 Certification. The Siting Board views the conditions that are in place as adequately protective of eelgrass in the project area. Yarmouth did not provide suggested conditions, but provided copies of a Host Community Agreement and a Statement of Principles it has entered into with Cape Wind. These documents address some wetlands and road opening matters. (Exhs. CW-2(O)(S-1); CW-2(O)(S-2).

²⁹ The Nantucket cable project interconnects the island of Nantucket with the regional electric grid on the Cape. The record shows that the cable route is approximately 34 miles long. The Nantucket cable travels partly underwater through Nantucket Sound and partly underground between its landfall and a substation in Barnstable (Exh. EFSB-YAR-2). No EIR was required for the Nantucket Cable project, and the Commission did not review it as a Development of Regional Impact (Exhs. CLF-CCC-3; CLF-CCC-6). Yarmouth and Barnstable each issued a positive wetlands Order of Conditions for the project (Exhs. EFSB-YAR-2(a); EFSB-TOB-2). The record shows that, like the Cape Wind project, undersea cable installation for the Nantucket cable was done by jet-plow, and HDD was used for the transition from sea to land (Exh. CLF-CCC-1 (p) at A-15-A18). Unlike the Cape Wind project, the record shows that the Nantucket cable would have direct impacts on eelgrass and on shellfish (*id.* at A-50-A-55).

³⁰ In KeySpan, in contrast, no record evidence regarding potential permit conditions was developed.

state Wetlands Protection Act (Exhs. EFSB-TOB-7; EFSB-YAR-7).³¹ Barnstable and Yarmouth each has a local wetlands bylaw as well; Barnstable estimated that a minimum of 3½ months would be required for issuance of an Order of Conditions under its local bylaw (Exhs. RR-EFSB-YAR-1(b); EFSB-TOB-8).³² With respect to road opening permits, each of the Towns estimated that it would require approximately 30 days for the issuance of a preliminary road-opening approval (Exhs. EFSB-TOB-8; EFSB-YAR-8).

The Siting Board concludes that, in the relatively unusual situation where an applicant has made a good faith effort to obtain certain necessary project permits, but is precluded by operation of law from obtaining them, it may be appropriate to avoid further permitting delay by including the otherwise unobtainable local permits in a Certificate, as opposed to requiring the applicant to undertake an entire de novo permitting process. This is particularly true where, as here: (1) the Siting Board has comprehensively reviewed, and has approved, the project three times over a span of seven years; (2) other state agencies with major permitting authority over the project have reviewed and approved it, including DEP and MEPA; (3) the relevant local permitting entities have had an opportunity to participate actively in the Certificate process, including the opportunity to provide the Siting Board with suggested conditions for the proposed project; and (4) the record contains examples of the types of permits in question, issued by the same agencies for a very similar project.

Accordingly, the Siting Board hereby determines that the Certificate in this proceeding shall include the equivalent of the following approvals:

- a wetlands Order of Conditions under G.L. c. 131, §40 and the local Barnstable wetlands bylaw;
- a wetlands Order of Conditions under G.L. c. 131, §40 and the local Yarmouth wetlands bylaw;
- a road opening permit from the Town of Barnstable; and
- a road opening permit from the Town of Yarmouth.

³¹ This period does not include the time necessary for DEP to issue a Superseding Order of Conditions, administrative appeal of that decision within DEP, or potential subsequent judicial appeal of DEP's decision to Superior Court and beyond.

³² This figure does not include the time required for subsequent appeal to Superior Court and beyond.

These approvals are included in Exhibit A as Attachments 2-6.³³ These approvals include conditions based on each Town's conditions in the Nantucket cable matter.

3. The Four State Approvals

a. DEP Chapter 91 License

Cape Wind applied for a Chapter 91 License on December 14, 2004, and submitted an updated application on October 6, 2008. DEP conducted a public hearing on November 5, 2008 (Exh. RR-EFSB-CW-5). Pursuant to G.L. c. 91, DEP on December 22, 2008 issued a favorable Written Determination and Draft License for the transmission project ("Written Determination") (Exh. APNS-CW-24(S)).³⁴ On January 9, 2009, the Alliance and the Town of Barnstable filed with DEP an administrative appeal of the Written Determination (Exh. RR-EFSB-CW-2(S)(2)(1)).

DEP has expressly stated that it has no objection to including the Written Determination as the Chapter 91 License for the project in a Certificate to be issued by the Board in this proceeding, provided that all conditions contained in the Written Determination are included (March 12 Tr. at 89). Including the Written Determination in the Certificate will eliminate potentially substantial delay in the construction and operation of a project that the Siting Board has twice approved, and, in this proceeding, has found to be needed and in the public interest. If the Determination is not included in the Certificate, issuance of a final Chapter 91 License will be delayed, at a minimum, until the pending administrative appeal has been resolved. That appeal, and possible subsequent judicial appeals, could delay the project significantly. Accordingly, the Siting Board hereby determines that the Certificate in this proceeding shall include the equivalent of a final Chapter 91 License, which shall be the Written Determination issued by DEP on December 22, 2008. This approval is incorporated in Attachment A.

³³ The Board's inclusion of these local permits in the Certificate is not intended to, and shall not be construed to affect any obligations with respect to local review that the Company has incurred under contractual agreements with any municipality.

³⁴ Pursuant to the waterways regulations, DEP found that the transmission project is a water-dependent use (Exh. RR-EFSB-DEP-2).

b. Section 401 Certification

DEP granted a Section 401 Certification for the project on August 14, 2008 (Exh. EFSB-DEP-4(a)). The appeal periods for the Section 401 Certification have passed and no appeals were filed (Exh. RR-EFSB-CW-5). However, Cape Wind seeks to have the 401 Certification included in the Certificate on the ground that the permit may be subject to collateral attack in a pending Barnstable Superior Court action challenging the Secretary's MEPA certificate for the project ("Barnstable MEPA action") (Tr. 1, at 117-120).

G.L. c. 164, § 69K provides that a Certificate must include "all" project permits. In general, the Siting Board does not construe this directive to require the inclusion of permits that have already been issued, particularly if the appeal period has run. In this case, however, if the state court petitioners were to prevail in their MEPA action, the validity of the Section 401 Certification might be called into question, as the 401 Certification contains Section 61 Findings that rely, in part, on the Secretary's Certificate. Indeed, the plaintiffs' in the pending Barnstable MEPA action are seeking this very relief in their complaint.³⁵ Including the Section 401 Certification in the Certificate would eliminate this uncertainty as well as the attendant delay that would result if, for example, re-issuance of the MEPA Certificate and the 401 Certification were to be required. The Siting Board has twice approved the transmission project, and in this proceeding, has found the project to be needed and in the public interest. DEP has stated that it has no objection to including the Section 401 Certification in a Certificate, provided that all conditions contained in the 401 Certification are included (March 12 Tr. at 89). Accordingly, the Siting Board hereby determines that the Certificate issued in this proceeding shall include the Section 401 Certification issued by DEP on August 14, 2008. This approval is included in Attachment A.

c. The MassHighway Access Permit and EOT License

The Massachusetts Highway Department issued a Highway Access Permit for the transmission project on July 22, 2008 (RR-EFSB-CW-5). The EOT issued a License for Use and Occupancy for the project on September 17, 2008 ("EOT approvals"). The state court petitioners in the Barnstable MEPA action assert the issuance of the DEP Section 401 Certification and the

³⁵ See Town of Barnstable et al v. Cape Wind Associates, LLC et al, Memorandum of Decision and Order, BACV2007-00506 (June 17, 2008), attached to June 23, 2008 letter from David S. Rosenzweig, Esq. to M. Kathryn Sedor, Esq.

MHD Highway Access Permit as jurisdictional bases for the state court action. Town of Barnstable v. Cape Wind Associates, LLP, BACV2007-00506, Memorandum of Decision and Order at 5 (December 17, 2008).

If the state court petitioners were to prevail in their MEPA action, the validity of the two EOT permits could conceivably be called into question, even though these permits contain no Section 61 Findings. Including the EOT permits in the Certificate would eliminate this uncertainty as well as the delay of waiting for a final judicial decision on the adequacy of the MEPA Certificate and the resulting impact, if any, on the two EOT permits. The Siting Board finds it appropriate to include the EOT permits in the Certificate, to allow the project to go forward without the possibility of additional delay arising from the pending state court MEPA action. Accordingly, the Siting Board hereby determines that the Certificate in this proceeding shall include the MassHighway Access Permit and the EOT License. These approvals are set forth in Attachment A.

IV. CONCLUSION

The Siting Board GRANTS the Initial Petition and the Application of Cape Wind Associates, LLC for a Certificate of Environmental Impact and Public Necessity. Pursuant to G.L. c. 164, § 69 K, the granted Certificate "shall be in the form of a composite of all individual permits, approvals, or authorizations which would otherwise be necessary for the construction and operation of the facility." To that end, the granted Certificate is a composite permit including the equivalent of: (1) a DRI approval, (2) a Chapter 91 License, (3) a Section 401 Water Quality Certification; (4) a MassHighway Access Permit; (5) an EOT License; (6) Town of Yarmouth wetlands Orders of Conditions, (7) a Town of Yarmouth road opening permit; (8) a Town of Barnstable wetlands Orders of Conditions ; and (9) a Town of Barnstable road opening permit.

This Final Decision, the appended Certificate of Environmental Impact and Public Interest, and the nine approvals contained in the Certificate each are conditioned on compliance by the Company with Conditions C.1 through C.7 set forth in the Certificate.

M. Kathryn Sedor

M. Kathryn Sedor
Presiding Officer

Dated this 27th day of May, 2009

**COMMONWEALTH OF MASSACHUSETTS
ENERGY FACILITIES SITING BOARD**

In the Matter of the Petition of Cape Wind
Associates, LLC for a Certificate of
Environmental Impact and Public Interest

)
) EFSB 07-8
)
)
)

EXHIBIT A TO FINAL DECISION IN EFSB 07-8

**CERTIFICATE OF ENVIRONMENTAL IMPACT AND
PUBLIC INTEREST**

Pursuant to its authority under G.L. c.164, §§69K-69O, the Energy Facilities Siting Board hereby GRANTS (1) the Initial Petition and (2) the Application of Cape Wind Associates, LLC ("Cape Wind" or Company") and (3) issues this Certificate of Environmental Impact and Public Interest ("Certificate") to Cape Wind. This Certificate constitutes Attachment A to, and is part of, the Final Decision in EFSB 07-8.

I. SCOPE OF CERTIFICATE

In accordance with G.L. c. 164, § 69K, this Certificate "shall be in the form of a composite of all individual permits, approvals or authorizations which would otherwise be necessary for the construction and operation of the facility" and it acts in the place of the nine permits referenced below. The Certificate authorizes the applicant to construct and operate two new 115 kV electric lines for the purpose of connecting a proposed offshore wind generating facility in Nantucket Sound with the regional electric grid on Cape Cod ("transmission project"), as approved by the Siting Board in Cape Wind Associates, LLC and Commonwealth Electric Company d/b/s NSTAR Electric, EFSB 02-2, 15 DOMSB 1 (May 11, 2005) ("2005 Decision"), Cape Wind Associates, LLC and Commonwealth Electric Company d/b/s NSTAR Electric, EFSB 02-2A/D.T.E. 02-53 (May 1, 2008) ("2008 Decision").

II. APPROVALS

This Certificate contains the following nine approvals (collectively, "Approvals"):

1. An approval that is the equivalent of a DRI approval, ordinarily issued by the Cape Cod Commission pursuant to Sections 12 and 13 of the Cape Cod Commission Act. This approval is appended hereto as Attachment 1;
2. An approval that is the equivalent of a wetlands Order of Conditions, ordinarily issued by the Barnstable Conservation Commission pursuant to G.L. c. 131, §40 and the Barnstable wetlands bylaw, to install undersea portions of the project within coastal wetlands resources in Barnstable ("Barnstable Order of Conditions"). This approval is appended hereto as Attachment 2;
3. An approval that is the equivalent of a wetlands Order of Conditions ordinarily issued by the Yarmouth Conservation Commission pursuant to G.L. c. 131, §40 and the Yarmouth wetlands bylaw, to install undersea and on-land portions of the project within wetlands resources in Yarmouth. This approval is appended hereto as Attachment 3;
4. An approval that is the equivalent of a road opening permit, ordinarily issued by the Town of Barnstable Department of Public Works, to install cables within certain public ways in Barnstable. This approval is appended hereto as Attachment 4;
5. An approval that is the equivalent of a road opening permit, ordinarily issued by the Town of Yarmouth Department of Public Works, to install cables within certain public ways in Yarmouth. This approval is appended hereto as Attachment 5.
6. An approval that is the equivalent of a Chapter 91 License, ordinarily issued by the Massachusetts Department of Environmental Protection ("DEP") pursuant to G.L. c. 91. This approval comprises the "Written Determination Pursuant to M.G.L. c. 91, Waterways Application No. W08-2480, Cape Wind Associates LLC-Submarine Cable Electric Transmission Facility, Flowed Tidelands of Lewis Bay and Nantucket Sound, Barnstable and Yarmouth" issued by DEP to Cape Wind Associates, LLC on December 28, 2008. This approval is marked as

Exhibit RR-EFSB-CW-2(S) in the EFSB 07-8 Certificate proceeding and is incorporated by reference in its entirety into this Certificate.

7. An approval that comprises the “401 Water Quality Certification, Application for BRP WW 07, Major Dredging, Lewis Bay and Nantucket Sound, in the Municipalities of Barnstable and Yarmouth” issued by DEP to Cape Wind Associates, LLC on August 15, 2008. This approval is marked as Exhibit EFSB-DEP-4(a) in the EFSB 07-8 Certificate proceeding and is incorporated by reference in its entirety into this Certificate.
8. An approval that comprises the “MassHighway Permit, Barnstable, Yarmouth, Permit #: 5-2008-0246” issued by the Massachusetts Highway Department on July 22, 2008. This approval is marked as Exhibit EOT-MC-1 in the EFSB 07-8 Certificate proceeding and is incorporated by reference in its entirety into this Certificate.
9. An approval that comprises the “Executive Office of Transportation and Public Works License Agreement, Cape Wind Associates, LLC, Yarmouth, Massachusetts, Hyannis Secondary” dated September 17, 2008. This approval is marked as Exhibit EFSB-EOT-7 in the EFSB 07-8 Certificate proceeding and is incorporated by reference in its entirety into this Certificate.

III. CONDITIONS

The granting by the Siting Board of this Certificate and each of the Approvals herein is subject to the following conditions:

C.1 Conditions A-J of the 2005 Decision and Condition K of the 2008 Decision are incorporated by reference into and are conditions to this Certificate. Conditions A-K are incorporated by reference herein.

C.2 The 2008 Decision provides that construction of the proposed project must begin within three years of the issuance date of that Decision, *i.e.*, around and about May 1, 2011. That date remains unchanged by this Certificate. Each of the nine approvals granted in this

Certificate also shall expire on or about May 1, 2011, if construction of the transmission project has not yet begun by that date. Extensions may be granted by written request to the Siting Board filed prior to the expiration date.

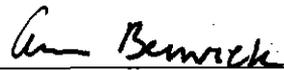
C.3 The applicant has an absolute obligation to construct the project in conformance with all aspects of the project as presented to and approved by the Siting Board in the underlying Decisions. The applicant is required to notify the Siting Board of any changes other than minor variations to the project so that the Siting Board may determine whether to inquire further into a particular issue. The applicant is obligated to provide the Siting Board with sufficient information on changes to the project to enable the Siting Board to make these determinations.

C.4 The applicant shall provide a copy of this Certificate, including all Attachments, to its general contractor prior to the commencement of construction.

C.5 In accordance with G.L. c. 164, § 69K, no agency shall require any approval, consent, permit, certificate or condition for the construction, operation, or maintenance of the project. No agency shall impose or enforce any law, ordinance, by-law, rule or regulation nor take any action nor fail to take any action which would delay or prevent construction, operation, or maintenance of the project.

C.6 In accordance with G.L. c. 164, § 69K, that portion of the Certificate which relates to subject matters within the jurisdiction of a state or local agency shall be enforced by such agency as if it had been directly granted by such agency.

C.7 This Certificate shall be appealable only by timely appeal of the 2009 Decision to the Massachusetts Supreme Judicial Court, in accordance with G.L. c. 25, § 5 and G. L. c.164, § 69P.



Ann Berwick, Acting Chair
Energy Facilities Siting Board

ATTACHMENT 1

EFSB 07-8, CAPE WIND ASSOCIATES, LLC
CERTIFICATE OF ENVIRONMENTAL IMPACT AND PUBLIC INTEREST

APPROVAL IN LIEU OF A DEVELOPMENT OF REGIONAL IMPACT
APPROVAL

1. Pursuant to its authority under G.L. c. 164, §§ 69K-69O, the Energy Facilities Siting Board hereby grants to Cape Wind Associates, LLC an Approval in lieu of Development of Regional Impact Approval as provided by Sections 12 and 13 of the Cape Cod Commission Act, to Cape Wind Associates, LLC. To that extent, this Approval authorizes construction and operation of the transmission project as approved by the Energy Facilities Siting Board in Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2, 15 DOMSB 1 (May 11, 2005); and Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2A/D.T.E. 02-53 (May 1, 2008).
2. This Approval is issued subject to Conditions C.1 through C.7 in the Certificate of Environmental Impact and Public Interest that is appended as Exhibit A to the Final Decision in Cape Wind Associates, LLC, EFSB 07-8 (May 27, 2009).



Ann Berwick, Acting Chair
Energy Facilities Siting Board

ATTACHMENT 2

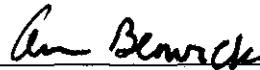
EFSB-07-8, CAPE WIND ASSOCIATES, LLC CERTIFICATE OF ENVIRONMENTAL IMPACT AND PUBLIC INTEREST

APPROVAL IN LIEU OF TOWN OF BARNSTABLE ORDERS OF CONDITIONS

1. Pursuant to its authority under G.L. c. 164, §§ 69K-69O, the Energy Facilities Siting Board hereby grants to Cape Wind Associates, LLC an Approval in lieu of a wetlands Order of Conditions pursuant to the Massachusetts Wetlands Protection Act, G.L. c. 131, § 40 (“Wetlands Act”) and in lieu of an Order of Conditions pursuant to the Town of Barnstable wetlands bylaw (“wetlands bylaw”).
2. This Approval authorizes construction and operation of the transmission project as approved by the Energy Facilities Siting Board in Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2, 15 DOMSB 1 (May 11, 2005); and Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2A/D.T.E. 02-53 (May 1, 2008).
3. This Approval is issued subject to Conditions C.1 through C.7, in the Certificate of Environmental Impact and Public Interest that is appended as Exhibit A to the Final Decision in Cape Wind Associates, LLC, EFSB 07-08 (May 27, 2009).
4. This Approval does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
5. Any fill used in connection with the proposed project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
6. No work shall be undertaken until this Approval has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, no work the Approval also shall be noted in the Registry’s Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of registered land, the Approval also shall be noted on the land Court Certificate of Title of the owner of the land upon which the propose work is to be done. The reporting information shall be submitted to the Conservation Commission, on a form provided by the Conservation Commission and stamped by the Registry of Deeds.
7. Upon completion of the proposed work, the Company shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission. The certificate of Compliance shall be recorded at the Registry of deeds.
8. Notice of any project change affecting wetlands resources that is filed with Energy Facilities Siting Board shall be filed with the Conservation Commission. If the

Siting Board grants a project change, notice of such change shall be filed with the Conservation Commission.

9. The Agent or members of the Conservation Commission and Department of Environmental Protection shall have the right to enter and inspect the area subject to this Approval, and may require the submittal of any data in the Company's possession reasonably deemed necessary by the Conservation Commission or Department for that evaluation.
10. This Approval shall apply to any successor in interest or successor in control of the property subject to this Approval and to any contractor or other person performing work subject to this Approval.
11. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
12. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. During construction, the Company or its designees shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The Company shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Approval.
13. The applicant shall be responsible for having a copy of this Approval on the job site at all times.
14. A pre-construction review shall be arranged by the contractor with the Conservation Administrator. This review shall occur prior to any work.
15. The applicant shall attempt to coordinate with Barnstable for the transportation of an agent of the Barnstable Conservation Commission to the construction area.



Ann Berwick, Acting Chair
Energy Facilities Siting Board

ATTACHMENT 3

EFSB-07-8, CAPE WIND ASSOCIATES, LLC CERTIFICATE OF ENVIRONMENTAL IMPACT AND PUBLIC INTEREST

APPROVAL IN LIEU OF TOWN OF YARMOUTH ORDERS OF CONDITIONS

1. Pursuant to its authority under G.L. c. 164, §§ 69K-69O, the Energy Facilities Siting Board hereby grants to Cape Wind Associates, LLC an Approval in lieu of a wetlands Order of Conditions pursuant to the Massachusetts Wetlands Protection Act, G.L. c. 131, § 40 ("Wetlands Act") and in lieu of an Order of Conditions pursuant to the Town of Yarmouth wetlands bylaw ("wetlands bylaw").
2. This Approval authorizes construction and operation of the transmission project as approved by the Energy Facilities Siting Board in Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2, 15 DOMSB 1 (May 11, 2005); and Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2A/D.T.E. 02-53 (May 1, 2008).
3. This Approval is issued subject to Conditions C.1 through C.7, in the Certificate of Environmental Impact and Public Interest that is appended as Exhibit A to the Final Decision in Cape Wind Associates, LLC, EFSB 07-08 (May 27, 2009).
4. Eelgrass beds shall be avoided and turbidity screens deployed. Prior to commencement of work and during the course thereof, the Town shall be given advance notice of construction activity.
5. This Approval does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
6. Any fill used in connection with the proposed project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
7. No work shall be undertaken until this Approval has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Approval also shall be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of registered land, the Approval also shall be noted on the land Court Certificate of Title of the owner of the land upon which the propose work is to be done. The recording information shall be submitted to the Conservation Commission, on a form provided by the Conservation Commission and stamped by the Registry of Deeds.
8. Notice of any project change affecting wetlands resources that is filed with Energy Facilities Siting Board shall be filed with the Conservation Commission. If the

Siting Board grants a project change, notice of such change shall be filed with the Conservation Commission.

9. The Agent or members of the Conservation Commission and Department of Environmental Protection shall have the right to enter and inspect the area subject to this Approval, and may require the submittal of any data in the Company's possession deemed reasonably necessary by the Conservation Commission or Department for that evaluation.
10. This Approval shall apply to any successor in interest or successor in control of the property subject to this Approval and to any contractor or other person performing work subject to this Approval.
11. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
12. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. During construction, the applicant or its designees shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require reasonable additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by the Conservation Commission.
13. Within one month of the receipt of this Approval and prior to the commencement of any work approved herein, the recording requirement in Condition 6, above, shall be complied with.
14. It is the responsibility of the applicant, the owner and/or successor(s) and the project contractors to ensure that all conditions of this Approval are complied with. The applicant shall provide copies of the Approval and approved plans to project contractors prior to the start of work. Conservation Commission Forms A and B shall be completed and returned to the Commission prior to the start of work.
15. The Conservation Commission shall receive written notice one week in advance of the start of work. A pre-construction review shall occur with the Conservation Commission or Administrator prior to the start of work.
16. Staked haybales backed by trenched-in siltation fencing shall be set along the approved on-land work limit line to the extent necessary in consultation with the Conservation Agent. Effective sediment controls shall remain until the site is stabilized with vegetation.
17. "Clean trench" construction methods shall be used.

18. Storage of equipment and materials shall be outside wetlands resource areas (excepting coastal plain).
19. Stamped as-built plans shall be promptly filed with the Department of Public Works
20. No area shall be left unvegetated for more than 30 days, given seasonal considerations. All areas disturbed during construction shall be revegetated as soon as practicable following completion of work at the site. Mulching shall not serve as a substitute for the requirement to revegetate disturbed areas at the conclusion of work.
21. At the completion of work, or by the expiration of this Approval, the applicant shall request in writing from the Conservation Commission a Certificate of Compliance for the work herein permitted. Barnstable Conservation Commission Form C shall be completed and returned with the request for a Certificate of Compliance. Where a project has been completed in accordance with plans stamped by a registered professional engineer, architect, landscape architect or land surveyor, a written statement by such professional person certifying substantial compliance with the plans and setting forth what deviation, if any, exists with the record plans shall accompany the request for the Certificate of Compliance. At the time of the request for a certificate of Compliance, an updated sequence of color photographs of the undisturbed buffer zone shall also be submitted.
22. The applicant shall maintain a copy of this Approval on the job site at all times.



Ann Berwick, Acting Chair
Energy Facilities Siting Board

EFSB 07-8, CAPE WIND ASSOCIATES, LLC
APPROVAL IN LIEU OF TOWN OF BARNSTABLE ROAD OPENING PERMIT

1. Pursuant to its authority under G.L. c. 164, §§ 69K-69O, the Energy Facilities Siting Board hereby grants to Cape Wind Associates, LLC an Approval in lieu of a road opening permit from the Town of Barnstable. To that extent, this Approval authorizes construction and operation of the transmission project as approved by the Energy Facilities Siting Board in Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2, 15 DOMSB 1 (May 11, 2005); and Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2A/D.T.E. 02-53 (May 1, 2008).
2. This Approval allows road openings in Spyglass Hill Road, Midpine Drive, Marstons Lane, Iris Lane, Oakmont Rd., Dromoland Lane and Mary Dunn Rd.
3. This Approval is issued subject to Conditions C.1 through C.7, in the Certificate of Environmental Impact and Public Interest that is appended as Exhibit A to the Final Decision in Cape Wind Associates, LLC, EFSB 07-08 (May 27, 2009).
4. The applicant shall conform to all applicable Massachusetts General Laws and Town of Barnstable ordinances.
5. The applicant shall be responsible for all work performed in connection with this Approval, and shall have adequate insurance for any injuries to persons or property resulting from such work. The applicant agrees to indemnify the Town of Barnstable against liability resulting from any negligent act or omission of the applicant or its contractors in connection with this Approval. The applicant shall be responsible for trench maintenance during the period of construction as well as trench repairs caused by settlement or poor construction for a period of one year from the date of project completion.
6. Cutting of pavement is prohibited at all times unless prior approval is given by contacting the Department of Public Works, which approval shall not be unreasonably withheld.
7. The applicant shall call DIGSAFE and the Department of Public Works at least 72 hours prior to initiating any work.
8. All repair work shall meet Massachusetts Department of Public Utilities Street Restoration Standards.
9. The names, addresses, and 24-hour, 7-day/week phone numbers shall be provided to the Department of Public Works, Police and Fire Department of at least two contacts to handle emergency requirements such as settled trenches. In the event a road opening failure presents a nuisance or public safety problem, the applicant shall respond to all trench restoration requests from the Town within 48 hours.

10. The 3-page April 30, 2009 letter to R. Burgmann, Town of Barnstable, from R. Donahoe, Cape Wind Associates, LLC, including the 3 attached pages of diagrams, is incorporated herein, and is attached hereto.

Ann Berwick

Ann Berwick, Acting Chair
Energy Facilities Siting Board



75 Arlington Street
Suite 704
Boston, MA 02116
617-904-3100
Fax: 617-904-3109
www.capewind.org

April 30, 2009

Robert A. Burgmann, P.E.
Town Engineer
Town of Barnstable
Department of Public Works
230 South Street, 4th Floor
Hyannis, Massachusetts 02601

RE: Cape Wind Project – Transmission Line Location

Dear Robert:

Thank you for meeting with me on April 28th to discuss the procedures associated with installation of our proposed underground transmission lines through certain roadways in the Town of Barnstable (the "Town"). The meeting was very productive and allowed us to develop a common understanding of the construction methods and protocols that will apply to the construction of the subject transmission lines.

I want to take this opportunity to memorialize our discussions, as referenced below, and to welcome your comments or corrections as appropriate.

- Construction will occur through a portion of the Town within the existing NSTAR Electric Company ("NSTAR") transmission right-of-way ("ROW") in which NSTAR has longstanding property rights for utility facilities. For your information, NSTAR will ultimately own the two new transmission lines located within its ROW. As we discussed, the routing is depicted in the Request for Transmission Line Location Submittal dated November 13, 2007.
- Cape Wind will likely be responsible for the construction of the transmission lines. It intends to utilize the open trench method for the installation of transmission lines along the entire route within the NSTAR ROW in the Town, as depicted in the initial submittal dated November 13, 2007.
- There will be seven (7) road crossings in the Town, six (6) of which will occur along or across public roadways (i.e., Spyglass Hill Road, Midpine Drive, Iris Lane, Oakmont

Road, Dromoland Lane and Mary Dunn Road)¹ and one (1) that may be considered a private way (i.e., Marstons Lane).

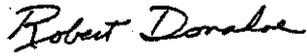
- During the meeting, you mentioned that the license that will be granted to the contractor prior to construction will be only for those crossings that are public ways. Having discussed this with our attorneys, I am told that municipalities in Massachusetts have the authority to permit road crossings for utility facilities over both public and private roadways that are open for public use and that have been maintained by the Town for long periods of time. Boston Edison Company v. Town of Sudbury, 356 Mass. 406, 425 (1969). In any event, the existing NSTAR easement for its transmission ROW covers any areas subject to private property rights of abutting landowners so there should be no issues with respect to the rights to occupy both public and private roadways traversed by the proposed transmission lines.
- The contractor ultimately selected must comply with the most current rules and regulations for street excavation at said time of issuance.
- A copy of said rules and regulations and a copy of the list of contractors that have met the town's criteria to perform street excavations were provided to me. In addition, it is understood that, if we select a contractor not listed, that contractor can apply to be included on the Department of Public Work's ("DPW") accepted list provided they agree to meet the criteria set forth in the Town's rules and regulations for street excavations.
- The DPW prefers that the construction activity be conducted from the months of April 1st to Memorial Day and then from Labor Day until December 1st. The purpose of the Town's preference for this schedule is: (a) to reduce traffic issues during the summer months; and (b) to recognize the closing of asphalt batch plants during the winter months. However, the DPW would reasonably allow roadway construction before and after those dates in areas in which excavation will not generally pose a substantial impact to the flow of traffic. The primary area of concern for traffic impact to the DPW is at the intersection of Dromoland Lane and Mary Dunn Road.
- It was suggested by you that an informal pre-introduction discussion of project construction may also be appropriate with the Water, Police, Fire and School Departments in order to provide them with some background and to afford them an opportunity to identify any specific concerns prior to the commencement of construction.

I believe these items were the major topics of our discussion. I greatly appreciate your insights and cooperation throughout this process. If there is anything that I missed or you do not concur with, please let me know at your convenience and I will make the mutually agreed-to modifications.

¹ For your additional background, according to mapping we received from the Town several years ago, the area of Dromoland Lane and Mary Dunn Road where the lines will be located is a public way and not a private way. I have attached a copy of those maps for your review.

Letter to Mr. Burgmann
April 30, 2009
Page 3

Sincerely,



Robert E. Donahoe
VP Environmental Services

Attachments

CC: R. Connors, NSTAR
D. Rosenzweig, Esq.
C. McLaughlin, Esq.

ATTACHMENT 5

EFSB 07-8, CAPE WIND ASSOCIATES, LLC
CERTIFICATE OF ENVIRONMENTAL IMPACT AND PUBLIC INTEREST

APPROVAL IN LIEU OF TOWN OF YARMOUTH ROAD OPENING PERMIT

1. Pursuant to its authority under G.L. c. 164, §§ 69K-69O, the Energy Facilities Siting Board hereby grants to Cape Wind Associates, LLC an Approval in lieu of a road opening permit from the Town of Yarmouth. To that extent, this Approval authorizes construction and operation of the transmission project as approved by the Energy Facilities Siting Board in Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2, 15 DOMSB 1 (May 11, 2005); and Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric, EFSB 02-2A/D.T.E. 02-53 (May 1, 2008).
2. This Approval allows specifically road openings in Willow Street, Higgins Crowell Road, Berry Avenue and New Hampshire Avenue.
3. This Approval is issued subject to Conditions C.1 through C.7, in the Certificate of Environmental Impact and Public Interest that is appended as Exhibit A to the Final Decision in Cape Wind Associates, LLC, EFSB 07-08 (May 27, 2009).
4. The applicant shall conform to all applicable Massachusetts General Laws and Town of Yarmouth ordinances.
5. The applicant shall be responsible for all work performed, and shall have adequate insurance for injuries to persons or property resulting from such work. The applicant agrees to indemnify the Town of Yarmouth against liability resulting from any negligent act or omission of the applicant or its contractors in connection with this Approval. The applicant shall be responsible for trench maintenance during the period of construction as well as trench repairs caused by settlement or poor construction for a period of one year from the date of project completion.
6. Cutting of pavement is prohibited unless prior approval is given by contacting the Department of Public Works, which approval shall not be unreasonably withheld.
7. The applicant shall call DIGSAFE and the Department of Public Works at least 72 hours prior to initiating any work.
8. All repair work shall meet Massachusetts Department of Public Utilities Street Restoration Standards.

9. The names, addresses, and 24-hour, 7-day/week phone numbers shall be provided to the Assistant DPW Director, Police and Fire Department of at least two project contacts to handle emergency requirements such as settled trenches. In the event a road opening failure presents a nuisance or a public safety problem, the applicant shall respond to all trench restoration requests from the Town within 48 hours.



Ann Berwick, Acting Chair
Energy Facilities Siting Board

APPROVED by the Energy Facilities Siting Board at its meeting of May 21, 2009, by the members and designees present and voting. **Voting for approval of the Tentative Decision, as amended:** Ann Berwick (Acting EFSB Chair/Designee for Ian A. Bowles, Secretary, Executive Office of Energy & Environmental Affairs); Rob Sydney, (Designee for Commissioner, DOER); James Colman (Designee for Commissioner, DEP); Robert Mitchell (Designee for Secretary, EOHED); Paul J. Hibbard, Chairman, DPU; Tim Woolf, Commissioner DPU; and Penn Loh, Public Member.



Ann Berwick, Acting Chair
Energy Facilities Siting Board

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).

**COMMONWEALTH OF MASSACHUSETTS
ENERGY FACILITIES SITING BOARD**

In the Matter of the Petition of)
Brockton Power Company, LLC)
for Approval to Construct a 350 MW)
Combined Cycle Power Plant in the)
City of Brockton, Massachusetts and)
for Zoning Exemptions from the Bylaws)
of the City of Brockton and for Approval to)
Construct an Electric Transmission Line)
in the City of Brockton)

EFSB 07-7/
D.P.U. 07-58/07-59

FINAL DECISION

Robert J. Shea,
Presiding Officer
August 7, 2009

On the Decision:
Enid C. Kumin
Mary M. Menino

APPEARANCES:

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Kevin Penders, Esq.
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Petitioner

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And

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Intervenor

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Limited Participants

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FOR: Constituents
Limited Participants

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Limited Participants

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FOR: Constituents
Limited Participants

Susan J. Nicastro, Esq.
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Brockton, MA 02301
FOR: Alliance Against Power Plant Location
Limited Participants

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ABBREVIATIONS

<u>1985 MECo/NEPC Decision</u>	<u>Massachusetts Electric Company/New England Power Company, 13 DOMSC 119 (1985)</u>
7Q10	lowest 7-day average flow anticipated in a 10-year period
AAL	Allowable Ambient Level
ACE	Refers to an intervenor group of 26 residents of Brockton and West Bridgewater. ACE is an acronym for the group's counsel, Alternatives for Community Development
ACT	Refers to Massachusetts Green Communities Act enacted in October, 2007
AIHA	American Industrial Hygiene Association
ALOHA	Areal Locations of Hazardous Atmospheres
<u>ANP Blackstone Decision</u>	<u>ANP Blackstone Energy Company, 8 DOMSB 1 (1999)</u>
AWRF	Advanced Wastewater Treatment Facility
BACT	Best Available Control Technology
BANCT	Best Available Noise Control Technology
BELD	Braintree Electric Light Department
<u>Braintree Decision</u>	<u>Braintree Electric Light Department, EFSB 07-1/ DTE/D.P.U. 07-5 (2008)</u>
<u>Brockton Decision</u>	<u>Brockton Power, LLC, 10 DOMSB 157 (2000)</u>
Btu/kWh	British thermal units per kilowatt-hour
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
cfs	cubic feet per second
CO	carbon monoxide
CO ₂	carbon dioxide

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Company	NAME
dBA	A-weighted decibels
Department	Massachusetts Department of Public Utilities (also "DPU")
DOMSB	Decisions and Orders of Massachusetts Energy Facilities Siting Board
DOMSC	Decisions and Orders of Massachusetts Energy Facilities Siting Council
DPU	Massachusetts Department of Public Utilities (also "Department")
EFSB	Energy Facilities Siting Board
EMF	electric and magnetic field(s)
<u>Enron Decision</u>	<u>Enron Power Enterprise Corporation, 23 DOMSC 1 (1991)</u>
EOEA	Massachusetts Executive Office of Environmental Affairs (predecessor to EOEEA)
EOEEA	Massachusetts Executive Office of Energy and Environment (replaced EOEA in 2007)
ERPG	Emergency Response Planning Guidelines
FCA	ISO-NE's Forward Capacity Auction
GCA	Massachusetts Green Communities Act (also "ACT")
GEP	Good Engineering Practice
GHG	Massachusetts Greenhouse Gas Policy
G.L. c.	Massachusetts General Laws chapter
gpd	gallons per day
HAPS	Hazardous Air Pollutants
HRSR	heat recovery steam generator
ICNIRP	International Commission on Non-Ionizing Radiation Protection
<u>IDC Decision</u>	<u>IDC Bellingham LLC, 9 DOMSB 225 (1999)</u>
ISO-NE	Independent System Operator of New England
kV	kilovolts

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kV/m	kilovolts per meter
L ₉₀	sound level exceeded 90% of time
lbs/mmBtu	pounds per million British thermal units
lbs/MWH	pounds per megawatt-hour
LAER	Lowest Achievable Emission Rate
LNG	liquefied natural gas
LOS	Level of Service (traffic grade at an intersection)
MAAQS	Massachusetts Ambient Air Quality Standards
MADEP	Massachusetts Department of Environmental Protection
MBTA	Massachusetts Bay Transportation Authority
MDPH	Massachusetts Department of Public Health
MEPA	Massachusetts Environmental Protection Act
mG	milligauss
MGPD	millions of gallons per day
MMBtu	million British thermal units
MMBtu/hr	million British thermal units per hour
MVA	megavolt-amperes
MW	megawatts
MWh	megawatt-hours
NAAQS	National Ambient Air Quality Standards
NH ₃	ammonia vapor
<u>Nickel Hill Decision</u>	<u>Nickel Hill Energy, LLC, 11 DOMSB 83 (2000)</u>
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards

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NSR	New Source Review
O ₃	ozone
PM	particulate matter
PM _{2.5}	particulates 2.5 microns or smaller
PM ₁₀	particulates 10 microns or smaller
ppm	parts per million
PSD	Prevention of Significant Deterioration
psi	pounds per square inch
RGGI	Regional Greenhouse Gas Initiative
ROW	right-of-way
SCR	Selective Catalytic Reduction
SILs	Significant Impact Levels
<u>Sithe Edgar Decision</u>	<u>Sithe Edgar Development, LLC</u> , 10 DOMSB 1 (2000)
<u>Sithe Mystic Decision</u>	<u>Sithe Mystic Development, LLC</u> , 9 DOMSB 101 (1999)
Siting Board	Energy Facilities Siting Board
SO ₂	sulfur dioxide
SO _x	sulfur oxides
SOP	standard operating procedure
<u>Southern Canal Decision II</u>	<u>Southern Energy Canal II, L.L.C.</u> , 12 DOMSB 155 (2001)
<u>Southern Energy Kendall</u>	<u>Southern Energy Kendall, LLC</u> , 11 DOMSB 255 (2000)
SPCC	Spill Prevention, Control and Countermeasure Plan
TEL	Threshold Effects Exposure Limit
tons/yr	tons per year
TPS	Technology Performance Standards
TRWA	Taunton River Watershed Alliance, Inc.
TPY	tons per year

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$\mu\text{g}/\text{m}^3$

micrograms per cubic meter

ULSD

ultra-low sulfur diesel oil

USEPA

United States Environmental Protection Agency

U.S. Gen Decision

U.S. Generating Company, 6 DOMSB 1 (1997)

VOCs

volatile organic compounds

Pursuant to G.L. c. 164, § 69J¼, the Energy Facilities Siting Board ("Siting Board" or "EFSB") hereby APPROVES, subject to the conditions set forth below, the petition of Brockton Power Company LLC ("Brockton Power") for approval to construct a 350 megawatt ("MW") combined-cycle, dual fuel (natural gas and ultra-low sulfur diesel oil ("ULSD")) electric generating facility (the "proposed facility" or "project") in Brockton, Massachusetts. Pursuant to G.L. c. 164, § 72, the Siting Board also APPROVES the petition of Brockton Power to construct an electricity transmission line connecting the proposed facility to the regional transmission grid. Pursuant to G.L. c. 40A, § 3, the Siting Board DENIES the petition of Brockton Power for various individual zoning exemptions from the zoning ordinances of the City of Brockton ("Zoning Ordinances") and for a comprehensive exemption from said ordinances.

I. INTRODUCTION

A. Description of the Proposed Facility, Site and Interconnections

Brockton Power is an affiliate of Advanced Power Services (NA) LLC ("Advanced Power") (Exh. BP-1, at 1-1). As stated above, Brockton Power proposes to construct a 350 MW combined-cycle, dual fuel (natural gas and ULSD) electric generating facility in Brockton, Massachusetts (*id.*). The proposed facility would use natural gas as its primary fuel, but would seek air permitting approval to use ULSD for up to 60 days per year (*id.*, Appendix C, § 2.3 at 2-7).

The proposed facility would be located on a vacant 13.2 acre site ("Proposed Facility Site") within the 70-acre Oak Hill Way Industrial Park in southeast Brockton (Exh. BP-1, at 1-10). The Brockton Advanced Wastewater Reclamation Facility ("AWRF") would be immediately adjacent to the Proposed Facility Site (*id.*). The treated water from the AWRF would be the source of water to cool the proposed facility's mechanical cooling tower (*id.* at 1-15).

The proposed facility would be powered by a nominal 300 MW dual-fueled combined-cycle power plant (*id.* at 1-1). Brockton Power anticipates using either a Siemens SGT6-PAC 5000 turbine or a similar F-class combustion turbine (*id.*). An additional 50 MW of energy may be produced by the supplemental firing of the Heat Recovery Steam Generator ("HRSG"), also

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referred to as "duct firing," and the injection of water into the turbine, also known as "evaporative cooling" (id.).

The proposed facility would obtain the natural gas it needs from a proposed natural gas supply line that would extend approximately 1,500 feet from the project to either: 1) the Bay State Gas Company connection on Oak Hill Way; or 2) as an alternative route, the Spectra Energy pipeline system along Sargents Way (Exh. BP-1, at 1-3, 1-16; Exh. BP-4, at 2-3, 2-22). The electricity produced by the proposed facility would be transmitted to the regional transmission grid by a new 115-kV overhead circuit and interconnection substation (Exh. BP-1, at 1-1). The interconnection substation would be connected to two existing National Grid 115-kV transmission lines, occupying a transmission corridor located approximately 3,000 feet southeast of the proposed facility (id.).

B. Procedural History

In accordance with M.G.L. c. 164, § 69J $\frac{1}{4}$, on July 12, 2007, Brockton Power filed a petition ("Petition") with the Energy Facilities Siting Board for approval to construct the above-described proposed facility at the Oak Hill Industrial Park located in Brockton, Massachusetts (Exh. BP-1, at 1-1). At the time the Petition was filed, this land was zoned for industrial uses, including electrical generating facilities.

On July 12, 2007, the Company also filed two petitions with the Department of Public Utilities ("DPU" or "Department"), one requesting zoning exemptions pursuant to G.L. c. 40A, § 3 (the "Zoning Exemption Petition," case number D.P.U. 07-58), and one requesting permission to construct and operate a transmission line pursuant to G.L. c. 164, § 72 ("Section 72 Petition," case number D.P.U. 07-59). The Chairman of the DPU referred the Zoning Exemption Petition and the Section 72 Petition to the Siting Board for hearing and determination.

Six entities intervened in this case: National Grid, Taunton River Watershed Alliance, Inc. ("TWRA"), the Town of West Bridgewater, the City of Brockton ("City"), Custom Blends LLC ("Custom Blends"), and 26 Residents of Brockton and West Bridgewater who have also been referred to as "ACE," an acronym for their counsel, Alternatives for Communities and Environment (collectively, the "Intervenors") (Ruling Re Petitions to Intervene and Petitions to Participate dated December 4, 2007).

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In addition, six persons and entities were admitted as limited participants: Alliance Against Power Plant Location (“AAPPL”), City Councilor Linda Balzotti, City Councilor Thomas Brophy, Senator Robert Creedon and State Representative Geraldine Creedon (“Senator and Representative Creedon”) and State Representative Christine E. Canavan (*id.*; see also, Ruling Re: AAPPL’s Motion to Change from Intervenor to Limited Participant Status and to Withdraw its Pre-filed Testimony dated May 13, 2008).

A total of 20 days of evidentiary hearings were held, commencing on May 19, 2008, and concluding on July 11, 2008. On or before the deadline of August 7, 2008, all Parties (except Custom Blends) as well as the limited participants Senator and Representative Creedon filed initial briefs. Brockton Power, National Grid, the Town of West Bridgewater, the City of Brockton, and ACE filed reply briefs.

The Siting Board met to consider this matter, and to hear argument from counsel for the Parties as well as elected officials, on December 11, 2008, January 8, 2009, and January 29, 2009. At the last meeting, the Siting Board formally voted on the three petitions before it and instructed the staff to draft a tentative decision reflecting said vote and the conditions imposed upon approval.

C. Jurisdiction and Scope of Review

1. General Laws, Chapter 164, Section 69J¼

Brockton Power filed its petition to construct the proposed facility in accordance with G.L. c. 164, § 69J¼. Pursuant to G.L. c. 164, § 69J¼, no applicant shall commence construction of a “generating facility” unless a petition for approval of construction of that generating facility has been approved by the Siting Board. Pursuant to G.L. c. 164, § 69G, a jurisdictional “generating facility” is defined as “any generating unit designed for or capable of operating at a gross capacity of 100 megawatts or more, including associated buildings, ancillary structures, transmission and pipeline interconnections that are not otherwise facilities, and fuel storage facilities.” Because the proposed facility is capable of operating at a gross capacity of 100 MW or more, it is a “generating facility” requiring Siting Board approval under G.L. c. 164, § 69J¼.

In accordance with G.L. c. 164, § 69J¼, before approving a petition to construct a generating facility, the Siting Board must determine that the applicant has met five requirements.

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First, the Siting Board must determine that the applicant's description of the site selection process used is accurate (see Section II, below). Second, the Siting Board must determine that the applicant's description of the proposed generating facility and its environmental impacts are substantially accurate and complete (see Section III, below). Third, the Siting Board must determine that the proposed generating facility will minimize environmental impacts consistent with the minimization of costs associated with mitigation, control, and reduction of the environmental impacts (see Section III, below). Fourth, the Siting Board must determine that plans for construction of the proposed generating facility are consistent with current health and environmental protection policies of the Commonwealth and with such energy policies as are adopted by the Commonwealth for the specific purpose of guiding the decisions of the Board (see Section IV, below). Fifth and finally, if the expected emissions from the proposed facility do not meet the applicable technology performance standard, the Siting Board must determine, based on a comparison with other fossil fuel generating technologies, that the proposed generating facility on balance contributes to a reliable, low-cost, diverse regional energy supply with minimal environmental impacts (see Section III.B, below). Southern Energy Kendall, 11 DOMSB 255, at 270-271 (2000).

2. General Laws, Chapter 40A, Section 3

Brockton Power also filed a petition for an exemption from the Zoning Bylaws of the Town of Brockton in accordance with G.L. c. 40A, § 3. Pursuant to G.L. c. 40A, § 3, the Department is authorized to grant exemptions "in particular respects" from the operation of a municipality's zoning ordinance or by-laws for lands or structures used, or to be used, by a public service corporation if:

upon petition of the corporation, the [Department] shall, after notice given pursuant to section eleven and public hearing in the town or city, determine the exemptions required and find that the present or proposed use of the land or structure is reasonably necessary for the convenience or welfare of the public . . .

Accordingly, a petitioner seeking exemption from a local zoning by-law pursuant to G.L. c. 40A, § 3 must meet three criteria. First the petitioner must qualify as a public service corporation. Save the Bay v. Department of Public Utilities, 366 Mass. 667 (1975). Second, the

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petitioner must establish that it requires a zoning exemption(s). Boston Gas Company, D.T.E. 00-24, at 3 (2001). Third, the petitioner must demonstrate that its present or proposed use of the land or structure is reasonably necessary for the public convenience or welfare. Massachusetts Electric Company, D.T.E. 01-77, at 4 (2002); Tennessee Gas Pipeline, D.T.E. 01-57, at 3-4 (2002).

3. General Laws, Chapter 164, Section 72

Brockton Power's final petition was filed with the Department under G.L. c. 164, § 72; it sought permission to construct approximately 3,000 feet of 115 kV overhead line and related facilities which would connect the proposed facility to the regional transmission grid. General Laws chapter 164, § 72, provides that the Department may approve a section 72 petition if it determines that said line is necessary and will serve the public convenience and is consistent with the public interest.

II. SITE SELECTION

A. Standard of Review

G.L. c. 164, § 69J $\frac{1}{4}$ requires the Siting Board to determine whether an applicant's description of the site selection process the applicant used is accurate. An accurate description of an applicant's site selection process must include a complete description of the environmental, reliability, regulatory, and other considerations that led to the applicant's decision to pursue the facility as proposed at the proposed site, as well as a description of other siting and design options that were considered as part of the site selection process.

The Siting Board also is required to determine whether a proposed facility provides a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. G.L. c. 164, § 64H. To accomplish this, G.L. c. 164, § 69J $\frac{1}{4}$ requires the Siting Board to determine whether "plans for the construction of a proposed facility minimize the environmental impacts consistent with the minimization of costs associated with the mitigation, control, and reduction of the environmental impacts of the proposed generating facility."¹ Site

¹ In recent decisions (see, for example, Municipal Wholesale Electric Company, EFSB 07-6 (2008)), the Siting Board has held that site selection, together with project design and

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selection, together with project design and mitigation, is an integral part of the process of minimizing the environmental impacts of an energy facility.

B. Description

The Company stated that it focused its site selection process on identifying sites where generating facilities had been previously proposed to the EFSB and permitted by the EFSB, but where power plants had ultimately not been built (Exh. BP-1, at 3-2). The Company explained that previously EFSB-permitted sites would inherently have sufficient acreage, access to fuel supplies in reasonable proximity, close access to the high voltage transmission grid, appropriate zoning, and ideally cooling water availability (*id.*). In addition, the Company stated that previously EFSB-permitted sites would have had any significant siting issues identified and adequate mitigation measures would have been developed (Exh. ACE-SS-2). The Company also noted that for previously EFSB-permitted sites there would be considerable data and analysis from which an updated proposal could be efficiently developed (Exh. EFSB-S-11).

Within the universe of previously EFSB-permitted sites in Massachusetts, the Company stated that it focused on those in eastern Massachusetts (Tr. at 1532 and 1555-1556). As the reason for its concentration on sites in eastern Massachusetts, the Company stated that the ISO-NE 2007 Regional System Plan had designated the four ISO-NE subareas that roughly comprise eastern Massachusetts² as being one of four regions in New England where power could be effectively added for the 2015/2016 timeframe (Tr. at 1534 and BP-JLR-1, at 38). The Company

mitigation, is an integral part of the process of minimizing the environmental impacts of an energy facility. In these cases, the Siting Board has considered whether site selection, together with project design and mitigation, contributed to the minimization of environmental impacts of the proposed project and the costs of mitigating, controlling and reducing such impacts. See Section II.C. below for discussion of the Siting Board review of this issue.

² Those subareas, as referenced in Table 5-2 of the ISO-NE 2007 Regional System Plan, are: Southeastern Massachusetts/Rhode Island (SEMA/RI); Boston; Central Massachusetts (CMA); and Northeastern Massachusetts (NEMA) (Tr. at 1534 and BP-JLR-1 at 38). Note that since the ISO-NE Regional System Plan also includes the Western Massachusetts (WMA) subarea as an effective area in which to locate new generating resources for the same 2015/2016 timeframe, the whole state of Massachusetts was designated as an effective area in which to add resources (BP-JLR-1, at 38).

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further explained that, although southeastern Massachusetts, where the Brockton plant would be located, has historically been a power-exporting region, the region was identified by ISO-NE in its 2007 Regional System Plan as an effective region in which to add capacity because of the region's capacity to transmit power to the greater Boston region (Tr. at 1536).

Based on its approach of considering only previously EFSB-approved sites, the Company identified four potential sites in eastern Massachusetts as possible sites for the proposed facility (Exh. BP-1, at 3-2): (a) the currently proposed Brockton site in Oak Hill Industrial Park which was the site on which Brockton Power, LLC previously proposed to build a generating station and received EFSB approval in March 2000 (Brockton Power, 10 DOMSB 157 (2000)); (b) the Everett site on which Cabot Power proposed to build a generating plant (initially considered as EFSB 91-101 which was approved in 1994 (Cabot Power, 2 DOMSB 241 (1994)), but subsequently reopened in 1997 as EFSB 91-101A which received EFSB approval in October, 1998) (Cabot Power, 7 DOMSB 233 (1998)); (c) the Bellingham site on which IDC proposed to build a generating plant and received EFSB approval in December 1999 (IDC Bellingham, 9 DOMSB 225 (1999)); and (d) the Dracut site on which Nickel Hill Energy, LLC proposed to build a generating facility and received EFSB approval in November 2000 (Nickel Hill Energy, 11 DOMSB 83 (2000)).

The Company stated that next it investigated and compared the four sites as to relative general attributes for development such as access to fuel supply and 345 kV transmission lines, zoning and existing land use, and cooling water availability (Exh. EFSB-S-11). The Company also considered site availability, but notes that it did so later in the process after it investigated and compared relative general attributes (id.). The Company stated that its "understanding of the Siting Board's site selection standards [post 1997 Electric Restructuring Act] under G.L. c. 164, § J¼ is that backup or alternative sites are no longer required" (id.).

After initial consideration of general attributes, the Company dismissed the IDC Bellingham and the Cabot Everett sites from further consideration on the grounds that these sites were currently unsuitable (Exh. BP-1, at 3-6 to 3-8). In the case of the IDC Bellingham site, the Company noted that the previously EFSB-approved site had subsequently been developed as a Dunkin' Donuts distribution center and that the placement of the distribution center effectively precluded co-siting a generating facility on the property (id. at 3-8). In the case of the Cabot

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Everett site, the Company explained that the site belonged to Suez/Tractabel, a direct competitor (id. at 3-6).

With the IDC Bellingham and the Cabot Everett sites eliminated, the Company presented a more detailed comparison of the proposed Brockton site in Oak Hill Industrial Park with the Nickel Hill site in Dracut on the basis of ten criteria (Exh. BP-1, at Table 3-1).³ The Company concluded that the two sites were very comparable, but noted that the Nickel Hill site was significantly more costly (Exhs. BP-1, at Table 3-1; EFSB-S-4) and that the Nickel Hill property was actively in use as a quarry and not currently for sale (Exh. EFSB-2-2). The Company stated that the quarry activity on the Nickel Hill property had been underway when the site was originally proposed for use as a power plant site in 1999 (Tr. at 1558). The Company did note that the total acreage of the Dracut site was nearly twice that of the Brockton site, which would have better accommodated space for on-site construction and laydown, as well as construction worker parking (Exh. BP-1, at 3-11). By contrast, the Company stated that the Brockton site was not large enough for these construction and parking activities, and Brockton Power would be obliged to lease land within the industrial park or nearby to accommodate these activities (Tr. at 2590). The Company did not hold any discussions with the Dracut site owner, Brox Industries, regarding the availability or price of land for the power plant (Tr. at 1560-1561). Instead, the Company relied upon knowledge of its assessments to conclude that the Dracut site would be more expensive than the Brockton site and likely unavailable (Tr. at 1560-1562). The Company also concluded that the Brockton site was superior to the Dracut site in its proximity to a source of waste water for use in the proposed wet mechanical cooling towers, though Brockton Power acknowledged that the Dracut site was located near the Merrimack River which might have served as a source of water for that purpose (Exh. BP-1, at 3-8 – 3-11).

The Company argued that its only obligation under G. L. c.164, § 69 ¼ was to provide an accurate and detailed description of its site selection process (BP Brief at 20). The Company

³ Those criteria were: (1) availability of land (10-acre minimum); (2) availability of natural gas; (3) proximity to electricity interconnection; (4) proximity to supply of ULSD supply; (5) proximity to water supply/waste water interconnects; (6) noise control considerations; (7) compatibility with existing or planned land use; (8) proximity to residences; (9) presence of or proximity to wetland resources; (10) visual considerations (Exh. BP-1, at Table 3-1).

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cited the 2001 decision of the Supreme Judicial Court of Massachusetts in the Town of Andover v. Energy Facilities Siting Board, 435 Mass. 377 (2001) (“Andover”) as affirming that the Siting Board’s duties with respect to site selection review are limited to a determination of whether the site selection process is accurate (id.).

C. Analysis and Findings

The record shows that Brockton Power’s site selection process identified only the Brockton site and three other sites in eastern Massachusetts, all of which had previously been reviewed and approved by the Siting Board—some, many years earlier—for the construction of electric generating facilities. Brockton Power quickly dismissed two of these sites because they were no longer available. The Company then provided an evaluation of the remaining two sites (its proposed location in Oak Hill Industrial Park in Brockton and the Nickel Hill Site in Dracut) on the basis of ten criteria. Although the Company rated both sites as comparable in most respects, it ruled out the Nickel Hill Site on the basis of cost, and also because it was currently in use as a quarry and not available for sale.

With respect to site selection, G.L. c. 164, § 69J¼ provides that a petitioner must meet the requirement that “the description of the site selection process used is accurate.” In Andover, the Supreme Judicial Court ruled that the Siting Board’s duties with respect to site selection review are limited to a determination of whether the petitioner’s description of its site selection process is accurate.

Although the site selection process in this case was clearly not robust,⁴ there is nothing in the record to indicate that the petitioner’s description of its process was inaccurate. It is also clear that, in light of the Andover decision, the petitioner reasonably understood its obligations with respect to site selection to be limited to providing an accurate description of its process.⁵

⁴ In the MMWEC Decision, EFSB-07-6, at 10 (2008), the Siting Board opined that “restricting the evaluation of alternative sites to those approved by the Siting Board eight or more years ago likely will not demonstrate that the applicant used a [site selection] process that contributes to minimization of environmental impacts, and the cost of mitigating, controlling or reducing such impacts.” However, the Siting Board did not consider the effect of Andover on this conclusion.

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Thus, the Siting Board is compelled in this case to approve the petitioner's approach to site selection.

We note that the Siting Board has not addressed directly the scope of its authority post-Andover. We have held in a number of post-Andover cases that site selection, together with project design and mitigation, is an integral part of the process of minimizing the environmental impacts of an energy facility. However, the Siting Board has not addressed how that scope of review and the holding in Andover should be reconciled, nor whether Andover speaks only to the Siting Board's *duties* as opposed to its *discretion*. The Siting Board intends to provide guidance on this matter for future project proponents.

The Siting Board finds that Brockton Power's site selection process was accurately described.

⁵ The Siting Board notes that the Parties raised arguments with regard to the application of the EJ Policy to the site selection process. For discussion of the general applicability of the EJ Policy, see Section IV.B.1.

III. ENVIRONMENTAL IMPACTS

A. Standard of Review

G. L. c. 164, § 69J^{1/4} requires the Siting Board to determine whether the plans for construction of a proposed generating facility minimize the environmental impacts of the proposed facility consistent with the minimization of costs associated with the mitigation, control, and reduction of the environmental impacts of the proposed generating facility. In order to make this determination, the Siting Board assesses the impacts of the proposed facility in several areas prescribed by its statute, including air quality, water resources, wetlands, solid waste, visual impacts, noise, local and regional land use, and cumulative health, and determines whether the applicant's description of these impacts is accurate and complete. G. L. c. 164, § 69J^{1/4}.^{6,7}

The Siting Board also assesses the costs and benefits of options for mitigating, controlling, or reducing these impacts, and determines whether mitigation beyond that proposed by the applicant is required to minimize the environmental impacts of the proposed facility consistent with the minimization of costs associated with the mitigation, control, and reduction of the environmental impacts of the proposed generating facility. Compliance with other agencies' standards does not establish that a proposed facility's environmental impacts have been minimized.

Finally, the Siting Board assesses any tradeoffs that need to be made among conflicting environmental impacts, particularly where an option for mitigating one type of impact has the effect of increasing another type of impact. An assessment of all impacts of a facility is

⁶ G. L. c. 164, § 69J^{1/4} includes "radiation impacts" in the list of generating facility impacts to be reviewed by the Siting Board. However, since radiation is a property only of nuclear power plants, radiation impacts are not considered in the Siting Board's review of gas-fired generating facilities.

⁷ The Siting Board also reviews in this decision the environmental impacts of the proposed project with regard to traffic, safety, and electric and magnetic fields ("EMF").

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necessary to determine whether an appropriate balance is achieved both among conflicting environmental concerns and between environmental impacts and cost. A facility proposal which achieves this balance meets the Siting Board's statutory requirement to minimize environmental impacts consistent with minimizing the costs associated with the mitigation, control, and reduction of the environmental impacts of the proposed generating facility.

B. Air Quality

This section describes baseline air quality conditions, emissions and air quality impacts of the proposed facility, compliance with existing regulations and emissions offsets proposed by Brockton Power.

1. Applicable Regulations

The Company indicated that regulations governing the air quality impacts of the proposed facility include National Ambient Air Quality Standards ("NAAQS") and Massachusetts Ambient Air Quality Standards ("MAAQS"); New Source Review ("NSR") requirements; Prevention of Significant Deterioration ("PSD") requirements, and New Source Performance Standards ("NSPS") (Exh. BP-1, at 4-2 to 4-9).⁸

The Company stated that all areas of the country are classified as "attainment," "non-attainment, or "unclassifiable" with respect to NAAQS (*id.* at 4-2). The Company stated that, as required by the Clean Air Act ("CAA"), USEPA has promulgated NAAQS for nitrogen dioxide (NO₂), sulfur dioxide ("SO₂"), particulate matter ("PM"), carbon monoxide ("CO"), ozone ("O₃"), and lead ("Pb") (*id.* at 4-6). The Company further stated that the NAAQS and MAAQS specify concentration levels for the identified emittants for various averaging times and durations of exposure, and that separate standards exist for PM with a diameter of 10 microns or less ("PM₁₀") and with a diameter of 2.5 microns or less ("PM_{2.5}") (*id.* at 4-6).

The Company explained that the NAAQS include primary standards, designed to protect human health, and secondary standards, intended to protect public welfare from adverse effects due to the presence of air pollution, such as damage to vegetation (*id.*). The Company further

⁸ The identified regulations serve to establish and achieve compliance with ambient air quality standards.

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explained that, for purposes of setting air quality modeling requirements, including when to conduct interactive modeling, USEPA and MADEP have set Significant Impact Levels (“SILs”) (Exh. EFSB-A-1(S)(1) at 3-4 to 3-5). Each SIL is a small fraction (1% to 5%) of the corresponding NAAQS and MAAQS (id.).

The Company indicated that if the area of proposed project construction is classified as “attainment” or “unclassified” for a particular pollutant, then PSD review applies, and a proposed facility must demonstrate meeting requirements of Best Available Control Technology (“BACT”), as well as compliance with the NAAQS (Exh. BP-1, at 4-3). The Company further indicated that in the case of a facility proposed for a region where it would qualify as a “major source” of a nonattainment pollutant, Nonattainment NSR applies (id. at 4-3 to 4-4; Exh. EFSB-A-1, at 3-2). The Company stated that, as part of Nonattainment New Source Review (“NSR”), a proposed facility must meet Lowest Achievable Emission Rate (“LAER”) requirements and secure emission offsets; furthermore, a proposed major source must meet NSPS which constitute a set of national emission standards for major stationary sources of air pollution (Exh. BP-1, at 4-3 to 4-4).

The Company stated that all Massachusetts, including Brockton, the anticipated location of the proposed facility, is classified as a moderate nonattainment area for the 8-hour ozone standard (Exh. BP-4, at 5.1-5). The Company indicated that its proposed facility must therefore meet non-attainment NSR requirements for the chemical precursors to ozone, NO_x and volatile organic compounds (“VOCs”) (id. at 5.1-5 to 5.1-6).⁹

The Company indicated that the MADEP requires an Air Plan Approval for all new facilities exceeding certain regulatory thresholds (Exh. BP-4, at 5.1-10).¹⁰ In addition to requiring compliance with federal and state regulatory requirements, an MADEP Air Plan Approval requires implementation of Massachusetts BACT for each pollutant regulated as part of the Air Plan review (id.).

Brockton Power also indicated that the Siting Board has established Technology Performance Standards (“TPS”) (Exh. BP-1, at 2-1 to 2-4). The Company stated that proponents

⁹ The Company indicated that USEPA evaluates Nonattainment NSR under 40 CFR 52.21, while MADEP does so under 310 CMR 7.00 Appendix A (Exh. BP-4, at 4-4).

¹⁰ These thresholds are set forth in 310 CMR 7.02 (Exh. BP-4, at 5.1-10).

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of new generating facilities must either: (1) establish that the emissions from the proposed facility meet the TPS established by the Siting Board for such facilities; or (2) provide data comparing the proposed generating facility to alternative fossil-fuel generating technologies (Exh. BP-1, at 2-1). See G.L. C. 164, § 69J¼.

The Company further stated that Massachusetts would regulate CO₂ emissions under the Regional Greenhouse Gas Initiative (“RGGI”) after January 1, 2009 (Exh. BP-1, at 5-4). The Company explained that RGGI compliance is achieved by each facility using CO₂ allowances issued by the state and offsets generated by CO₂ offsets projects to account for each ton of CO₂ emitted (*id.*). The Company further explained that the RGGI involves a “cap, auction and trade” system in which the state transfers allowances to facilities via an auction, and facilities transfer allowances among facility owners via a secondary market (*id.*). The Company also explained that regulations limit the extent (3.3% to 10%, depending on allowance prices) to which CO₂ offsets might serve to account for a facility’s emissions (*id.*). The Company stated that the RGGI guidelines set an initial cap of 26,660,204 tons for CO₂ in Massachusetts, with progressive reductions over the following ten year period (*id.*). The Company indicated that it expected to participate in the CO₂ allowance and offset auction (Exh. BP-4, at 5.1-18).

2. Baseline Air Quality

The Company presented background air quality concentrations of criteria pollutants based on recent air quality data collected by MADEP at two monitoring stations in Boston and one each in Brockton and Milton, at distances from the facility ranging from 3 to 8 miles to the north of the proposed facility site (Exh. BP-1, at 4-13). The Company indicated data for each criteria pollutant was collected at one of the four identified MADEP monitoring stations and was based on three years of monitoring, from 2004-2006 (*id.*). The Company indicated that the background air quality values were below NAAQS for all criteria pollutants except ozone for the eight-hour averaging period; for this period, ozone exceeded the NAAQS by 14%, or by approximately 8 micrograms per cubic meter (“µg/m³”) (*id.*).

3. Emissions Impacts and Compliance

The Company indicated that it proposes to construct a nominal 300 MW gas turbine dual fuel combined cycle generation facility, consisting of a gas turbine and an HRSG (Exh. EFSB-A-

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1(S)(1) at 2-4). The Company stated that the project would also be equipped with duct firing, *i.e.*, supplemental firing of the HRSG (*id.*). The Company indicated that, with duct firing in use, the proposed facility would have a potential power output of 350 MW (*id.*). The Company stated that it calculated potential emissions based on 8,760 hours per year of full-load operation (*id.* at 2-4, 2-17). Of these 8,760 hours, the Company indicated that it calculated potential emissions for 2,000 hours at full load on natural gas while duct firing, 5,320 hours on natural gas at full load without duct firing, and 1,440 hours on ULSD (720 hours with duct firing and 720 hours without duct firing) (*id.* at 2-1, 2-3).

The Company provided the Siting Board with a copy of its Air Plan Approval Application, submitted to MADEP, based on the above hours of operation at 100% load (Exh. EFSB-A-1(S)(1) at 2-17). The Company asserted that its proposed permitted operation would result in regional air quality benefits because it would maximize operating flexibility and allow for the displacement of older, less efficient and higher emitting plants (Exh. EFSB-A-1(S)(1) at 2-17). The Company stated that while proposed permitting for the plant would include 8,760 hours of operation, it anticipated that its proposed facility would run as a “mid-merit” plant with total operations of approximately 5,000 hours per year (approximately 57% of full operation) (*id.*).

Brockton Power stated that the proposed facility would control emissions to applicable LAER and BACT levels (Exh. EFSB-A-1(S)(1)). The Company indicated that, to do so, the proposed facility would use water injection and Selective Catalytic Reduction (“SCR”) to minimize NO_x emissions; combustion controls and an oxidation catalyst to minimize CO and VOC emissions; and “clean” fossil fuels (natural gas and ULSD) to control SO₂ and PM₁₀/PM_{2.5} emissions (Exhs. EFSB-A-5; EFSB-A-1(S)(1) at 2-18). The Company stated that the proposed facility would be a major source for NO_x and CO, based on the potential to emit > 50 tpy and 100 tpy, respectively), and a minor source for Hazardous Air Pollutants (“HAPS”), based on potential emissions of < 25 tpy for total HAPS and <10 tpy for each individual HAP) (Exh. EFSB-A-1(S)(1), at 2-18).

The Company indicated that its “potential to emit” calculations included 1,200 hours of a 60 MMBtu auxiliary boiler operation and 400 unit-hours of black-start generator operation (RR-COB-2, at 3). The Company explained that the auxiliary boiler would keep the HRSG warm when the plant was not operating (*id.* at 2). The Company stated that it anticipated that any

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MADEP Air Plan approval for the project would include an enforceable permit condition precluding simultaneous operation of the auxiliary boiler and the gas turbine (*id.*).

In addition to other documentation, the applicant has provided: the maximum potential annual emissions for the proposed project assuming full year operation on natural gas and ULSD with duct firing on each fuel for some portion of the time, as indicated above; a BACT analysis, through which the air pollution control technologies were selected; and air pollutant dispersion modeling for NO₂, SO₂, PM₁₀, and CO. Brockton Power stated that it submitted an air modeling protocol to MADEP for the proposed project and that MADEP raised no concerns with respect to air modeling in its comments on the DEIR (Exh. EFSB-G-2(S)(1), at 6; Brockton Power Initial Brief at 47).

The Company presented refined modeling results that indicate maximum cumulative predicted levels below NAAQS for all modeled pollutants and averaging periods (Exh. EFSB-A-1(S)(1) at 6-10 to 6-13).

The Company conducted air quality modeling for the project using USEPA models SCREEN3 and AERMOD (Exh. EFSB-A-1(S)(1) at 6-1). The Company stated that, for its AERMOD modeling, it used five years (2001 to 2005) of National Weather Service meteorological data from Logan Airport, Boston, MA (RR-EFSB-2). The Company stated that, in addition to data from Logan Airport, it explored use of data from an alternative location in eastern Massachusetts, Taunton Municipal Airport (RR-COB-7). The Company indicated, however, that Taunton data available for modeling was not sufficiently complete to meet the EPA recovery standard for meteorological data in four of the five most current years available; data for the fifth year was also slightly below the EPA threshold (Tr. at 2328-2329).

The Company stated that the applicable science and EPA guidance for AERMOD modeling indicated that use of Logan Airport data was appropriate in the instant case (Tr. at 2503-2504, 2508-2509). The Company explained that, with respect to synoptic-scale data over eastern Massachusetts, there are established wind patterns and wind regimes experienced in general, with reasonable consistency, at Logan Airport and at the alternative Taunton Airport location (Tr. at 2506-2508).

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The Company's emission rates and dispersion modeling results¹¹ appear in summary form in Tables 1 and 2, below:

¹¹ The Siting Board notes that facility ozone impacts are not modeled, as ozone forms in the atmosphere from NO_x and VOC emitted by multiple sources, and such formation has caused large sections of the east coast to be in nonattainment for ozone. Furthermore, the Company also noted that, as required by LAER, it proposed to purchase offsets amounting to 126% of project emissions for each pollutant, NO_x and VOC, which should improve regional air quality (Company Initial Brief at 38, *citing* Exhs. EFSB-A-1(S)(1), at 8-4; EFSB-A-6).

Pollutant	Load	Concentration Using Natural Gas	Concentration Using Oil (ULSD)	Annual Max Emissions	Control Method
NO ₂ /NO _x	60-100%	2.0 ppm with duct firing ("w/df") 2.0 ppm without duct firing ("w/o df")	6.0 ppm w/ duct firing 6.0 ppm w/o duct firing	107 tons/yr	Selective Catalytic Reduction & Water Injection (during ULSD firing)
CO	100% 75% 60%	2.0 ppm w/ df 2.0 ppm w/o df 3.0 ppm w/o df	4.0 ppm w/ df 5.0 ppm w/o df 20.0 ppm w/o df	109 tons/yr	Combustion Controls & Oxidation Catalyst
VOC	75-100% 100% 60%	1.0 ppm w/ df 2.5 ppm w/o df 1.0 ppm w/o df	6.0 ppm w/ df 6.0 ppm w/o df 9.0 ppm w/o df	31 tons/yr	Combustion Controls & Oxidation Catalyst
Particulate (PM _{10/2.5})	100% 100% 75% 60%	.007 lb/MMBtu w/df .005 lb/MMBtu w/o df .006 lb/MMBtu w/o df .007 lb/MMBtu w/o df	.023 lb/MMBtu w/df .026 lb/MMBtu w/o df .035 lb/MMBtu w/o df .050 lb/MMBtu w/o df	85 tons/yr	Fuel Selection (Natural Gas & ULSD)
SO ₂	Constant	0.0006 lb/MMBtu	0.0015 lb/MMBtu	7 tons/yr	Fuel Selection (Natural Gas & ULSD)

Source: Exh. EFSB-A-1(S)(1) at 2-18; Tr. 1, at 29; RR-COB-2

Note: df = duct firing

Table 2. BROCKTON POWER Project Air Impacts, 250-Foot-High Stack*

Table 2. BROCKTON POWER Project Air Impacts, 250-Foot-High Stack*									
	SIL EVALUATION				NAAQS EVALUATION				
	Averaging Period	Project Maximum Concentration	SIL	% SIL	Project Modeled Concentration (refined)	Monitored Background	Cumulative Impact	NAAQS	% NAAQS
		µg/m ³	µg/m ³		µg/m ³	µg/m ³	µg/m ³	µg/m ³	
NO ₂	Annual	0.0325	1	3.3	0.0325	9.4	9.4	100	9.4
CO	1-Hour	7.78	2000	0.4	6.12	4,176	4,182	40,000	10.5
	8-Hour	4.43	500	0.9	3.65	2,668	2,672	10,000	26.7
Particulate (PM ₁₀)	24-Hour	3.43	5	68.6	1.67	39	40.7	150	27.1
	Annual	0.25	1	25.0	0.25	20.1	20.4	50	41.0
Particulate (PM _{2.5})	24-Hour	3.43**	NFS	NFS	1.15	30.7	31.85	35	91.0
	Annual	0.25**	NFS	NFS	0.25	9.9	10.15	15	67.7
SO ₂	3-Hour	0.229	25	0.9	0.21	84	84.2	1,300	6.5
	24-Hour	0.137	5	2.7	0.06	50	50	365	13.7
	Annual	0.00225	1	0.2	0.2	.00225	8	80	10.0

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Source: (Exh. EFSB-A-1(S)(1) at 6-12).

NFS = No Federal Standard

- * Annual average impacts are based on 7,320 hours firing natural gas and 1,440 hours firing ULSD for all pollutants.
- ** Based on Brockton Power's assumption that all PM₁₀ is PM_{2.5} (for SIL comparison).

Brockton Power stated that, assuming construction with a 250-foot-high stack, its proposed project would meet all established NAAQS and SILs, including NAAQS promulgated for PM_{2.5} effective December 2006 (Exh. BP-4, at 5.1-6 to 5.1-7). The Company indicated that, while no SILs have been adopted for PM_{2.5}, USEPA has proposed a number of possible SILs for 24-hour and annual averaging periods (Tr. at 129). The Company stated that 24-hour PM_{2.5} impacts of the proposed project would be below two of the three alternative levels being considered for the 24-hour SIL; the proposed project's annual PM_{2.5} impact would be less than all of the alternative levels being considered for the annual SIL (Tr. at 128-130). The Company argued that, in any case, the NAAQS and not the SILs are the relevant standards for the Siting Board to consider because only the NAAQS are applicable air standards for protection of public health (Company Initial Brief at 48). The Company's witness testified that there were presently no large-scale power plants in the City of Brockton, nor any existing major stationary sources of air pollutants in close proximity to the proposed site (Exh. BP-PAV-1(Rebuttal); Tr. at 1,098).

With respect to the TPS, the Siting Board assesses the predicted emissions that would be produced by the proposed facility when it operates solely on its "primary fuel" (980 CMR § 12.03(1)). Brockton Power stated that natural gas would be the primary fuel for its proposed facility, and ULSD would be the secondary fuel, used for a maximum of 60 days per year (Exhs. EFSB-A-5; EFSB-A-14). Brockton Power presented data comparing the TPS to the projected facility emissions rates, based on the proposed facility operating on natural gas, at 100% load and at 59° F (Exh. BP-1, at 2-2). Data submitted by the Company included project emissions rates for criteria and non-criteria pollutants, with and without duct firing (*id.* at 2-3). Based on its submitted data for the proposed facility with natural gas as the primary fuel, the Company stated that predicted emissions for all evaluated pollutants were below TPS (*id.* at 2-2 to 2-4).

With respect to non-criteria pollutants, the Company compared the modeled dispersed facility emission concentrations to Allowable Ambient Levels ("AALs") and Threshold Effects Exposure Limits ("TELS") established by the MassDEP (Exh. BP-4, at 5.1-22 to 5.1-25, App. B

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at 5-9). Among the non-criteria pollutants, Brockton Power indicated that none exceeded TELs or AALs (*id.*; *see* Section III.K.1.c).

The Company conducted a Good Engineering Practice (“GEP”) analysis for stack construction for the proposed facility (Exhs. BP-1, App. C; EFSB-A-1(S)(1) at 5-9). The Company reported that, based on this analysis, GEP stack height for the facility would be 325 feet (Exh. EFSB-A-1(S)(1) at 5-9). The Company used the USEPA AERMOD PRIME downwash algorithm to examine the potential air impacts of building a shorter, 250-foot tall stack (*id.*). According to the Company, its modeling shows that air quality impacts would be below SILs and NAAQS (Exh. EFSB-A-1(S)(1) at 6-1 to 6-13, App. C and App. E).¹²

¹² The proposed facility would meet NAAQS and be below SILs with a 325-foot GEP-height stack or a stack of the proposed 250-foot height. The taller stack offers the potential for reduced local air impacts, but with an accompanying increase in cost and visibility at greater distances. Installation of the proposed (250') stack would likely cost \$1,100,000, \$220,000 less than the anticipated \$1,320,000 installation cost for a GEP (325') stack (RR-EFSB-28, Tr. at 2620-2621).

Table 3. Comparison of Impacts, 250-Foot vs. 325-Foot Stack Height: NAAQS

Pollutant	Averaging Period	NAAQS ($\mu\text{g}/\text{m}^3$)	Monitored Background ($\mu\text{g}/\text{m}^3$)	250' Stack		325' Stack		250' Stack % of NAAQS	325' Stack % of NAAQS
				Total Modeled Concentration ($\mu\text{g}/\text{m}^3$)	250' Stack Cumulative Impact ($\mu\text{g}/\text{m}^3$)	Total Modeled Concentration ($\mu\text{g}/\text{m}^3$)	325' Stack Cumulative Impact ($\mu\text{g}/\text{m}^3$)		
NO ₂	Annual	100	9.4	0.0325	9.43	0.02	9.42	9.43%	9.42%
SO ₂	3-Hour	1,300	84	0.21	84.21	0.14	84.14	6.48%	6.47%
	24-Hour	365	50	0.06	50.06	0.04	50.04	13.72%	13.71%
	Annual	80	10	0.00225	10.0	0.002	10.00	12.50%	12.50%
PM ₁₀	24-Hour	150	42	1.67	43.67	1.55	43.55	29.11%	29.03%
	Annual	50	20.1	0.25	20.35	0.24	20.34	40.70%	40.68%
PM _{2.5}	24-Hour	35	29.6	1.15	30.75	1.00	30.60	87.86%	87.43%
	Annual	15	10.12	0.25	10.37	0.24	10.36	69.13%	69.07%
CO	1-Hour	40,000	4,176	6.12	4,182	4.12	4,180	10.46%	10.45%
	8-Hour	10,000	2,668	3.65	2,672	2.00	2,670	26.72%	26.70%

Source: Exh. EFSB-G-2(S)(1) at 4.1-4.

Table 4. Comparison of Impacts, 250-Foot vs. 325-Foot Stack Height: SILs

				250' Stack AERMOD		325' Stack AERMOD	

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Pollutant	Averaging Period	NAAQS ($\mu\text{g}/\text{m}^3$)	Significant Impact Level ($\mu\text{g}/\text{m}^3$)	PRIME Maximum Concentration ($\mu\text{g}/\text{m}^3$)	250' Stack % of SIL	PRIME Maximum Concentration ($\mu\text{g}/\text{m}^3$)	325' Stack % of SIL
NO ₂	Annual	100	1	0.0325	3.3%	0.02	2.0%
SO ₂	3-Hour	1,300	25	0.229	0.9%	0.15	0.6%
	24-Hour	365	5	0.137	2.7%	0.07	1.4%
	Annual	80	1	0.00225	0.2%	0.002	0.2%
PM ₁₀	24-Hour	150	5	3.43	68.6%	1.90	38.0%
	Annual	50	1	0.25	25.0%	0.24	24.0%
CO	1-Hour	40,000	2,000	7.78	0.4%	6.41	0.3%
	8-Hour	10,000	500	4.43	0.9%	2.86	0.6%

Source: Exh. EFSB-G-2(S)(1) at 4.1-3.

4. Offsets and Allowances

The Company stated that, pursuant to 40 CFR 72, its proposed project would be designated a Phase II Acid Rain "New Affected Unit" on January 1, 2009, or 90 days after commencement of commercial activities, whichever comes later, but not after the date the facility declares itself commercial (Exh. EFSB-A-1, at 3-6). The Company indicated that, as such, it would be required by USEPA to hold an allowance for each ton of SO₂ emitted, and that it would secure the required allowances through the Chicago Board of Trade (*id.*). The Company stated that it would comply with NO_x monitoring, reporting, recordkeeping, and allowance trading requirements under the Clean Air Interstate Rule ("CAIR") at 310 CMR 7.32, scheduled for implementation in January 2009 (*id.* at 8-15). The Company indicated that CAIR would supersede the NO_x Allowance Trading Program at 310 CMR 7.28 (*id.*).

The Company indicated that the Siting Board has previously required that an applicant offset 1% of the CO₂ emissions from a proposed project (Exh. BP-1, at 4-17). The Company

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stated that, if required in accordance with past Siting Board practice, it would make an appropriate monetary contribution to cost-effective CO₂ mitigation programs (id.). The Company also indicated, however, that the Company expected to participate in RGGI after its implementation (id. at 5-4). The Company indicated that RGGI implementation was scheduled to begin in Massachusetts as of January 1, 2009 (id. at 5-4; Exh. BP-4, at 5.1-18 to 5.1-19). The Company indicated that under RGGI, the proposed facility would achieve compliance by using CO₂ allowances (issued by the state) and offsets (generated by CO₂ offset projects) to account for each ton of CO₂ emitted (Exh. BP-4, at 5.1-18 to 5.1-19). The Company explained that under the “cap, auction, and trade” RGGI system, transfer of state CO₂ allowances to a facility occurs via an auction, with allowances transferred among facilities via a secondary market (id.).¹³

5. Intervenors

The City of Brockton argued that USEPA prefers on-site meteorological data, and that, as such, the Company should have used Taunton data rather than data from Logan airport for its air modeling (City of Brockton Initial Brief at 16-17; Exh. COB-A-9(S)(1)). With respect to NAAQS, the City of Brockton stated that for most contaminants and averaging periods, using Logan data generated higher concentration (City of Brockton Initial Brief at 18). The City of Brockton noted several exceptions to this pattern: using Taunton in lieu of Logan data generated 45% higher facility contributions of 24-hour PM_{2.5}; annual facility contributions were also higher for NO₂ (0.067 µg/m³ vs. 0.0325 µg/m³) and SO₂ (0.005 µg/m³ vs. 0.00225 µg/m³) with use of Taunton data (id.; RR-COB-7(1) at Table RR-COB-7(b)).

With respect to PM_{2.5}, the City of Brockton asserted that the Siting Board should establish a quantitative value to guide regulatory decisions (COB Initial Brief at 35). The City of Brockton held that this would make possible a rebuttable presumption regarding the minimization of environmental impacts from PM_{2.5} consistent with minimization of costs (id.). The City of Brockton further opined that absent specific and compelling evidence of major visual impacts, stacks should always be set at the full GEP height to minimize ground level pollution

¹³ The Company indicated that RGGI allowed the use of offsets to account for 3.3% to 10% of a facility’s CO₂ emissions, depending on allowance prices (id.).

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impacts (id.). The City of Brockton argued for giving much greater weight to air quality impacts than to visual or other purely aesthetic impacts (id.).

The City of Brockton also supported the position of ACE's witness, who testified to the need for a health study to evaluate impacts of the project on sensitive subpopulations in Brockton (City of Brockton Initial Brief at 32, citing Exh. ACE-11; Tr. 9, at 1209 to 1212). Further, ACE argued that, to be complete, air modeling for the proposed facility required information with respect to confidence intervals about the statistical values used in decision making (ACE Initial Brief at 25).

Limited participants Senator and Representative Creedon jointly argued that emissions of PM_{2.5} and other pollutants from the facility would have a direct effect on EJ populations in Brockton, and specifically on children attending five schools in EJ areas within 1.5 miles of the proposed site (Creedon Brief at 3 to 5).

In addition, ACE argued that the Board should not base its decision on whether the proponent has demonstrated compliance with the annual NAAQS standard for PM_{2.5} (15 µg/m³) because the Court of Appeals has remanded that standard to the EPA for further analysis. (American Farm Bureau Federation and National Pork Producers Council v. Environmental Protection Agency, 559 F.3d 512 (D.C. Cir. 2009) ("American Farm Bureau").

6. Analysis

The Siting Board notes that evidence in this case includes documentation consistent with that submitted in other power plant cases before the Siting Board, including a copy of the Company's Air Plan Approval application incorporating the BACT/LAER analysis and air dispersion modeling for the proposed facility. The record shows that the Company would comply with requirements for holding an allowance for each ton of SO₂ emitted by the proposed facility, and with NO_x monitoring, reporting, recordkeeping, and allowance trading requirements under CAIR. The record also shows that the Company would be subject to implementation of RGGI rules and regulations regarding CO₂ allowances and offsets beginning January 1, 2009.

The record shows that natural gas is the expected primary fuel of the proposed facility and that ULSD would be used at the proposed facility when oil is used as a substitute for natural gas. Use of natural gas as primary fuel, with the limitation of backup use of ULSD to only 60 days per year, minimizes emissions of SO₂, particulates, and other pollutants.

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The record shows that combustion control and an oxidation catalyst would control emissions of VOCs and CO, and that NO_x would be controlled by temperature regulation with water injection and SCR using ammonia.

To assess air quality impacts, the Company modeled dispersion of emitted pollutants using USEPA models, together with meteorological data from Logan Airport. The MADEP is the agency responsible for judging the validity of the Company's air quality modeling and data in its review of the Company's request for an air permit. The record shows that, given established wind patterns and wind regimes experienced in general over eastern Massachusetts, meteorological data for Logan Airport is representative of conditions at the proposed Brockton site. Therefore, the Siting Board concludes that the MADEP's review of the Company's air quality modeling and data is likely to find that the Logan Airport data provided suitable input for modeling the proposed facility's air quality impacts.

Further, the record indicates that emissions from the proposed facility would not cause local or regional air quality to worsen significantly, as compared to ambient conditions and established air quality standards. The Company would provide offsets amounting to 126% of facility emissions of ozone precursors, NO_x and VOC. For other pollutants, the Company's modeling analyses show ambient facility impacts would not cause an exceedance of the NAAQS. The MADEP Air Plan Approval process will further evaluate compliance with air regulations.

The Siting Board notes that concerns have been raised regarding the potential local impacts of the proposed facility with respect to air quality. Nonetheless, the record shows that with a 325-foot GEP height stack or with the proposed 250-foot stack height modeled facility, emission concentrations would be below SILs, and combined background and facility emission concentrations would be below NAAQS for the proposed facility.¹⁴ In its review, the Siting Board both ensures that proposed facility emission concentrations would meet regulated standards and considers visual impacts of the proposed facility. In the instant case, given facility impacts that would be less than SILs in effect for criteria pollutants (other than PM_{2.5}—for which there are currently no SILs), and combined facility and background levels that would be within NAAQS, the proposed 250 foot stack height would minimize air quality impacts

¹⁴ Ozone, formed regionally from precursor pollutant emitted by multiple sources, is unaffected by stack height. See Footnote 8 above.

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consistent with the minimization of visual impacts. As in past reviews, this provides a basis for the Siting Board to accept the lower of the two considered stacks for the proposed facility (see Section III.E, Visual Impacts, below). It is, however, noteworthy that the Siting Board in one past case approved a sub-GEP stack height, but later approved a project change for a taller stack that had been required as part of local permitting. IDC Bellingham, LLC – Project Change, 12 DOMSB 372, at 389-390 (2001). The Siting Board determines, therefore, that it would accept as part of any approval of the proposed facility, without further review by the Siting Board, a stack of any height from 250 feet to 325 feet as the Company may elect to construct and may be approved by any applicable local and MADEP/USEPA permitting.

The record shows that the proposed facility's SO_x, NO_x, and CO₂ emissions would be regulated in a cost-effective manner under a USEPA program in the first instance, and by state CAIR and RGGI programs with respect to NO_x and CO₂, respectively. In previous cases, the Siting Board has required mitigation of CO₂ emissions. Because the recently promulgated Massachusetts RGGI regulations would apply to the proposed Brockton facility, however, the mitigation of emissions that would occur under the RGGI regulations for generation sources would fulfill the intent of the Siting Board's offset requirements. Since the Massachusetts RGGI regulations have now been implemented, the Siting Board is not requiring, here, a back-up plan for CO₂ offsets.

The record shows that the Company has conservatively included all PM₁₀ in its PM_{2.5} analysis. As a further measure of conservatism, the Siting Board directs that of the hours that MADEP may allow the proposed project by permit to operate on oil, the Company will reserve two weeks – i.e., 336 hours – of that time for the month of December. To illustrate: pursuant to Brockton Power's Air Plan Approval Application, the Company has requested permission to operate for 1,440 hours per year using ULSD. If this request is granted, then from January 1 through November 30 of each year, the project may operate on ULSD for no more than 1104 hours; in December of each year, the project may operate up to 336 hours on ULSD.

The Siting Board notes that MADEP, as part of its Air Plan Approval review, will assess the Company's air modeling procedures. The Siting Board notes the MADEP review incorporates consideration of feasibility, cost, and environmental protection, and thus is generally consistent with the Siting Board's mandate to minimize both environmental impacts and the cost of mitigating or controlling such impacts.

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The record shows that the Company has submitted information with respect to air impacts for full-time operation of its proposed facility, but anticipates that the proposed facility would run as a mid-merit plant, approximately 5000 hours per year.

While further refinements may be required by the MADEP, the proposed project represents a reasonable overall balance of feasibility, cost, and environmental protection with respect to its potential impacts on air quality. Accordingly, based on the proposed design, with use of a stack between 250 and 325 feet in height, the Siting Board finds that the air quality impacts of the proposed facility would be minimized.

Before concluding this analysis section, we think it appropriate to address the opinion of the United States Court of Appeals for the District of Columbia Circuit issued in the case of American Farm Bureau Federation and National Pork Producers Council v. Environmental Protection Agency, 559 F.3d 512 (D.C. Cir. 2009). This opinion was issued on February 24, 2009, after the Siting Board voted to direct the staff to prepare the tentative decision. Because the opinion addresses the most recent NAAQS standards for PM_{2.5} – *i.e.*, the standards used herein –we address the opinion here.

In its opinion, the Court of Appeals examined the EPA's "decision to set the primary annual NAAQS for PM_{2.5} at 15 µg/m³" pursuant to its authority under the Clean Air Act. 559 F.3d at 519. The petitioners objected, arguing that the EPA's decision was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law." (*Id.*). The court ultimately concluded that "the EPA failed to adequately explain why" the standard it had adopted for annual NAAQS for PM_{2.5} was "sufficient to protect the public health with an adequate margin of safety." (*Id.* at 520, internal quotation marks and brackets omitted). Nevertheless, the court explicitly declined to vacate the standard in question. 559 F.3d at 528. Instead, the court remanded the matter to the EPA, requiring it "to explain why it believes the NAAQS will provide, as required by the CAA, an adequate margin of safety against morbidity in children and other vulnerable subpopulations." 559 F.3 at 526.

Although the District of Columbia Court of Appeals discusses at length the annual NAAQS standard for PM_{2.5} in American Farm Bureau Federation, it nevertheless does not change that standard. Both before and after the opinion was rendered, the annual NAAQS for PM_{2.5} was and is 15 µg/m³. However, the Board acknowledges that the decision in the American Farm Bureau Federation case calls into question the validity of the 15 µg/m³ standard,

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although it is important that the court declined to vacate the standard. The court noted that the 15 $\mu\text{g}/\text{m}^3$ standard is higher than that recommended by EPA staff and the Clean Air Scientific Advisory Committee (CASAC), and remanded the matter to EPA to provide additional justification for the 15 $\mu\text{g}/\text{m}^3$ standard. 559 F.3d at 520-521. The Final Rule that was published in the Federal Register (of which we take administrative notice) reveals that CASAC advocated a standard of 13 $\mu\text{g}/\text{m}^3$ – 14 $\mu\text{g}/\text{m}^3$. The Final Rule also references an EPA staff report which recommended a standard between 12 $\mu\text{g}/\text{m}^3$ – 14 $\mu\text{g}/\text{m}^3$. National Ambient Air Quality Standards for Particulate Matter, Final Rule, 71 FR 61144-01 (2006), at 61172-61177. The Final Rule contains no indication that a standard of less than 12 $\mu\text{g}/\text{m}^3$ is warranted in order to protect public health. We note that this facility is estimated to emit .25 $\mu\text{g}/\text{m}^3$ at the point of maximum impact. When this .25 $\mu\text{g}/\text{m}^3$ is added to the background of 9.9 $\mu\text{g}/\text{m}^3$, the total is 10.15 $\mu\text{g}/\text{m}^3$, which is far below the lowest of the possible limits (12 $\mu\text{g}/\text{m}^3$) that were being considered and recommended during the rulemaking. Therefore, the Siting Board finds that the facility meets the NAAQS standard that is currently in place, as well as any reasonably foreseeable revised standard that may be established by EPA on remand.

C. Water Resources and Wetland Impacts

In this section, the Siting Board addresses the water-related impacts of the proposed facility including: the water supply requirements and related impacts on water supply systems and surface water and ground water resources; the water-related discharges from the facility, including wastewater and stormwater discharges, and their related impacts; and wetlands impacts.

1. Water and Wastewater Issues

a. Water Supply Requirements: Volumes, Uses, Sources, Cost

The Company stated that the proposed facility would require water supply for potable needs, the combustion turbine inlet air evaporative cooling system, operation of the HRSG, and cooling tower “makeup” (Exh. BP-4, at 5.8-1 to 5.8-3). The Company indicated that cooling tower makeup would require the largest water volumes, and that its preferred source of water supply for this use was the Brockton AWRF (RR-EFSB-18; Tr. at 634). The Company stated that, with the exception of potable needs, it could also use AWRF water with additional treatment for other major water requirements, but that City of Brockton water supply was

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preferred (RR-EFSB-18).¹⁵ Table 5 below, "Company's Anticipated Water Requirements and Proposed Source of Supply," indicates anticipated volumes and source for each water supply requirement.

¹⁵ The Company stated that plans for the proposed facility also included (1) a one-million gallon cooling water storage tank that would ensure a water supply if the AWRF were temporarily out of service, and (2) a 265,000 gallon equalization tank that would enable discharge of wastewater at off-peak periods (Exhs. EFSB-G-2(S)(1) at 1-9; BP-1, at 1-26).

Table 5. Company's Anticipated Water Requirements and Proposed Source of Supply*		
Purpose	Volume	Source
Cooling tower makeup	<p>At peak** (using AWRF effluent): ~1.9 MGD evaporated (2.3 MGD withdrawn, 0.4 MGD returned to AWRF) on a hot summer day given full-load operation with 12-hours of duct firing</p> <p>On average (using AWRF effluent): ~1.6 MGD evaporated (1.9 MGD withdrawn, 0.3 MGD returned to AWRF) on average annual basis, full-load operation, 12-hrs of duct firing, ambient temperature 59 degrees F.</p>	<p>Preferred: AWRF effluent</p> <p>Alternative: City of Brockton water</p>
Heat Recovery Steam Generator (HRSG)	<p>~75,000 gpd for HRSG makeup water</p> <p>~229,000 gpd when ULSD firing -- for turbine water injection plus HRSG makeup</p>	<p>Preferred: City of Brockton water</p> <p>Alternative: treated effluent from AWRF with additional pretreatment</p>
Combustion turbine inlet air evaporative cooling system (assumes cooling 12 hrs/day) -- maintains combustion turbine power output during hot weather operation	~27,000 gpd	<p>Preferred: City of Brockton water</p> <p>Alternative: treated effluent from AWRF with additional pretreatment</p>

* Source: Exhs. BP-4, at 5.8-1 to 5.8-3; EFSB-G-2(S)(1) at 5-3; RR-EFSB-18.

** (1) Brockton water has a lower dissolved solids level than does treated water from the AWRF. This allows for some conservation in its use for cooling tower makeup relative to use of AWRF supply (RR-EFSB-18). Makeup requirements using City of Brockton water would be approximately 1.75 MGD at peak on a hot summer day (*id.*). (2) At the Company's anticipated 70% capacity factor, cooling tower makeup would require approximately 1.3 MGD with AWRF water, and approximately 1.2 MGD with City of Brockton water (*id.*).

With respect to the adequacy of City of Brockton water as a backup source for cooling, the Company stated that the City of Brockton (1) is authorized for Water Management Act withdrawals totaling 11.93 million gallons per day ("MGD"), and, in addition, (2) has contracted for supplemental water supply from the Inima USA Desalination Plant ("Inima" or "Aquadria"),

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pending completion of the desalination plant in summer 2008 (Exhs. EFSB-G-2(S)(1) at 3-2; ACE-8; Tr. at 958, 979, 981).¹⁶

The Company stated that water from preferred sources for the proposed facility, including AWRP cooling water, would require approximately \$750,000 in capital costs (RR-EFSB-1). The Company further stated that operating costs would run approximately \$687,000 per year using AWRP effluent for cooling water and approximately \$3.6 million annually using City of Brockton water (*id.*). The Company also indicated that its planned cooling water storage tank would add \$600,000 to capital costs for the proposed facility; the wastewater equalization tank would increase capital costs by \$275,000 (Exhs. EFSB-G-2(S)(1) at 1-9; BP-1, at 1-26).

b. Air Cooled Condenser Alternative

The Company stated that it considered an air-cooled condenser (as opposed to wet-mechanical cooling) as an approach to reducing water supply requirements for the proposed facility (Exhs. BP-4, at 4-8 to 4-10; EFSB-A-13). The Company indicated, however, that air-cooling would reduce plant power output, especially in hot weather, and would, in addition, increase the capital costs and physical dimensions of the proposed project (Exh. BP-4, at 4-9). The Company estimated that with an air-cooled condenser, the net plant power output penalty would be approximately 10 MW (*id.*; Exh. EFSB-A-13). According to the Company, because the loss would most likely occur under high ambient temperature conditions, and therefore high demand for electric power, it would coincide with the hours of peak pricing of electricity (Exh. BP-4, at 4-9). The Company asserted that lower-cost, older, less efficient plants would be run to compensate for the proposed facility's lost capacity (*id.*). The Company estimated that construction of the proposed facility with an air-cooled condenser would increase capital costs by \$17,500,000 (*id.* at 10). With respect to size, the Company estimated that an air-cooled unit

¹⁶ The Company stated that the City of Brockton, under its contract with Inima, would have the right to 1.9 MGD in the first year of the 20-year agreement (Exh. ACE-8). Under the contract, the City must pay a fixed annual charge per 0.1 MGD of the City's firm commitment, whether or not taken (*id.*). The City's firm annual commitment increases annually from 1.9 MGD in the first year to 3.81 MGD in the tenth (*id.*). From Year 11 through the end of Year 20, the City has the right to purchase 4.07 MGD (*id.*). The City is entitled to request an additional 2.5 MGD beyond the firm commitment in each year of the contract term (*id.*).

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would be 25,000 square feet larger and 56 feet higher than the proposed water cooling tower unit (id.).

c. Impacts on Salisbury Plain River Flows and Uses

The Company presented its analysis of changes to minimum flow conditions and downstream water quality in the Salisbury Plain River, and to water withdrawals downstream of the proposed project, resulting from use of the Company's preferred water supply (Exh. BP-4, at 5.8-2 to 5.8-9). On the basis of its analysis, the Company asserted that facility water supply needs could be met without adverse effects on downstream water resources or river flows (Company Initial Brief at 61). Of significance to meeting flow needs of the downstream uses, the Company noted that, at the AWRF, flow in the Salisbury Plain River is augmented above natural conditions by the treated discharge from the AWRF (Exhs. EFSB-G-2(S)(1) at 3-2; Tr. at 965).¹⁷

i. Changes to Flow

(A) Reduction to Mean Annual Flow

The Company stated that the long-term naturally occurring mean annual flow of the Salisbury Plain River immediately upstream of the Brockton AWRF site is approximately 20.6 MGD (Exh. EFSB-W-9). The Company further stated that the average annual wastewater discharge from the Brockton AWRF to the Salisbury Plain River is currently 19.4 MGD (id.). The Company indicated that the consumptive use of AWRF water by the proposed project would be 1.6 MGD on an average annual basis (1.9 MGD withdrawn, 1.6 MGD evaporated, 0.3 MGD returned); therefore, the proposed project would reduce the total average annual flow immediately downstream of the AWRF by an average of 1.6 MGD, from 40.0 MGD to 38.4 MGD (id.).

¹⁷ The Company explained that of the City's authorized withdrawals of 11.93 MGD for its water supply system, 11.11 MGD are authorized withdrawals from sources in the South Coastal River Basin; when discharged via the AWRF these withdrawals from the South Coastal River Basin represent water volumes imported into the Taunton River Basin that augment river flows above natural conditions (Exhs. EFSB-G-2(S)(1) at 3-2; ACE-3; Tr. at 965).

(B) Reduction to Base Flow

The Company indicated that the naturally occurring 7-day low flow with 10-year return frequency ("7Q10") value for the Salisbury Plain River immediately upstream of the Brockton AWRF is approximately 0.4 MGD (Exh. BP-1, at 4-40). The Company stated that, currently, if the minimum AWRF discharge were to occur coincident with the naturally occurring 7Q10, the base flow in the Salisbury Plain River at the AWRF would be 0.4 MGD plus 12.4 MGD,¹⁸ or approximately 12.8 MGD (*id.* at 4-44). The Company stated that the project was expected to consume recycled water from the Brockton AWRF at the rate of 1.9 MGD on a hot summer day (2.3 MGD withdrawn, 1.9 MGD evaporated, 0.4 MGD returned to the AWRF) (Exh. EFSB-G-2(S)(1), at 5-3). According to the Company, the project would therefore reduce base flow in the Salisbury Plain River at the AWRF from 12.8 MGD to 10.9 MGD with peak consumptive cooling water use.

ii. Impacts to Uses

(A) Impacts on Downstream Wastewater Treatment

Brockton Power asserted that with its proposed cooling water use all principal downstream water resource uses will be protected and preserved (Company Initial Brief at 67). The Company stated the proposed use would not affect the ability of downstream wastewater treatment plants to comply with effluent guidelines (Exh. BP-1, 4-45 to 4-48). The Company noted that at the closest downstream wastewater discharge plant the 7Q10 is 17.7 MGD, and the proposed removal of 1.9 MGD for the project thus would represent 10.7% of that amount (Exh. COB-WR-1).

(B) Impacts on Aquatic and Recreational Uses

With respect to aquatic uses, the Company stated that to support resident fisheries, Taunton River flows of 0.32 MGD per square mile of tributary area should be maintained (Exh. BP-1, at 4-45 to 4-48). The Company stated that this flow requirement would be 5.4 MGD

¹⁸ This is the minimum monthly average discharge from the AWRF between 2002 and 2005 minus proposed project consumption of 1.9 MGD during peak use conditions (Exh. BP-1, at 4-44).

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below the AWRP, and that with the proposed project the minimum flow of 10.9 MGD at this location would meet this requirement (*id.*; Exhs. EFSB-W-9; COB-WR-1). The Company also stated that during low flow conditions the project would not compromise the flow interests of the Wampanoag Canoe Passage (Exhs. BP-1, at 4-45 to 4-48; COB-WR-1; Brockton Power Initial Brief at 64). The Company indicated that use for the Wampanoag Canoe Passage would entail maintaining 2.13 to 12.9 MGD below the AWRP, based on a criterion of 0.13 to 0.77 MGD per square mile of tributary area, in order to maintain downstream river depth and velocity (Exhs. BP-1, at 4-45 to 4-48; COB-WR-1; Brockton Power Initial Brief at 64).

(C) Impacts on Town of West Bridgewater Water Supply

The Company also addressed effects of its water use on the Town of West Bridgewater water supply. With respect to the Town of West Bridgewater's public water supply, the Company argued that the proposed project's use of AWRP effluent would not negatively affect the wells in West Bridgewater that are the source of the Town's water (Exhs. TWB-W-3; TWB-W-3(S)). In support, the Company asserted the minimum flow of 10.9 MGD in the Salisbury Plain River below the AWRP would be more than sufficient to meet the Town's authorized withdrawal of 1.53 MGD from wells near the Salisbury Plain River (Exhs. BP-1, at 4-40; TWB-W-3(S)). On the basis of its analysis and comparison, the Company concluded that, even assuming Town wells were supplied solely from infiltration of river water, the proposed facility would not have an adverse impact on the public water supply of the Town of West Bridgewater (Exh. TWB-W-3(S)).

2. Wetlands

The Company submitted a summary of wetland resource area impacts, including proposed stormwater management and wetland mitigation, mitigation timing, and cost information (Exh. EFSB G-2(S)(1) at 5-9). According to updated information provided by the Company, the cost of proposed stormwater management and wetland mitigation measures would likely range from \$250,000 to \$325,000 (*id.*). Table 6 below, "Summary of Impacts to Wetland Resource Areas," catalogues the anticipated wetland impacts associated with the proposed facility as altered.

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The Company indicated that it altered its original facility design with respect to the proposed transmission line to reduce wetlands impacts (Tr. at 640-642). The Company indicated, in addition, that the proposed transmission line, designed to run close to the western edge of Oak Hill Way, abutting undeveloped land, was moved in response to the Certificate of the Secretary of Energy and Environmental Affairs on the Draft Environmental Impact Report (“DEIR”) and comments by the Brockton Conservation Commission (*id.*, Exh. EFSB-G-2(S)(1)).¹⁹ The Company stated that the revised route would reduce impacts to BVW by 27,200 square feet (Exh. EFSB-G-2(S)(1)).²⁰

¹⁹ The Certificate of the Secretary of Energy and the Environment on the DEIR directed the Company to evaluate alternative routes that would minimize wetlands impacts; the Brockton Conservation Commission commented that tree cutting associated with the original alignment would impact approximately 29,000 square feet of Bordering Vegetative Wetlands (“BVW”) (Exh. EFSB-G-2(S)(1); Tr. at 640-642).

²⁰ The Company adopted the revised route, but noted that it would need to acquire easements from abutters Nutramax and UPS (Tr. at 2588-2589; *see* Section VI, below). There is no indication in the record of the extent of these easements. The Brockton Conservation Commission has stated it approves the relocated alignment presented in the FEIR (Tr. at 872).

3. Intervenor Concerns

ACE argued that the Company did not adequately analyze the downstream impacts on the Salisbury Plain River of using treated effluent from the Brockton AWRF for proposed facility water supply (ACE Initial Brief at 34). ACE emphasized that on an average annual basis, Brockton Power's use of AWRF effluent would reduce the AWRF discharge to the Salisbury Plain River by 8 %; on an average monthly basis, the reduction might be as much as 13.4 % (Exh. BP-4, at 3-2, 5.8-1; ACE Initial Brief at 10). ACE further noted that the power plant would have a peak demand for AWRF effluent during summer months, when the discharge from the AWRF would be low and the Salisbury Plain River would be experiencing low flows (ACE Initial Brief at 10-11; Exh. BP-4, at 3-2, 5.8-1).

ACE also noted that proposed facility operation might reduce Salisbury Plain River flow by approximately 15% and asserted that Brockton Power had not studied the Salisbury Plain River to determine the effect of such flow reduction on the river at extreme natural low flow (Exhs. BP-4, at 5.8-2; BP-1, 4-45; ACE Initial Brief at 11). ACE cited testimony from a witness for intervenor Taunton River Watershed Association ("TRWA") to support its position that reductions in flow in the Salisbury Plain River might impact stream ecology.²¹ ACE stated, in addition, that the Company's use of AWRF wastewater would require that two-thirds of the Brockton City Council vote in favor of sale of AWRF discharge to Brockton Power (Tr. 8, at 1044). According to ACE, Brockton Power to date has no agreement with the City of Brockton to use AWRF effluent (id.).

In addition to opposing Brockton Power's use of its preferred water source (i.e., wastewater from the Brockton AWRF), ACE argued against Brockton Power's use of its identified alternative water source, City of Brockton water supply (ACE Initial Brief at 12). According to ACE, Brockton Power based its arguments for use of City of Brockton potable water on total allowed water withdrawals for Brockton of 11.94 MGD under two Water Management Act Permits, the first for 0.83 MGD from the Taunton River Watershed, and the

²¹ TRWA's witness submitted information with respect to the possible impact of reductions in Salisbury Plain River flow on the tessellated darter (Exhs. TRWA-KC-2, TRWA-KC-3).

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second for 11.11 MGD from Silver Lake in the South Coastal Watershed (Exh. ACE-3). ACE stated that the City of Brockton was operating its potable water system under a water supply declaration of emergency and related administration consent orders that required Brockton not to exceed an average water supply withdrawal of 11.3 MGD (110% of "safe yield") (Exhs. ACE-4, ACE-5).

The Town of West Bridgewater asserted that the Company did not completely and accurately describe the potential impacts of the proposed facility on the Zone II aquifer providing the Town's drinking water (TWB Initial Brief at 5). In support of its position, the Town noted that the Company's acknowledgement (1) that its use of AWRP effluent would result in a 15 % reduction of AWRP minimum flow during low flow conditions in the Salisbury Plain River, and (2) that the Zone II supplying the Town of West Bridgewater's wells would need to expand laterally within the aquifer to make up the lost river recharge through an expanded area of precipitation recharge (Exhs. TWB-W-3(S) at 7; TWB-W-3(S)(2), EFSB-W-9, at 2; Tr. at 2775 to 2776). The Town also argued that the Company based its subsequent estimate of expansion of the bounds of the aquifer for recharge on out-moded (20-year-old) assumptions, information, and modeling (Tr. at 2775 to 2776).

The City of Brockton and Town of West Bridgewater maintained that the Company's use of treated wastewater from the Brockton AWRP would qualify as an impact to resources subject to protection under the Wetlands Protection Act, i.e., Land Under a Water Body and Waterways (City of Brockton Initial Brief at 10-12, 20-22; Town of West Bridgewater Initial Brief at 7-11; RR-EFSB-21; RR-EFSB-21(1); Tr. at 2083).²² The intervenors opined that had the Company described its use of AWRP wastewater correctly (as an alteration of a wetland resource area), the proposed facility would require an Order of Conditions under the Wetlands Protection Act (G.L. c. 131, § 40) and MADEP's wetland regulations at 310 CMR 10.00 (City Initial Brief at 20-22; Town Initial Brief at 7-11). The City noted, furthermore, that the Company's latest calculation of likely impacts to wetlands assumed the Company's ability to obtain transmission easements from other nearby property owners (UPS and Nutramax) (Tr. at 2119-2121; City of Brockton

²² The City contended that Bank Under a Water Body and Waterways would also be affected (City of Brockton Initial Brief at 20-22). Both intervenors argued that the impact was due to an anticipated reduction in flow in the Salisbury Plain River (City of Brockton Initial Brief at 10-12; Town Initial Brief at 7-11).

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Initial Brief at 11). ACE also asserted that construction for the proposed facility might directly or indirectly impact wetlands due to sediment deposited on public roads, construction lay-down areas, and worker parking areas (ACE Initial Brief at 36).

4. Analysis

The proposed facility would be water-cooled, using recycled municipal wastewater, and if necessary, using backup water from City of Brockton potable supply. Power plant cases which included the use of recycled municipal wastewater as the primary facility water supply have been reviewed for facilities proposed in Milford, Charlton, and Brockton. Enron Power Enterprise Corporation 23 DOMSC 1, at 142-179 (1991), ("Enron Decision"); U.S. Gen Decision at 129-135; Brockton Power, LLC 10 DOMSB 157, at 193-205 (2000), ("Brockton Decision").²³

The Milford plant was a baseload plant located near the headwaters of the Charles River. Its water uptake was identified as 1.35 cubic feet per second ("cfs") (0.87 MGD) at a point where the defined "low flow condition" of the Charles River was 3 cfs (1.9 MGD). Enron Decision at 142. Considering the reduction in stream flow volume an issue in the Milford case, the Siting Board reviewed modeling analysis of river flow, water quality, and aquatic impacts and imposed restrictions on plant operation during low water flow. Enron Decision at 176-179. The Charlton plant and the previously-permitted Brockton plant were to use up to 2.8 MGD and 1.65 MGD, respectively, diverted from wastewater plants or surface intakes, each resulting in up to 10% river flow reduction under low flow conditions. U.S. Gen Decision at 129; Brockton Decision at 194. The Siting Board did not impose water usage restrictions in either case.

The Siting Board has also previously reviewed power plant proposals with cooling technologies other than wet mechanical cooling, as is proposed in the present case (Exh. EFSB-A-13). Air cooling, for example, is in use at a number of operating combined-cycle plants approved by the Siting Board. ANP Bellingham, 7 DOMSB 39 (1998); Sithe Fore River, 10 DOMSB 1 (2000); ANP Blackstone, 8 DOMSB 1 (1999). In the United States, air cooling is most frequently used in dry regions such as the west and southwest, and elsewhere when water

²³ A Billerica facility recently reviewed by the Siting Board also proposes future operation with wastewater. See Montgomery Energy Billerica Power Partners, LLC, EFSB 07-2 (2009).

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supply is of concern (Exh. EFSB-A-13). Though it is a reliable and proven technology, air cooling, may increase the capital costs and physical dimensions of a power plant and reduce its output or efficiency (id.).

The record shows that discharges from the AWRF augment flow in the Salisbury Plain River above natural conditions, and would continue to do so, though at a reduced rate, even with construction and operation of the proposed facility. The record shows, furthermore, that there is already a range between high and low flows in the Salisbury Plain River due to natural flow plus discharges from the wastewater treatment plant that largely overlaps the range that would occur with operation of the proposed facility. Even with project flow effects, 7Q10 low flow below the AWRF would be twice the rate-per-unit-tributary-area standard established to protect resident fisheries.

The record also shows that the Company would use its proposed cooling water storage tank and wastewater equalization tank to minimize impacts on the Salisbury Plain River of proposed facility withdrawals and discharges. The record further shows as an additional mitigating factor that significant additional water volumes from the Inima desalination plant to be supplied to the City of Brockton under contract beginning in 2008 would supplement flows to the Salisbury Plain River.

Regarding the Town of West Bridgewater's concern that recharge of river water to supply its wells would be reduced by the Project, the record indicates that the Project's effects on 7Q10 flows below the AWRF would be up to 15% at most, and a 7Q10 flow of at least 10.9 MGD would be maintained. Based on the limited reduction in 7Q10 flow, and the maintained 7Q10 flow well in excess of Town well requirements, there is little in the record to support the conclusion that Town wells would be adversely affected.

Based on all the foregoing, with the proposed use of AWRF water: AWRF discharges would continue to augment Salisbury Plain River flow above natural conditions; identified low flow reductions of up to 15% would be generally consistent with past Siting Board cases involving wastewater use for water supply; and, river effects would be mitigated by use of project cooling water storage and wastewater equalization tanks and operation of the Inima desalination plant. The Siting Board concludes that operation of the proposed facility would not have adverse impacts on Salisbury Plain River flows and uses, including downstream wastewater treatment and water supply, and aquatic and recreation uses.

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The Siting Board notes that the record shows that the Company has indicated its strong preference for use of water from the Brockton AWRF for the majority of the water requirements of its proposed facility. The Siting Board concludes, consistent with the Company's preference, that proposed use of recycled water for the proposed facility would be preferable to using City of Brockton potable water – the identified backup water supply source to operate the proposed facility. However, we also note the uncertainty, based on the latest information in the record, around the availability of Brockton AWRF water supply.

The Siting Board therefore directs the Company to work with the City of Brockton regarding use of Brockton AWRF water, and to provide a report to the Siting Board with respect to the outcome of such efforts. Furthermore, if the Company intends to use potable water for the majority of the water requirements of its proposed facility, the Siting Board directs that prior to such use the proponent provide a project change filing to the Siting Board, together with a detailed analysis focused on those issues that are germane to the use of potable water, including opportunities for water conservation. Subject to these conditions and any further ruling or conditions that the Siting Board may issue as part of its review of a project change review, the Siting Board concludes that water resources impacts of the proposed facilities, including impacts related to water use and wastewater, would be minimized.

The record shows that the Company has modified its proposed facility, in particular, the transmission line, to reduce wetland resource area impacts. Based on the record, the Siting Board concludes that with the Company's proposed changes, temporary and permanent construction impacts of the proposed facilities on wetland resource areas would be minimized.

Accordingly, the Siting Board finds that, with the implementation of the above conditions with respect to water supply, the water resources and wetlands impacts of the proposed facility would be minimized.

D. Solid Waste

1. Company Position and Description

Brockton Power estimated that during construction approximately 100 cubic yards of solid waste would be produced (Exh. EFSB-SW-2). The Company stated that its Engineering Procurement and Construction ("EPC") contractor would be responsible for the proper handling,

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collection, removal, transportation and disposal of any solid waste (including hazardous solid waste) that would be produced during the construction of the proposed facility (id.). The Company further pledged that it and its EPC contractor would take an active role with regard to recycling and reprocessing of waste (id.). To that end, the Company stated that it planned to segregate recyclable from non-recyclable materials and that non-recyclable materials would be disposed of in an approved solid waste facility (id.).

Brockton Power estimated that the operation of its proposed facility would result in the generation of approximately 15 tons per year ("TPY") of solid waste (Exh. EFSB-SW-1). The Company stated that it would place appropriate recycling containers on the site for paper, packaging materials, newspapers and corrugated cardboard (id.). The Company estimated that approximately one-half ton of cardboard and small office paper would be recycled each year (id.). In addition, the Company estimated that less than one ton of waste oil would be generated per year from maintenance and operation of the proposed facility (id.).

The Company stated that it would work to minimize the use and production of toxics at the proposed project (Exh. EFSB-SW-3). To this end the Company would use trailer-mounted demineralizers which would be hauled off-site for regeneration, thereby eliminating the need for on-site storage and handling of regeneration chemicals (typically strong acidic and basic chemicals (id.). The Company stated that chemical use in the wet mechanical cooling towers would be limited to the minimum amount of sodium hypochlorite necessary for proper disinfection of the system and small quantities of water treatment chemicals (e.g., an anti-scalant) (id.). The Company stated that other chemical usage at the proposed plant would be limited to lubrication and gear oil reservoirs in the turbine and other power generation and ancillary equipment (id.).

2. Analysis and Findings

The record shows that to the extent possible Brockton Power would recycle, and otherwise contract for proper disposal of, solid wastes generated by construction, operation and maintenance of its proposed facility. However, the Company has not committed to specific targeted recycling rates or tonnage goals for either the construction or operational phases. As noted in prior decisions, Massachusetts has developed a Massachusetts Solid Waste Master Plan, that sets forth a specific state-wide goal for recycling municipal solid waste. Massachusetts

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Wholesale Electric Company Decision EFSB 07-06 (2008) at 44, 45; Southern Energy Canal II Decision at 214,215; Southern Energy Kendall Decision at 330, 331.24. The Master Plan was last updated in 2006. According to information that appears on the MADEP website, MADEP began to update the Master Plan in December 2008 (see <http://www.mass.gov/dep/public/committee/swmpwkgp.htm>).

The Siting Board directs Brockton Power to work with the City of Brockton to develop a program with the goal of attaining the target recycling rates for both construction materials and operational solid waste which are set forth in the most recent update of the Massachusetts Solid Waste Master Plan at the commencement of construction. The Siting Board further directs Brockton Power to work with its contractor to attain the maximum feasible recycling of construction debris. The Siting Board directs Brockton Power, prior to the commencement of operation, to report on its recycling rate for construction debris and to provide the Siting Board with a copy of its recycling plan and anticipated recycling rate for the operational solid wastes.

Accordingly, with the implementation of the above condition, the Siting Board finds that the solid waste impacts of the proposed facility would be minimized.

E. Visual Impacts

This section describes the visual impacts of the proposed facility and mitigation proposed by Brockton Power.

²⁴ The master plan referred to in the two Southern Energy decisions is the Massachusetts Solid Waste Master Plan 1997 Update, which had a statewide goal of 46% for recycling of municipal solid waste. Southern Energy Canal II Decision at 214, 215; Southern Energy Kendall Decision at 330, 331. The master plan has been revised twice since the 1997 Update: Beyond 2000 Solid Waste Master Plan and Solid Waste Master Plan – 2006 Plan Revision. The 2006 Plan Revision sets a goal of a 56% overall recycling rate for 2010 (see <http://www.mass.gov/dep/recycle/priorities/swmprev.pdf>). In 2006, Massachusetts achieved an overall recycling rate of 47% and a municipal solid waste recycling rate of 37% (see <http://www.mass.gov/dep/public/committee/swmp1008.ppt>). As of April, 2009 there is an on-going process to update the Massachusetts Solid Waste Management Plan (see <http://www.mass.gov/dep/public/committee/swmpwkgp.htm>).

1. Company

The Company submitted a series of photo-simulations of the proposed facility with a 250-foot stack in support of its assertions that a combination of other structures impacting existing vantage points and tree cover will lessen the visual impact of the proposed project (Exhs. BP-1, at 4-86 to 4-102; EFSB-V-3; EFSB-V-6; EFSB-V-7). The Company stated that it would use on-site tree planting to soften views from within the industrial park; however, the height of proposed project structures is such that on-site tree planting would not mitigate more distant views (Exh. EFSB-V-3). The Company indicated its willingness to work with the Siting Board and any affected residents with respect to supplemental visual mitigation measures that would limit views of the top of the HRSG and stack (*id.*). The Company asserted that the overall visual impact of the proposed project, including its proposed 115 kV overhead transmission line, would be consistent with the industrial and commercial land use activities that characterize the surrounding area (Exh. BP-1, at 4-86).

The Company also submitted information regarding trade-offs between a GEP stack height of 325 feet and the Company's proposed stack height of 250 feet (Exh. EFSB-V-5). Compared to its proposed 250-foot-high stack, the Company's modeling indicates that a 325-foot-high GEP stack would reduce modeled impacts, depending on pollutant, by margins representing .002% to 0.5% of NAAQS (*id.*). The Company's modeling further indicates that its proposed project with a 250-foot-high stack would be less than USEPA/MADEP SILS (*id.*). The Company asserted that the additional reduction in emissions from use of a GEP stack does not justify a 30% increase in stack height (*id.*).

2. Intervenors

The City of Brockton asserted that the proposed facility should be designed with a stack of 325 feet rather than 250 feet, and that a 250-foot stack would not minimize impacts (COB Initial Brief at 25 to 26). The City of Brockton argues that constructing a stack of GEP height would result in a measurable reduction in ground-level air pollution levels at only a small marginal cost to the proposed project (*id.*). The City of Brockton further argues that there is no incremental visual impact to outweigh the air quality improvement associated with a stack of GEP height relative to a 250-foot-high stack (*id.* at 26).

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3. Analysis

In prior generating facility decisions, the Siting Board has required proponents to mitigate visibility of the facility and the associated stack by providing selective tree plantings and other reasonable mitigation upon request, by property owners or local officials, in all residential areas up to a set distance (such as a half-mile or a mile) from the proposed stack location. Montgomery Energy Billerica Power Partners, LLC, EFSB 07-02 at 48-49 (2009) (“Billerica Decision”); IDC Decision at 298-300; Nickel Hill Decision at 179. In some previous cases, the Siting Board has required off-site mitigation, such as provision of selective measures on request or other specific mitigation plans, focused on specific nearby residential areas. Braintree Electric Light Department, EFSB 07-1/D.T.E./D.P.U. 07-5 (“Braintree Decision”) at 33-34; Nickel Hill Decision at 179. Cases in which the Siting Board required mitigation focused on specific areas include (1) sites not warranting wide-area (i.e., 360-degree) mitigation given the pre-existing extent of heavily urbanized or industrial development including pre-existing power plant use in some direction, Braintree Decision at 33-34; Sithe Mystic Development LLC, 9 DOMSB 101, at 159-160 (1999); Sithe Edgar Decision at 11-12; and (2) sites warranting added or specific mitigation in particular directions based on openness or other sensitivity of areas to visibility impacts. U.S. Gen Decision at 150-152; ANP Blackstone Decision, 8 DOMSB 1, at 196-197.

The record shows that the proposed facility, although visible at a range of distances, would be consistent with other uses that are part of its immediate surroundings. The record shows, however, that construction for the proposed facility of a stack of any height between 250 feet, as proposed by the Company, and 325 feet, the maximum GEP height, would likely have visual impacts outside the industrial park and commercial area where the proposed facility would be located. The record further shows that, on the basis of its review of potential air quality impacts of the proposed facility, the Siting Board has determined that it would accept, as part of any approval of the proposed facility, without further review by the Siting Board, a stack of any height from 250 feet to 325 feet as may be agreed upon by the Company and approved by any applicable local and MADEP/USEPA permitting (see Section III. B, above). Thus, any visual impacts of the proposed facility associated with construction of the proposed stack may differ in locus and degree, depending on the actual height of any facility stack the Company may construct, in accordance with MADEP or other local approvals. The Siting Board concludes that

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to minimize the potential visual impacts of the proposed facility, mitigation should incorporate flexibility to deal with visual impacts at a range of distances.

Therefore, consistent with Siting Board precedent concerning the minimization of visual impacts, the Siting Board directs the Company to provide, as requested by individual residential property owners or appropriate municipal officials, reasonable off-site mitigation of visual impacts, including shrubs, trees, window awnings, or other mutually agreeable measures that would screen views of the proposed generating facility and related facilities at affected residential properties and roadways up to one mile from the site where residents experience changed views. In implementing this requirement, the Company: (1) shall provide shrub and tree plantings, window awnings, or other reasonable mitigation on private property, only with the permission of the property owner, and along public ways, only with the permission of the appropriate municipal officials; (2) shall provide written notice of this requirement to appropriate officials and to all owners of residential property within one mile of the site, prior to the commencement of construction; (3) may limit requests for mitigation measures from local property owners and municipal officials to a specified period ending no less than six months after initial operation of the facility; (4) shall complete all agreed-upon mitigation measures within one year after completion of construction, or if based on a request filed after commencement of construction, within one year after such request; and (5) shall be responsible for the reasonable maintenance and replacement of plantings, as necessary, to ensure that healthy plantings become established.

The Siting Board also directs the Company to determine an exterior color for the proposed stack in consultation with appropriate municipal officials, as well as to maintain the good appearance of the facility, including the stack, and on-site landscaping, for the life of the project.

Accordingly, based on the proposed design, with use of a stack between 250 and 325 feet in height, the Siting Board finds that with the implementation of the above-described visual mitigation conditions, the visual impacts of the proposed project would be minimized.

F. Noise Impacts

This section describes the noise impacts of the proposed facility and mitigation proposed by Brockton Power.

1. Company

The Company measured existing sound levels in the vicinity of the proposed facility at six representative community locations (Exh. EFSB-A-1(S)(1) at 7-3 and App. D). The Company indicated that the selected locations generally corresponded to the nearest sound-sensitive locations in various directions from the site (id.). The Company stated that both short-term and continuous sound level measurements were made during a 9-day period (id.). According to the Company, study results indicated that the ambient L_{90} sound levels²⁵ in January 2007 ranged from 36 to 42 A-weighted decibels (“dBA”) in the community surrounding the proposed site during the quietest part of the nighttime period (id.).

The Company stated that it modeled the propagation of noise from the proposed facility using the 2005 version of the DataKustik Corporation’s Cadna/A noise calculation model (Exh. EFSB-A-1(S)(1) at 7-9). The Company indicated that the model allows for octave band calculation of noise from multiple noise sources, as well as computation of diffraction around building edges, and multiple reflections off parallel buildings and solid ground areas (id.). The Company further indicated that it based its analysis on calculation of facility sound levels at nine discrete receptors, four property line receptors, one each to the north, south, east and west, and five residential receptors, including the nearest residences in several directions around the proposed facility location (id.).

The Company stated that its modeling assumed noise generated by facility equipment with incorporation of proposed noise mitigation measures (Exh. BP-1, at 4-27). The Company indicated that these mitigation measures fell into two general categories, positioning of equipment such that noise would transmit away from sensitive receptors, and buffering of equipment to reduce the level of noise transmitted (id.). The Company indicated that specific mitigation measures included: designing the site layout to face the quietest end of the cooling tower towards residential areas; housing generating equipment in metal clad buildings; adding an evaporative cooler and pulse jet cartridge system to mitigate sound from the gas turbine air inlet filter; using a stack silencer on the turbine exhaust, with additional reduction achieved by

²⁵ L_{90} noise is the sound level exceeded for 90% of each hour, and so tends to represent the background, or baseline ambient sound level.

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exhausting through the HRSG; and enclosing the gas compressors and the circulating cooling water pumps (as necessary) (id.).

The Company stated that it also combined ambient noise data with modeled facility noise propagation to estimate increases in sound levels from facility operation (Exh. EFSB-A-1(S)(1) at 7-12 to 7-16). The Company stated that its modeling indicated likely high noise levels along the facility site perimeter, located inside an industrial park (id.). The Company indicated that its analysis projected the greatest noise levels at the north and south edges of the facility perimeter: 57 dBA and 63 dBA, respectively (id. at 7-13). The Company stated that with quietest night-time hour L_{90} measurements used for a baseline, the projected noise levels would create an increase over ambient levels of 21 dBA at the north edge of the proposed facility site and 27 dBA at the south edge (id.).²⁶

The Company represented that the MADEP Noise Policy (Noise Policy DAQC 90-001) limits a source to a 10-dBA increase in ambient L_{90} sound as measured at the property line of the proposed project and at the nearest residences (Exh. EFSB-A-1(S)(1) at 7-14). According to the Company, certain projects, including several power plants, have received a MADEP waiver for predicted sound level increases at the property line above 10 dBA (id.). The Company further indicated that the projects that have received such a waiver have been in industrially developed areas (id.). The Company asserted that a waiver would be appropriate in the instant case given the location of the proposed facility in an industrial park where there are no sensitive land uses (id.).

Among residential receptors, the Company identified the neighborhoods to the east and west of the proposed facility site as the primary areas of noise impact concern (Exh. EFSB-A-1(S)(1) at 7-13). The Company emphasized, however, that its modeling indicated that with planned mitigation, the project would increase sound levels at residences no more than 5 dBA during the quietest nighttime hours, and less at other times (Exhs. BP-1, at 4-27; EFSB-A-1(S)(1) at 7-15 to 7-21). Addressing the issue of noise at the closest residences, the Company indicated that to the east, at 71 Appleby Street, operational noise from the proposed facility would be approximately 40 dBA; it would be approximately 43 dBA to the west, at the

²⁶ The Company projected lower sound level increases during daytime hours (Exh. EFSB-A-1(S)(1) at 7-13).

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intersection of Hayward Avenue and Route 28 (Exh. EFSB-A-1(S)(1) at 7-13). The Company stated that the quietest hourly L_{90} noise would increase from 36 to 41 dBA at Appleby Street, and from 39 to 44 dBA at the Hayward Avenue/Route 28 intersection, *i.e.*, increases of 5 dBA above background noise levels at both locations (*id.*).

The Company provided a Best Available Noise Control Technology (BANCT) analysis (Exh. EFSB-A-1(S)(1) at 7-17 to 7-20).²⁷ As part of this analysis, the Company discussed additional mitigation options beyond the measures described above. Most of the additional mitigation options discussed by the Company targeted specific equipment sources (*id.* at 7-16 to 7-17).²⁸ The Company indicated the following options.

- (1) ATCO Noise Management wall/roof and ventilation systems would be used to reduce the calculated nighttime ambient sound level increases from 5 dBA to 3 dBA at the nearest residences to the proposed facility (Exh. EFSB-A-1(S)(1) at 7-18 to 7-19). The additional mitigation would reduce sound levels from the proposed facility's rooftop exhaust fans, HRSG, and steam turbine at a net increased cost of \$1,200,000 (*id.*). The Company asserted that the additional measures would not be cost effective (*id.*).
- (2) ATCO Noise Management wall/roof and ventilation systems of a higher grade than the same components in the Company's proposed facility would be used, along with a cooling tower with greater noise attenuation²⁹ than the same component in the Company's proposed facility, a gas turbine air inlet filter, and a stack silencer to reduce to zero dBA the nighttime ambient sound level increases at the nearest residences to the proposed facility (*id.*). The additional mitigation

²⁷ The Company's BANCT analysis examines the technical feasibility and cost effectiveness of incremental noise control measures (Exh. EFSB-A-1(S)(1) at 7-17 to 7-20).

²⁸ The same turbine installation has many sound sources, which requires a systematic reduction of sound levels from individual contributing sources. Since total sound levels are combined logarithmically, any additional noise control must focus on the highest contributing sources first before moving to lesser contributing sources. For example, further controlling a component that is already 5 dBA quieter than the loudest source will have minimal impact on proposed project sound levels. The location of residential receptors and directionality of some proposed project noise sources are also considered (Exh. EFSB-A-1(S)(1) at 7-16 to 7-17).

²⁹ The specified cooling tower is the lowest noise model manufactured by SPX Cooling Technologies (Exh. EFSB-A-1(S)(1) at 7-19).

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would reduce sound levels from the proposed facility at a net increased cost of approximately \$6,500,000³⁰ (id.). The Company asserted that the additional measures would not be cost effective (id.).

- (3) Measures to reduce the increase in ambient sound levels at the industrial property lines to 10 dBA or less, if possible, would be used (id.). The Company asserted that limiting property line ambient sound level increases to no more than 10 dBA would not be possible even with re-orientation of project components on the proposed facility site (id.). Based on its analysis, the Company asserted that the lowest noise cooling tower available (manufactured by SPX CoolingTechnologies) would not provide sufficient noise attenuation to achieve the targeted sound level reduction (id.).

The Company stated that the location of the proposed project in a commercial area with heavy traffic, along with limits on the Company's hours of construction, would limit noise impacts at residences due to proposed project construction (Exh. EFSB-N-9; Tr. at 467 to 468; Tr. at 2742 to 2745; RR-EFSB-9; RR-EFSB-30). The Company indicated its willingness to limit any Saturday construction at the proposed site to the hours of 9:00 a.m. to 1:00 p.m., subject to negotiation of a labor agreement between the Company and its union workforce (RR-EFSB-30; Tr. at 2742 to 2745).³¹ With respect to Monday through Friday construction, the Company indicated that construction would normally occur from 7:00 a.m. to 3:30 or 4:00 p.m., with a 30-minute lunch period, but that to keep to schedule, it might sometimes be necessary to extend weekday construction to twelve hours (RR-EFSB-9; Tr. at 457). The Company stated that as a general rule, it would only undertake wiring, pipefitting, and other indoor work when continuing construction after a normal eight-hour weekday shift (Tr. at 456). An exception to this general rule would be a large concrete pour (id. at 457 to 458). The Company stated that it must complete any large concrete pours in one day (id.). The Company also indicated that it would equip pile drivers and internal combustion engines with vibratory hammers and mufflers,

³⁰ Costs for the described system are as follows: approximately \$3,400,000 for the ATCO Noise Management systems; \$1,700,000 for the cooling tower; \$1,200,000 for the gas turbine air inlet filter; and \$240,000 for the stack silencer (Exh. EFSB-A-1(S)(1) at 7-19).

³¹ The Company indicated that the labor agreement would also dictate holidays when no work would occur at the proposed project site, most likely New Year's Day, President's Day, Patriot's Day, Memorial Day, the Fourth of July, Labor Day, Columbus Day, Veteran's Day, Thanksgiving, and Christmas (RR-EFSB-9).

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respectively, to minimize the vibration and noise impacts of construction (Exh. EFSB-A-1(S)(1) at 7-21).

2. Intervenors

The City of Brockton argued that Brockton Power should implement the first option for additional noise impact mitigation (maximum 3 dBA noise increase at residences) (City of Brockton Initial Brief at 42). The City of Brockton asserted this option would noticeably reduce noise impacts at residences at a small percentage of the total cost of the proposed project, and that mitigation of residential noise impacts is particularly important given the long life of power plants and the small cost of mitigation relative to total project cost (id.). Furthermore, with respect to construction phase noise impacts, the City of Brockton stated that the Company's proposed construction hour limits, 7:00 a.m. to 3:30 p.m. on weekdays, and 9:00 a.m. to 1:00 p.m. on Saturdays, were the result of dialogue with the Siting Board staff during evidentiary hearings rather than the outcome of discussions with City of Brockton officials (id.). The City of Brockton asserted that if the Company had applied for Site Plan Approval, construction noise issues would have been reviewed and addressed by City of Brockton officials during the site plan review process (id. at 42-43). The City of Brockton argued that, absent an opportunity for appropriate City of Brockton officials to participate in establishing construction work schedules, the City of Brockton was not able to agree that construction noise impacts had been adequately minimized (id.).

ACE argued that the Company erroneously assumed it would receive a noise limit waiver from MADEP at the property line of the proposed project (ACE Initial Brief at 51 to 52). ACE argued that, while the adjacent property to the river line of the plant is an industrial or commercial use, the Salisbury Plain River itself represented a de facto distinct property that is not fully controlled by Brockton Power or the opposite-bank land owner (id.). In addition, ACE argued that the Company cannot assume there is no "noise-sensitive use" at the river and land proximate to the river because the present uses might change over time (id.). ACE asserted that the Company's Petition should therefore include noise mitigation to lower the noise level at the proposed plant property line adjacent to the Salisbury Plain River such that a waiver from MADEP would no longer be required (id.).

3. Analysis

In prior decisions, the Siting Board has reviewed the noise impacts of proposed facilities for general consistency with applicable governmental regulations, including the MADEP 10-dBA standard. Southern Energy Canal II, 12 DOMSB 155, at 229 (2001). In the present case, facility operations would increase L₉₀ sound levels at the property line by up to 28 dBA, which significantly exceeds the 10-dBA MADEP standard. It appears that MADEP gives waivers for exceedances on neighboring industrial properties on a case-by-case basis. We do not know whether MADEP would agree, given the extent of excesses, to waive the standard for all affected neighboring parcels; however, we note that MADEP often grants such waivers. We also note that MADEP is precluded from issuing a final permit, which would make clear its decision, before the Siting Board issues a decision in the case. G. L. c. 164, § 69J¼.

As part of reviewing whether projects meet the Siting Board's "minimum environmental impact" standard, the Siting Board has also considered the significance of expected off-site noise increases which, although lower than 10 dBA, may adversely affect existing residences or other sensitive receptors. In cases where measured background noise levels at the most affected residential receptors were neither unusually noisy nor unusually quiet, the Siting Board has accepted or required facility noise mitigation sufficient to hold residential L₉₀ increases to 5 to 8 dBA. Billerica Decision at 50, 55-56; Braintree Decision at 40- 43 (2008); IDC Bellingham, 9 DOMSB at 311 (1999); Berkshire Power Development, Inc. 4 DOMSB 221, at 404. The Siting Board has accepted higher noise increases at residential receptors with unusually quiet background, but only after considering whether cost-effective alternatives existed for additional mitigation. See ANP Blackstone Decision at 172. In Everett, the Siting Board approved a baseload project in a noisy location with modeled residential L₉₀ noise increases of 2 dBA. Sithe Mystic Decision at 165.

In prior decisions, the Siting Board has also reviewed the cost of additional mitigation when a facility would cause an appreciable increase in ambient sound levels. In Charlton, the Siting Board required a reduction in the project's modeled nighttime noise increase from 10 dBA to 7.5 dBA, at an estimated cost of \$1 million. U.S. Gen Decision, at 163-170, 311-314. In Taunton, the Siting Board required a 2 dBA nighttime reduction, from 9-10 dBA to 7-8 dBA, based on estimates that a package of measures costing \$501,000 would reduce the increase by 3 dBA, to 6-7 dBA (additionally, sound wall mitigation of unspecified cost was required to

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similarly reduce daytime noise increase due to rail activities). Silver City Energy Limited Partnership, 3 DOMSB 1, at 366-369, 412-414. In Bellingham, the Siting Board required a reduction of the nighttime increase of a proposed facility from 8 dBA to 5 dBA at one receptor at a cost of \$1.4 million. IDC Decision at 155-159, 314-316. More recently, the Siting Board did not require mitigation costing \$1,075,000 that would have provided up to 2 dBA of night-time noise reduction calculated for a peaking facility likely to operate during the day. Braintree Decision at 41 (2008). Similarly, the Siting Board did not require mitigation costing \$250,000 that would have provided less than 1 dBA of noise reduction. Billerica Decision at 56.

The record shows that the Company has provided a comprehensive measurement study of ambient sound levels in the vicinity of the proposed facility and predicted increases in sound levels resulting from proposed facility operation. The record shows that with the noise reduction features incorporated in the proposed facility design, noise impacts at residences closest to the proposed facility would be no more than 5 dBA during the quietest nighttime hours, and less at other times.

The record shows that the Company could achieve an additional 2 dBA reduction of nighttime ambient sound level increases at residences nearest to the proposed facility with an additional net increased cost of \$1,200,000. However, the Siting Board notes that the proposed facility as planned would already provide a level of noise mitigation consistent with Siting Board precedent, as discussed above.

The record shows that, with respect to construction noise, the Company would institute measures to minimize the vibration and noise impacts of construction to the extent possible, as well as limit, to the extent possible, construction from 7:00 a.m. to 3:30 or 4:00 p.m. at the latest, Monday through Friday. The record further shows the Company's willingness to limit any weekend construction at the proposed site to Saturday from 9:00 a.m. to 1:00 p.m., subject to negotiation of a labor agreement between the Company and its union workforce. The Siting Board directs the Company to limit any weekend construction at the proposed site to the hours of 9:00 a.m. to 1:00 p.m.

Intervenor ACE asserts that the Company should further mitigate operation noise impacts of the proposed plant at its property line adjacent to the Salisbury Plain River. The City of Brockton asserts that it cannot agree that construction noise impacts have been adequately

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minimized barring the review of noise issues by the City of Brockton as part of its Site Plan Approval review.

The Siting Board notes that it considers proposed and additional mitigation based on its mandate to minimize environmental impacts consistent with minimizing the costs associated with the mitigation, control, and reduction of the environmental impacts of the proposed generating facility. The Siting Board notes that this balancing is incumbent upon the Siting Board apart from any analysis and findings the Siting Board may make in conjunction with an applicant's request for specific zoning exemptions. Furthermore, as noted above, the Company's proposed noise mitigation is consistent with the minimization of noise impacts in previous proceedings before the Siting Board.

The Siting Board also observes that the present uses of the property adjacent to the river line of the plant are industrial or commercial. The Siting Board notes that the record indicates no categorical changes to uses of river and land proximate to the river at the identified location in the foreseeable future. The Siting Board concludes, based on its noise impacts review, that no additional noise mitigation is warranted at the identified location. Consequently, the Siting Board concludes that the noise impacts of the proposed facility would be minimized, consistent with minimizing costs.

The Siting Board therefore finds that, with the implementation of the condition limiting construction hours, the noise impacts of the proposed facility would be minimized, consistent with minimizing costs.

G. Safety

This section describes the safety impacts of the proposed facility with regard to the overall safety and the handling and storage of aqueous ammonia and the mitigation proposed by Brockton Power.

1. Company

The Company indicated that, prior to commencement of construction, it would install a temporary construction security fence to segregate the construction area for the proposed facility from the public at large (Exh. EFSB-HS-7). The Company further stated that it would install a permanent security fence equipped with card access and electronic gates to bar entry to

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unauthorized individuals after construction of the proposed facility (*id.*). The Company stated that it would follow all Occupational Safety and Health Administration and environmental regulations during proposed facility construction, and that it would require its Engineering, Procurement, and Construction (“EPC”) contractor to have an on-site safety engineer for the active phases of the construction process (Exh. BP-1, at 4-70 to 4-71) .

The Company stated that the proposed project would include a 15,000-gallon welded steel tank, 10 feet in diameter and 25 feet in height, for on-site storage of 19% aqueous ammonia (Exh. BP-4, at 5.5-2 to 5.5-3). The Company indicated that a concrete or steel dike surrounding the tank would have 110% of its capacity and would contain leaks of any size, up to and including a major spill (*id.*). The Company also indicated that it would enclose the tank and dike in a building in keeping with recent Siting Board precedent (*see Braintree Decision* at 51), would leak-test the tank before initial plant operations, and would inspect all equipment periodically (Exh. BP-4, at 5.5-2 to 5.5-3; Brockton Power Initial Brief at 106 to 107). The Company stated that a level gauge in the tank would connect to a monitor in the control room of the proposed facility; any unusual change in the level of tank contents would activate an alarm and emergency response procedures, including notification of local emergency response agencies (Exh. BP-4, at 5.5-2 to 5.5-3). The Company indicated that responders would include Brockton Power plant staff and contracted emergency response personnel (*id.*).

The Company indicated that it used the USEPA’s ALOHA model to estimate the maximum one-hour averaged concentrations for an accidental ammonia release from the proposed facility at the nearest public receptors (Exh. EFSB-HS-3). Based on its modeling, the Company stated that predicted concentrations at the nearest property line would be 1.3 ppm, below the American Industrial Hygiene Association’s Level 1 Emergency Response Planning Guideline (“ERPG”) of 25 ppm (*id.*). The Company stated that, at the nearest residence to the proposed facility (1,140 feet to the west), its modeling predicted ammonia concentration of 0.5 ppm in the event of a catastrophic spill (*id.*).³²

³² ERPG-1 (25 ppm) is the maximum airborne concentration of ammonia below which nearly all individuals could be exposed for up to 1 hour without experiencing other than mild, transient adverse health effects or without perceiving a clearly defined, objectionable odor. At this level, there may be some odor, but there should be no significant irritation (Exh. EFSB-HS-4).

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The Company indicated that its SCR system would include a Standard Operating Procedure (“SOP”) for handling, transfer, and storage of aqueous ammonia on site (Exh. EFSB-HS-1). The Company stated that a second SOP would be developed for aqueous ammonia deliveries (*id.*).³³ The Company indicated that development of the SOPs would occur during the detailed engineering and procurement stage of the proposed project (*id.*). The Company also provided a copy of its Draft Spill Prevention, Control and Countermeasure Plan (“SPCC Plan”) for handling of oil delivery, transfer, storage, and removal (Exhs. EFSB-HS-1; BP-4, App. I). In addition, the Company provided a copy of its Draft Emergency Action Plan, which indicates procedures to follow in the event of a fire (Exhs. EFSB-HS-1; BP-4, App. J).

The Company stated that it was committed to coordinating well in advance of commercial operations with emergency responders from Brockton and other mutual aid communities, in particular with respect to conducting reviews of planned emergency response procedures (Tr. at 1928 to 1930; Brockton Power Initial Brief at 75). The Company stated that it had made good faith efforts to meet with the fire chief of the City of Brockton to discuss the various safety aspects of the proposed project (Tr. at 2021 to 2023). The Company further stated, however, that the fire chief had indicated a general preference to hold such meetings after the proposed project had moved further through the approval process (*id.*).

ERPG-2 (150 ppm) is the maximum airborne concentration of ammonia below which nearly all individuals could be exposed for up to 1 hour without experiencing or developing irreversible or other serious health effects or symptoms, which could impair an individual’s ability to take protective action. There is likely to be strong odor and some eye irritation at this level, but serious health effects are unlikely (*id.*).

ERPG-3 (750 ppm) is the maximum airborne concentration of ammonia below which all individuals could be exposed for up to 1 hour without experiencing or developing life-threatening health effects. This level may cause severe eye and nasal irritation, but lethality is not expected (*id.*).

³³ The Company states that aqueous ammonia delivery procedures will be similar to those for ULSD, as identified in the draft SPCC plan (Exh. EFSB-HS-1).

2. Intervenors

The City of Brockton argued that a complete safety analysis of the proposed project would require the Company and local public safety officials to meet and jointly review project safety issues (Tr. at 2017). The City of Brockton stated that no such meeting and joint review had occurred (*id.*). The City of Brockton asserted that (1) the safety analysis for the proposed project was therefore incomplete and (2) the description of safety issues in the Company's Petition could not be considered accurate and complete (City of Brockton Initial Brief at 22 to 23).

The Town of West Bridgewater expressed concern about the transportation of aqueous ammonia and ULSD oil within its town limits (TWB Initial Brief at 12 to 14; Tr. at 1824, 2714 to 2731). The Town argued that the Siting Board should condition any approval of the proposed project on transportation of aqueous ammonia and ULSD oil via a route entirely outside the Town of West Bridgewater (Town of West Bridgewater Initial Brief at 12 to 14; Tr. at 2719, 2725). The Town further argued that, should trucks transporting aqueous ammonia or ULSD oil violate said condition, Brockton Power should provide compensation to the Town of West Bridgewater (Town of West Bridgewater Initial Brief at 13 to 14).

3. Analysis

The record shows that the Company proposes to store aqueous ammonia on-site in an enclosed 15,000 gallon tank, surrounded by a concrete or steel dike impoundment with 110% of the tank capacity. The record shows that in the event of a worst-case ammonia release, ammonia concentrations would be approximately 1.3 ppm at the nearest property line and 0.5 ppm at the nearest residence, well below the level at which nearly all individuals would experience health impacts.

In recent cases the Siting Board examined the applicant's ammonia dispersion modeling and found that enclosure of the applicant's proposed aqueous ammonia storage tank (1) was warranted and (2) would mitigate potential impacts of on-site aqueous ammonia storage for the proposed facility. Billerica Decision at 62-63; Braintree Decision at 46, 50, 51.

The record shows that Brockton Power would have programs in place to ensure safety for employees and the surrounding community during facility construction and operation. The Company has also shown that it would store, handle and dispose of oil and other non-fuel

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chemicals properly and in accordance with applicable regulatory standards, and that it would have secondary systems in place to contain oil and chemical spills or releases.

The Company has provided drafts of its SPCC Plan and its Emergency Action Plan. The record also shows that its SCR system would include a SOP for handling transfer and storage of aqueous ammonia on site; a second SOP would be developed for aqueous ammonia deliveries. To facilitate accurate and effective emergency response planning procedures, the Siting Board directs the Company to prepare final versions of the Company's SPCC Plan and Emergency Action Plan as well as the two anticipated SOPs for management of aqueous ammonia, and to submit copies of same to the Siting Board within six weeks of their completion. In addition, the Siting Board directs the Company to develop safety and security plans for the proposed facility in consultation with the Brockton Fire and Police Departments. The Siting Board directs the Company to provide a report for the Board's consideration on the outcome of the required consultations within six weeks of their occurrence. Such report should include documentation of agreed plans, recommendations, and comments resulting from such consultations. The police and fire departments of Brockton may submit a separate report to the Board, if they so desire. Based on the report(s), the Siting Board will consider whether the Company's development of safety and security plans establishes that safety impacts of the facility would be minimized.

The record also shows the concerns of the Town of West Bridgewater with respect to routing of deliveries of aqueous ammonia and ULSD for the proposed facility. The Siting Board directs the Company to work with the Town of West Bridgewater and the City of Brockton with respect to routing and related safety issues associated with the delivery of aqueous ammonia and ULSD to the proposed facility. Specifically, the Siting Board directs the Company to instruct its ULSD and aqueous ammonia vendors located outside the Town of West Bridgewater to use one of two major roads (Routes 27 and 123) from Route 24 through the City of Brockton to Route 28 South; and that these Brockton Routes must be stipulated in its contracts with vendors. (see Section III.H, below.)

Accordingly, the Siting Board finds that, with the implementation of the above conditions requiring: that Brockton Power prepare, and submit copies to the Siting Board within the time period specified, an SPCC Plan, an Emergency Action Plan, a Standard Operating Procedure for handling, transfer, and storage of aqueous ammonia on site, and a Standard Operating Procedure for aqueous ammonia deliveries; that Brockton Power consult with the Brockton Fire and Police

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Departments regarding development of safety and security plans for the proposed facility; that the Company provide the Siting Board with a report on the outcome of consultations with the Brockton Fire and Police Departments, including documentation of agreed plans, recommendations, and comments, within six weeks after their occurrence; that the police and fire departments of Brockton may submit a separate report to the Board, if they so desire; and provided that the Board favorably considers whether the Company's development of safety and security plans establishes that safety impacts of the facility would be minimized; and, that the Company stipulate with its vendors in their contracts that all ULSD and aqueous ammonia vendors located outside the Town of West Bridgewater must cause the delivery of their product to be made using one of two major roads (Routes 27 and 123) from Route 24 through the City of Brockton to Route 28 South, then the safety impacts of the proposed project would be minimized.

H. Traffic Impacts

This section describes the traffic impacts associated with the construction and operation of the proposed facility, as well as mitigation measures proposed by Brockton Power.

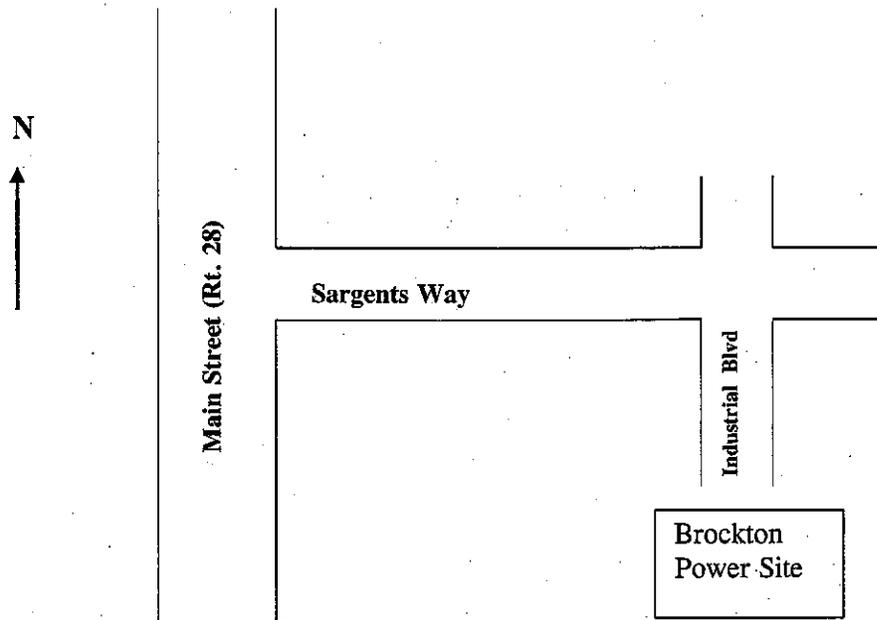
1. Company Description and Position

Traffic approaching the proposed site on Industrial Boulevard in Oak Hill Industrial Park is expected to come either from Main Street (Rt. 28) or Sargents Way (Exh. BP-1 at 4-67). In 1998, when a generating facility was proposed for this same site in Oak Hill Industrial Park, the intersection of Main Street and Sargents Way was governed by a flashing light (yellow for traffic on Main Street and red for traffic on Sargents Way) (*id.* at 4-66). As a result of the traffic study carried out in connection with the 1998 power plant proposal, the intersection of Main Street and Sargents Way was upgraded to become a fully signalized intersection (*id.*). Counts of existing traffic at the Main Street/Sargents Way intersection conducted in May of 2007 during peak morning and evening construction hours³⁴ (6:00-7:00 a.m. and 3:00-4:00 p.m.) confirmed the findings of the 1999 traffic study that the majority of the traffic would enter and exit Sargents Way from the south on Main Street, presumably headed to/from Routes 24 and I-495 (Exh. BP-

³⁴ The peak hours refer to the projected peak hours for construction-generated traffic.

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4, at 5.6-2). May 2007 counts indicated that 851 vehicles during the peak morning construction hour and 1,716 vehicles during the peak afternoon construction hour passed through the Main Street/Sargents Way intersection, with the majority of the traffic north or south bound through traffic on Main Street (*id.*).



Brockton Power analyzed the impact of construction-related traffic on the intersection of Main Street and Sargents Way, using the updated May 2007 traffic counts for the intersection and assuming the current optimization of signal timing and a 90-second signal cycle (Exh. BP-1, at 4-68). Brockton Power estimated that traffic associated with the plant's 24-month construction period would increase peak hour vehicle counts by a maximum of 305 vehicles during morning peak hour and 232 vehicles during afternoon peak hour (*id.*). Brockton Power estimated the impact of the construction traffic on the Main Street/ Sargent's Way intersection in terms of grades of Level of Service ("LOS") between A and F (where a grade of A indicates lower volumes and relatively free-flowing traffic conditions and an F indicates large volumes of traffic with significant congestion and delays) (*id.*). As shown in the table below, the Company projected that during the construction of Brockton Power, the intersection would continue to operate at a generally "A" LOS in the morning except for traffic coming west on Sargents Way and turning left onto Main Street (*id.*). The Company indicated that overall peak afternoon hour traffic at the intersection is currently graded at a somewhat lower "B" LOS. The Company stated that it would expect that during construction the peak afternoon LOS rating would drop to

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“C” (id.). The Company asserted that the congestion and delays would be associated with west-bound traffic seeking to turn left off Sargents Way onto Main Street (id.).³⁵ The Company stated that it would “endeavor to work with the City of Brockton to optimize the timing of the lights during the peak afternoon construction traffic hours” (Exh. AAPPL-T-1).

³⁵ The Company did not provide information on the number or schedule of deliveries of large equipment or plant components. Therefore, all assumptions about increased traffic appear to refer to construction worker trips to and from the site.

Table 7. Comparison of Level of Service at Intersection of Main Street (Rt. 28) and Sargents Way		
	Level of Service/Average Delay (Seconds)	
	AM	PM
Existing Conditions¹		
Westbound Left	C/34.1	D/37.0
Westbound Right	A/5.4	A/3.3
Southbound Left	A/3.7	A/7.8
Overall Intersection	A/8.9	B/14.1
Construction Period		
Westbound Left	C/33.4	E/55.4
Westbound Right	A/4.8	A/2.8
Southbound Left	A/4.8	A/9.9
Overall Intersection	A/7.5	C/21.8

¹Based on 2007 counts under signal control

The Company stated that post-construction, during normal operations, there would be three to seven workers at the plant (*id.* at 4-69). In the Company's view, the traffic generated by these few workers would not have a significantly adverse impact on the operation of the Main Street/Sargents Way Intersection (*id.*). The Company stated that in addition to employees required to operate the plant, there would be occasional deliveries of ULSD³⁶ and two or three

³⁶

The Company stated that the initial filling of the ULSD storage tank would be done gradually over a period of time (*i.e.*, 12 truck deliveries per day over 10 days) and that

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deliveries per month of aqueous ammonia (*id.*).³⁷ The Company stated that the impact of deliveries would be minimized by being scheduled during period of lowest traffic flows (Exh. BP-4, at 5.6-4).

The Company stated that with the planned mitigation measures, the impact of construction traffic would be minimized (Company Initial Brief at 99). The decline in overall LOS of the Main Street/Sargents Way intersection in the afternoon peak period would be due to the increased delay for westbound traffic on Sargents Way turning left (*id.*). Once the westbound traffic received a green light, all vehicles in the queue would likely clear the intersection (*id.*). The Company cited other factors which would tend to mitigate the traffic impact during construction, including: a Company plan to schedule deliveries of construction equipment and materials outside peak morning and evening hours; a Company requirement that all construction traffic access the site through Main Street; the expectation that peak construction activity would last less than 24 months because construction activity typically tapers off somewhat towards the project end, with associated reductions in construction personnel; the Company's plan to pursue negotiations with its union work force regarding a limited Saturday work schedule (9:00 a.m. to 1:00 p.m.); and the Company's possible use of satellite parking areas during construction (*id.*; Exh. B-4, at 5.6-2).

In addition to mitigation measures directed at minimizing the impact of construction worker related traffic, the Company has agreed to measures designed to restrict truck traffic associated with delivery of fuel oil and aqueous ammonia when the plant is in operation (Exh. BP-4, at 5.6-4). These delivery vehicles would, per the terms of the Company's contracts with its suppliers, be required to access the Brockton Power site from Route 24 through Brockton using one of two routes: from the north exiting onto Route 27 through the City of Brockton and then onto Route 28 south; or, from the south, exiting Route 24 onto Route 123 to Route 28 south (*id.* at 5.6-4 – 5.6-5). The use of these two prescribed routes would minimize traffic through residential neighborhoods and, except for vendors located in the Town of West Bridgewater,

any refilling could occur gradually over time (Exh. BP-1, at 4-69). In the unlikely event that the facility were to operate continuously on ULSD during a winter cold spell, the maximum number of truck deliveries would reach two per hour (*id.*).

³⁷ See Section III.I regarding safety impacts of deliveries of ULSD and aqueous ammonia.

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keep the delivery traffic out of West Bridgewater (*id.*) The Company committed to the use of fines and/or contract termination as penalty for suppliers whose trucks did not utilize the prescribed access routes (Tr. at 2719 and 2725).

2. Intervenors' Positions and Concerns

a. City of Brockton

The City of Brockton expressed concern about the projected traffic delays at the intersection of Main Street and Sargents Way during construction (City of Brockton Initial Brief at 43). As a condition to any Siting Board approval of the facility, the City of Brockton would like the Company to be required to hire a consultant to perform a traffic optimization study for the Main Street/ Sargents Way intersection related to the construction phase (*id.*). The City of Brockton requested that such a study be focused on optimizing the timing of the traffic lights during construction to minimize delays at the intersection.³⁸ During the evidentiary hearing the Company indicated that such an optimization study could be carried out for a cost of \$5,000 (assuming all hardware including signal controllers were in place) to \$10,000-20,000 (if detection equipment were added to left-turning lanes) (RR-COB-11).

b. Town of West Bridgewater

The Town of West Bridgewater raised concerns about construction and delivery truck traffic use of West Bridgewater roads to access the proposed site if the primary routes through Brockton were blocked for repair work, accidents or some other reason (Town of West Bridgewater Initial Brief at 11-12). The Town argued that the Company had not identified secondary routes to be followed in the event that either of the two main routes from Rt. 24 to the proposed site are unavailable (*id.*; Tr. at 1821-1824). The Town of West Bridgewater argued that because the Company had not determined secondary routes to the plant site and examined the impact of these secondary routes, it had not fully described the environmental impact of its proposed plant (Town of West Bridgewater Initial Brief at 11-12). The Town of West

³⁸ The Company noted that the cycles and intervals of the traffic light at the intersection of Main Street and Sargents Way are currently optimized to minimize delays associated with normal traffic. The optimization study which the City of Brockton requested is related to projected traffic volumes associated with construction.

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Bridgewater also raised a similar concern with regard to the route of trucks which would deliver distillate oil and aqueous ammonia to the plant (id. at 12-14). The Town of West Bridgewater asked that the Town receive some form of compensation from the Company when fines are levied by the Company on its suppliers for violating the required delivery route and that the Company's contractual commitment with its suppliers be subject to annual renewal (id. at 14).

3. Analysis and Findings

The record shows that the construction of the proposed facility would result in a maximum temporary increase in the traffic to the site by construction workers of approximately 305 trips per hour, in the morning between 6:00 and 7:00 a.m., with peak afternoon increase of 232 vehicles between 3:00 and 4:00 PM. The added traffic is expected to primarily affect the flow of traffic at the intersection of Main Street (Route 28) and Sargents Way. Brockton Power's analysis of construction traffic through the Main Street/Sargents Way intersection indicates that with the optimization of signal timing and the use of a 90-second signal cycle, the overall level of service at that intersection will remain at the "A" LOS level in the morning, but will deteriorate from a "B" LOS to a "C" LOS in the afternoon during the period of greatest construction activity. The Company has committed to work with the City of Brockton to optimize the timing of intervals and cycles of the traffic light at the intersection of Main Street and Sargents Way so as to minimize any congestion associated with construction traffic. The Siting Board notes that the Company's commitment to work with the City of Brockton to minimize the impact of construction traffic could include, among other measures, the commissioning of a study to determine how to further optimize the operation of the traffic light at the intersection of Main Street and Sargents Way during the construction period. Given that the Company will coordinate with the City of Brockton, it would be premature here to order the Company to proceed with a specific measure, i.e. commissioning a traffic study as a condition of this decision.

With respect to traffic impacts during facility operation, the record shows that operation of the facility would have minimal impacts on local traffic. Specifically, traffic would be limited to the daily commutes of three to seven workers, occasional deliveries of ULSD and two or three

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deliveries per month of aqueous ammonia.³⁹ Any impact of deliveries during plant operation would be minimized by scheduling them during periods of lowest traffic flows.

The Town of West Bridgewater has requested, and the Company has agreed, that the Company will instruct its ULSD and aqueous ammonia vendors located outside West Bridgewater to use one of two major roads (Route 27 or Route 123) from Route 24 through the City of Brockton to Route 28 South. The Company has stated that these Brockton routes would be stipulated in its contracts with vendors; furthermore, vendors that do not follow one of the prescribed routes will be subject to fines and possible contract termination. The Siting Board notes that the stipulation to its vendors by the Company in response to the Town of West Bridgewater's request will contribute to minimizing the traffic impacts of the proposed facility.

Accordingly, the Siting Board finds that the traffic impacts of the proposed facility would be minimized.

I. EMF

This section describes the electro and magnetic field ("EMF") impacts of the proposed transmission line and the mitigation measures proposed by Brockton Power.

1. Company Description

Brockton Power described that the electricity generated by the proposed facility would be transmitted to the regional power grid via a new 3,000-foot 115 kV overhead line running from the southeast corner of the project site to a new substation adjacent to a New England Power Company d/b/a National Grid ("NEP") right of way ("ROW"), and would interconnect with an existing double-circuit NEP 115 kV line (Exh. BP-1, at 4-110). The Company stated that approximately the first 1800 feet of the new transmission line would be constructed within Oak Hill Industrial Park and the remainder of the new line and the new substation would be built on vacant land owned by South Brockton LLC to the southeast of the project site (*id.*). The Company described that the proposed route of the new transmission line would extend from the site east across an adjacent vacant lot, and then southward along the east side of Oak Hill Road and across the parcel owned by South Brockton LLC (*id.* at 1-19, Figure 1.6-3; Exh. EFSB-G-2

³⁹ See Section III. G regarding the safety aspects of delivering ULSD and ammonia.

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(S) (1) at 4.3-3-4.3-4). The Company indicated that the alignment had been revised to run along the eastern edge of Oak Hill Way, away from the BVW located along the western edge of the roadway (Exh. BP-1, at 4-77-4-78).⁴⁰ Within this alignment, however, the transmission line would run very close to the enterprises⁴¹ located along the eastern side of Oak Hill Way (Exh. BP-1, at 4-77-4-78). Specifically, the Company stated that the nearest United Parcel Service structure would be approximately 70 feet from the center line of the proposed transmission line (Tr. at 1739).

Brockton Power presented analyses of both the electric and magnetic field strengths (together "EMF") that would be expected to occur directly under the transmission line at the point of maximum sag in the line and at intervals of 100 feet laterally to either side of that point of maximum sag in the line (Exh. BP-4, Appendix G, at 11-12; Tr. Vol. 15 at 2045-2051; RR-ESFB-31). The Company estimated that magnetic fields (measured at 3 feet off the ground) would reach a maximum of 307 milligauss ("mG") directly under the transmission line at the point of greatest sag, but would fall off rapidly with lateral distance from the transmission corridor to a range of 25 to 32 mG at intervals of plus and minus 100 feet from the point of maximum sag (Exh. BP-4, Appendix G at 12). The Company then estimated that the resultant maximum magnetic field at the nearest UPS structure would be 50 to 60 mG (Tr. at 1739). Brockton Power also noted that structures (such as the UPS building) and cars do not generally have a shielding effect with regard to magnetic fields (Tr. at 2055).

The Company estimated that electric field strength (also directly under the transmission line at the point of maximum sag) would be 1.55 kilovolts per meter ("kV/m") (Exh. BP-4,

⁴⁰ In its Petition (Exh. BP-1) and in its DEIR (Exh. BP-4), Brockton Power proposed to locate the transmission line along the western edge of Oak Hill Way. However, in response to concerns about wetland disturbance raised by the Brockton Conservation Commission, and as required by the Certificate issued by the Massachusetts Secretary of Energy and Environmental Affairs, Brockton Power identified the currently proposed route. This revised route would first cross the undeveloped lots abutting the eastern edge of the proposed plant site and then head south along the eastern edge of Oak Hill Way onto the South Brockton LLC property. This realignment reduces by 94% the area of Bordering Vegetated Wetland ("BVW") that would require tree removal.

⁴¹ Specifically United Parcel Service ("UPS") (warehouse and distribution) and Nutramax Cough and Cold Division (Nutramax") (manufacturing).

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Appendix G at 3). The Company explained that electric field strength is dependent upon line voltage (id.). The Company also noted that electrical fields, unlike magnetic fields, “essentially attenuate to zero” inside a building (such as the UPS building) or car because of the shielding effect of those structures (Tr. at 2054).

The Company also contrasted its projection of EMF levels for its proposed transmission line with recent EMF measurements along the existing NEP 115 kV lines into which the proposed transmission line would connect (id.). The Company stated that magnetic fields measured within the NEP ROW peaked at about 10 mG in the center of the ROW and decreased with distance from the centerline to 1 to 2 mG at the ROW edge (id.). According to the Company, peak electric fields within the NEP ROW were approximately 4 kV/m at the center of the ROW and also decreased with distance from the center line to a range of 0.7 to 1.0 kV/m at the ROW edge (id.).

At the request of Siting Board staff, Brockton Power analyzed design changes that might lower the projected levels of magnetic field strength at adjacent enterprises along Oak Hill Way (RR-EFSB-20). Brockton Power’s analysis showed that with the use of a delta configuration for the line’s conductors (rather than the vertical array originally proposed), greater magnetic field cancellation would be possible and, as a result, magnetic fields under the line at the eastern edge of the Oak Hill Way ROW (that is, 30 feet from the centerline of the ROW) would be a maximum of 84 mG at the point of greatest sag in the line (id.). The Company also indicated that the use of the delta configuration would also significantly reduce maximum electric field strength near the center of the ROW (id.). The Company stated that the use of the delta array would not increase facility capital costs (id.). According to Brockton Power, use of an underground design for the transmission line, while it would reduce electric field strength at ground level and above to zero, would not result in lower magnetic fields compared to an overhead delta design (id.). The Company stated that the use of an underground design would increase costs substantially (id.). The Company agreed to revise the conductor design (from vertical to delta) to produce a greater cancellation effect on magnetic fields (Company Initial Brief at 117).

Regarding the potential detrimental health impacts of EMF, the Company indicated the impact of exposure to EMF on human health is a debated topic among health experts (RR-ACE-13). The Company maintained that there is no scientific data to support the establishment of

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health-based maximum exposure levels to either electric or magnetic fields (Company Initial Brief at 111).

Brockton Power's expert, Dr. Peter Valberg, claimed that no definitive causal link between exposure to higher EMF levels and negative impacts on human health has been proven (Tr. at 2068-2072). Dr. Valberg explained that there have been some epidemiological studies in which proximity to transmission lines has been statistically associated with higher rates of cancer (especially childhood leukemia) (*id.*). However, Dr. Valberg asserted that the statistical associations reported have been weak and inconsistent across studies and that it is possible that other factors in the lives of the population (e.g., socio-economic or age of housing stock) could explain the correlations (*id.* at 2069-2070). Dr. Valberg pointed out that studies on adult workers on transmission lines do not show a correlation between exposure to EMF and risk for cancer (*id.* at 2071).

The Company also noted that only seven states have set guidelines or definitive limits for new transmission lines on electric fields and only two states have established limits/guidelines on magnetic fields (Exh. BP-1, at 4-114). The Company provided a summary of existing state electric field strength limits which indicated within-ROW limits typically range from 7 to 10 kV/m and edge-of-ROW limits generally range from 1.6 to 3 kV/m (*id.*). The Company reported that two states have set limits on magnetic field strength measured at the edge of the ROW: Florida has set standards that vary as a function of the voltage of the line from 150 mG for a 230 kV line to 200 mG for a 500 kV line; New York has established a 200 mG maximum.

By contrast, the Company stated that Massachusetts had set no definitive limits with regard to either electric or magnetic field levels (*id.*). In the absence of such prescriptive standards, petitioners have regarded the maximum field levels previously approved in the 1985 case of Massachusetts Electric Company as guidelines. Massachusetts Electric Company/New England Power Company, 13 DOMSC 119, at 228-242 (1985) ("1985 MECo/NEPCo Decision"). In that case, the Siting Board approved a new 345 kV transmission line with a maximum edge of ROW electric field of 1.8 kV/m and a maximum edge of the ROW magnetic field of 85 mG (*id.*).

2. Position of Other Intervenors

NEP supports the use of the delta configuration because it believes that the delta configuration achieves the best balance of minimizing costs and environmental impacts (NEP

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Brief at 9-11). None of the other intervenors advanced a position on projected EMF levels or the proximity of the lines to the parking areas and buildings belonging to Nutramax and UPS.

3. Analysis and Findings

In a previous review of proposed 345 kV transmission line facilities, the Siting Board accepted edge of ROW levels of 1.8 kV/meter for electric field and 85 mG for magnetic field. (*id.*). In subsequent reviews of proposed electric facilities, the Siting Board has compared estimated EMF impacts to the edge-of-ROW impacts accepted in the 1985 MECo/NEPCo Decision, and as applicable considered whether based on such comparison estimated EMF impacts are unusually high. CELCo Kendall Decision, 12 DOMSB 305, at 347-349; Sithe Mystic Decision, 9 DOMSB 101, at 181-183; Hingham Municipal Lighting Plant, 14 DOMSB 7, at 28 (1986).

The Siting Board did not conclude, in the 1985 MECo/NEPCo Decision or any later review referencing that decision, that an edge-of-ROW magnetic field of 85 mG is a level above which harmful effects would necessarily result. Sithe Mystic Decision, 9 DOMSB 101, at 181. Rather, the Siting Board has held that the edge-of-ROW magnetic field level of 85 mG serves as a benchmark of a previously accepted impact along a 345 kV transmission ROW in Massachusetts, not as a limit of acceptable impact. (*Id.*) Among past cases, for example, the Siting Board has approved petitions for: a generating facility that, with proposed interconnection plans, was expected to result in a magnetic field level at a residence along an interconnecting transmission line of up to 110 mG. Sithe Mystic Decision, 9 DOMSB 101, at 181; and an underground transmission line that was expected to result in an in-street magnetic field level of up to 124 mG. CELCo Kendall Decision, 12 DOMSB 305, at 348.

At the same time, the Siting Board in previous decisions has cited transmission line applicants' recognition that some members of the public are concerned about magnetic fields, and on this basis has found reasonable those applicants' proposed use of design features that would reduce magnetic fields at low additional cost or no additional cost. *See, e.g., CELCo Kendall Decision*, at 349; New England Power Company, 4 DOMSB 109, at 148 (1995). In a previous transmission line review, the Siting Board directed the applicant to consult with local officials, and make a compliance filing, regarding use of cost-effective measures to reduce EMF

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exposure of students at a school along the route and, if reasonably feasible, reduce magnetic field to 10 mG at the school. CELCo Kendall Decision, 12 DOMSB 305, at 349.

In generating facility cases, the Siting Board has reviewed EMF in the context of possible impacts along interconnecting power lines. Braintree Decision at 61; Sithe Mystic Decision, 9 DOMSB 101, at 181-182; Silver City Decision, 3 DOMSB at 353-354. The Siting Board has held that, as part of pursuing interconnection plans that require upgrades to the regional transmission system, generating facility applicants should work with transmission providers to seek inclusion of practical and cost-effective designs to minimize magnetic fields along affected ROWs. Braintree Decision at 61 ; Sithe Mystic Decision, 9 DOMSB 101, at 181-182; Silver City Decision at 353-354.

In the present case of the proposed transmission line between the proposed Brockton facility and a new substation, the record indicates that there are no residences close to the transmission line ROW. However, the UPS and Nutramax enterprises would be close to the ROW. The Company has agreed to employ a delta configuration of conductors which is projected to reduce the strength of the magnetic fields directly under the transmission line at the point of maximum sag from 236 mG to 141. The use of the delta configuration would also reduce electric field strength at the maximum sag point 1.55 kV/m to 0.58 kV/m.

Regarding interconnecting transmission lines, the Siting Board notes that the proposed project may increase power flow on the two existing NEP transmission lines into which the proposed transmission line from the project would connect. We note, however, that the existing NEP lines are supported on double-circuit poles, offering the opportunity to minimize magnetic fields by optimizing line phasing. We understand that final interconnection plans have not been drawn up and will be based on the conclusions of ISO-NE's final interconnection study. Because the proposed project may contribute to higher power flows on area transmission lines, the Siting Board seeks to remain informed about Brockton Power's interconnection plans and any associated transmission upgrades as they may relate to EMF impacts.

Accordingly, the Siting Board directs Brockton Power to keep the Siting Board informed as to the progress and the outcome of Brockton Power's interconnection plans and on designs for any transmission upgrades. Specifically, at such time as Brockton Power reaches final agreement with NEP and ISO-NE regarding interconnection, the Siting Board directs Brockton

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Power to keep it informed as to any measures incorporated into final transmission upgrade designs to minimize electric and magnetic field impacts.

The Siting Board finds that, with the implementation of the delta configuration of conductors on the proposed transmission line from the proposed generating facility to the proposed substation and the above condition, the environmental impacts of the proposed facility would be minimized with respect to EMF impacts of that line.

J. Land Use

This section describes the land use impacts of the proposed facility, including the associated transmission line and substation.

1. Description

Brockton Power has proposed to build its facility on a vacant, previously disturbed 13.2-acre site within the 70-acre Oak Hill Industrial Park in the southeastern part of the City of Brockton (Exh. BP-1, at 1-10). The Company stated that the site, though currently undeveloped, does not provide any potential for scenic or recreational qualities, because it is located in the middle of an industrial district. Specifically, the Company indicated that the proposed project site is zoned Industrial I-3, "Zones, heavy industrial uses," and that the principal permitted uses include "electric power generating plants" (id.).

The Company stated that the zoning within Oak Hill Industrial Park includes both I-3 and Commercial C-2 areas (Exh. BP-1, at 4-80). Brockton Power explained that in addition to its proposed project site, land to the south and southwest (including the site of the Brockton waste water reclamation facility, the site of the proposed substation and areas adjacent to the eastern boundary of proposed site and along the eastern side of Oak Hill Way) is zoned I-3 (id.). However, the Company reported that the section of Oak Hill Industrial Park immediately to the north of the proposed project site is zoned C-2 and currently is occupied by businesses compatible with that zoning (id. at 4-76-4-78).⁴² The Company further described that land

⁴² These businesses include Zoots (dry cleaning delivery hub); F. W. Webb (plumbing, heating, cooling and industrial supply operation); Custom Blends, Inc. (a.k.a. Cindy's Kitchen, manufacturer of salad dressings, dips, etc.); and a vacant lot.

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outside Oak Hill Industrial Park to the west of the proposed project site, along both sides of Route 28, is zoned Commercial C-2 (id. at 4-80).

The Company stated that one of two proposed routes for a pipeline to connect the proposed facility to the Spectra Gas Pipeline (which runs across the northern edge of Oak Hill Industrial Park) would cross the C-2 zoned land lying north of the proposed facility (Exhs. BP-4, at 2-3; BP-1, at 4-80). According to the Company, the City of Brockton's C-2 zoning ordinance neither specifically allows nor prohibits public utility structures within C-2 districts (Exh. BP-2, at 16-17). The Company stated that it planned to seek relief from this ambiguity in its Zoning Exemption Petition (id.).

Brockton Power stated that the nearest residence would be located to the west on Hayward Avenue approximately 1,100 feet from the proposed location of the turbine exhaust stack (id. at 76). The Company stated that Hayward Avenue residences would be well buffered from the proposed site by a combination of the commercial activity along Main Street (Rt. 28), and the wooded banks of the Salisbury Plains River (id. at 77). The Company stated that the nearest residences to the east would be located along Appleby Street, approximately 1,500 feet from the proposed site of the turbine exhaust stack (id. at 4-77). The Company indicated that the nearest residences to the north would be the Crowne Place Condominiums located approximately 1,600 feet northeast of the turbine exhaust stack at the intersection of Sargents Way and Plain Street (id.).

The Company stated that the Massachusetts Bay Transportation Authority commuter rail line and the industrial buildings along Oak Hill Way, which lie between the proposed site and Appleby Street and Plain Street residences, would provide some buffer to the east and northeast (id.). The Company indicated that the Brockton AWRF is located directly south of the proposed site, and that the land south of the AWRF falls within the boundaries of the Town of West Bridgewater (id. at 4-74). The Company indicated that the closest residences to the south are those in West Bridgewater within the Westbridge Landing mobile home community (Exh. BP-4, at 2-4).

Brockton Power described that it had reviewed the State and National Register files and the Inventory of Historic and Archaeological Assets at the Massachusetts Historical Commission and found no evidence of historical or archaeological resources within the project area (Exh. BP-4 at 3-30). Based on this research, the Company stated that the nearest historic or

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archaeological resources are located over one-half mile from the Project site and, thus, are unlikely to be impacted, directly or indirectly, by the Project (*id.*). Furthermore, Brockton Power stated that it does not anticipate any direct impacts to historical or archaeological resources due to the previously disturbed nature of the proposed power plant and substation sites (*id.*).

The Company stated that the Project will not affect any rare species habitat (Exh. BP-1, at 4-81).

2. Analysis and Findings

The Siting Board includes in its review of land use impacts a consideration of whether a proposed facility would be consistent with: (1) existing land uses; and (2) state and local requirements, policies or plans relating to land use and terrestrial resources. The Siting Board notes that the proposed facility would be built on previously disturbed, industrially-zoned land on which electric generating facilities are a permitted use. The record indicates that the areas immediately surrounding the proposed plant site are zoned and currently utilized for commercial or industrial applications.

The record also indicates that the footprint of the proposed generating plant and its associated outbuildings would cover the majority of the 13.2 acre site. The site has a limited wooded buffer area along the Salisbury Plain River on its western site boundary. The limited extent of the buffer has ramifications with respect to specific environmental issues considered herein, for example noise and visual impacts, each of which has been evaluated in previous sections.⁴³ The Siting Board has found above (*see* Sections C and H), that with the mitigation measures proposed by the Company and/or imposed as conditions to this decision, noise and visual impacts would be minimized.

The Siting Board finds that the land use impacts of the proposed facility would be minimized.

⁴³ In particular, the facility proposal has posed issues relating to (1) the level of noise at the property line; and, (2) the visibility of the 250-325-foot stack and other high structures.

K. Cumulative Health Impacts

This section describes the cumulative health impacts of the proposed facility. The Siting Board considers the term “cumulative health” to encompass the range of effects that a proposed facility could have on human health through emission of pollutants over various pathways, as well as possible effects on human health unrelated to emissions of pollutants (e.g., EMF or noise effects). The Siting Board considers these effects in the context of existing background conditions, existing baseline health conditions, and, when appropriate, likely changes in the contributions of other major emissions sources. Braintree Decision at 65; Massachusetts Municipal Wholesale Electric Company, EFSB 07-6, at 59 (2008); Sithe Mystic Decision, 9 DOMSB 101, at 189.

The analysis of the health impacts of a proposed generating facility is necessarily closely related to the analysis included in sections above of specific environmental impacts which could have an effect on human health and any necessary mitigation measures. This section: (1) sets forth information on the human health effects that may be associated with air emissions, including criteria pollutants and air toxics, emissions to ground and surface waters, the handling and disposal of hazardous wastes, EMF, and noise; (2) describes any existing health-based regulatory programs governing these impacts; and (3) considers the impacts of the proposed facility in light of such programs.

1. Air

a. Baseline Health Conditions

The Company provided a summary of study findings regarding pediatric and adult asthma prevalence and total cancer incidence for Massachusetts communities, including Brockton and West Bridgewater (Exh. EFSB-H-2). The Company indicated that the summary of study findings it provided was available from the Massachusetts Department of Public Health (“MDPH”). With respect to adult asthma prevalence, the Company submitted findings from the MDPH publication “A Profile of Health Among Massachusetts Adults, 2005.” With reference to this publication, the Company indicated that MDPH grouped Brockton and West Bridgewater with other cities in southeastern Massachusetts (id.). The Company stated that the adult asthma prevalence for southeastern Massachusetts was 13.8%, lower than the statewide average adult asthma prevalence of 14.2% (id.). The Company reported on adult cancer incidence in Brockton

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and West Bridgewater based on estimates from the MDPH report "Cancer Incidence in Massachusetts, 2000-2004" (*id.*). The Company stated that, for the study period, Brockton rates for most cancers were about average, but were statistically above the state average for cervical, esophageal, and lung cancer and below the state average for breast and prostate cancer (*id.*). The Company stated that West Bridgewater cancer incidence rates were comparable to statewide averages (*id.*).

The Company stated that the two most recent MDPH reports on pediatric asthma covered the years 2004-2005 and 2005-2006 (Exh. EFSB-H-2). For 2004-2005, the Company stated that average pediatric asthma prevalence statewide was 10%, with a range of 2.6 to 22.1%; for the same year, prevalence of pediatric asthma was 11.7% in Brockton, and 8.7% in West Bridgewater, considered "statistically higher" and "statistically similar," respectively (*id.*). The Company indicated that in 2005-2006, average prevalence of pediatric asthma in Massachusetts communities was 10.6%, with a range of 8.1% to 12% (*id.*). The Company stated that in the same year, prevalence of pediatric asthma in Brockton was 13.85%, again statistically above the mean, in contrast to the statistically lower prevalence of 8.56% in West Bridgewater (*id.*). The Company indicated that MDPH ascribed differences in pediatric asthma prevalence across communities to a number of factors, including, but not limited to, different levels of mold and moisture in school buildings and differences in record keeping (*id.*). The Company further stated that MDPH observed an association between pediatric respiratory symptoms and genetic and lifestyle factors, and with the nature of children's outdoor and home environment exposures (*id.*).

In addition to information with respect to asthma prevalence in Brockton and West Bridgewater, the Company provided information with regard to the possible effect of industrial emission sources, such as power plants and incinerators, on asthma rates (Exhs. BP-1, at 4-103 to 4-106; BP-4, at 5.14-2 to 5.14-5; EFSB-H-2). The information provided by the Company included results of a Year 2008 MDPH study of air pollution in the Merrimack Valley ("Merrimack Valley study") which, the Company stated, concluded that the prevalence of asthma in children was not associated with air pollution levels from stationary sources (Exh. EFSB-H-2,^{44, 45}). The Company argued, furthermore, that its use of an efficient turbine, clean

⁴⁴ The Company indicated that the Merrimack Valley study did, however, link the incidence of asthma with proximity to high volumes of traffic (Exh. EFSB-H-2).

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fossil fuels, combustion controls and a “very effective” air pollution control system would produce emission rates fully compliant with LAER and BACT requirements (Company Initial Brief at 38).

b. Criteria Pollutants

As discussed in Section III.B, above, the Company indicated that USEPA and MADEP regulate emissions of SO₂, PM (PM₁₀ and PM_{2.5}), CO, O₃, and lead (Pb) under NAAQS (Exh. BP-1, at 4-6). The Company stated that NAAQS for PM_{2.5}, set at 35 µg/m³ for the 24 hour average, and 15 µg/m³ for the annual average, were promulgated by USEPA in September 2006 under the Clean Air Act (*id.*).

The Company indicated that USEPA is required to establish both primary and secondary NAAQS for the identified pollutants; primary standards are designed to be protective of human health, including the health of children and other sensitive subgroups, with an adequate margin of safety (Exhs. BP-1, at 4-6; EFSB-A-1, at 3-4). The Company stated that primary standards must be set at the level that is “in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, ...requisite to protect the public health” (Exh. EFSB-H-1, *citing* 42 U.S.C.A. §7409). The Company indicated that the “margin of safety” requirement is intended to address uncertainties in the available scientific and technical information, to protect sensitive subpopulations, and to provide a reasonable degree of protection against harms that may be identified in the future (Exh. EFSB-H-1).

The Company further indicated that the Clean Air Act specifically identifies asthmatics as a sensitive subpopulation to be protected by primary standards (*id.*).⁴⁶ The Company indicated, in addition, that the proposed facility would be below SILs, and that SILs had been adopted by USEPA and MADEP for NAAQS criteria pollutants (excluding PM_{2.5}) with respect to new sources of air pollution with the potential for incremental impacts to ambient air quality

⁴⁵ The Company stated that the Merrimack Valley study indicated that rural communities without power plants in the study may have had higher pediatric asthma rates than cities with power plants (Exhs. EFSB-H-2; BP-PAV-1 (Rebuttal)(S) at 10-11).

⁴⁶ Secondary standards, which are not human health-based, are developed to protect public welfare and the environment, including effects to crops and vegetation, wildlife, man-made materials, and visibility (Exh. EFSB-A-1, at 3-4).

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(Exh. BP-4, at 5.14-1). The Company stated that, because all Massachusetts is a moderate non-attainment area for ozone, potential new sources of ozone-precursor pollutants such as the proposed facility must obtain emissions offsets and achieve a more stringent level of pollution control (as required under LAER) (Exh. BP-1, at 4-4). The Company stated that the proposed facility would meet BACT and LAER standards as well as all health-based USEPA requirements (Exhs. BP-1, at 4-1 to 4-17; BP-PAV-1(Rebuttal) at 9; EFSB-A-1 at 5.14-1). The Company asserted that the proposed facility would thus have no adverse impacts on air quality in Brockton or the surrounding area (Exh. BP-PAV-1(Rebuttal) at 9).

c. Air Toxics

Two types of ambient air guidelines, allowable ambient limits (“AALs”) and threshold effects limits (“TELS”), have been developed by MADEP for potentially hazardous air pollutants, also commonly known as “air toxics” or “non-criteria pollutants” (Exh. BP-4, at 5.1-22 to 5.1-25, App. B at 5-9). Air toxics include organic compounds, metals, ammonia, and sulfuric acid (id. at 5.1-22 to 5.1-25).

The Company indicated that it modeled ambient air impacts of potential hazardous air pollutants from the facility (id. at 5.1-22 to 5.1-25, App. B at 5-9). The Company further indicated that it based such modeling on USEPA emission factors for turbines firing oil and natural gas, and on AERMOD dispersion modeling (id.). The Company stated that it compared modeled values to MADEP ambient air guidelines,⁴⁷ and that modeled 24-hour and annual average concentrations would be within MADEP guidelines for AALs and TELS (id.).

d. Intervenors

With respect to cumulative health, the City of Brockton asserted that the Company’s own evidence indicated that the background concentration of ozone over an eight-hour period was already in excess of the applicable NAAQS standards by 21% (City of Brockton Initial Brief at 7, citing COB-A-10, Table COB-A-10-1). The City of Brockton further asserted that the Project would be a significant source of NOx and other volatile organic compounds (“VOC”), which

⁴⁷ MADEP regulates air toxics through the establishment of AALs and TELS based on potential carcinogenic and non-carcinogenic effects from exposure to ambient air. Braintree Decision at 68-69.

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would be precursors to ozone (City of Brockton Initial Brief at 7, citing BP-4, at 5.1-5 to 5.1-6). According to the City of Brockton, the Project would, in addition, result in an increase in particulate matter in the Brockton air (City of Brockton Initial Brief at 8, citing Exh. RR-COB-2(c) Table RR-COB-2(c)). The City of Brockton further argued that this was significant for two reasons: (1) even at levels below NAAQS the pollutant PM_{2.5} would be a health hazard (City of Brockton Initial Brief at 9-10, citing Exh. ACE-11, at 67-68); and (2) both ozone and PM_{2.5} have been associated with the aggravation of asthma (City of Brockton Initial Brief at 8-9, citing Exh. COB-LT-1(7), at 5-6, and Exh. COB-LT-1(8), at 54128).

ACE asserted that the Company's methodology for calculating particulate matter emissions was flawed (ACE Initial Brief at 3-4). ACE argued that while the Company included primary particulate matter in its model, it excluded secondary particulate matter (*id.* at 4, citing Tr. at 2377-2378).⁴⁸ According to ACE, the modeled emission, PM_{2.5}, would comprise both primary and secondary PM (ACE Initial Brief at 4, citing COB-LT-1(8)). ACE implied that, by ignoring the secondary PM that the proposed project would emit, the Company underestimated the PM_{2.5} that would result from operation of the proposed facility (*id.*). This is important, ACE asserted, because even though the Company's own model did not take secondary PM_{2.5} formation into account, the model predicted that PM_{2.5} emissions would be at 91% of NAAQS for the 24-hour period; had the secondary PM been included, the modeled PM_{2.5} emissions might have exceeded NAAQS (ACE Initial Brief at 4, citing EFSB-A-1(S)(1), 6-12).

ACE asserted, moreover, that the Company used flawed data for dispersion modeling because the data came from Logan Airport, 20 miles to the northeast of the proposed site (ACE Initial Brief at 5, citing EFSB-A-1(S)(1), 5-3). According to ACE, the Company did not provide information from which one might conclude that the Logan Airport data "approximates the meteorological data at the Brockton site" (ACE Initial Brief at 5). Finally, ACE asserted that the Company's argument that the Project's emissions would not exceed federal air quality limits was irrelevant because said limits do not fully protect public health (*id.* at 5-8).

⁴⁸ Primary and secondary particulates are those emitted directly to the atmosphere and those formed by reactions in the atmosphere, respectively.

e. Analysis

Based on the Company's air toxics impact assessment, the proposed project would comply with each of the MADEP's applicable ambient air guidelines for AALs and TELs (*id.*). The Siting Board therefore finds that the cumulative health impacts of air toxics from the proposed facility would be minimized.

With respect to criteria pollutants, the Siting Board notes that the approach of USEPA and MADEP to protecting air quality is consistent with the Siting Board's mandate to minimize both the environmental health impacts and costs of proposed generating facilities. The Siting Board notes that it consequently gives great weight to expected compliance with USEPA and MADEP air quality regulatory requirements as an indicator of whether the potential impacts to air quality of a proposed facility would be minimized. In the instant case, the Company has shown that its proposed facility would comply with regulatory programs of USEPA and MADEP that would minimize its cumulative health impacts with respect to air quality.

In Sithe Edgar Development LLC, 10 DOMSB 1 ("Sithe Edgar Development") (2000), the Board addressed the issue of compliance with NAAQS as follows:

[T]he USEPA has set in place ambient air quality standards, called NAAQS . . . These standards are set based on extensive review of medical literature regarding the health effects of each pollutant, and are designed to be protective of human health, *including the health of sensitive subgroups* such as the elderly, children, and asthmatics, *with an adequate margin for safety*. The Siting Board *gives great weight to these standards* as indicators of whether incremental emissions of criteria pollutants will have a discernable impact on public health.

Sithe Edgar Development LLC, at 121 (emphasis supplied).

This view of NAAQS was recently reiterated in the Braintree Decision, at 66: "The USEPA sets the NAAQS to be protective of sensitive populations, such as adult and pediatric suffers of respiratory illnesses, including asthma." Consequently, it appears that the Company is on safe ground in using NAAQS to measure the health impacts of the Project.

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The Siting Board therefore finds that the cumulative health impacts of criteria pollutant emissions from the proposed facility would be minimized.

2. Discharges to Ground and Surface Waters

The Company indicated that with anticipated completion of an upgrade of its facilities, the Brockton AWRF would be in compliance with its NPDES permit (Exh. TRWA-W-14). The Company stated that the purpose of the NPDES permit, in accordance with the Clean Water Act, is to protect water quality in the Salisbury Plain River (*id.*). The Company indicated that withdrawals and return flow would not affect the ability of the AWRF to comply with its NPDES permit in the future (*id.*; Exh. EFSB-W-18).

Based on its analysis, the Company indicated that variability of AWRF discharge flows already encompassed periods of 15% flow reduction, similar to the potential impact of the proposed facility on AWRF discharge flows (Exh. TRWA-W-14). The Company indicated, in addition, that because of the planned raw water storage tank, it would be possible for the proposed facility to withdraw water at peak hours of AWRF flow and to discharge its wastewater to the AWRF at periods of low flow, thus minimizing impacts to the Salisbury Plain River (Exh. TRWA-W-14). The Company stated that the Brockton AWRF used pre- through secondary treatment, with seasonal tertiary treatment, to disinfect wastewater flows, and ultra-violet light for final disinfection (Exhs. BP-1, at 1-3; EFSB-W-19, Att.). The Company stated that any water discharged from a wastewater treatment plant such as the AWRF must be comparable in terms of water quality to existing surface waters (Exh. BP-1, at 107).

The Company also indicated that its proposed facility stormwater management system would comply with MADEP's Stormwater Management Policy and revised (effective January 2, 2008) Wetlands Protection Act regulations (Exhs. BP-1, at 4-58 to 4-60; EFSB-W-15). The Company further indicated that it would use a combination of MADEP-listed Best Management Practices to achieve an 80% removal rate of total suspended solids (*id.*). In addition, the Company stated that rooftop and driveway runoff from the main power plant building would be collected and appropriately treated before recharging the groundwater via an infiltration trench (Exhs. EFSB-W-15; EFSB-W-25).

As discussed in Section III.C, above, the Siting Board has found that the wastewater impacts of the proposed facility on the Salisbury Plain River would be minimized. Accordingly,

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the Siting Board finds that the health impacts of wastewater and stormwater discharges would be minimized.

3. Handling and Disposal of Hazardous Materials

In Section III.G, above, the Siting Board reviewed plans submitted by the Company with respect to (1) storage and handling of hazardous materials at the proposed facility, including 19% aqueous ammonia, ULSD, and limited amounts of industrial chemicals for facility maintenance and operation, and (2) minimizing and responding to accidental releases of oil or other hazardous materials. The Company also submitted information, details of which are provided in Section III.G, above, regarding potential human health effects of exposure to ammonia vapor.

The Siting Board has determined in Sections III.D and III.G, above, that Brockton Power would have appropriate programs in place to ensure the safety of employees and the surrounding community during facility construction and operation. The Siting Board also determined that the Company would use appropriate measures to prevent or contain chemical spills or releases. In addition, the Siting Board has directed the Company to update its Emergency Response and SPCC Plans prior to any construction at the proposed site. The Company has committed to enclosing its proposed ammonia storage tank to minimize dispersion risk, and to work with affected towns with respect to delivery routing and other safety issues. Based on these safety and mitigation measures, the Siting Board finds that the health risks of the proposed facility related to the handling and disposal of hazardous materials, including ammonia, would be minimized.

4. Noise

As discussed in Section III.F, above, Brockton Power has assessed the noise impacts of the proposed facility during construction and operation in relation to the applicable state and local criteria for acceptable ambient noise. The record demonstrates that with implementation of the Company's proposed noise mitigation measures, noise impacts at residential receptors closest to the proposed facility would be at most 5 dBA above ambient noise during the quietest nighttime hours and less at other times (Exhs. BP-1, at 4-27; EFSB-A-1(S)(1) at 7-15 to 7-21).

The Company provided a copy of the USEPA document "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin

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of Safety,” USEPA 550/9-74/004 (Exh. EFSB-N-7(1)). The submitted document indicates that (1) maintaining outdoor noise levels at an energy equivalent of 55 dB and indoor levels at 45 dB will, with high probability, avert noise-induced annoyance and interference with activity; and (2) individuals generally do not risk hearing loss if exposed to an equivalent sound level (24 hours per day) below 70 dBA (Exh. EFSB-N-7(1) at 3). Based on its environmental sound evaluation, the Company anticipated that, at nearby residences, with anticipated noise mitigation, operational noise from the proposed facility would not likely exceed 44 dBA, and that noise from construction would not likely exceed 70 dBA (Exh. BP-4, at 7-1 to 7-22).

In Section III.F, above, the Siting Board found that, with implementation of Brockton Power’s proposed mitigation measures and a condition imposed by the Siting Board, noise impacts of construction and operation of the proposed facility would be minimized, consistent with minimizing cost. Accordingly, the Siting Board finds that the health effects, if any, of noise from the proposed facility would be minimized.

5. EMF

The Company stated that the revised alignment of the proposed transmission line (see Section III.I, above) would place the line along the eastern edge of Oak Hill Road, approximately 70 feet from the UPS building which would be the nearest abutting industrial structure (Tr. at 1739; RR-EFSB-20). The Company indicated that use of a delta configuration for the line’s conductors would produce a greater cancellation effect on magnetic fields than would use of a vertical array (Tr. at 1739; RR-EFSB-20). The Company indicated that with a delta configuration, magnetic fields would be reduced to between 83 and 107 mG under the proposed line and to a maximum of 50 to 60 mG at the nearest industrial structure, the identified UPS building (Tr. at 1739; RR-EFSB-20). The Company stated that it projected the highest electric field strength would be about 1.55 kV/m directly under the conductors at the point of maximum sag (Exh. BP-4, App. G at 3). The EMF levels indicated by the Company are consistent with edge-of-ROW levels of 1.8 kV/m and 85 mG previously accepted by the Siting Board.

The Company described a variety of EMF research initiatives undertaken internationally and within the United States, including initiatives examining the potential health impacts of power-line electric and magnetic fields (Exh. BP-1, at 4-110 to 4-114). The Company’s witness, Dr. Valberg, indicated that there have been some epidemiological studies associating proximity

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to transmission lines with higher rates of cancer, particularly childhood leukemia, but asserted that the reported associations have been weak and inconsistent across studies (Tr. at 2006 to 2072). Dr. Valberg hypothesized that housing, age, or other socio-economic factors might explain the studies' findings (*id.*).

Based on Dr. Valberg's testimony, the Company asserted that available data have not demonstrated a statistically significant association between power-line EMF and human health effects, including effects to workers at higher levels of exposure (*e.g.*, transmission line workers) (NRC, 1997) (Exh. BP-1, at 4-113; Tr. at 2066 to 2072). With respect to guidelines for EMF exposures, the Company indicated that a number of agencies had proposed guidelines, and singled out the work of the International Commission on Non-ionizing Radiation Protection ("ICNIRP") (Exh. BP-1, at 4-113 to 4-114). The Company stated that the ICNIRP, formally recognized by the World Health Organization, concluded that there was no evidence of adverse health effects of EMF below continuous exposure levels of 833 mG (*id.* at 4-113). The Company asserted that 833 mG exceeds magnetic field level exposure encountered by the public in a transmission line environment (*id.*).

In Cambridge Electric Light Company, 12 DOMSB 305, at 348 (2001), the Siting Board found that "although some epidemiological studies suggest a correlation between exposure to magnetic fields and childhood leukemia, there is no evidence of a cause-and-effect association between magnetic field exposure and human health." Consistent with this Siting Board finding, and in light of Brockton Power's projections regarding electric and magnetic fields at the edge of the transmission line rights-of-way, the Siting Board finds that the health effects, if any, of EMF associated with the proposed facility would be minimized.

6. Conclusions

In the sections above, the Siting Board has reviewed the potential for the Company's proposed facility to impact human health as a result of emissions of criteria pollutants and air toxics, discharges to ground and surface waters, handling and disposal of hazardous materials, EMF, and noise. The Siting Board has found that: (1) the health impacts, if any, of air toxics and criteria pollutant emissions from the proposed facility would be minimized; (2) the health impacts of wastewater and stormwater discharges would be minimized; (3) the health risks of the proposed facility related to the handling and disposing of hazardous materials, including

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ammonia would be minimized; (4) the health effects, if any, of EMF associated with the proposed facility would be minimized; and (5) the health effects, if any, of noise from the proposed facility would be minimized.

Accordingly, based on its review of the record, the Siting Board finds that the cumulative health impacts of the proposed facility would be minimized.

L. Conclusions on Environmental Impacts

Based on the information in Sections III.B through K, above, the Siting Board finds that Brockton Power's description of the proposed project and its environmental impacts is substantially accurate and complete.

In Section III.B, the Siting Board has found that, based on the proposed design, with use of a stack between 250 and 325 feet in height, the air quality impacts of the proposed facility would be minimized.

In Section III.C, the Siting Board has found that, with the implementation of the conditions with respect to water supply, water resources and wetlands impacts of the proposed facility (including any rulings or conditions that may come from a Siting Board review of any project change filing) would be minimized.

In Section III.D, the Siting Board has found that, with implementation of the recycling condition, the solid waste impacts of the proposed facility would be minimized.

In Section III.E, the Siting Board has found that, based on the proposed design, with use of a stack between 250 and 325 feet in height, and with the implementation of the two visual mitigation conditions, the visual impacts of the proposed project would be minimized.

In Section III.F, the Siting Board has found that, with the implementation of the condition limiting construction hours, the noise impacts of the proposed facility would be minimized.

In Section III.G, the Siting Board has found that, with the implementation of the condition regarding routing and related safety issues associated with the delivery of ULSD and aqueous ammonia to the proposed facility, the condition regarding Brockton Fire and Police Department approval of safety and security plans for the proposed facility, and the conditions requiring preparation of an SPCC Plan, an Emergency Action Plan, a Standard Operating Procedure for on-site transfer and storage of aqueous ammonia, and a Standard Operating

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Procedure for aqueous ammonia deliveries, the safety impacts of the proposed facility would be minimized.

In Section III.H, the Siting Board has found that the traffic impacts of the proposed facility would be minimized.

In Section III.I, the Siting Board has found that, based on a delta configuration of the proposed transmission line conductors, and with the implementation of the EMF informational condition, the EMF impacts of the proposed facility would be minimized.

In Section III.J, the Siting Board has found that the land use impacts of the proposed facility would be minimized.

In Section III.K, the Siting Board has found that the cumulative health impacts of the proposed facility would be minimized.

Accordingly, the Siting Board finds that, with the implementation of the above-listed conditions, Brockton Power's plans for the construction of the proposed generating facility would minimize the environmental impacts of the proposed facility consistent with the minimization of costs associated with the mitigation, control, and reduction of the environmental impacts of the proposed generating facility. In addition, the Siting Board finds that an appropriate balance would be achieved among conflicting environmental concerns as well as between environmental impacts and costs.

IV. CONSISTENCY WITH THE POLICIES OF THE COMMONWEALTH

A. Standard of Review

G.L. c. 164, § 69J $\frac{1}{4}$ requires the Siting Board to determine whether the plans for construction of a proposed generating facility are consistent with current health and environmental protection policies of the Commonwealth and with such energy policies of the Commonwealth as are adopted by the Commonwealth for the specific purpose of guiding the decisions of the Siting Board. The health and environmental protection policies applicable to the review of a generating facility vary considerably depending on the unique features of the site and technology proposed; however, they may include existing regulatory programs of the Commonwealth relating to issues such as air quality, water-related discharges, noise, water supply, wetlands or riverfront protection, rare and endangered species, and historical or

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agricultural land preservation. Therefore, in this section, the Siting Board summarizes the health and environmental protection policies of the Commonwealth that are applicable to the proposed facility and discusses the extent to which the proposed facility complies with these policies.

B. Policies and Issues

In this case, parties have raised arguments with regard to whether the construction and operation of the proposed facility would be consistent with the Environmental Justice policy and other policies of the Commonwealth. These issues are discussed below.

1. Environmental Justice (“EJ”) Policy

a. Background

In 2002, the EJ policy was promulgated by the Executive Office of Environmental Affairs (“EOEA”) (Exh. EFSB-1, EJ Policy Statement), the predecessor to the Executive Office of Energy and Environmental Affairs (“EOEEA”). EOEA issued the EJ policy pursuant to its statutory mandate to “develop policies, plans, and programs for carrying out [its] assigned duties” (G.L. c. 21A, §2, see also, Exh. EFSB-1, EJ Policy Statement, page 2 of 12, “Legal Authority” section). Pursuant to said policy, an EJ area is a neighborhood in which the median household income is below 65% of the statewide median income for Massachusetts, or one in which 25% of the residents are either minority, foreign born, or lacking in English proficiency; a neighborhood need only satisfy one of these four criteria to constitute an EJ area (Exh. EFSB-1, EJ Policy Statement at 5). While the Commonwealth contains 351 municipalities, only 20 of them have a neighborhood, or collection of neighborhoods, that satisfy all four EJ criteria. Brockton is one of those 20 (Exh. EFSB-2).

The EJ Policy contains a set of procedures to be followed by project proponents to enhance public participation when projects are proposed to be located in or near an EJ area (Exh. EFSB-1, at 8). In the present case, the record shows that although the proposed site would not be inside an EJ area, it would be within one half-mile or less of EJ areas to the west, north and northeast (Exhs. BP-4 at Figure 6.5-1; COB-SS-1 (Attachment)).

When the EJ Policy was issued, the Siting Board was under the jurisdiction of the Office of Consumer Affairs, not the EOEA. The policy explicitly stated that it was not applicable to the EFSB: “This policy is not intended to regulate agencies outside the EOEA secretariat . . . This

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policy is not intended to interfere with, supersede, or create any new obligations on the Energy Facility Siting Board, an entity which is not by law or otherwise a part of the EOEAs secretariat" ("Environmental Justice Policy of the Executive Office of Environmental Affairs" dated October 9, 2002, at 12, section entitled "Disclaimers"). The Siting Board later came under the jurisdiction of the EOEAs successor, EOEEA, on April 11, 2007 (Statutes of 2007, Chapter 19, section 17A Addendum Issued by Office of the Secretary of the Commonwealth dated March 7, 2007). All of the Parties who addressed the EJ Policy issue, assumed that said policy was one of the "current health and environmental protection policies of the Commonwealth" referred to in section 69J¼ (see citations above). No one argued to the contrary.

b. Summary of the Parties' Positions

The Company asserted that: the "EJ Policy establishes procedural requirements that an applicant must satisfy . . . [such as] additional outreach, education, and information distribution with EJ communities . . . the EJ Policy does not establish any substantive requirements that provide any community, whether EJ or not, with preferential treatment either for or against the siting of development or infrastructure projects" (Company Reply Brief at 90; emphasis in original, language in brackets supplied). The Company argued that it, "has complied fully with the EJ policy through the MEPA process as a result of its extensive outreach efforts and public notification process" (Company Initial Brief, at 137).

The City of Brockton acknowledged that the EJ Policy required various procedural steps to be taken and admitted that the Company has satisfied these requirements (City of Brockton Initial Brief at 46, n.7). Nevertheless, the City of Brockton asserted that the Board must be attentive to the "broader findings and principles of" said policy (*id.*). Approving the proposed facility, the City of Brockton argued, would increase the pollution problems of an EJ community and this would, in turn, exacerbate "an existing equal protection problem as defined by EJ Policy" (*id.*).

ACE articulated five specific arguments for denying the Company's Petition on EJ Policy grounds (ACE Initial Brief at 61). They are: 1) the Petition "does not include a comprehensive health impact assessment"; 2) the Petition "does not describe the environmental justice impacts of the facility"; 3) the Petition "does not describe the environmental justice considerations of the site selection process"; 4) the Petition "does not use local meteorological data for air quality

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modeling”; 5) the Petition “does not compare its air modeling estimates to the most protective proposed SIL for PM_{2.5} or undertake the analysis required for exceeding the 24-hour SIL for PM_{2.5}” (*id.*). In addition to these specific objections, ACE also asserted a more general, policy objection: i.e., that siting the proposed facility in Brockton would result in an “undue concentration of environmentally hazardous sites in the City of Brockton” (*id.* at 62).

Senator Robert Creedon and Representative Geraldine Creedon asserted that allowing the Siting Board Petition would violate the rights of Brockton residents to clean air and water (Brief of Senator Representative Geraldine Creedon at 7-8). Senator and Representative Creedon argued that the City of Brockton is already “overburdened with environmentally hazardous sites and facilities.” Therefore, Senator and Representative Creedon contended, siting the proposed facility at the proposed location would “disproportionately overburden the Environmental Justice Population that abuts the site” (*id.* at 7).

In response to the arguments propounded by the City of Brockton, ACE, and Senator and Representative Creedon regarding air quality and its EJ implications, Brockton Power asserted that the NAAQS are established by the USEPA and are the only criteria that should be used to determine whether the proposed facility would result in a “minimum environmental impact” (Company Reply Brief at 87). The Company argued that: “The Siting Board should not attempt to establish new air quality standards under the guise of the EJ Policy, but should continue to apply on an even-handed basis the currently applicable standards that are used by the federal and state agencies with primary authority over air emissions regulations” (*id.* at 89).

c. Analysis

When issued in 2002, the EJ policy explicitly stated that it was not intended to apply to agencies outside the EOEA, the predecessor to the EOEEA. Therefore, we agree that the EJ policy became applicable to the Siting Board for the first time in 2007, when the Board came under the jurisdiction of EOEEA. This is the first case in which the Siting Board has had an opportunity to consider the EJ policy, and it has adhered to the relevant aspects of that policy.

The 2002 policy is largely procedural in nature and specifically states that it does not change existing regulations. The Board provided for enhanced outreach, and no participant in this case argues that there was any defect in that regard. Further, the EJ policy calls for “enhanced analysis” of impacts and mitigation if a project exceeds a mandatory EIR threshold

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for air emissions. In his MEPA Certificate (of March 28, 2008), the Secretary of EOEEA found that the facility did not exceed such a threshold. In view of this aspect of the EJ policy, the Board did not require an enhanced analysis of impacts and mitigation. For these reasons, EJ considerations are consistent our conclusions in this case.⁴⁹

In its current form, the EJ policy seems to the Board to be largely procedural, requiring enhanced outreach and public participation. No participant in this case appears to argue that there was any defect in that regard. Rather, participants argue that substantive requirements are implicit in the EJ policy. In light of the prescriptive nature of the Siting Board's obligations as imposed by statute, it is difficult to know how to apply requirements that are implicit at best. This problem is confounded by two other considerations: (1) the proposed facility is close to but not actually in an EJ area, and (2) in his MEPA Certificate (of March 28, 2008), the Secretary of EOEEA concluded that the facility was not subject to the requirement of enhanced analysis under the EJ policy (because it did not exceed a mandatory EIR threshold for air). For these reasons, we conclude that EJ considerations do not change other aspects of the analysis we have undertaken or our conclusions in this case. Therefore, the Siting Board finds that construction of the proposed facility would be consistent with EJ Policy.

2. Other Consistency Arguments, Asserted by ACE

a. Positions of the Parties

ACE asserts that plans for the construction of the proposed facility are inconsistent with the Brockton and West Bridgewater residents' right to clean air under Article XCVII of the Massachusetts Constitution (ACE Initial Brief at 62 - 63). In response, the Company asserts that the Constitutional right to clean air is ensured through statutory provisions and regulations such as the air emissions policies adopted by the MADEP, and it argues that any project that complies with MADEP regulations, "cannot be said to be in violation of this constitutional protection" (Company Reply Brief at 98).

⁴⁹ Such enhanced outreach included numerous public meetings, translations of Company-issued public information into multiple languages, translation material on its website into multiple languages, and the posting of meeting notices in multiple languages at many locations within the City of Brockton. The record shows both enhanced outreach and tremendous public participation through the Siting Board proceedings.

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Furthermore, ACE cites to the Commonwealth's 2004 Water Policy, maintaining that it encourages protection of fish habitat and recharge of treated wastewater into the ground to replenish aquifers (ACE Initial Brief at 64-67). The proposed facility's use of wastewater, ACE argues, would reduce the discharge into the Salisbury Plain River, thereby both endangering the fish habitat and precluding the use of this water to recharge the aquifer (*id.* at 65-67). The Company, however, notes that the Commonwealth's 2004 Water Policy was not introduced into evidence during the proceedings (Company Reply Brief at 99-100 and at 31). Consequently, the Company had no opportunity to question the ACE witness about the Water Policy and no opportunity to present its own witnesses on this subject (*id.* at 99-100 and at 31). As a result, Brockton Power alleges, it has been prejudiced and, therefore, it requests that the Board disregard both ACE's arguments and the Commonwealth 2004 Water Policy itself (*id.* at 99 n. 42 and at 31).

In addition, ACE argues that the proposed use of ULSD fuel in the proposed facility would violate the Greenhouse Gas ("GHG") Policy promulgated by the EOEEA (ACE Initial Brief at 69).⁵⁰ Brockton Power responds by arguing that its receipt of a MEPA certificate demonstrates its compliance with the EOEEA's Greenhouse Gas Policy (*id.*).

Finally, ACE argues that construction of the project would not be consistent with the goals of the Green Communities Act ("GCA"), including the goals of demand reduction, conservation, energy efficiency, and increasing renewable energy sources (ACE Initial Brief at 71).

b. Analysis of the Parties' Arguments

With respect to Article XCVII of the Massachusetts Constitution, the right to clean air, the Siting Board has extensively examined air issues above and found that the proposed facility

⁵⁰ EOEEA issued the Greenhouse Gas Emissions Policy and Protocol pursuant to its authority under the Massachusetts Environmental Protection Act ("MEPA"), G.L. c. 30 § 60 (MEPA Greenhouse Gas Emissions Policy and Protocol, at 1, available at www.mass.gov/envir/mepa). The Policy took effect on October 15, 2007 (*id.*). The GHG Policy was issued in order to fulfill the statutory obligation to take all feasible measures to avoid, minimize, or mitigate damage to the environment. The Policy requires certain Projects undergoing review by the MEPA Office to quantify their GHG emissions and to identify measures to avoid, minimize, or mitigate such emissions (*id.*). The GHG Policy itself was neither admitted into evidence nor submitted by any Party.

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meets air quality standards (Section III.B). ACE has provided neither supporting argument nor citation to relevant precedent to support its argument that construction and operation of the proposed facility would violate this constitutional right. Consequently, we have not been presented with a compelling reason or reasons to reach the conclusion that ACE advocates.

With respect to the Commonwealth's 2004 Water Policy, we note that in Section III.C above, the Siting Board looked at both water discharges and resources. In that section the Siting Board determined that with the conditions imposed the water resources and wetland impacts, including impacts to water use and wastewater would be minimized. Further, there is nothing in the record to indicate that the proposed facility would be inconsistent with the Commonwealth's 2004 Water Policy.

Regarding the Greenhouse Gas ("GHG") Policy, we note that this project appears not to be subject to said policy. The Greenhouse Gas Policy applies only to "new projects that file an Environmental Notification Form for MEPA review after the effective date of the Policy" (GHG Policy at 1). The policy's effective date was October 15, 2007 (*id.*). The ENF in this case was filed on April 30, 2007 (Exh. BP-4, at 1-1).

Finally, we address ACE's argument that construction of the proposed facility would not be consistent with the Green Communities Act ("GCA" or "Act"). The Act does not change the fundamental prescriptive requirements of the statutory charge to the Siting Board under M.G.L. ch. 164. Indeed, ACE itself states that: "The Act itself does not change any rights or obligations of the Company or intervenors" (ACE Initial Brief, at 70). Finally, even ACE itself expresses some doubt whether the Act, which became effective one year after the filing of this case, applies to this proceeding (*id.* at 70).⁵¹

C. Conclusions with Respect to Consistency with Environmental and Health Policies of the Commonwealth

In Sections II and III above, the Siting Board has reviewed the process by which Brockton Power sited and designed the proposed facility, and the overall environmental and health impacts of the proposed facility as sited and designed. As part of this review, the Siting

⁵¹ The Petition was filed on July 12, 2007, and the hearings in this case began on May 19, 2008, and concluded on July 11, 2008. The Act became effective on July 2, 2008 (Chapter 169 of the Acts of 2008).

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Board has identified a number of Commonwealth policies applicable to the design, construction, and operation of the proposed facility. These are briefly summarized below.

As discussed in Section III.B above, the MADEP, in conjunction with the USEPA, extensively regulates emissions of criteria and non-criteria pollutants from new sources such as the proposed facility. Brockton Power has demonstrated that operation of its proposed facility would comply with all applicable MADEP and USEPA standards.

As discussed in Sections III.C and III.D above, the MADEP, in conjunction with the USEPA, extensively regulates various wastewater discharges as well as construction in wetlands and waterway areas. Brockton Power has demonstrated that it would comply with MADEP and USEPA standards for water discharges and for work in wetlands and waterway areas.

As discussed in Section III.G above, Brockton Power has maintained that it will limit increases in off-site noise caused by operation of the proposed facility to less than 10 dBA at the nearest residences and property lines, and has represented that it will seek a waiver from MADEP for noise increases on adjacent non-residential properties, consistent with MADEP policy 90-001, which limits such increases to 10 dBA.

As discussed in Section III.J above, the record indicates that the proposed project will not to adversely impact endangered species or historical or archaeological resources. Brockton Power has thereby demonstrated that it would comply with the policies of the Massachusetts Natural Heritage and Endangered Species Program and the Massachusetts Historical Commission.

As discussed in Section IV.B above, the Siting Board has found that the proposed project is consistent with the EJ Policy of the Commonwealth and other policies that have been asserted by the Parties.

Accordingly, for the reasons set forth above, the Siting Board finds that plans for construction of the proposed facility are consistent with current health and environmental protection policies of the Commonwealth and with such energy policies of the Commonwealth as have been adopted for the specific purpose of guiding the decisions of the Siting Board.

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V. ZONING EXEMPTION⁵²A. Standard of Review

General Laws c. 40A, § 3, provides, in relevant part, the following:

Land or structures used, or to be used by a public service corporation may be exempted in particular respects from the operation of a zoning ordinance or bylaw if, upon petition of the corporation, the department . . . shall, after notice given pursuant to section eleven and public hearing in the town or city, determine the exemptions required and find that the present or proposed use of the land or structure is reasonably necessary for the convenience or welfare of the public

Accordingly, a petitioner seeking exemption from a local zoning bylaw under G.L. c. 40A, § 3 must meet three criteria. First, the petitioner must qualify as a public service corporation. New England Power Company/Massachusetts Electric Company, D.T.E. 04-66/04-81, at 4-5 (2005) ("NEP/MECo (2005)"), citing Save the Bay, Inc. v. Department of Public Utilities, 366 Mass. 667 (1975) ("Save the Bay"). Second, the petitioner must establish that it requires exemption from the zoning ordinance or bylaw. NEP/MECo (2005) at 4-5 citing Boston Gas Company, D.T.E. 00-24, at 3 (2001) ("Boston Gas"). Finally, the petitioner must demonstrate that its present or proposed use of the land or structure is reasonably necessary for the public convenience or welfare. New England Power Company/Massachusetts Electric Company, D.T.E. 04-66/04-81, at 4-5 (2005), citing Massachusetts Electric Company, D.T.E. 01-77, at 4 (2002) ("MECo (2002)"); Tennessee Gas Pipeline Company, D.T.E. 01-57, at 3-4 (2002) ("Tennessee Gas (2002)").

1. Public Service Corporation

In determining whether a petitioner qualifies as a "public service corporation" ("PSC") for the purposes of G.L. c. 40A, § 3, the Massachusetts Supreme Judicial Court ("SJC") stated:

⁵² As mentioned in section I.B. above, the Zoning Exemption Petition and the Section 72 Petition were both originally filed with the Department but have been referred to the Siting Board for hearing and determination and also have been consolidated with the petition filed with the Siting Board pursuant to G.L. c. 164, § 69J¼. G.L. c. 25, § 4; G.L. c. 164, § 69H.

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among the pertinent considerations are whether the corporation is organized pursuant to an appropriate franchise from the State to provide for a necessity or convenience to the general public which could not be furnished through the ordinary channels of private business; whether the corporation is subject to the requisite degree of governmental control and regulation; and the nature of the public benefit to be derived from the service provided.

Save the Bay at 680. See also, Boston Gas at 3-4; Berkshire Power Development, Inc., D.P.U. 96-104, at 26-36 (1997) (“Berkshire Power”).

The Department interprets this list not as a test, but rather as guidance to ensure that the intent of G.L. c. 40A, § 3 will be realized, i.e., that a present or proposed use of land or structure that is determined by the Department to be “reasonably necessary for the convenience or welfare of the public” not be foreclosed due to local opposition. See Berkshire Power, D.P.U. 96-104, at 26-36; Save the Bay at 685-686. The Department has interpreted the “pertinent considerations” as a “flexible set of criteria which allow the Department to respond to changes in the environment in which the industries it regulates operate and still provide for the public welfare.” Berkshire Power at 30; see also Dispatch Communications of New England d/b/a Nextel Communications, Inc., D.P.U./D.T.E. 95-59-B/95-80/95-112/96-113, at 6 (1998) (“Nextel”). The Department has determined that it is not necessary for a petitioner to demonstrate the existence of “an appropriate franchise” in order to establish PSC status. See Berkshire Power at 31.

2. Exemption Required

In determining whether exemption from a particular provision of a zoning bylaw is required for purposes of G.L. c. 40A, § 3, the Department looks to whether the exemption is necessary to allow construction or operation of the petitioner’s project as proposed. NEP/MECO (2005) at 5-6, citing MECo (2002) at 4-5; Tennessee Gas (2002) at 5; Western Massachusetts Electric Company, D.P.U./D.T.E. 99-35, at 4, 6-8 (1999); Tennessee Gas Company, D.P.U. 92-261, at 20-21 (1993). It is the petitioner’s burden to identify the individual zoning provisions applicable to the project and then to establish on the record that exemption from each of those provisions is required:

The Company is both in a better position to identify its needs, and has the responsibility to fully plead its own case . . . The Department fully expects that, henceforth, all public service corporations seeking exemptions under c. 40A, § 3

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will identify fully and in a timely manner all exemptions that are necessary for the corporation to proceed with its proposed activities, so that the Department is provided ample opportunity to investigate the need for the required exemptions.

New York Cellular Geographic Service Area, Inc., D.P.U. 94-44, at 18 (1995).

3. Public Convenience or Welfare

In determining whether the present or proposed use is reasonably necessary for the public convenience or welfare, the Department must balance the interests of the general public against the local interest. NEP/MECo (2005) at 6-7, citing Save the Bay at 680; Town of Truro v. Department of Public Utilities, 365 Mass. 407, at 411 (1974). Specifically, the Department is empowered and required to undertake "a broad and balanced consideration of all aspects of the general public interest and welfare and not merely [make an] examination of the local and individual interests which might be affected." New York Central Railroad v. Department of Public Utilities, 347 Mass. 586, 592 (1964) ("New York Central Railroad"). When reviewing a petition for a zoning exemption under G.L. c. 40A, § 3, the Department is empowered and required to consider the public effects of the requested exemption in the State as a whole and upon the territory served by the applicant. Save the Bay at 685; New York Central Railroad at 592.

With respect to the particular site chosen by a petitioner, G.L. c. 40A, § 3 does not require the petitioner to demonstrate that its preferred site is the best possible alternative, nor does the statute require the Department to consider and reject every possible alternative site presented. Rather, the availability of alternative sites, the efforts necessary to secure them, and the relative advantages and disadvantages of those sites are matters of fact bearing solely upon the main issue of whether the preferred site is reasonably necessary for the convenience or welfare of the public. Martarano v. Department of Public Utilities, 401 Mass. 257, 265 (1987); New York Central Railroad, 347 Mass. at 591.

Therefore, when making a determination as to whether a petitioner's present or proposed use is reasonably necessary for the public convenience or welfare, the Department examines: (1) the present or proposed use and any alternatives or alternative sites identified; (2) the need for, or public benefits of, the present or proposed use; and (3) the environmental impacts or any other impacts of the present or proposed use. The Department then balances the interests of the general public against the local interest, and determines whether the present or proposed use of

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the land or structures is reasonably necessary for the convenience or welfare of the public.

Boston Gas at 2-6; MECo (2002) at 5-6; Tennessee Gas (2002) at 5-6; Tennessee Gas Company, D.T.E. 98-33, at 4-5 (1998).

B. Summary of Parties' Arguments and Analysis

1. Parties' Arguments Regarding Public Service Corporation Status

a. Summary of Arguments

The City of Brockton argued that Brockton Power does not qualify as a public service corporation ("PSC") because it has not received an "appropriate franchise" from the Commonwealth, and that the grant of such a franchise is the sine qua non of PSC status (City of Brockton Initial Brief at 48–50, citing Save the Bay). The City admitted that since the Save the Bay decision, the Department has determined that it is not necessary for a petitioner to establish the existence of an appropriate franchise in order to establish PSC status (City of Brockton Initial Brief at 48 citing Princeton Municipal Light Department, D.T.E./D.P.U. 06-11, at 5 (2007) ("Princeton") and Berkshire Power Development, Inc., D.P.U. 96-104, at 31 (1997) ("Berkshire Power"). Nevertheless, the City of Brockton argued that Princeton and Berkshire Power were wrongly decided and urged the Siting Board to reinstate the grant of an "appropriate franchise" as a required element of all public service corporations (City of Brockton Initial Brief 48).

Brockton Power responded that the deregulation of the energy industry has effectuated a change in energy generation that has rendered the "appropriate franchise" argument inapplicable (Company Reply Brief at 103). Prior to deregulation, according to the Company, the generation and sale of energy in the Commonwealth was exclusively accomplished by vertically integrated utilities that operated as monopolies (*id.*). As a result of deregulation, however, "the generation of electricity is now a competitive service that is no longer subject to a monopoly or utility franchise as granted by the state" (*id.*). Consequently, the Company asserted, no corporations now enjoy the type of franchise referred to in Save the Bay (*id.* at 104).

b. Analysis of Parties' Arguments Regarding Public Service Corporation Status

In 1997, the Department issued Berkshire Power. In that decision, for the first time, the Department addressed whether an independent power producer qualified as a PSC under G.L. c. 40A, § 3. Specifically, the Department stated that,

the issues before the Department in the present proceeding are how the Department should (1) interpret the intent of the Legislature in enacting G.L. c. 40A, § 3 in an environment that is significantly different from that in which the section was first enacted, and (2) apply the section in this changed environment.

Berkshire Power, D.P.U. 96-104 at 28.

Since G.L. c. 40A, § 3 does not define a PSC, the Department looked to Save the Bay for guidance. In Save the Bay, the Court provided a "list of 'pertinent considerations' to be used when making a determination as to whether an entity is a PSC." (*id.*, citing Save the Bay, 366 Mass. at 680.

As mentioned above, the City asserts that the receipt of an appropriate franchise from the state is essential in order for an entity to successfully claim PSC status (Section VI.B.1 above; City of Brockton Initial Brief at 48–50, citing Save the Bay). The Company, on the other hand, asserts that the "appropriate franchise" argument has been superseded, and rendered irrelevant, by developments in the generation and distribution of energy since Save the Bay was decided (Section VI.B.1, above; Company Reply Brief at 102 - 105).

In Save the Bay, the Supreme Judicial Court states that, "whether the corporation is organized pursuant to an appropriate franchise from the State" is one of the "pertinent considerations" in determining whether a corporation qualifies as a PSC. Save the Bay at 680 (emphasis supplied). The City, however, asserts that the receipt of an "appropriate franchise" is absolutely essential to the qualification of an entity as a PSC (City of Brockton Initial Brief at 48, emphasis supplied). Specifically, in criticizing the Princeton decision, the City states that it, "submits that [the] DPU was incorrect in determining that an entity does not require an 'appropriate franchise' to qualify as a public service corporation" (*id.*, emphasis added).

The Siting Board is of the opinion that the City of Brockton's argument goes farther than the Save the Bay decision would support. We agree with the reasoning of the Berkshire Power

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decision. Therefore, it is not necessary that Brockton Power have an appropriate franchise from the state in order to qualify as a public service corporation.

Finally, the City cites to Attorney General v. Haverhill Gaslight Co., 215 Mass. 394 (1913) and Town of Truro v. Department of Public Utilities, 365 Mass. 407 (1947) in support of its petition. These cases are inapposite. These cases were decided when the provision of electric service was the monopoly of local utility companies. Therefore, they address factual situations far removed from the present case.

In conclusion, it is not necessary that Brockton Power have an appropriate franchise from the state in order to qualify as a public service corporation. Consequently, we conclude that Brockton Power qualifies as a PSC for purposes of G.L. c. 40A, § 3.

2. Parties' Arguments Regarding Public Convenience and Welfare

a. Company Description and Position

The Company asserted that its proposed plant would enhance the reliability of the regional electric system by providing 350 MW of dual natural gas/oil generating capacity (Exhs. BP-1, at 1-33; BP-4, at 2-26 to 2-29; AAPPL-1-5; RR-EFSB-16; Tr. at 187-89). The Company cited a number of factors that it asserts together are a threat to future system reliability:

- demand for peak resources increasing at nearly 2% per year (Exh. BP-4 at 2-26);
- limited capacity additions in recent years (including only 11 MW in 2006) (*id.*);
- the prospect of substantial unit retirements (Exh. BP-J-1 (Rebuttal) at 8),
- uncertainty regarding the level of regional electrical imports and exports (Exh. BP-JLR-1 (Rebuttal) at 10-11);
- the unmet need for “steel-in-the-ground” to back up the regional system’s growing reliance on demand response resources (Exh. BP-JR-1 (Rebuttal) at 11-12); and
- the requirement to maintain a sufficient level of reserves (Tr. 2,233-4, 2,282-3, 2285)

With reference specifically to the Southeastern Massachusetts (“SEMA”) region, within which the City of Brockton is located, the Company stated that there is uncertainty surrounding the continued operation of the Mirant Canal plant. The Company asserted that this uncertainty is indicative of a need for additional capacity in that region (Tr. at 2189-90).

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With respect to forecasted regional needs,⁵³ the Company initially cited the ISO-NE 2006 Regional System Plan, indicating that ISO-NE would need new capacity by 2011-2012 (Exh. BP-4, at 2-26). However, the Company later testified that, based on the new capacity and Demand Response (“DR”) added in the February 2008 Forward Capacity Auction and the projected 1.2% growth in peak summer demand forecast in of the 2008 ISO-NE Capacity, Energy, Load and Transmission Report (“CELT Report”), ISO-NE might not require additional capacity until the 2013-2014 period assuming continued availability of imports at current levels, and the planned retirement of only the Norwalk, CT generating station (Exh. BP-JR-1 (Rebuttal) at 10). The Company’s witnesses critiqued the new forecasts as vulnerable to underestimation of need, based on such factors as reliance on large amounts of DR, assumed continued operation of older plants, historic inaccuracy of ISO-NE forecasts, presumed continuation of imports at current levels, and untested effectiveness of FCM auctions (Exh. BP-JR-1(Rebuttal)(1), at 7-8, 10, 11-12)). With respect to the growing reliance of ISO-NE on DR, the Company argued that its proposed plant would “facilitate efforts to increase Massachusetts and ISO-NE’s reliance on demand-side resources and renewables” by providing backup capacity should DR resources fail to respond or by filling in intermittent gaps in the output of renewable resources (*id.* at 7).

The Company noted that in past generating facility reviews which addressed need, the Siting Board held that “because of the critical importance of a reliable supply of electricity, the several-year lead time that is associated with adding new generating facilities and the sudden changes that may occur in market conditions. . . the need for new generating facilities exists when need is shown within a window of 4-6 years from the proposed online date of the subject

⁵³ As regards the issue of “Need,” the Company relied exclusively on ISO-NE forecasts of need for additional generating capacity (Exh. BP-1, at 1-4, 1-5 citing, ISO-NE October, 2006 New England Regional System Plan). The ISO-NE 2008 Regional System Plan indicates that there is no need for additional generating capacity until after 2014 (Exh. EFSB-4(S) at 3). The 2008 forecast reflects slower growth in demand, evidence of new energy conservation and efficiency programs to be enacted by the New England states and the response to the first FCM auction held in February 2008. The ISO-NE 2008 Regional System Plan, dated October 16, 2008, was received by the Board after the close of evidentiary hearings and was added to the Exhibit List as EFSB-4(S). A copy of this ISO-NE 2008 Regional System Plan was served electronically on all parties and limited participants.

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facility” (Company Initial Brief at 160, citing ANP Bellingham, 7 DOMSB 39, 64 (1998); Cabot Power, 7 DOMSB 233, 252-253; U.S. Generating Company, 6 DOMSB 1, at 23 (1997)).

With regard to potential additions to generating capacity in ISO-NE in general, the Company admitted that its proposed 350 MW facility in Brockton is among 8,517 MW (summer MW rating) of combined-cycle capacity being proposed to be built system-wide in ISO-NE per the May 2008 list of Interconnection Requests (“the ISO-NE queue”) (Tr. at 1625; Exh. EFSB-7). Within the SEMA subarea alone, the Company stated that there are three combined-cycle plants totaling 1,165 MW of new capacity (including the proposed Brockton facility) which have been proposed and appear on the May 2008 ISO-NE queue (Tr. at 1627-1628). The Company stated that historically many plants which have been listed on the ISO-NE queue have subsequently been withdrawn (*id.* at 1637-1638). Specifically, the Company called attention to ISO-NE’s estimate in its 2007 Regional System Plan that indicated that within SEMA a total of 11,250 MW of new capacity of all types had been proposed over the decade 1997 to 2007, of which 8,680 MW had been withdrawn, 1,135 MW had become operational and 1,440 MW remained on the ISO-NE queue (Exh. EFSB-4).

The Company asserted that the siting of the proposed plant would maximize its system reliability benefits (Tr. at 2159-2160, 2185-2191). The Company described that the proposed plant would be located in the SEMA subarea of ISO-NE, which is a subarea where there have been significant reliability concerns due to transmission constraints and the potential retirement of the Mirant Canal Electric plant (*id.* at 2159-2160).⁵⁴ The Company also asserted that ISO-NE

⁵⁴ The Mirant Canal plant is located in Sandwich, MA, which is technically part of the ISO-NE subarea known as Lower SEMA and which includes all of Cape Cod plus the communities along the southeastern coast of Massachusetts from Marshfield, Duxbury and Plymouth southward, but does not include Brockton. NSTAR, D.P.U. 07-60/0761, at 10 (2008). The Mirant Canal plant is an 1120 MW oil-fired plant and when oil prices are higher than natural gas prices, the plant would not ordinarily be called upon to operate (*id.*). However, because Lower SEMA has historically lacked sufficient transmission capacity to import power should it simultaneously experience more than one event which compromised its ability to provide and transmit sufficient power (a condition known as “N-2”), ISO-NE has frequently required the Mirant Canal plant to operate in backup mode (*id.* at 10-11). With oil prices high, this reliability-driven practice resulted in very large uneconomic wholesale market costs beginning in January, 2006 which were borne by Lower SEMA residents (*id.*). NSTAR devised and implemented upgrades to its transmission system and substations in Lower SEMA in 2007 and 2008 intended to increase Lower SEMA’s import capacity to provide sufficient power during peak periods

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has determined that the SEMA/RI subarea is an effective region in which to add capacity in order to improve system wide reliability (Tr. at 2185-2919; Exhs. BP-JLR-1(Rebuttal) at 38; EFSB-4).

The Company also asserted that the operation of the proposed facility would result in significant environmental benefits for the ISO-NE region (Exhs. AAPPL-1-5; BP-JLR-1(Rebuttal) at 5). The Company argued that the relatively high efficiency rating of the proposed Brockton plant (6,842 Btu/ kWh versus 7,200 Btu/kWh for the average existing gas-fired combined-cycle facility⁵⁵) would result in its being designated by ISO-NE to operate at least 70% of the annual hours (Company Initial Brief at 176). As a result of the Brockton plant being dispatched at such a high rate, the Company stated that operation of the proposed plant would back out (i.e., reduce the hours of operation of) other existing, less efficient and more polluting generating facilities within the ISO-NE system (Exhs. AAPPL-1-5; Company Initial Brief at 174-176).

The Company conducted modeling of the ISO-NE dispatch program with and without the proposed Brockton plant (Exh. AAPPL-1-5). The Company stated that the operation of the proposed Brockton Power plant would result in reductions in projected tons of emissions by power plants within the ISO-NE region equivalent to 0.8% for nitrogen oxides, 0.4% for sulfur

(cont'd) under N-2 conditions from 35% to 73% (*id.* at 11-12). As a result of the NSTAR upgrades and the dramatic decline in the price of oil, ISO-NE has dispatched the Mirant Canal plant less frequently and only when the use of the plant is economic compared with other sources (*id.*).

⁵⁵ In its initial Petition (Exh. BP-1, at 1-13), its DEIR (Exh. BP-4, at 2-9) and its FEIR (Exh. EFSB-G-2 (S) (1) at 2-1) Brockton Power described the proposed plant as being a "highly efficient unit" with "a nominal heat rate of 7,226 British thermal units per kilowatt hour ("Btu/kWh"). However, Brockton Power testified that a heat rate of approximately 7,300 Btu/kWh would describe the average efficiency of gas-fired combined-cycle power plants added to the ISO-NE system since 1999/2000 (Tr. at 42). In later testimony and in its Air Plan application (Exh. EFSB-A-1 (S) (1)) the Company said that the heat rate of the plant would be 6,876 Btu/kWh (Tr. at 2636). The Company explained that the earlier characterizations of the plant's efficiency had been based on in-house calculations, and that the later rating of 6,876 Btu/kWh was provided by the turbine manufacturer (Siemens) and included more accurate estimates of fuel requirements of other equipment within the power plant (*id.* at 2636-2638). In other parts of the record, Brockton Power stated that the proposed plant was designed to be water-cooled, which, the Company stated is approximately 3% more efficient than an air-cooled plant (Exh. EFSB-A-13).

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dioxide and 0.3% carbon dioxide (see Table 8 below) (*id.*). Specifically, the Company projected that the operation of the proposed Brockton plant would reduce annual operating hours primarily at older, less efficient gas-fired combined-cycle power plants by about 1-2% (*id.*). The Company stated that the projected emissions in the Base Case reported in Table 8 were based on the October 2006 ISO-NE Regional System Plan, and did not include the impact of resources added in any of the Forward Capacity Auctions or the Connecticut RFP and did not incorporate recent ISO-NE changed assumptions about the rate of future growth in demand for electricity (*id.*).

Table 8**BASE CASE**

Brockton Power's Projection of Total System Wide ISO-NE Emissions in 2011
With and Without Proposed Facility – Base Case

Pollutant	Base Case 2011 Without Brockton Power Emissions (Tons)	Base Case 2011 With Brockton Power Emissions (Tons)	Percentage Reduction in 2011 Emissions Due to Operation of Brockton Power
Nitrogen Oxides (NO _x)	57,987	57,507	0.8%
Sulphur Dioxide (SO ₂)	202,893	202,084	0.4%
Carbon Dioxide (CO ₂)	52,964,454	52,827,212	0.3%
% of Time Brockton Power Dispatched			71%

Source: Exh. AAPPL-1-5.

In response to questions from the Siting Board staff, Brockton Power repeated its modeling of emissions to take into account the impact on its Base Case projections of reductions in pollutants associated with the following factors: (1) the resources added in the initial Forward Capacity Auction ("FCA") in February 2008 (new generating capacity, demand response, energy efficiency); (2) the resources procured in the Connecticut 2008 Request for Proposals; (3) the adoption by ISO-NE of more conservative assumptions about future growth in peak electricity demand; (4) the assumption of continued imports from outside the ISO-NE region of 2,000 MW;

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and (5) the assumption of only announced plant retirements (RR-EFSB-16). The Company stated that once items (1) through (5) above were taken into consideration, the operation of the proposed facility would result in the following reductions in pollutants:

Table 9

REVISED CASE

Brockton Power's Estimate of the Reduction in Pollutant Emissions Due to Operation of Brockton Power Assuming the Availability of Resources Procured in the February 2008 FCA and CT RFP, 2000 MW of Imports, Lower Demand Growth and Announced Capacity Retirements

Pollutant	% Reduction in Emissions with Operation of Brockton Power
Nitrogen Oxides (NO _x)	0.4%
Sulphur Dioxide (SO ₂)	0.1%
Carbon Dioxide (CO ₂)	0.1%
% of Time Brockton Power Dispatched	70%

b. Other Positions

i. The City of Brockton

The City of Brockton disputes the Company's argument that the operation of the proposed plant would result in a net reduction in regional emissions (City of Brockton Initial Brief at 37). The City of Brockton contends that the Company's modeling of ISO-NE's future dispatch of the region's power plants assuming the Brockton Power plant is constructed is unreliable and that the modeling failed to consider the impact of programs such as RGGI (*id.* at 38). Finally, the City argues that any evidence of reduced emissions at other existing dirtier facilities should not be allowed to offset local impacts on the City of Brockton (*id.* at 39).

ii. ACE

ACE argued that the Company's claims that its proposed plant will displace operations at existing, dirtier power plants in the region are misleading, inconsistent and lacking evidence of improvements in ambient air quality (ACE Reply Brief at 13). ACE stated that the Company's claims were misleading in that modeling results showed that displacement would occur almost exclusively at other gas-fired co-generation plants rather than at the region's dirtier oil and coal-fired plants. ACE also stated that the Company's modeling results are inconsistent with the Company's representation that its proposed plant would displace "older, inefficient steam-cycle facilities firing fuel oil." Finally, ACE stated that the Company failed to quantify through modeling the claimed improvements in ambient air quality that would be associated with the displaced plant operations (*id.* at 13-15).

c. Analysis and Findings

Brockton Power has asserted that the capacity of its proposed 350 MW plant will be needed to maintain the reliability of the New England power grid operated by ISO-NE in the timeframe of 2008-2014. The arguments presented by the Company supporting its assertion of future need for the capacity included general growth in peak demand, expected future retirements of older existing capacity, uncertainty surrounding the future level of New England imports and exports of power, and the desire to maintain historic (or higher) reserve levels to assure reliability as the region increases its reliance on demand response and renewable energy.

In reaching its conclusion, however, the Company relied on selected ISO-NE estimates of future peak electricity demand. In the view of the Siting Board, the Company-cited estimates may overstate the levels of future capacity required, due to their failure to factor in current estimates of:

- the capacity committed during the initial FCA in February 2008;
- the capacity procured by Connecticut with its RFP process in early 2008;
- the continuation of historic net imports of electric power from Canada and seasonal trade with New York; and,
- the potential of subsequent FCAs to lock in additional capacity.

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Since the Company's filing of the Petition and the close of evidentiary hearings, the Legislature of the Commonwealth passed the Green Communities Act⁵⁶ which is expected to reduce the rate of growth in demand for electricity (through promotion of greater energy efficiency and increased participation in demand response programs) and to stimulate the development of renewable power which could further reduce the need for new power plant capacity such as proposed by Brockton Power. In addition, Governor Patrick articulated a policy goal in 2007 of offsetting all future electric demand growth with increased energy efficiency by 2010.⁵⁷ If the recently enacted regulations and policy objectives succeed in their goals, they will reduce future electrical demand and extend the timeframe in which additional generating capacity is needed beyond 2014. The Siting Board notes that the FCA process provides a regularly scheduled, disciplined method of addressing future capacity needs. Additionally, the Siting Board does not consider that it would be warranted to discount future levels of power imports, given (1) the current expansion projects for Canadian hydropower and (2) the growing demand for imported certifiable renewable power under the Regional Greenhouse Gas Initiative.

At the same time the Siting Board notes that as of May 2008 (when evidentiary hearings commenced on the Brockton Power Petition) there were proposals to build approximately 8,500 MW of new gas-fired or gas/oil-fired combined-cycle capacity listed on the active ISO-NE queue. Within SEMA alone proposals for new gas/oil-fired combined-cycle capacity totaled 1,150 MW. While the Siting Board acknowledges that historically many of the proposals listed on prior ISO-NE queues have not been built, it notes that the extent of interest in building new gas-fired co-generation plants within ISO-NE evidenced by the number of proposed plants and their cumulative capacity, together with the financial incentives of the FCA process, strongly supports the view that Brockton's proposal is only one of many possible facilities which could

⁵⁶ "An Act Relative to Green Communities" (a.k.a "Green Communities Act" was signed into law on July 2, 2008 (www.mass.gov/legis/laws/seslaw08/sl080169.htm))

⁵⁷ Governor Patrick's Address to the Clean Energy Council, October 30, 2007.

http://www.mass.gov/?pageID=gov3terminal&L=3&L0=Home&L1=Media+Center&L2=Speeches&sid=Agov3&b=terminalcontent&f=text_2007-10-30_clean_energy&csid=Agov3

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supply future needs for new generating capacity, if these needs develop. On balance, the Siting Board is persuaded that any need for added generating capacity within the ISO-NE grid is neither currently obvious nor urgent. Based on its review of the record in this case, the Siting Board cannot conclude, and in fact finds it highly unlikely, that there will be unmet need for power in Massachusetts or within the New England power grid over the 10-year period covered in the forecast of ISO-NE if this project is not built.

The Company also asserted that there is a specific need for additional generating capacity within SEMA based on ISO-NE projections of where new capacity could be effectively sited to improve overall system reliability and uncertainties associated with future operation of the Mirant Canal plant. In reaching its determination that ISO-NE had designated SEMA as a subarea in which up to 1,000 MW of new capacity could be effectively sited to increase system reliability, the Company relied on Table 5-2 of the 2007 ISO-NE Regional System Plan ("RSP"). The Siting Board agrees that SEMA combined with Rhode Island ("SEMA/RI") is shown as a subarea in which up to 1,000 MW of capacity can effectively be sited. However, the Siting Board notes that SEMA/RI is not unique within New England. Table 5-2 of the 2007 RSP indicates that up to 500 MW of new capacity could be effectively sited anywhere in New England except Northern Maine, and up to 1,000 MW of new capacity could be sited anywhere in Massachusetts, Rhode Island, or Connecticut.

As to the Company's claim that its proposed facility could provide a backup should the Mirant Canal facility be decommissioned, the Siting Board notes that: (1) the Mirant Canal plant is located in Lower SEMA which historically has had limited import capacity from SEMA; (2) the recently-completed NSTAR upgrades to its lines and substations in the Lower SEMA have substantially increased the ability of the Lower SEMA subarea to operate reliably without the Mirant Canal plant; and (3) the proposed Brockton facility is located electrically outside the Lower SEMA region, and thus would not be effective in addressing the identified reliability issues associated with the Lower SEMA region. For all of these reasons, the Siting Board rejects the idea that Brockton Power's proposed location in SEMA fulfills a specific need for new capacity in SEMA.

Brockton Power has asserted that operation of its proposed facility would result in significant environmental benefits to the New England region as a result of reducing the use of older, more polluting generating plants. The Siting Board finds that the asserted reductions in

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tons of emissions are very small on a New England-wide basis (in all scenarios less than 1% for nitrogen oxides, sulfur dioxide and carbon dioxide) and that these reductions would not come from reducing operations of highly polluting plants, but instead come from reduced hours of operation at gas-fired cogeneration plants constructed in the period since 1997. The Company credited the modern design of its proposed plant and its intention to employ water rather than air in cooling with making the plant more efficient than existing gas-fired co-generation plants. However, the Siting Board notes that the advances in technology and water cooling may not be characteristics unique to Brockton Power's proposed facility. These same or similar efficiency improvements may be incorporated in the design of plants proposed by other developers of co-generation plants which are listed on the ISO-NE queue.

The Siting Board also notes that while there may be minimal reductions in emissions achieved on a New England-wide basis, there will be additional emissions in Brockton and surrounding municipalities. Further, the Siting Board notes that the ISO-NE Queue listing of proposed generating facilities current at the time of the evidentiary hearings (May, 2008)⁵⁸ indicated that there were 24 other combined-cycle gas or gas/oil-fired plants proposed throughout the ISO-NE system, in addition to wind generating facilities with significantly lower emission rates than the proposed facility. The approximately 8,150 MW of total capacity represented in these other similarly-configured generating facilities, as well as additional proposed low- or zero-emission generation capacity indicates that it is highly likely that even absent construction or operation of the Brockton facility, incremental need for new generation capacity will be met by facilities that will result in the same, or greater, displacement emission reductions than those estimated for proposed facility. Consequently, based on the record in this case, we cannot conclude and, in fact, find it highly unlikely, that emissions in Massachusetts or within New England would be higher than they would be if the facility were not constructed. In consideration of these factors, the Siting Board finds that the proposed plant would not result in significant system-wide environmental benefits.

In Section III, above, the Siting Board reviewed the environmental impacts, including air, traffic, noise, land use, water resources and wetlands, visual, hazardous materials, and EMF

⁵⁸ See Exh. EFSB-7 and Exh. EFSB-8 for plant by plant listing of the proposed combined-cycle gas and gas/ULSD facilities on the May 2008 ISO-NE queue.

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impacts of the proposed facility. The review showed that many of the impacts considered would be either a temporary condition, limited to the construction period, or periodic conditions, such as ULSD and ammonia deliveries. The review also showed that the proposed facility may result in some local adverse environmental impacts extending to off-site areas, including possible air and noise emissions, stream flow reductions, project views, and EMF. The Siting Board found in Section III, above, that with the conditions set forth therein, the environmental impacts associated with the proposed facility would be minimized. In Section IV, above, the Siting Board further found that the proposed facility would be consistent with the environmental, health, and resource development policies of the Commonwealth.

In summary and as noted above, in determining whether a proposed use is reasonably necessary for the public convenience or welfare, the Siting Board must balance the interests of the general public against the local interest. Further, in this weighing of benefits and disadvantages, it is the burden of the project proponent to show that the benefits prevail. In this case, the Siting Board has found that the record provides limited—if any—evidence that the project is needed to meet power system demand, or that the facility would lead to significant—or, again, any—environmental benefits by virtue of displacing the emissions from other facilities. Thus, the Siting Board has determined that the benefits of this facility would be minimal at best. The Siting Board also concluded above that while we have found that the environmental impacts would be minimized, the facility would have some adverse impacts on the local environment.

Therefore, on balance, the Siting Board finds that the project proponent has not sustained its burden of proof, and that the benefits to the general public of the proposed use would not outweigh the adverse local impacts. Accordingly, the Siting Board finds that the proposed use of the land to construct the proposed generating facility is not reasonably necessary for the public convenience and welfare.⁵⁹

⁵⁹ We will not separately analyze whether granting the requested zoning exemptions as they relate solely to the transmission line would serve the public convenience and welfare. The transmission line is ancillary to the proposed generating facility in the siting review under G.L. c. 164, §69J¼, and therefore does not require a separate analysis.

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3. Specific Exemptions Sought

In section V.B.2.c above, the Siting Board found that the proposed use of the land and structures was not reasonably necessary for the public convenience and welfare. Consequently, the Siting Board does not address the issue of whether the proposed exemptions are required.

VI. G.L. C. 164, § 72⁶⁰A. Standard of Review

Massachusetts General Laws, chapter 164, § 72, requires, in relevant part, that an electric company seeking approval to construct a transmission line must file with the Department a petition for:

authority to construct and use ... a line for the transmission of electricity for distribution in some definite area or for supplying electricity to itself or to another electric company or to a municipal lighting plant for distribution and sale ... and shall represent that such line will or does serve the public convenience and is consistent with the public interest The [D]epartment, after notice and a public hearing in one or more of the towns affected, may determine that said line is necessary for the purpose alleged, and will serve the public convenience and is consistent with the public interest.⁶¹

The Department, in making a determination under G.L. c. 164, § 72, is to consider all aspects of the public interest. Boston Edison Company v. Town of Sudbury, 356 Mass. 406, 419 (1969). Section 72, for example, permits the Department to prescribe reasonable conditions for the protection of the public safety. Id. at 419-420. All factors affecting any phase of the public interest and public convenience must be weighed fairly by the Department in a determination

⁶⁰ As mentioned in section I.B. above, the Zoning Exemption Petition and the Section 72 Petition were both originally filed with the DPU but have been referred to the Siting Board for hearing and determination and have been consolidated with the petition filed under G.L. c. 164, § 69J¼. G.L. c. 25, § 4; G.L. c. 164, § 69H.

⁶¹ Pursuant to G.L. c. 164, §72, the electric company must file with its petition a general description of the transmission line, a map or plan showing its general location, an estimate showing in reasonable detail the cost of the line, and such additional maps and information as the Department requires. Brockton Power filed these documents as exhibits to its section 72 petition (Exh. BP-3).

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under G.L. c. 164, § 72. Town of Sudbury v. Department of Public Utilities, 343 Mass. 428, 430 (1962).

As the Department has noted in previous cases, the public interest analysis required by G.L. c. 164, § 72, is analogous to the Department's analysis for the "reasonably necessary for the convenience or the welfare of the public" standard under G.L. c. 40A, § 3. See New England Power Company, D.P. U. 89-163, at 6 (1993); New England Power Company, D.P.U. 91-117/118, at 4 (1991); Massachusetts Electric Company, D.P.U. 89-135/136/137, at 8 (1990). Accordingly, in evaluating petitions filed under G.L. c. 164, § 72, the Department relies on the standard of review for determining whether the proposed project is reasonably necessary for the convenience or welfare of the public under G.L. c. 40A, § 3, as set forth above.

B. Parties' Positions

Brockton Power stated the transmission facilities are necessary in order to connect the proposed electric generating facility to the regional electricity grid (Exh. BP-3, at 7; Tr. at 2579, 2584). Without the transmission facilities, the proposed project would not be possible because there would be no means by which the electricity generated could be delivered to consumers throughout the region (Exh. BP-3, at 7; Tr. at 2579, 2584).

The Company stated that it considered an alternative transmission route, which would follow the preferred route along Oak Hill Way, then head east along the UPS facility boundary, then south along the MBTA rail line ROW until the intersection with NEP's transmission corridor (Exh. BP-3, at 11 to 12). The Company stated that this route is 3,371 feet in length, and would require three more transmission structures than the preferred route (*id.*; Tr. at 2575). The Company indicated that approval from the MBTA would be required for construction along this route (Exh. BP-3, at 11 to 12; Tr. at 2575). The Company also stated that while this route is technically feasible, it would necessitate negotiating with the MBTA and meeting their specific design requirements, construction windows and potentially added costs and ROW clearing (Exh. BP-3, at 11 to 12; Tr. at 2575 to 2576). The Company further indicated that, assuming that the MBTA ROW could be obtained, the cost estimate associated with the alternative route is approximately \$300,000 more expensive than the estimate for the preferred route.

In addition, the Company indicated that, unlike the preferred route, siting the transmission line along the MBTA ROW would result in visual impacts to nearby residences

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located along Appleby Street (Exh. BP-3, at 12; Tr. at 2575). The Company indicated that greater wetland impacts are also anticipated along the alternative transmission route as compared to the preferred route as revised, including placement of new utility poles directly within certain wetland resource areas (Exh. BP-3, at 12; Tr. at 2575 to 2576).

In response to concerns about wetland impacts and EMF impacts with use of its preferred route, the Company proposed both a different alignment and a different conductive configuration of the transmission lines during the course of the proceedings (Company Initial Brief at 72-73). As a result, both the EMF impacts and the cutting or trimming of trees along the right of way for the lines would be significantly reduced (*id.* at 73, 116-117; see also, Initial Brief of National Grid at 7-12).

The City noted, however, that the Company has not yet obtained all easements necessary to construct its proposed line with the revised route (City of Brockton Initial Brief at 53). Consequently, the City argued, the route of said lines was left unresolved at the close of the record (City of Brockton Initial Brief at 53). Therefore, Brockton asserted, the "Transmission Line Petition should be denied until such time as the Company secures the required easements or describes adequate but unsuccessful efforts to obtain them" (*id.*).

In response, the Company, citing Town of Andover v. Energy Facilities Siting Board, 435 Mass. 377, 395 (2001), argued that an applicant need not have a property right in the site or, by implication, in the route of a transmission line, in order to obtain approval under Section 72 (Company Reply Brief at 115). The same argument is advanced by National Grid, which cites to Town of Sudbury v. Department of Public Utilities, 343 Mass. 428, 433 (1962) (Reply Brief of National Grid at 2-3).

C. Analysis

To establish the need for a transmission interconnect line, a petitioner must demonstrate that: (1) the existing transmission system is inadequate to interconnect the new or expanded generator; and (2) the new or expanded generator is likely to be available to contribute to the regional energy supply. Cape Wind Associates and NSTAR Electric, EFSB 02-2, at 16-17 (2005); Cambridge Electric Light Co., 12 DOMSB 305, 318 (2001). This standard is met by Brockton Power's proposal. The record shows here that transmission facilities are an essential

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component of the proposed project in that, in the absence of the transmission facilities, the proposed generating facility could not interconnect to the transmission grid.

In addition, the record shows that an alternative transmission route along the MBTA ROW was evaluated, but would result in greater visual impacts and wetland impacts and be more costly than the preferred route. The Siting Board finds that Brockton Power has reasonably determined that the preferred route is preferable to its identified alternative route along the MBTA ROW.

In Section III above, the Siting Board reviewed the environmental impacts of the overall project including specific impacts of the transmission facilities relating to water resources and wetlands and EMF impacts. The record shows the Company will use modified alignment and conductor configurations that minimize wetland and EMF impacts. The Siting Board finds for the purposes of Section 72 review that the proposed transmission facilities may result in some modest EMF impacts but would result in generally minimal environmental impacts.

As the Company points out, the City does not contest Brockton Power's assertion that the transmission line will be needed, nor does the City deny that the line will provide public benefits (Company Reply Brief at 114). Consequently, Brockton Power has established at least a prima facie case that construction and use of the transmission line, "is necessary for the purpose alleged," and that said line "will serve the public convenience and is consistent with the public interest." G.L. c. 164, § 72.

This leaves the City's argument that it is premature to approve the Section 72 petition because the Company has not obtained all the necessary easements. We agree with Brockton Power that the SJC opinion in Town of Andover v. Energy Facilities Siting Board, 435 Mass. 377, 395 (2001) is dispositive of this matter. In that case, the Court held:

There is no merit to the argument that Nickel Hill [the Petitioner] lacks standing to petition for a permit to construct the proposed generating facility at the selected site because it had not secured an ownership, leasehold, or other interest in the site. The statute does not require such an interest.

435 Mass. at 395.

Chapter 164, Section 72, (the statute in question in the present case) contains no requirement that a petitioner hold a property interest in the route of the transmission line in order to obtain approval, just as Chapter 164, section 69J¼ (the statute in question in the Andover

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case) contains no requirement that a petitioner hold a property interest in the site of a proposed facility. The two statutes are identical in this respect. Consequently, the holding of the Andover case applies to the present case, and the Company's lack of certain property interests in the proposed route is irrelevant to the issue of whether the Siting Board may approve the Section 72 petition.

As stated above, in evaluating petitions filed pursuant to G.L. c. 164, § 72, the Department relies on the standard of review established for G.L. c. 40A, § 3, for determining whether the proposed project is reasonably necessary for the convenience or welfare of the public. We note that we are not in this section focusing on the need for the generating facility but, rather, on the need for the transmission line should the facility be built. If the project is built, the transmission facilities will be needed to allow the project output to be delivered to the grid. The Siting Board finds pursuant to G.L. c. 164, § 72, that if the proposed facility is constructed, then the proposed transmission lines will be necessary for the purpose alleged, will serve the public convenience, and be consistent with the public interest.

D. Conclusion

The Siting Board concludes that the Section 72 petition should be APPROVED.

VII. SECTION 61 FINDINGS

The Massachusetts Environmental Policy Act ("MEPA") provides that "[a]ny determination made by an agency of the Commonwealth shall include a finding describing the environmental impact, if any, of the project and a finding that all feasible measures have been taken to avoid or minimize said impact." G.L. c. 30, § 61. Pursuant to 301 CMR § 11.01 (4), these findings are necessary when an Environmental Impact Report ("EIR") is submitted by a petitioner to the Secretary of the Executive Office of Energy and Environmental Affairs, and should be based on such EIR. Where an EIR is not required, G.L. c. 30, § 61 findings are not necessary. 301 CMR § 11.01 (4). The record indicates that Brockton Power filed both a draft EIR as well as a final EIR in relation to the project. Therefore, a finding under G.L. c. 30, § 61 is necessary relative to Brockton Power's Zoning Exemption Petition.

In Section III, above, the Siting Board conducted a comprehensive analysis of the environmental impacts of the proposed generating facility and found that the temporary and

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permanent impacts of the proposed generating facility at the preferred site would be minimized and that the proposed project would achieve an appropriate balance among conflicting environmental concerns as well as among environmental impacts, reliability, and cost. Accordingly, the Siting Board finds that all feasible measures have been taken to avoid or minimize the environmental impacts of the proposed facility. In Section III, above, the Siting Board has also found that Brockton Power's description of the proposed project and its environmental impacts is substantially accurate and complete.

VIII. DECISION

The Siting Board's enabling statute directs the Siting Board to implement the energy policies contained in G.L. c. 164, §§ 69H-69Q, to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. G.L. c. 164, § 69H. Section 69J $\frac{1}{4}$ requires that, in its consideration of a proposed generating facility, the Siting Board review inter alia the site selection process, the environmental impacts of the proposed project, and the consistency of the plans for construction and operation of the proposed project with the environmental policies of the Commonwealth.

In Section II above, the Siting Board has found that Brockton Power's description of the site selection process it used is accurate.

In Section III, above, the Siting Board examined Brockton Power's analysis of the impact of the project relative to air quality, water resources and wetlands, solid waste, visual, noise, safety, traffic, and EMF impacts, and concluded that Brockton Power's plans for the construction of the proposed generating facility would minimize the environmental impacts of the proposed project consistent with the minimization of costs associated with the mitigation, control and reduction of the environmental impacts of the proposed project, subject to certain conditions. In Section III, above, the Siting Board has also found that Brockton Power's description of the proposed project and its environmental impact is substantially accurate and complete.

In Section IV, above, the Siting Board has found that the plans for the construction of the proposed project are consistent with current health and environmental protection policies of the Commonwealth and with such energy policies of the Commonwealth as have been adopted by the Commonwealth for the specific purpose of guiding the decisions of the Siting Board.

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Accordingly, the Siting Board finds that, upon compliance with the conditions listed below, the construction and operation of the proposed project will provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

Accordingly, the Siting Board APPROVES the petition of Brockton Power to construct a 350 MW generating facility, subject to the following conditions:

1. The Siting Board directs that of the hours that MADEP may allow the proposed project by permit to operate on oil, the Company will reserve two weeks – i.e., 336 hours – of that time for the month of December.
2. The Siting Board directs the Company to work with the City of Brockton with respect to water supply issues associated with use of Brockton AWRF water, and to provide a report to the Siting Board with respect to the outcome of such efforts. Furthermore, if the Company intends to use potable water for the majority of the water requirements of its proposed facility, the Siting Board directs the Company to provide a project change filing to the Siting Board, together with an analysis as detailed as that done for AWRF water, but directed to those issues that are germane to the use of potable water, including opportunities for water conservation
3. The Siting Board directs Brockton Power, prior to the commencement of operation, to report on its recycling rate for construction debris and to provide the Siting Board with a copy of its recycling plan and anticipated recycling rate for operational solid wastes.

4. The Siting Board directs the Company to provide, as requested by individual residential property owners or appropriate municipal officials, reasonable off-site mitigation of visual impacts, including shrubs, trees, window awnings, or other mutually agreeable measures that would screen views of the proposed generating facility and related facilities at affected residential properties and roadways up to one mile from the site where residents experience changed views. In implementing this requirement, the Company: (1) shall provide shrub and tree plantings, window awnings, or other reasonable mitigation on private property, only with the permission of the property owner, and along public ways, only with the permission of the appropriate municipal officials; (2) shall provide written notice of this requirement to appropriate officials and to all owners of residential property within one mile of the site, prior to the commencement of construction; (3) may limit requests for mitigation measures from local property owners and municipal officials to a specified period ending no less than six months after initial operation of the facility; (4) shall complete all agreed-upon mitigation measures within one year after completion of construction, or if based on a request filed after commencement of construction, within one year after such request; and (5) shall be responsible for the reasonable maintenance and replacement of plantings, as necessary, to ensure that healthy plantings become established.
5. The Siting Board directs the Company to determine an exterior color for the proposed stack in consultation with appropriate municipal officials, as well as to maintain the good appearance of the facility, including the stack, and on-site landscaping, for the life of the project.
6. The Siting Board directs the Company to limit any weekend construction at the proposed site to the hours of 9:00 a.m. to 1:00 p.m.

7. The Siting Board directs the Company to prepare final versions of the Company's SPCC Plan and Emergency Action Plan as well as the two anticipated SOPs for management of aqueous ammonia, and to submit copies of same to the Siting Board within six weeks of their completion. In addition, the Siting Board directs the Company to develop safety and security plans for the proposed facility in consultation with the Brockton Fire and Police Departments. The Siting Board directs the Company to provide a report for the Board's consideration on the outcome of the required consultations within six weeks of their occurrence. Such report should include documentation of agreed plans, recommendations, and comments resulting from such consultations. The police and fire departments of Brockton may submit a separate report to the Board, if they so desire. Based on the report(s), the Siting Board will consider whether the Company's development of safety and security plans establishes that safety impacts of the facility would be minimized.
8. The Siting Board directs the Company to work with the Town of West Bridgewater and the City of Brockton with respect to routing and related safety issues associated with the delivery of aqueous ammonia and ULSD to the proposed facility. Specifically, the Siting Board directs the Company to instruct its ULSD and aqueous ammonia vendors located outside the Town of West Bridgewater to use one of two major roads (Routes 27 and 123) from Route 24 through the City of Brockton to Route 28 South; and that these Brockton Routes must be stipulated in its contracts with vendors.
9. The Siting Board directs Brockton Power to keep the Siting Board informed as to the progress and the outcome of Brockton Power's interconnection plans and on designs for any transmission upgrades. Specifically, at such time as Brockton Power reaches final agreement with NEP and ISO-NE regarding interconnection, the Board directs Brockton Power to keep it informed as to any measures incorporated into final transmission upgrade designs to minimize magnetic field impacts.

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Regarding the petition to construct a 115 kV overhead line and related facilities filed pursuant to G.L. c. 164, § 72, the Siting Board found in Section VI above that the line is necessary for the purpose alleged, i.e., to connect the project to the regional transmission grid; that the proposed line will serve the public convenience; and that construction and maintenance of the proposed line is consistent with the public interest. Consequently, the Siting Board APPROVES Brockton Power's Section 72 Petition provided that the Company is able to secure such easements and/or rights of way as are necessary to allow it to fully construct the project as it has proposed. Once all necessary rights or easements have been obtained, the Siting Board directs the Company to report this acquisition to the Siting Board.

Regarding the Zoning Exemption Petition filed by the Company pursuant to G.L. c. 40A, § 3, the Siting Board found in Section V above that Brockton Power has failed to establish that the proposed use of the land and structures is reasonably necessary for the convenience and welfare of the public. Accordingly, the Siting Board DENIES the petition of Brockton Power for several specific exemptions, as well as a general exemption, from the City of Brockton's Zoning Bylaws.

Pursuant to G.L. c. 30, § 61, and 301 CMR § 11.01 (4), the Siting Board finds that all feasible measures have been taken to avoid or minimize the environmental impacts of the proposed facility.

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

In addition, the Siting Board notes that the findings in this decision are based upon the record in this case. A project proponent has an absolute obligation to construct and operate its facility in conformance with all aspects of its proposal as presented to the Siting Board. Therefore, the Siting Board requires Brockton Power to notify the Siting Board of any changes other than minor variations to the proposal so that the Siting Board may decide whether to

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inquire further into a particular issue. Brockton Power is obligated to provide the Siting Board with sufficient information on changes to the proposed project to enable the Siting Board to make these determinations.

August 7, 2009

Robert J. Shea
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Presiding Officer

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ABBREVIATIONS

<u>1985 MECo/NEPCo Decision</u>	<u>Massachusetts Electric Company/New England Power Company, 13 DOMSC 119 (1985)</u>
<u>2005 NSTAR Electric Decision</u>	<u>Boston Edison Company, d/b/a NSTAR Electric, 14 DOMSB 233 (2005)</u>
<u>2008 BELD Decision</u>	<u>Braintree Electric Light Department, 16 DOMSB 78 (2008)</u>
<u>2008 MMWEC Decision</u>	<u>Massachusetts Municipal Wholesale Electric Company, 16 DOMSB 233 (2008)</u>
<u>2009 Brockton Power Decision</u>	<u>Brockton Power, LLC, EFSB 07-2, D.P.U. 07-58/D.P.U. 07-59 (2009)</u>
AAL	Allowable Ambient Limit
ALOHA	Areal Locations of Hazardous Atmospheres
<u>Andover</u>	<u>Town of Andover v. Energy Facilities Siting Board, 435 Mass 377 (2001)</u>
<u>ANP Blackstone Decision</u>	<u>ANP Blackstone Energy Company, 8 DOMSB 1 (1999)</u>
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
BACT	Best Available Control Technology
BCF	billion [standard] cubic feet
<u>Billerica Decision</u>	<u>Montgomery Energy Billerica Power Partners, 16 DOMSB 317 (2009)</u>
<u>Brockton Decision</u>	<u>Brockton Power, LLC, 10 DOMSB 157 (2000)</u>
CO	carbon monoxide
Company	Pioneer Valley Energy Center, LLC
dba	A-weighted decibels
DOMSB	Decisions and Orders of Massachusetts Energy Facilities Siting Board
DOMSC	Decisions and Orders of Massachusetts Energy Facilities Siting Council
EFSB	Energy Facilities Siting Board
EMF	electric and magnetic field(s)
ERPG	Emergency Response Planning Guidelines
FAA	Federal Aviation Administration

HDD	horizontal directional drill
HRSB	heat recovery steam generator
<u>IDC Decision</u>	<u>IDC Bellingham LLC, 9 DOMSB 225 (1999)</u>
ISO-NE	Independent System Operator of New England
kV	kilovolts
kV/m	kilovolts per meter
L ₉₀	sound level exceeded 90 percent of time
LAER	Lowest Achievable Emission Rate
lbs/mmBtu	pounds per million British thermal units
LNG	liquefied natural gas
MAAQS	Massachusetts Ambient Air Quality Standards
MADEP	Massachusetts Department of Environmental Protection
MassHighway	Massachusetts Highway Department
<u>MECo/NEPCo Decision</u>	<u>Massachusetts Electric Company and New England Power Company, 18 DOMSC 383 (1989)</u>
mG	milligauss
Mgd	million gallons per day
MMBtu	million British thermal units
MSDS	Material Safety Data Sheet
MW	megawatts
NAAQS	National Ambient Air Quality Standards
NESCAUM	Northeast States for Consolidated Air Use Management
NHESP	Natural Heritage and Endangered Species Program
<u>Nickel Hill Decision</u>	<u>Nickel Hill Energy, LLC, 11 DOMSB 83 (2000)</u>
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NNSR	Non-attainment New Source Review
PAH	polycyclic aromatic hydrocarbon
Pipeline Applicants	PVEC together with WG&E
PM _{2.5}	particulates 2.5 microns or smaller
PM ₁₀	particulates 10 microns or smaller
ppm	parts per million

primary route	proposed 2.5-mile natural gas pipeline route
PSD	Prevention of Significant Deterioration
psig	pounds per square inch, gauge
PVEC	Pioneer Valley Energy Center, LLC
RCRA	Resource Conservation and Recovery Act (1976)
ROW	right-of-way
SCR	Selective Catalytic Reduction
SILs	Significant Impact Levels
<u>Sithe Edgar Decision</u>	<u>Sithe Edgar Development, LLC</u> , 10 DOMSB 1 (2000)
<u>Sithe Mystic Decision</u>	<u>Sithe Mystic Development, LLC</u> , 9 DOMSB 101 (1999)
Siting Board	Energy Facilities Siting Board
SO ₂	sulfur dioxide
<u>Southern Canal Decision II</u>	<u>Southern Energy Canal II, L.L.C.</u> , 12 DOMSB 155 (2001)
SPCC	Spill Prevention, Control and Countermeasure [plan]
TEL	Threshold Effects Exposure Limit
TGP	Tennessee Gas Pipeline Company
tpy	tons per year
TPS	Technology Performance Standards
µg/m ³	micrograms per cubic meter
ULSD	ultra-low sulfur diesel oil
USEPA	U. S. Environmental Protection Agency
<u>U.S. Gen Decision</u>	<u>U.S. Generating Company</u> , 6 DOMSB 1 (1997)
VOCs	volatile organic compounds
WMECO	Western Massachusetts Electric Company
WG&E	Westfield Gas & Electric
WLDC	Westfield Land Development Company, LLC

Pursuant to G.L. c. 164, § 69J¼, the Massachusetts Energy Facilities Siting Board (“Siting Board”) hereby APPROVES, subject to the conditions set forth below, the petition of Pioneer Valley Energy Center, LLC (“PVEC” or “Company”) to construct a 400-megawatt dual-fueled combined-cycle electric generation facility at the proposed site in the City of Westfield. Furthermore, pursuant to G.L. c. 164 § 69J, the Siting Board hereby APPROVES, subject to the conditions set forth below, the petition of PVEC and Westfield Gas & Electric (“WG&E”) to construct a 2.5-mile natural gas pipeline in the City of Westfield.

I. INTRODUCTION

A. Summary of Proposed Facilities

Pioneer Valley Energy Center, LLC, previously known as Westfield Land Development Company, LLC,¹ is proposing to construct a 400 megawatt² (“MW”) combined-cycle, dual fuel (natural gas and ultra low sulfur distillate (“ULSD”) electric generating facility on approximately 13 acres of a 45-acre site in Westfield (Exh. WLDC-1, at 1). PVEC, in conjunction with WG&E, also proposes to construct an approximately 2.5-mile natural gas pipeline connecting WG&E’s gas transmission pipeline system to the proposed generating facility (*id.*). The Company is seeking approval from the Massachusetts Department of Environmental Protection (“MADEP”) to operate the facility for up to 8760 hours per year, including use of a maximum of 21.0 million gallons per year of ULSD fuel, with no daily limit on ULSD use; 21.0 million gallons per year is equivalent to 1440 hours (60 days) per year at the maximum heat rate (*id.* at 19; Exh. WLDC-3, at 2; Tr. 1, at 12; Tr. 3, at 300). The proposed generating facility would be located on an undeveloped 45-acre industrial zoned property one mile north of the Massachusetts Turnpike on Ampad Road in Westfield (Exh. WLDC-1, at 1). All immediately surrounding property is also zoned for industrial use, and the closest residences are located just over one-half mile from the nearest proposed structure (Exh. EFSB-LU-4).

¹ On May 29, 2009, the Company notified the Siting Board that the Company’s name was changed from Westfield Land Development Corporation, LLC, to Pioneer Valley Energy Center, LLC.

² The maximum gross output would be 431 MW (Exh. WLDC-3, at 2; Tr. 3, at 291-295). The 400 MW figure is a round number corresponding to net output at around 45 degrees Fahrenheit (*id.*).

The proposed generating facility would include a 115-foot tall generator building containing a gas turbine, a heat recovery steam generator, and electric generators (Exh. WLDC-1, at 8, 109). A 180-foot high, 23-foot diameter stack would disperse combustion turbine exhaust gases, and a 241-foot long, 41-foot tall structure would provide wet cooling (*id.*). The site would contain storage tanks for ULSD fuel, aqueous ammonia, and raw and de-mineralized water (*id.* at 9).

PVEC stated that it would use water from the Tighe-Carmody Reservoir which is part of the Holyoke reservoir water supply system, supplemented with water from the Westfield municipal water supply system to service the proposed facility (Exh. WLDC-1, at 6). Holyoke's Reservoir would be the primary source of water for the wet cooling system (*id.*). Water from the Westfield Municipal System would be used for potable uses at the proposed facility, for use in the combustion turbine and HRSG, and as a back-up source for cooling water (*id.*).

The Company stated that there are two existing, but out-of-use, 20-inch water supply lines which run from the Tighe-Carmody Reservoir to Holyoke, passing within one mile of the proposed generating facility site (Exh. WLDC-1, at 6). PVEC would rehabilitate one or both of these lines from a point near the reservoir to a point near the facility (*id.*). The Company would construct a new supply line between the rehabilitated 20-inch lines and the new generating facility (*id.*).³

The electricity generated by the generating facility would be distributed to the regional electricity grid by connecting to an existing Western Massachusetts Electric Company ("WMECO") 115 kV transmission line that passes through the site (*id.* at 13). The existing 115 kV line would be bisected at the interconnection to the facility, by means of a 115 kV ring bus switching station to be constructed within the generating facility site (*id.*).

The proposed 2.5-mile gas pipeline route ("primary route") would begin at a point on the WG&E delivery system on the south side of the Westfield River in Westfield, extend under the Westfield River by a 550-foot horizontal directional drill ("HDD"), and continue north to the generating facility on the Pioneer Valley Railroad right-of-way (Exh. WLDC-1, at 21). The

³ PVEC stated that Holyoke Water Works would own and operate the 20-inch water lines after they are rehabilitated; however, it had not settled the commercial question whether PVEC or Holyoke Water Works would manage the work of re-lining the water lines (Tr. 2, at 282-283).

pipeline would be a 12-inch diameter steel pipe normally operating at approximately 700 pounds per square inch, gauge (“psig”), with a maximum allowable operating pressure of 878 psig and a delivery capacity of 62,000 dekatherms per day (*id.* at 20). The locations of the proposed generating facility and pipeline are shown in Figure 1, attached.

The alternative route for the gas pipeline is approximately 3.5 miles in length. It would begin at the existing Northampton Lateral at the intersection of North Road and East Mountain Road in Westfield. The pipeline would continue on North Road westbound to an existing electric transmission easement and then south to the proposed site (Exh. WLDC-1, at 41).

B. Jurisdiction and Scope of Review

1. Generating Facility

PVEC filed its petition to construct the proposed facility in accordance with G.L. c. 164, § 69J¼. Pursuant to G.L. c. 164, § 69J¼, no applicant shall commence construction of a “generating facility” unless a petition for approval of construction of that generating facility has been approved by the Siting Board. Pursuant to G.L. c. 164, § 69G, a jurisdictional “generating facility” is defined as “any generating unit designed for or capable of operating at a gross capacity of 100 megawatts or more, including associated buildings, ancillary structures, transmission and pipeline interconnections that are not otherwise facilities, and fuel storage facilities.” Because the proposed facility is capable of operating at a gross capacity of 100 MW or more, it is a “generating facility” requiring Siting Board approval under G.L. c. 164, § 69J¼.

In accordance with G.L. c. 164, § 69J¼, before approving a petition to construct a generating facility, the Siting Board must determine that the applicant has met five requirements. First, the Siting Board must determine that the applicant’s description of the site selection process used is accurate (*see* Section II.A, below). Second, the Siting Board must determine that the applicant’s description of the proposed generating facility and its environmental impacts are substantially accurate and complete (*see* Section II.C, below). Third, the Siting Board must determine that the proposed generating facility will minimize environmental impacts consistent with the minimization of costs associated with mitigation, control, and reduction of the environmental impacts (*see* Section II.C, below). Fourth, the Siting Board must determine that plans for construction of the proposed generating facility are consistent with current health and environmental protection policies of the Commonwealth and with such energy policies as are

adopted by the Commonwealth for the specific purpose of guiding the decisions of the Board (see Section IV, below). Fifth, if the expected emissions from the proposed facility do not meet the applicable technology performance standard, the Siting Board must determine, based on a comparison with other fossil fuel generating technologies, that the proposed generating facility on balance contributes to a reliable, low-cost, diverse regional energy supply with minimal environmental impacts (see Section II.C, below).

2. Gas Pipeline

PVEC and WG&E (“Pipeline Applicants”) filed their joint petition to construct a natural gas pipeline pursuant to G.L. c. 164, §69J, which requires a project applicant to obtain Siting Board approval for the construction of proposed energy facilities before a construction permit may be issued by another state agency. As a new pipeline over one mile in length intended for the transmission of natural gas, the Pipeline Applicants’ project falls within the definition of “facility” set forth in G.L. c. 164, § 69G, which provides that a “facility” includes:

a new pipeline for the transmission of gas having a normal operating pressure in excess of 100 pounds per square inch gauge which is greater than one mile in length except restructuring, rebuilding, or relaying of existing transmission lines of the same capacity.

Before approving a petition to construct facilities pursuant to G.L. c. 164, §69J, the Siting Board requires an applicant to justify its proposal in three phases. First, the Siting Board requires the applicant to show that additional energy resources are needed (see Section III.A, below). Next, the Siting Board requires that the applicant establish that, on balance, its proposed project is superior to alternative approaches in terms of cost, environmental impact, reliability, and ability to address the identified need (see Section III.B, below). Finally, the Siting Board requires the applicant to show that it has considered a reasonable range of practical siting alternatives and that the proposed site for the facility is superior to a noticed alternative site, in terms of cost, environmental impact, and reliability of supply (see Sections III.C and III.D, below).

C. Procedural History

In accordance with G.L. c. 164, §69J¼, on June 18, 2008, PVEC filed a petition with the Siting Board for approval to construct the proposed generating facility in Westfield, Massachusetts, described above (Exh. WLDC-1). On the same day, PVEC and WG&E filed a joint request pursuant to G.L. c. 164, §69J to construct the proposed gas pipeline facilities described above to interconnect with the proposed generating facility (*id.*).

The Siting Board staff conducted a public comment hearing in the City of Westfield on August 5, 2008. Siting Board staff granted the petition to intervene filed by WMECO, and the petitions for limited participant status filed by the City of Westfield and Christopher and Kellye Shuman. The Siting Board staff conducted four days of evidentiary hearings between November 25, 2008, and December 12, 2008. The Company presented the testimony of three witnesses: Matthew A. Palmer, Project Manager for PVEC; Dammon M. Frecker, Vice President of Energy and Industrial Services at ESS Group, Inc.; and Dr. Peter Valberg, Principal and Senior Scientist at Gradient Corporation. PVEC was the only party participating in evidentiary hearings, and filed a single brief on January 9, 2009. Neither the intervenor nor the limited participants in this matter filed a brief. The evidentiary record consists of approximately 150 exhibits which are primarily Company responses to information requests and record requests issued by Siting Board staff.

On June 11, 2009, the Siting Board met to consider this matter, and directed staff to draft a tentative decision approving PVEC's petition and the joint petition of PVEC and WG&E with the conditions as set forth below.

II. ANALYSIS OF PROPOSED GENERATING FACILITY

A. Site Selection

1. Standard of Review

G. L. c. 164, § 69J¼ requires the Siting Board to determine whether an applicant's description of the site selection process used is accurate. An accurate description of an applicant's site selection process includes a complete description of the environmental, reliability, regulatory, and other considerations that led to the applicant's decision to pursue the project as proposed at the proposed site, as well as a description of other siting and design options that were considered as part of the site selection process.

In accordance with G. L. c. 164, § 69H, the Siting Board is charged with the responsibility for implementing energy policies in its statute to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. To accomplish this, G. L. c. 164, § 69J¹/₄ requires the Siting Board to determine whether “plans for the construction of a proposed facility minimize the environmental impacts consistent with the minimization of costs associated with the mitigation, control, and reduction of the environmental impacts of the proposed generating facility.” Site selection, together with project design and mitigation, is an integral part of the process of minimizing the environmental impacts of an energy facility.⁴

2. Description

The Company stated that, based on its understanding of the marketplace for generation in the region, the Company identified a need for new base load generation capacity, with a particular preference for natural gas combined-cycle generating facilities (Exh. WLDC-1, at 36). The Company stated that it focused on areas of Massachusetts with suitable conditions for industrial development, and areas where it would have the ability to secure a long-term electricity supply contract (*id.* at 37; Tr. 2, at 159). PVEC explained that its primary considerations in identifying potential sites included availability of sufficient acreage (15 acres or more) in an industrial zone, proximity to a high pressure gas transmission line and an electric transmission corridor, suitable zoning, a favorable political climate in the community, and adequate buffering from residential neighborhoods and sensitive receptors (*id.* at 36).

PVEC stated that it identified several areas in Massachusetts where small municipal electric companies are located, including south of Boston, in the vicinity of Worcester, and near Springfield (Exh. WLDC-1, at 37). The Company stated that after reviewing each of these markets in detail, it determined that the Springfield area would benefit from additional generation (*id.*). After evaluating available properties with sufficient size for the proposed facilities and the receptiveness of communities in the Springfield area, the Company determined that the City of Westfield contained the most suitable sites for the proposed project (*id.*). PVEC

⁴ See Section II.A.3 for further discussion regarding the standard of review for site selection.

explained that Westfield is closest to the main Tennessee Gas Transmission pipeline, and has an active municipal light plant; the Company further stated that Westfield officials are supportive of the proposed project (id.; Tr. 2, at 160).

PVEC stated that it considered three potential sites in Westfield: (1) property near the Westfield River and an existing municipal wastewater treatment plant; (2) property located to the northwest of the Barnes Municipal Airfield; and (3) the proposed site (Exh. WLDC-1, at 38). According to the Company, the site near the Westfield River is proximate to both electric transmission and gas pipeline interconnections, and has sufficient acreage as well as significant buffer between the site and the nearest residence (id.). PVEC determined that since the property is located in a floodway regulated by the Federal Emergency Management Agency, it would be impractical to pursue the proposed project at this site (id.). With respect to the site northwest of the airfield, PVEC stated that it has sufficient acreage, immediate access to an electric transmission interconnection, reasonable access to high pressure gas interconnection, and significant buffer between residences and other sensitive receptors (id.). PVEC stated, however, that Federal Aviation Administration (“FAA”) regulations limit the height of any structure at the site to a maximum of 106 feet to avoid impacts on airfield operations (id.). PVEC, therefore, eliminated this site based on the Company’s inability to construct a stack of sufficient height to allow for proper dispersion of emissions from the proposed facility (id.).

According to the Company, it chose the proposed Ampad Road site because it is the only site that meets required infrastructure requirements, has adequate acreage, has immediate access to 115 kilovolt (“kV”) electric transmission lines, has reasonable access to high pressure gas via several potential routes, and is zoned for development of an electric generating facility (Exh. WLDC-1, at 38). In addition, PVEC stated that the proposed site has fewer wetland impacts than the other industrial properties it considered (id.).

In response to Siting Board staff’s request for more specific information regarding the Company’s site selection process, PVEC provided a matrix setting forth selection screening of the three Westfield sites as well as several others PVEC identified outside of Westfield in Western Massachusetts (Exh. EFSB-SS-2). The additional sites are located in Springfield, West Springfield, and East Longmeadow and, according to the Company, each assessed site, aside from the one selected for development, had a flaw precluding viable development of the proposed generating facility (id.). These sites are summarized in Table 1, below.

Table 1. Summary of Sites					
Site	Description	Proximity to Gas	Proximity to Power	Public Power Community	Flaws
Ampad Road (chosen site)	45-acre vacant industrial land	Available via proposed pipeline	115-kV lines on parcel	Yes	None
Atlantic Tree Nursery, Westfield	100-acre agricultural land, abuts wastewater treatment plant and Westfield river	Tennessee lateral across street with limited available service	115-kV lines on site	Yes	Located within Westfield River floodway
Campanelli Industrial Park, Westfield	Existing industrial park with 2 vacant sites	Would be available via proposed pipeline	115-kV lines abut site	Yes	Proximity to Westfield airport would preclude sufficiently tall stack
Bondi's Island, West Springfield	24-acre remediated waste site, abuts wastewater treatment plant	High pressure line would need to be extended from Agawam	Lines and substation abut site	No	Structural restrictions due to landfill
Smith & Wesson Development, Springfield	Large remediated industrial site	High pressure line several miles away	Lines and substation abut	No	Near residences; Gas delivery would be expensive
Deer Park Industrial Center, East Longmeadow	Industrial park developed by Western MA Development Council	High pressure line in abutting road	115-kV lines abut site	No	Site too small; near residences

(Exh. EFSB-SS-2)

PVEC maintained that it has accurately set forth the key elements of its site selection process in satisfaction of the requirements of G.L. c. 164, § 69J¼ (Exh. WLDC-1, at 38).

3. Analysis

The record shows that the Company evaluated several areas in Massachusetts where municipal light departments are located (Exh. WLDC-1, at 37). After reviewing these markets, the Company determined that based on proximity to the main Tennessee Gas Transmission pipeline, its active municipal light plant, and the support of its municipal officials, the City of Westfield had the most suitable potential sites for the proposed facility. After investigating three proposed industrial sites in Westfield, the Company determined that the proposed Ampad Road site was the only site that met all of PVEC's infrastructure requirements, and that it had fewer

environmental impacts than the two other Westfield sites under consideration. Overall, PVEC's site selection process was limited.

With respect to site selection, G.L. c. 164, § 69J¼ provides that a petitioner must meet the requirement that "the description of the site selection process used is accurate". The Supreme Judicial Court of Massachusetts in the Town of Andover v. Energy Facilities Siting Board, 435 Mass. 377 (2001) ("Andover") affirmed that the Siting Board's minimum duties with respect to site selection review are limited to a determination of whether the petitioner's description of its site selection process is accurate.⁵ Here, there is nothing in the record to indicate that the petitioner's description of its site selection process was inaccurate.

The Siting Board finds that PVEC provided an accurate description of its site selection process.

B. Technology Selection

The Siting Board's Technology Performance Standard ("TPS") requires a proponent to prepare an analysis of alternative fuel technologies if the project does not meet a published set of emissions criteria.

1. Standard of Review

G. L. c. 164, § 69J¼ requires the Siting Board to promulgate technology performance standards for generating facility emissions. The TPS are to be used solely to determine whether a petition to construct a generating facility must include information regarding fossil fuel generating technologies other than the technology proposed by the petitioner. G. L. c. 164, § 69J¼. If the expected emissions of the facility do not meet the technology performance

⁵ As we noted in Brockton Power, LLC, EFSB 07-7/D.P.U. 07-58/D.P.U. 07-59, at 9-10 (2009) ("2009 Brockton Decision"), the Siting Board has not addressed the scope of its authority post-Andover. We have held in a number of post-Andover cases that site selection, together with project design and mitigation, is an integral part of the process of minimizing the environmental impacts of a generating facility. Id. However, the Siting Board has not addressed how that scope of review and the holding in Andover should be reconciled nor whether Andover speaks to the Siting Board's *duties* as opposed to its *discretion*. Id. The Siting Board intends to provide guidance on this matter for future generating facility project proponents. Id.

standards in effect at the time of filing, the petitioner must include in its petition a description of the environmental impacts, costs, and reliability of other fossil fuel generating technologies, and an explanation of why the proposed technology was chosen. Id. The Siting Board must then determine whether the construction of the proposed generating facility on balance contributes to a reliable, low-cost, diverse regional energy supply with minimal environmental impacts. Id.

2. Discussion and Analysis

The Company calculated project emission rates for the five criteria pollutants and sixteen non-criteria pollutants for which the Siting Board has set TPS (Exh. WLDC-1, at 31, tables 3.1-1, 3.1-2). For all 21 pollutants, the generating facility's potential emission rates fall below the TPS (id.). Therefore, the Company was not required to provide a comparison of the technology for the proposed generating facility to potential alternatives.

C. Environmental Impacts

1. Standard of Review

G. L. c. 164, § 69J¼ requires the Siting Board to determine whether the plans for construction of a proposed generating facility minimize the environmental impacts of the proposed facility consistent with the minimization of costs associated with the mitigation, control, and reduction of the environmental impacts of the proposed generating facility. In order to make this determination, the Siting Board assesses the impacts of the proposed facility in eight areas prescribed by its statute – air quality, water resources, wetlands, solid waste, visual impacts, noise, local and regional land use, and health – and determines whether the applicant's description of these impacts is accurate and complete. G. L. c. 164, § 69J¼.

The Siting Board also assesses the costs and benefits of options for mitigating, controlling, or reducing these impacts, and determines whether mitigation beyond that proposed by the applicant is required to minimize the environmental impacts of the proposed facility consistent with the minimization of costs associated with the mitigation, control, and reduction of the environmental impacts of the proposed generating facility. Compliance with other agencies' standards does not establish that a proposed facility's environmental impacts would be minimized.

Finally, the Siting Board assesses any tradeoffs that need to be made among conflicting environmental impacts, particularly where an option for mitigating one type of impact has the

effect of increasing another type of impact. An assessment of all impacts of a facility is necessary to determine whether an appropriate balance is achieved both among conflicting environmental concerns and between environmental impacts and cost. A facility proposal which achieves this balance meets the Siting Board's statutory requirement to minimize environmental impacts consistent with minimizing the costs associated with the mitigation, control, and reduction of the environmental impacts of the proposed generating facility.

G.L. c. 164, § 69J¼ also requires the Siting Board to determine whether the plans for construction of a proposed generating facility are consistent with current health and environmental protection policies of the Commonwealth and with such energy policies of the Commonwealth as are adopted by the Commonwealth for the specific purpose of guiding the decisions of the Siting Board. The health and environmental protection policies applicable to the review of a generating facility vary considerably depending on the unique features of the site and technology proposed; however, they may include existing regulatory programs of the Commonwealth relating to issues such as air quality, water-related discharges, noise, water supply, wetlands or riverfront protection, rare and endangered species, and historical or agricultural land preservation.

2. Air Quality

This section describes baseline air quality conditions, emissions and impacts of the proposed facility, and compliance with existing regulations. The plant's turbines would be primarily gas-fired, with up to 8760 hours of operation per year and consumption of no more than 20.9 million gallons per year of ULSD fuel, equivalent to 1440 hours (60 days) per year (Exh. WLDC-1, at 19). The generating facility would have a 180-foot emissions stack (*id.* at 7).

a. Applicable Regulations

The Company indicated that the principal air quality regulatory programs that apply to the proposed facility are: MADEP's Major Comprehensive Plan Approval and USEPA's Nonattainment New Source Review ("NNSR"), Prevention of Significant Deterioration ("PSD") and Acid Rain Program (Exh. WLDC-1, at 46).

MADEP's regulations require a best available control technology ("BACT") or lowest achievable emission rate ("LAER") analysis, as appropriate, and a demonstration that the project will not cause or contribute to an exceedance of state or national ambient air quality standards

(“MAAQS” and “NAAQS”, respectively) (*id.* at 46-48). All areas of the country are classified as “attainment,” “non-attainment,” or “unclassified” with respect to NAAQS for the criteria pollutants nitrogen dioxide (“NO₂”), sulfur dioxide (“SO₂”), lead, carbon monoxide (“CO”), ground level ozone, and particulate matter (*id.* at 47). The proposed facility is in a non-attainment area for ozone, so because the proposed facility’s potential ozone precursor, nitrogen oxides (“NO_x”), exceeds the major source threshold, review under NNSR is required. The facility will be required to acquire offsets and implement Lowest Achievable Emissions Rate (“LAER”) for NO_x (*id.*). The proposed facility’s potential CO and NO₂ emissions exceed the major source thresholds (Tr. 1, at 70-71). The Company provided information indicating that potential emissions of SO₂, lead and particulate matter would not exceed the major source thresholds (*id.*; Exh. WLDC-3 at table 7-3). Because the proposed facility’s potential emissions exceed the major source threshold for at least one criteria pollutant, review under PSD is required (Exh. WLDC-4, at 21; Tr. 1, at 71). The Company stated that, beyond the PSD program, MADEP pre-construction permitting requires at least BACT for all emissions (Exh. WLDC-3; Tr. 1, at 78-79).

b. Baseline Air Quality

Air quality in the project area is in attainment with the NAAQS for all pollutants except ozone (Exh. WLDC-1, at 52). Massachusetts is in attainment for the other criteria pollutants including CO, lead, NO₂, SO₂, and particulate matter (including particulate matter smaller than 10 microns – PM₁₀ and particulate matter smaller than 2.5 microns – PM_{2.5}) (*id.*). The Company stated that there are no ambient air monitors located in Westfield (*id.*). There are three ambient air monitoring stations located in Hampden County: PM₁₀ and PM_{2.5} monitors located approximately 8.25 miles south-east of the site in Springfield; CO, SO₂, NO₂, and PM_{2.5} monitors located approximately 8.5 miles southeast of the site, also in Springfield; and ozone, NO₂, and PM_{2.5} monitors located approximately 9.5 miles northeast of the site, at the Westover Air Force Base in Chicopee (*id.*). The Company asserted that the Chicopee and Springfield monitoring stations are in close proximity to the site, and are representative of the site in terms of topography, climatology, and meteorology (*id.*). The Company used measured background concentrations recorded at the Springfield and Chicopee air monitoring stations (*id.* at table 5.2-3).

c. Proposed Facility Impacts

PVEC filed a Comprehensive Plan Approval Application with MADEP as well as a PSD Permit Application with the U.S. Environmental Protection Agency (“USEPA”) on November 24, 2008 (Exhs. WLDC-3; WLDC-4). The Comprehensive Plan Approval Application contains appropriate BACT and LAER analyses for air emissions, as required by MADEP (Exh. WLDC-3, at 27-38). Proposed air pollution control systems include dry low-NO_x combustion technology, water injection during ULSD firing and a selective catalytic reduction system to control NO_x, as well as a CO oxidation catalyst for control of CO and volatile organic compounds (“VOCs”) (*id.* at 12). The cooling tower would be equipped with mist eliminators to control particulate matter (*id.*). A summary of project air emissions is provided in Table 2, below.⁶

Pollutant	Concentration Using Gas	Concentration Using Oil	Annual Max Emissions	Control Method
NO ₂ /NO _x	2.0 ppm	5.0 ppm	110.9 tons/yr	Water Injection, Selective Catalytic Reduction
CO	2.0 ppm	6.0 ppm	549.9 tons/yr	Oxidation Catalyst
VOC	1.0 ppm	6.0 ppm	24.8 tons/yr	Oxidation Catalyst
Particulate	0.0040 lb/MMBtu	0.014 lb/MMBtu	51.0 tons/yr	Cooling Tower Mist Eliminators
SO ₂	0.0019 lb/MMBtu	0.0017 lb/MMBtu	18.0 tons/yr	Fuel Selection

(Exh. WLDC-3, at 2, Table 3-1, Table 7-3; Tr. 1, at 9-10)

The Company conducted screening level and refined air dispersion modeling to evaluate the project’s potential ambient air impacts for criteria pollutants and air toxics (*id.* at 57). PVEC concluded that the project would not cause or contribute to an exceedance of the health-based NAAQS, and that the maximum predicted worst case impacts of criteria pollutants from the facility are below Significant Impact Levels (“SILs”) established by the USEPA (*id.*). PVEC did

⁶ USEPA has not promulgated SILs for PM_{2.5}. PVEC stated that MADEP has adopted a draft policy of applying PM_{2.5} SILs recommended by Northeast States for Coordinated Air use Management (“NESCAUM”). Therefore, PVEC used the NESCAUM recommended SILs for its analysis of PM_{2.5} (Exh. WLDC-5 at Table 3.3-1).

not conduct interactive source modeling as part of its air permitting, as its modeling showed that air impacts would be below SILs (Exh. EFSB-A-14).⁷

Air quality impacts of the generating facility, as predicted by adding modeled facility impacts to regional background concentrations, are summarized in Table 3, below.

Pollutant	Averaging Period	NAAQS ($\mu\text{g}/\text{m}^3$)	Significant Impact Level ($\mu\text{g}/\text{m}^3$)	Maximum Project Impacts		Background Concentrations ($\mu\text{g}/\text{m}^3$)	Total Predicted Ambient Concentrations	
				($\mu\text{g}/\text{m}^3$)	% of SIL		($\mu\text{g}/\text{m}^3$)	% of NAAQS
CO	1-hr	40,000	2000	104.2	5%	3843	3947	10%
	8-hr	10,000	500	18.2	4%	3028	3046	30%
NO ₂	Annual	100	1	0.6	60%	19.1	20	20%
PM ₁₀	24-hr	150	5	1.9	38%	53	55	37%
PM _{2.5}	24-hr	35	2*	1.9	95%	28.3	30	86%
	Annual	15	0.3*	0.2	67%	10	10	67%
SO ₂	3-hr	1300	25	2	8%	99	101	8%
	24-hr	365	5	0.4	8%	56	56	15%
	Annual	80	1	0.04	4%	16	16	20%

(Exh. PVEC-4, at 30, Table 6-19).

* NESCAUM recommended SIL.

With respect to non-criteria pollutants, the Company compared the modeled dispersed facility emission concentrations to Allowable Ambient Levels ("AALs") and Threshold Effects

⁷ Staff requested that PVEC perform interactive source-modeling for PM_{2.5} having required a similar analysis in EFSB 07-2 (Exh. EFSB-A-14). According to the Company, MADEP requires inclusion into interactive source modeling of all sources within 10 kilometers of the site with emissions greater than 100 tons per year, as well as all sources within 20 kilometers with emissions greater than 1000 tons per year (Tr. 1, at 41). The Company stated that there are no sources within the above distances that exceed the respective emission thresholds (id.). Upon consultation with MADEP, the Company determined that there are no registered sources of air emissions in the area with which such an interactive analysis would be performed (id.). Therefore, the Company did not perform the interactive source modeling for PM_{2.5} (id.).

Exposure Limits (“TELS”) established by the MADEP (Exh. WLDC-3, at 49). Among the non-criteria pollutants, PVEC indicated that none exceeded TELS or AALs (id.)

d. Analysis

The record shows that natural gas is the expected primary fuel of the proposed facility and that ULSD would be used at the proposed facility when oil is used as a substitute for natural gas for up to 60 days per year. Use of natural gas as primary fuel, with a limit on backup use of ULSD to only 60 days per year, minimizes emissions of SO₂, particulates, and other pollutants.

The record shows that oxidation catalyst would control emissions of VOCs and CO. The record shows that NO_x would be controlled by water injection and selective catalytic reduction. Further, the record indicates that emissions from the proposed facility would not cause local or regional air quality to worsen significantly, as compared to ambient conditions and established air quality standards. Based on modeling analyses, ambient impacts would not cause an exceedance of the NAAQS. The record also shows that the proposed facility’s emissions would all be below SILs.

If approved as proposed in its Air Plan Application, the project will be permitted to operate on ULSD oil fired operation for the equivalent of 60 days per year. The Siting Board is concerned that the Company could use up its annual allotment of oil before the month of December, and would thereby be left without permission to operate in the event of a natural gas shortage in that month. In a past case, the Siting Board addressed a similar concern by requiring the proponent to reserve a portion of the permitted oil use for the month of December.

Massachusetts Municipal Wholesale Electric Company, 16 DOMSB 233, at 262 (2008) (“2008 MMWEC Decision”). Accordingly, the Siting Board directs the Company to limit operation on oil in any one year to the hourly equivalent of 60 days, including no more than 46 days from January 1st to November 30th (and not during ozone season) and reserving at least 14 days for December 1st to December 31st; provided that this limitation on operation on ULSD oil will not apply when natural gas is unavailable to operate the proposed facility (either due to gas transportation disruptions, or supply disruptions or curtailment), the Company has used either its pre-December allotment of 46 days (equivalent) and/or its December allotment of 14 days (equivalent) for any reason, and ISO-NE calls on the facility to operate out of economic merit. The Siting Board further directs the Company to provide the Board with a report of the

hours of ULSD use and the reasons therefor, for each day ULSD was used, for each calendar year, by the following February 1st.

The Siting Board finds that, with implementation of this condition, the air quality impacts of the proposed generating facility would be minimized.

3. Water Resources and Wetlands Impacts

In this section, the Siting Board addresses the water-related impacts of the proposed facility including: (1) the water supply requirements and related impacts on water supply systems and on surface and subsurface water levels and flow volume; (2) the water-related discharges from the facility, including wastewater and stormwater discharges, and their related impacts; and (3) wetlands impacts.

a. Water Supply

PVEC stated that water for the generating facility would be supplied in part by the City of Holyoke (Holyoke Water Works) and in part by the City of Westfield (Westfield Water Resources Department) (Exh. WLDC-1, at 64). Holyoke Water Works would supply water for the cooling tower makeup via a pipeline from the Tighe-Carmody Reservoir, typically less than 1.9 million gallons per day (“mgd”), with a peak demand of 2.2 mgd (*id.* at 64-65). Holyoke is authorized to withdraw 8.04 mgd from the Reservoir under the Massachusetts Water Management Act (*id.* at 65-66). Holyoke’s average withdrawals in 2005, 2006, and 2007 were respectively 2.48, 2.82 and 3.6 mgd lower than authorized volumes (*id.* at 66). The Holyoke Water Works historically delivered water from the Tighe-Carmody Reservoir to Holyoke via two 20-inch cast iron supply lines; water is currently delivered to Holyoke on a different route by a single 42-inch transmission main (*id.* at 65). The two 20-inch lines remain in place but not in use (*id.*). PVEC proposes to rehabilitate a section of one or both of the 20-inch lines to provide the cooling water to the proposed generating facility (*id.* at 66). The existing 20-inch lines would remain in control of Holyoke Water Works (Tr. 2, at 282).

One or both of the 20-inch lines would be connected at one end to the 42-inch main near the Tighe-Carmody Reservoir, and at the other end to a new water supply line where the existing 20-inch lines cross the Pioneer Valley Railroad easement or WMECO transmission line 1302, north of the site (Exh. WLDC-1, at 6). The Company’s preferred route for the new supply line would run south 0.9 miles along the existing WMECO transmission line easement from the

connection point with the existing water line to the generating facility (*id.*). An alternative water supply line route would be approximately 1.3 miles long; from a connection point with the existing water line, it would run south within the Pioneer Valley Railroad easement, then turn east at the Ampad facility and run through a new easement on that property for 0.1 miles to the generating facility (Exhs. WLDC-1, at 25, fig. 1.6-1; WLDC-2, at 34, fig. 2.3-3).

PVEC evaluated an option of using dry cooling instead of the wet cooling proposed. Dry cooling would eliminate water use from the Holyoke Water Works system (Exh. WLDC-5, at 8). The Company indicated that a tall cooling tower would be required for dry cooling, and that two percent more heat input would be required for a given level of electricity production, costing money and causing greater air emissions per unit generation (*id.*; Tr. 2, at 266; Tr. 3, at 301).

PVEC maintains that the proposed water withdrawal amount would not lead to an exceedance of Holyoke's authorized volume and that no further water supply permitting would be required as a result of water withdrawal for the proposed generating facility (*id.*). Because no new permitting would be necessary, the Company would not be required to obtain any additional permits under the Water Management Act with the attendant review of the water use often undertaken when such large volumes of water are consumed. PVEC asserted that, due to the surplus capacity, the proposed withdrawal would have no significant impact on the capacity or level of the Tighe-Carmody Reservoir; PVEC even asserted that the project would have no impact to water flows in the Manhan River downstream from the reservoir (Exh. EFSB-W-9; Tr. 1, at 20).

As mitigation for its cooling water use, PVEC proposed to support water conservation efforts that have been initiated for the Holyoke water system (Exh. EFSB-RR-21). The Company proposes to provide \$25,000 in funding to complete a leak detection survey begun for the system and to provide Holyoke Water Works with an additional \$55,000 for future leak detection and repair activities (*id.*).

As proposed by PVEC, potable water and water for turbine cooling, steam production and air pollution control would be provided from the municipal system of the City of Westfield (Exh. WLDC-1, at 64). The typical demand would be 0.12 mgd, with a peak demand during ULSD firing of 0.5 mgd (*id.* at 65). The City of Westfield is authorized to withdraw from eight municipal wells and the Granville Reservoir up to 6.1 mgd on an annual average basis (*id.*). Westfield's current maximum capacity is approximately 14.6 mgd, with an annual average

withdrawal of 5 mgd and estimated peak usage of 11 mgd (*id.*). Pursuant to a letter dated December 10, 2008, the Superintendent of the Westfield Water Resources Department “certified” that the Westfield system has adequate water supply to accommodate the peak flow to the proposed generating facility of 0.5 mgd without modification to the City of Westfield’s existing infrastructure (Exh. EFSB-W-4(1)).

PVEC also proposes to connect the Westfield water supply line to the cooling tower for backup in the event of a disruption in supplies from the Holyoke Water Works system (Exh. WLDC-1, at 65). PVEC states the connection would be used only for brief periods and in close coordination with the operators of the Westfield system (*id.*). The Company has had preliminary discussions with the Westfield Water Resources Department regarding the cooling tower backup supply, and stated that it intends to reach an agreement with the Westfield Water Resources Department which will meet the Company’s requirements while ensuring that using Westfield water as a backup does not overdraw Westfield’s system (Tr. 2, at 255).

b. Wastewater and Stormwater Discharge

The typical wastewater discharge rate from the facility is expected to be less than 229,000 gpd, with a peak discharge rate of 341,000 gpd (Exh. WLDC-1, at 66). The City of Westfield has confirmed that Westfield has the sewerage infrastructure capacity to handle the wastewater discharge from the project (Exh. EFSB-W-4(1)).

PVEC stated that the proposed project would be located over the Barnes Aquifer, and indicated that the Barnes Aquifer is one of the most productive in the state (Tr. 2, at 157). However, the project would not be located in the Zone 2 recharge area (*id.*).

All impervious surfaces associated with the generating facility would be located within the watersheds of two small swales (Exh. WLDC-1, at 73). Impervious surfaces on site would include the generator building, paved driveways and parking area, the wet-cooling tower and storage tanks (*id.*). Of the total drainage area of swale A, approximately 5.8 acres, 2.64 acres would be converted to impermeable surfaces; the drainage area of swale B is approximately 8.1 acres, of which 1.99 acres would be converted to impermeable surfaces (Exh. EFSB-W-5).

PVEC indicated that it would seek coverage under general permits under the National Pollutant Discharge Elimination System (“NPDES”) for: (a) construction activities, by filing a notice of intent with the USEPA before starting construction, and (b) operational industrial

activities, by filing a second notice of intent 60 days before starting operations (Tr. 1, at 85). The proposed site stormwater management system would collect runoff via a drainage system (Exh. WLDC-1, at 73). The Company stated that its proposed system is designed to remove 80% of total suspended solids as required by MADEP stormwater policy and that the calculated groundwater recharge volume of the infiltration basin is sufficient to satisfy the MADEP capacity requirements (id.).

PVEC stated that it would design and construct for the ammonia off-loading area a spill control system large enough to contain the contents of one ammonia truck (Tr. 4, at 383). The Company stated that a control system extending under all pipes and hoses leading to the ammonia storage tank would minimize the risk of release of ammonia to the soil (id. at 385-386).

c. Wetlands

The site of the proposed generating facility contains two distinct wetland areas: a forested wetland in the central area of the site; and a drainage swale on the western portion of the site along Ampad Road (Exh. WLDC-1, at 68). Both wetlands are classified as Bordering Vegetated Wetlands with associated 100-foot buffer zones and are protected under the Massachusetts Wetlands Protection Act (id.).

According to the Company, there would be no permanent impacts to the forested wetland area; however, transmission wires within the buffer zone may require tree pruning and vegetation clearing (id. at 69). There would be a bridge spanning the drainage swale, and a roadway and bridge crossing would be located within the buffer to the swale (id. at 69-70). There may also be temporary impacts to the swale during construction (id. at 69).

All activities affecting the 100-foot buffer zones are subject to approval by the Westfield Conservation Commission (id. at 69-70). The Company stated that, where necessary, it will temporarily install sediment and erosion control barriers to mitigate impacts to wetland areas (id. at 71).

d. Analysis

The record shows that to meet cooling water make-up needs, the Company would rehabilitate one or both abandoned water lines extending eastward from the Tighe-Carmody Reservoir and also would construct a new water supply line to the generating facility, either 0.9 miles following a WMECO transmission right-of-way, or 1.3 miles largely in the Pioneer

Valley Railroad right-of-way. No differential environmental impact between the two new water supply line routes was identified.

With respect to water supply, the record indicates that the City of Westfield and Holyoke Water Works have sufficient capacity to serve the needs of the proposed generating facility. However, by withdrawing water from the Tighe-Carmody Reservoir, the proposed project would necessarily affect annual flow in the Manhan River. The Siting Board reviewed a similar proposal to obtain cooling water supply by diverting potable water from a municipally operated reservoir and aqueduct system. Berkshire Decision, 4 DOMSB 221, at 148-150, 204-205, 211-212 (1996). There, as here, the municipal system's withdrawal allocation could support the cooling water use, but a sizable amount of high quality water would be consumed, and reservoir spillage and other releases that contribute at times to downstream river flow would be less. Id. at 148-150. The Siting Board imposed a condition requiring the petitioner to work with the municipal system operator to implement, as appropriate, measures to ensure the system's long-term supply capability, including such measures as a backup water supply for the generating facility or pursuit of water conservation programs in the overall municipal system. Id. at 148-150, 211-212.

Here, given the extent of consumption of water, the Siting Board concludes the offered mitigation to support water conservation in Holyoke's water system is warranted. Therefore, the Siting Board directs the Company to provide Holyoke Water Works with the \$80,000 proposed to perform leak detection, repair and other water supply system improvements and also to work in conjunction with Holyoke Water Works in support of customer water conservation education efforts.

The record shows that the Company intends to use Westfield municipal water as a backup supply for the cooling tower, and to come to an agreement with the Westfield Water Resources Department regarding this use. The Siting Board directs the Company to provide the Board, within two weeks of its execution, a copy of any agreement reached with the Westfield Water Resources Department regarding use of Westfield water for cooling tower backup, should such an agreement be reached. Further, the Siting Board directs the Company to inform the Board if and when discussions regarding backup water supply have ceased and no agreement is reached.

With respect to wastewater discharge, the record shows that existing Westfield sewer infrastructure is capable of handling the generating facility wastewater. With respect to

stormwater discharge, the record indicates that the proposed stormwater system is designed to remove 80% of total suspended solids and the groundwater recharge volume is sufficient to satisfy MADEP stormwater policy. With respect to wetlands, the record shows that there would be no permanent impact to forested wetlands, but some impacts to the wetlands' 100-foot buffer zones. The record also shows that all work within regulated wetlands would be done in consultation with the Westfield Conservation Commission.

The record shows that the risk of release of ammonia to the soil would be minimized by extending the spill control system for ammonia under all pipes and hoses leading to the ammonia storage tank, which would have its own spill control system. The Siting Board directs the Company to design and operate the proposed project so that all ammonia transfer from parked delivery trucks to the ammonia storage tank is diked or otherwise contained.

The Siting Board finds, with implementation of the above three conditions, that water resources impacts of the proposed generating facility would be minimized.

4. Solid Waste

a. Description

The Company stated that the typical types of solid waste that may be generated during generating facility construction and operation are: excess excavation materials, metal scrap, wood scrap, debris, office waste, and woody debris from site clearing (Exh. WLDC-1, at 14; Tr. 2, at 192-192). The Company stated that depleted selective catalytic reduction ("SCR") and CO catalysts would be sent off-site for reprocessing and that solid wastes would be recycled where possible (Exh. EFSB-SW-3). Additionally, the project would generate hazardous waste, which will be removed from the site by licensed contractors in accordance with applicable regulatory requirements and disposed of at approved facilities. (Exh. WLDC-1, at 14). The Company has outlined its proposed hazardous waste management protocol, which includes using USEPA registered hazardous waste transporters, record-keeping, and on-site maintenance of Material Safety Data Sheets ("MSDS") (*id.*).

b. Analysis

The record shows that the Company would arrange for proper disposal of solid wastes generated by construction and operation of the proposed facility, and that the amount of solid waste produced would be minimal. The Siting Board notes that the Company's commitment to

recycle, where possible, solid waste from construction, maintenance, and operation of the proposed facility would contribute to minimizing the solid waste impacts of the proposed facility. However, the Siting Board seeks to remain informed regarding the plans and effectiveness of recycling efforts. Therefore, in order to minimize solid waste impacts, the Siting Board directs the Company, prior to the commencement of operation, to provide to the Siting Board a recycling plan, and to report on the Company's recycling rate for construction debris and its anticipated recycling rate for operational wastes. The Siting Board finds that, with implementation of this condition, the solid waste impacts of the proposed facility would be minimized.

5. Visual Impacts

a. Description

The proposed facility would include a 115-foot tall generator building, a 180-foot tall, 23-foot diameter stack, and a 41-foot tall, 241-foot long cooling structure (Exh. WLDC-1, at 109). The proposed generating facility would be situated on an open lot within an industrial park (*id.* at 116). PVEC provided figures indicating that, within the industrial park, the generating facility would be largely visible from Ampad Road immediately to the west of the site, as well as from neighboring commercial and industrial facilities to the south and to the west of the site (*id.* at fig. 1.3-2, 5.12-2, and Appendix E). Photographs provided by the Company show that there would be a nearly unobstructed view of the generating facility from the outside edge of the Hampden Village neighborhood located one-half mile to the west of the generating facility site across an intervening privately owned vacant lot ("intervening lot") (*id.* at 116, fig. 5.12-3B). Maps of the area suggest that occupants of vehicles exiting from the Hampden Village neighborhood onto Root Road might experience a similar view (*id.* at fig. 1.5-1). The Company asserted that the photos showing the view from Hampden Village neighborhood were taken through a break in a discontinuous line of trees bordering Root Road, which runs between the neighborhood and the generating facility, in order to show the worst-case view (Tr. 1, at 56). The Company is unaware of any imminent development plans for the intervening vacant parcel (Exh. EFSB-RR-5). The top of the generating facility stack would be partially visible from additional residential areas and some more distant viewpoints (Exh. WLDC-1, at 116-117).

The Company stated that it may be possible to place vegetative screening along Root Road in the Hampden Village area, on land controlled by the City along the roadside (Tr. 1, at 57). The Company has expressed willingness to work with affected residents, and with the City of Westfield, to mitigate possible visual impacts (Exh. EFSB-RR-5). The Company has not proposed any vegetative or other visual screening on the vacant parcel or elsewhere, and has not contacted any land owners to discuss visual mitigation options (*id.*). The Company asserted that there are no historical areas or state parks from which the site would be visible, and that none of the structures would be visible from downtown Westfield (Exh. WLDC-1, at 117).

The Company stated that there is the possibility of a visible water vapor plume on cold days, and on cooler days with high humidity (Exh. EFSB-V-3). Stack plume heights generally would not exceed the equivalent of one or two stack heights (*id.*). There is also a chance of ground level fog resulting from operation of the cooling tower (Exh. EFSB-V-4). However, the Company stated that this is predicted to be extremely infrequent and occur almost entirely within the boundaries of the parcel (*id.*). The Company stated that the exterior lighting of the generating facility has been designed to have a minimal impact on surrounding areas and to be consistent with recommended practices (Exh. EFSB-V-7). The 180-foot stack will have FAA compliant lighting consisting of night-time red flashing lights and no daytime lighting (Exh. EFSB-V-8).

b. Analysis

In prior generating facility decisions, the Siting Board has required proponents to mitigate visibility of facilities, including their stacks, by providing selective tree plantings and other reasonable mitigation upon request (by property owners or local officials) in all residential areas within a set distance up to one mile from the proposed stack location. In some previous cases, the Siting Board has required off-site mitigation, such as provision of selective measures on request or other specific mitigation plans, focused on specific nearby residential areas. Montgomery Energy Billerica Power Partners, LP, 16 DOMSB 317, at 374-375 (2009) (“Billerica Decision”); Braintree Electric Light Department, 16 DOMSB 78, at 118-119 (2008) (“2008 BELD Decision”); Nickel Hill Energy, LLC, 11 DOMSB 83, at 179 (2000) (“Nickel Hill Decision”). Cases in which the Siting Board required mitigation focused on specific areas include: (1) sites not warranting wide-area (*i.e.*, 360-degree) mitigation given pre-existing extent

of heavily urbanized or industrial development including pre-existing power plant use in some direction, 2008 BELD Decision at 118-119; Sithe Mystic Development LLC, 9 DOMSB 101, at 155-156 (1999) (“Sithe Mystic Decision”); Sithe Edgar Development, 10 DOMSB 1, at 71-72 (2000) (“Sithe Edgar Decision”); and (2) sites warranting added or specific mitigation in particular directions based on openness or other sensitivity of areas to visibility impacts, U.S. Generating Company, 6 DOMSB 1, at 139-141 (1997); ANP Blackstone Energy Company, 8 DOMSB 1, at 196-197(1999). The Siting Board has also required proponents to maintain a good appearance of a facility for the life of the project. Billerica Decision at 368.

The record indicates, here, that the generating facility would be visible from the edge of one nearby residential area. The generating facility would be minimally visible from other more distant residential areas.

The record indicates that the view from the edge of the Hampden Village neighborhood may be mitigated by planting trees on the vacant intervening parcel or along Root Road, both of which lie between the affected neighborhood and the generating facility. Accordingly, the Siting Board directs the Company to pursue discussions with the owner of the intervening vacant parcel regarding the possibility of conifer plantings on the parcel, such that views of the generating facility are obscured. Additionally, the Siting Board directs the Company, with the permission of and in consultation with the City of Westfield, to plant vegetative screening along the eastern side of the Root Road public way near Hampden Village, as is practical, such that views of the generating facility are obscured.

In addition, consistent with previous cases, the Siting Board directs the Company to provide, as requested by individual property owners or appropriate municipal officials, reasonable off-site mitigation of visual impacts, including shrubs, trees, window awnings, or other mutually agreeable measures that would screen views of the proposed generating facility and related facilities at affected residential properties and roadways up to one mile from the site where residents may experience changed views. In implementing this requirement, the Company: (1) shall provide shrub and tree plantings, window awnings, or other reasonable mitigation on private property, only with the permission of the property owner, and along public ways, only with the permission of the appropriate municipal officials; (2) shall provide written notice of this requirement to appropriate officials and to all owners of property within one mile of the site, prior to the commencement of construction; (3) may limit requests for mitigation

measures from local property owners and municipal officials to a specified period ending no less than six months after initial operation of the facility; (4) shall complete all agreed-upon mitigation measures within one year after completion of construction, or if based on a request filed after commencement of construction, within one year after such request; and (5) shall be responsible for the reasonable maintenance and replacement of plantings, as necessary, to ensure that healthy plantings become established. Further, the Siting Board directs the Company to maintain the good appearance of the facility, including the stack and on-site landscaping, for the life of the project.

The Siting Board finds that, with implementation of these conditions, the visual impacts of the proposed generating facility would be minimized.

6. Noise Impacts

a. Description

i. Generating Facility Operational Noise

PVEC conducted ambient noise assessment and noise modeling for nine points surrounding the proposed generating facility: the four nearest residences in various directions, and five property boundary points (Exh. WLDC-1, at 105). The Company used the single quietest hourly L_{90} noise level⁸ observed over the seven-day measurement period to represent ambient noise levels in its operational noise modeling (Exh. WLDC-3, at 54).

PVEC stated that a single main building would enclose much of the noise-producing equipment of the generating facility, including the gas turbine, the steam generator and compressors (Exh. WLDC-1, at 104). The proposed structure would have engineered sound-attenuating walls which would serve to reduce the noise of the equipment inside the building (Exh. WLDC-3, at 53). The Company has proposed locating the cooling tower in a central location on the 45-acre parcel, installing a silencer for the exhaust stack, and installing a rooftop parapet on the main building (*id.* at 53). In addition, the Company proposes to implement some cooling tower design modifications, presented below as “Option 1” (*id.* at 8, 16, Table 8-3).

⁸ L_{90} noise is the sound level exceeded for 90% of each hour, and is used to represent background, or baseline ambient sound level.

PVEC modeled operating noise levels at the aforementioned nine receptors. The Company also modeled the resulting noise reductions of five additional mitigation options (*id.* at 16-20). These included: cooling tower design modifications including shielding the fans and using a single air entry with low noise fans, motors and gear boxes (referred to as “Option 1” in Table 4 below); localized enclosures around the major equipment in the powerhouse (“Option 2”); increased casing thickness and other modifications to the heat recovery steam generator (“HRSG”) (“Option 3”); installation of a 23-foot high, 300-foot long sound wall south of the transformers (“Option 4”) and increased density of powerhouse walls (“Option 5”). The resulting changes in predicted noise levels of each of these options are shown in Table 4, below, along with projected costs.

Table 4. Operational Noise Mitigation Options

Modeled point	Ambient* (dBA)	Base predicted noise level (plant + ambient) (dBA)	Resulting change in predicted noise levels				
			Option 1: cooling tower option	Option 2: localized enclosures	Option 3: Modify HRSG	Option 4: Noise Barrier	Option 5: Enhanced power- house wall
Property line point 1	41	54	0	0	-8	0	-4
Property line point 2	42	54	-3	0	0	-1	0
Property line point 3	40	63	-5	0	0	0	0
Property line point 4	40	50	-3	0	0	0	0
Property line point 5	43	51	-4	0	0	0	0
Residence at 1 Williams Way	33	38	0	0	-1	0	-1
Residence at 47 Barbara Street	37	40	-1	0	0	0	0
Residence at 21 West Glen Road	41	44	-1	0	0	0	0
Residence at 323 Lockhouse Street	37	41	-1	0	0	0	0
Option Implementation Costs			\$1,425,000	\$1,240,000	\$8,000,000	\$345,000	\$3,380,000
Selected for Implementation by Company?			Yes	No	No	No	No

* Ambient levels are the lowest hourly L_{90} measured over the week-long measurement period. (Exh. WLDC-3, at tables 8-1, 8-3). PVEC stated that this statistic is very conservative and that MADEP has long accepted much shorter monitoring periods (Tr. 3, at 339).

As modeled, Option 1 would reduce predicted noise levels by one A-weighted decibel (“dBA”), as rounded, at three of four residences (Exh. WLDC-3, at 20). The Company determined that only Option 1 was warranted by the cost, as each other option resulted at most in minimal reduction at one modeled location (*id.*). With the implementation of Option 1, the maximum increase in ambient noise at residential receptors would be three to five dBA (*id.*).

With respect to property line boundaries, the noise modeling, including implementation of Option 1, suggests that during operation, the facility’s noise level would exceed MADEP noise level criteria at two of five modeled boundary points, meaning that operational noise level would be greater than 10 dBA above ambient levels (up to 18 dBA above the ambient level at the loudest measured boundary point) (Exh. WLDC-3, at 16). The Company intends to seek a waiver of MADEP’s noise policy due to the industrial, non-noise-sensitive nature of abutters (Exh. WLDC-1, at 107). The Company stated that before a waiver can be granted, the Company must obtain releases from adjacent property owners (Exh. EFSB-G-2(S) at 41).

ii. Generating Facility Construction Noise

The Company stated that construction noise generated at the generating facility site would only occur during what the Company defined as normal daytime working hours – 7:00 a.m. to 9:00 p.m. (Exh. WLDC-1, at 108). Westfield’s noise ordinance limits commercial construction to 7:00 a.m. to 9:00 p.m. (Exh. EFSB-RR-23). Further, within these hours, the City of Westfield’s noise ordinance prohibits construction noise exceeding 85 dBA at a distance of 50 feet (*id.*). The total construction period is expected to be two years; and most of the construction noise is anticipated to be in earlier phases: site clearing, excavation and backfill, pile driving, concrete placement and building and steel erection (*id.*). PVEC estimated construction noise impacts using a construction noise model which accounts for equipment the Company anticipates using (*id.*). PVEC asserted that none of their equipment is expected to exceed Westfield’s construction noise limit (*id.*). PVEC further predicted the noisiest construction activity will not exceed 65 dBA at 2000 feet; the closest residence is approximately 2000 feet from the project footprint (*id.* at table 5.11-3).

b. Analysis

In prior decisions, the Siting Board has reviewed the noise impacts of proposed facilities for general consistency with the applicable governmental regulations, including the MADEP 10-dBA standard. Billerica Decision at 380-381; 2008 MMWEC Decision at 267-268; Brockton Power, LLC, 10 DOMSB 157, at 217 (2000) (“Brockton Decision”). In this case, the greatest property boundary increase in L₉₀ sound levels would be 18 dBA, exceeding MADEP’s standard (Exh. WLDC-3, at 16). It appears that MADEP gives waivers for exceedances on neighboring industrial properties on a case-by-case basis. We do not know whether MADEP would waive the standard for affected neighboring parcels here, as MADEP is precluded from issuing a final permit prior to the Siting Board’s issuance of a decision in the case.

As part of reviewing whether projects meet the Siting Board’s “minimum environmental impact” standard, the Siting Board has also considered the significance of expected off-site noise increases below the MADEP 10-dBA standard which may none-the-less adversely affect residences. In cases where measured background noise levels at the most affected residential receptors were neither unusually noisy nor unusually quiet, the Siting Board has accepted or required facility noise mitigation sufficient to hold residential L₉₀ increases to 5 dBA to 8 dBA.

With respect to generating facility operating noise, the record shows that the increase in noise levels at residential receptors would be three to five dBA, assuming the implementation of Option 1 as listed in Table 4 above (Exh. WLDC-3, at tables 8-1, 8-3). This increase in ambient noise is within Siting Board precedent, and additional identified potential mitigation would be relatively ineffective. With respect to generating facility construction noise, the record indicates that construction noise generated would not exceed 65 dBA at residences, and would comply with the City of Westfield’s noise ordinance. The Siting Board directs the Company to implement operational noise mitigation Option 1.

The Siting Board finds that, with implementation of the operational noise mitigation condition, the noise impacts of the proposed generating facility would be minimized.

7. Safety

a. Description

PVEC stated that compressed gases, cleaning solutions, paint, and fuel and lubricating oil in vehicles would be present at the generating facility site during construction (Exh. WLDC-1,

at 15). The Company stated that contractors will use and store chemicals in a manner to prevent and contain any potential spills, and that all fueling would take place in designated areas designed to contain any potential spills (*id.*). To ensure safe operation, the facility design will include accessibility for emergency equipment, automatic shutdown systems, fire-retardant building materials, fire protection employing city water and carbon dioxide, containment for all liquid storage areas, emergency lighting, and a security fence enclosing the site, with a gated access drive (*id.* at 16; Exhs. EFSB-S-2; EFSB-S-9).

The proposed generating facility would include a 1,000,000-gallon diesel fuel storage tank and a 20,000-gallon aqueous ammonia storage tank (Exh. WLDC-1, at 8, 10). PVEC has proposed that both the diesel fuel and ammonia tanks be located within concrete containment berms capable of containing fluid leaks up to 110 percent of the tank contents (Exhs. EFSB-S-1, EFSB-S-5). PVEC further proposes to use a passive mitigation measure in the form of large plastic baffles which float on the surface of the aqueous ammonia, reducing the exposed surface area, and thereby reducing the evaporation rate in the event of a release (Exh. EFSB-S-5). In addition, the Company's proposal includes features designed to prevent or contain any possible leaks occurring during transfer of ammonia or oil from truck to tank (Tr. 2, at 178).

PVEC conducted a "worst-case" accidental release scenario analysis for the ammonia to determine what public receptors would be affected and to what extent (Exh. EFSB-S-6). The Company evaluated potential ammonia exposure by modeling ammonia dispersion and comparing modeled concentrations to the Emergency Response Planning Guideline ("ERPG") values established by the American Industrial Hygiene Association (*id.*). There are three ERPG levels:

- ERPG-1 is the maximum airborne concentration below which nearly all individuals exposed for up to one hour would not experience other than mild transient health effects or would perceive a clearly defined objectionable odor.
- ERPG-2 is the maximum airborne concentration below which nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take action.
- ERPG-3 is the maximum airborne concentration below which nearly all individuals could be exposed for up to one hour without experiencing or developing life-threatening health effects (Exh. EFSB-S-6).

Ammonia dispersion was modeled for using the Areal Locations of Hazardous Atmospheres (“ALOHA”) software, for F Class (very stable) atmospheric stability, a wind speed of 1.5 meters per second, and a maximum air temperature of 97 degrees Fahrenheit, for a hypothetical failure of the aqueous ammonia storage tank resulting in a complete release of the contents into the surrounding containment berm (Exh. WLDC-1, at 61).

A summary of the downwind ammonia dispersion modeling results is shown in Table 5, below.

Level	Summary of level of exposure	Distance from release	Offsite receptors
ERPG-1 25 ppm	Exposure for up to 1 hour with no more than mild, transient adverse health effects or clearly defined objectionable odor	444 yards	industrial facilities, currently undeveloped industrially zoned land, electric transmission corridor, 2 industrial park public roadways
ERPG-2 150 ppm	Exposure for up to 1 hour without irreversible or other serious health effects or symptoms which could impair individuals ability to take protective action	167 yards	1 industrial park public roadway, currently undeveloped industrially zoned land, and electric transmission corridor
ERPG-3 750 ppm	Exposure for up to 1 hour without life-threatening health effects	70 yards	currently undeveloped industrially zoned land and electric transmission corridor

(Exhs. EFSB-S-6; EFSB-S-10)

The Company stated that commercial distributors use single-wall carbon steel storage tanks for both aqueous and anhydrous ammonia, and that the tanks are built to the standards of the American Society of Mechanical Engineers (“ASME”) and the American National Standards Institute (“ANSI”) (*id.*). The Company provided an analysis of the relative merits of additional containment or other measures beyond what is proposed (Exh. EFSB-RR-2). The Company stated that direct statistical comparisons of tank safety are not available (*id.*). However, the Company did assert that the safety benefits of either using a double-walled tank or enclosing the tank in a building are outweighed by their respective disadvantages, as described below (*id.*).

Double-walled tank: According to the Company, the purpose of a double-walled tank is that, should one wall rupture or fail, the other wall would contain the contents (Tr. 1, at 35).

However, the Company asserted that tank wall failures are rarely the cause of a release, and instead valves, fittings, hoses and human error during transfer are more likely causes, none of which a double-walled tank would prevent (Exh. EFSB-RR-2). PVEC asserted several disadvantages of double-walled tanks: double-walled tanks are less subject to integrity monitoring, more subject to corrosion, more difficult to repair, and more expensive to construct and maintain (*id.*). The Company indicated that it would regularly monitor its single-walled aqueous ammonia tank with an ultrasonic tank wall thickness monitoring program, which would provide the Company with information on the rate of any corrosion, such that the Company would therefore be able to prepare to replace the tank in advance of need (Tr. 1, at 35-39). PVEC stated that this method of wall-thickness monitoring is not possible on a double-walled tank (*id.*). The Company did not provide a cost estimate for the construction of a double-walled tank.

Enclosure: PVEC stated that an enclosure around the ammonia tank would contain ammonia vapor in the event of tank rupture (Tr. 1, at 36). However, the Company asserted that such a solution would cause several safety concerns. PVEC asserted that small leaks are much more common than large releases, and in the event of a small leak within an enclosure, the ammonia vapor would cause a hazardous atmosphere unsafe for personnel and equipment inside the enclosure (*id.*). While protective equipment would be made available to personnel to enter the enclosure, the Company maintained that avoiding the hazardous condition is a superior approach (*id.* at 37; Exh. EFSB-RR-2). The Company determined that construction cost for an ammonia storage tank enclosure at a similar project was approximately \$500,000 (Exh. EFSB-S-7).

Stainless steel: Following questioning on ammonia tank safety, PVEC put forward the option of fabricating the tank with stainless steel to eliminate external corrosion (Exh. EFSB-RR-2). The Company stated that stainless steel tanks are 30-35% more expensive than carbon steel, but that stainless steel affords greater protection from corrosion without adding risks to plant personnel (*id.*).

The Company stated that a project Health and Safety plan would be developed prior to the start of any site work, detailing safety measures to be followed during construction, as well as training and safety measures to be followed during operation (Exh. WLDC-1, at 124). This plan has not yet been crafted, nor has a Spill Prevention, Control and Countermeasure plan

("SPCC plan") for ammonia and ULSD fuel. The Company did provide a draft of its Emergency Response Plan (Exh. WLDC-2, at Appx K). The generating facility would be staffed 24 hours per day (Tr. 2, at 120).

b. Analysis

Similar worst-case-ammonia-release analysis was performed by the proponents in EFSB 07-2 (Billerica) for two 18,000-gallon ammonia tanks. In Billerica, the ERPG-1 area was to extend to the closest residences, the ERPG-2 area was to extend off-site but not as far as residences and the ERPG-3 area was to reach the nearby auto junkyard as well as the nearby MBTA Lowell line tracks. Billerica Decision at 385. In that case, the Siting Board included a condition requiring the applicant to enclose the ammonia tanks in a building. Id. at 389. In another recent case, EFSB 07-1 (Braintree), the worst-case-release analysis was performed for one 15,000-gallon ammonia tank, and demonstrated that the ERPG-1 area was to extend to residences,⁹ and the ERPG-2 area was to extend to a publicly accessed building and parking lot. 2008 BELD Decision at 135-136. In that case, the Siting Board found that enclosure was warranted and would mitigate potential off-site impacts and required the proponent to enclose the ammonia tank. Id. In a third case, the proponent's proposal included enclosure of the 15,000-gallon ammonia tank. 2009 Brockton Power Decision at 56. A summary of worst-case release analyses in recent Siting Board cases is provided below in Table 6.

⁹ In the Braintree case, the proponents provided the distance from release for 50 ppm, rather than the ERPG-1 concentration of 25 ppm (per the evidentiary record in EFSB 07-1). Logically, if 50 ppm levels extend to residential areas, so do 25 ppm levels.

	Distance to Closest Residence	Distance from release, receptors			Ammonia containment
		ERPG-1 (25 ppm)	ERPG-2 (150 ppm)	ERPG-3 (750 ppm)	
<u>Braintree</u> EFSB-07-1 15,000 gallons	200 yards	>> 239 yards* Residences and publicly accessible building and parking lot	135 yards Publicly accessible building and parking lot	Not provided	Condition in Decision requiring enclosure
<u>Billerica</u> EFSB-07-2 36,000 gallon (in 2 tanks)	185 yards	602 yards Several residences, abutting commercial and industrial buildings, access road	233 yards Abutting commercial and industrial buildings, access road	100 yards Access road	Condition in Decision requiring enclosure
<u>Brockton</u> EFSB-07-7 15,000 gallons	480 yards	N/A**	N/A**	N/A**	Proposal included enclosure of ammonia tank
<u>PVEC</u> EFSB-08-1 20,000 gallons	650 yards	444 yards Industrial facilities, 2 industrial park public roadways	167 yards 1 industrial park public roadway	70 yards Currently undeveloped land	

* The distance of 239 yards represents the extent of a concentration of 50 ppm, rather than the ERPG-1 value of 25 ppm. According to the petitioner in Braintree, the health effects at 50 ppm are: a perceived pungent odor that may be accompanied by eye, nose and throat irritation, without expectation of irreversible health effects. The modeled concentration at the nearest residence was 70 ppm.

** In the Brockton case, the proponent's ammonia release modeling included enclosure of the tank in a building.

In the case of the proposed facility, public receptors are further from the ammonia tank than in Billerica, Braintree and Brockton. The record in this case illuminates potential disadvantages of double-wall construction and use of an enclosure that may well offset any advantages in this particular case, given longer distances to residences than in previous, above-cited cases. Regarding choice of tank material, stainless steel is known to be more resistant to corrosion than carbon steel. The Company ultimately proposed to use stainless steel (see Company Brief at 96). The Siting Board directs the Company to use an aqueous ammonia storage tank of stainless steel construction.

The record shows that an SPCC plan has not been developed for the generating facility, nor has a safety plan for the offloading of ammonia been developed. The Siting Board directs the Company to provide the Board with a Spill Prevention, Control and Countermeasure plan which covers the procedures to be followed in the event of an aqueous ammonia or ULSD fuel spill, as well as a safety plan for offloading ammonia, prior to the start of operations testing.

The Siting Board finds that, with implementation of these conditions, the safety impacts of the proposed generating facility would be minimized.

8. Traffic

a. Description

The Company stated that there are two possible driving routes from the Massachusetts Turnpike to the generating facility site as well as two site entry points. The first driving route is: drive north on U.S. Route 202 (Southampton Road) from the Mass Turnpike, two miles to the intersection with Servistar Industrial Way, then travel west 1.2 miles to the proposed generating facility site (Exh. WLDC-1, at 119). This route is 3.5 miles and consists entirely of two-lane paved roads abutted by residential, commercial, and retail properties (id. at 120).

This route provides access to the site via the first entry point off of Servistar Industrial Way which is on the east side of the site and would serve as primary construction access and would not be used for operational access (Exh. EFSB-T-2). In order to make the left-hand turn onto Servistar Industrial Way, all vehicles, including large trucks, would have to cross the southbound lane of U.S. Route 202, a heavily trafficked road. However, the Company stated that there is a paved shoulder on the side of Route 202 which allows traffic to go around vehicles queued to make the left turn (Tr. 4, at 450).

An alternative route is: drive south on U.S. Route 202 from the Mass Turnpike, turn right onto Arch Road which becomes Lockhouse Road, continue for 1.3 miles, turn right onto Servistar Industrial Way for 0.2 miles, turn left onto Ampad Road for 0.3 miles (Exh. WLDC-1, at 119). This route is approximately 2 miles long and consists of two-lane paved roads abutted by residential, commercial and retail properties (id.). The route provides access to the site via the second access point off of Ampad Road which is on the west side of the site and would serve as primary operational access (it also provides secondary construction access) (Exh. EFSB-T-2). Additionally, the first driving route (via Route 202) may be used in conjunction with the

Ampad Road entrance by travelling further down Servistar Industrial Way and turning right onto Ampad Road (*id.*). Therefore, both driving routes may be used during facility operation.

The total construction period would be approximately 24 months (Exh. WLDC-1, at 17). Peak construction is estimated to last three months, with an estimated 300 personnel per day, and 520 one-way vehicle trips per day including trucks (Exh. RR-EFSB-3). The typical construction workforce would range from 150 in the initial and final months to 200-300 personnel per day for approximately nine months (Exh. WLDC-1, at 17). The majority of work would take place between 7 a.m. and 4 p.m., with a maximum of ten truck trips per day during peak hours (*id.* at 120).

During facility operation the traffic generated by employees is estimated at 50 one-way trips per day (*id.*). The proposed generating facility would be staffed 24 hours a day with two 12-hour shifts (*id.*). There would be two people on site during the night shift and ten to twelve people on site during the day shift (*id.*). Other traffic associated with the generating facility would involve truck delivery of supplies, as well as an estimated maximum of 25 truck deliveries per day of fuel periodically during the winter months (*id.*). The Company stated that Pioneer Valley Railroad has expressed interest in extending rail service to the proposed site, which would allow for rail delivery, rather than truck delivery, of ULSD fuel (Exh. EFSB-T-5).

PVEC concluded that traffic impacts of the proposed facility would be negligible and therefore performed no traffic counting program, capacity analysis, or Level of Service analysis for either of the associated routes (Exh. EFSB-T-2).

b. Analysis

The record indicates that the Company expects up to 520 one-way trips per day during construction, but based on existing volume and roadway configuration, does not anticipate any substantial traffic impacts. The record also shows that when the generating facility is operating on ULSD fuel, up to 25 fuel truck deliveries per day may be required, together with other bulk deliveries such as ammonia with the potential to impact traffic on U.S. Route 202. The Siting Board has, in previous cases, directed applicants to avoid peak traffic hours for deliveries of oil and bulk materials. Billerica Decision at 392-392; Brockton Decision, at 71. The Siting Board directs that, during operation of the proposed facility, except in the case of a fuel-supply emergency such as may occur in a cold snap, the Company shall avoid peak travel hours, as

determined by the City of Westfield, for bulk truck deliveries to the proposed facility. In addition, the Siting Board directs the Company to report to the Siting Board, prior to construction, on any traffic plans or agreements developed with local agencies.

The Siting Board finds that, with implementation of these two conditions, the traffic impacts of the proposed generating facility would be minimized.

9. EMF

a. Description

The Company stated that electricity generated by the proposed generating facility would be transmitted through an existing 115 kV transmission line, Line 1302, which runs south-west from Buck Pond Substation through the proposed generating facility site to Pochassic Substation (Exh. WLDC-1, at 122). Electricity flow on Line 1657, which extends north-east beyond Buck Pond Substation to Southampton Junction, would also be affected by the tie-in (*id.*). Line 1302 and Line 1657 are each on two-circuit steel poles ranging in height from 90 to 115 feet on 100-foot wide rights-of-way (*id.*). The structures were built with the capability to carry two circuits; however, only one circuit position is being used (*id.*).

The Company stated that the New England's Independent System Operator for the electric transmission system ("ISO-NE") currently does not expect that this project will require any upgrades to either Line 1302 or 1657 (Exh. EFSB-E-1, at 1). Accordingly, the Company used the current line geometries to estimate both existing and post-project electric and magnetic field ("EMF") levels (*id.*). The largest change at the edge of a right-of-way in magnetic field strengths, from 12.93 milligauss ("mG") to 66.23 mG, would occur at both the east and west edges of the Line 1302 right-of-way, from the generating facility south to Pochassic Substation (Exh. EFSB-E-1(S)(2)). The nearest residence falls approximately on the west edge of the same right-of-way and therefore would experience the same increase. PVEC indicated that the project would have a negligible effect on electric fields because the lines would continue to carry approximately 115 kV (*id.*). The Company stated that final interconnect plans would be completed by mid-year 2010, at which time a more accurate EMF impact analysis would be available (Tr. 4, at 417).

b. Analysis

In a previous review of a transmission line facility, operating at 60 hertz, the Siting Board accepted edge-of-ROW levels of 1.8 kilovolts per meter (“kV/m”) for electric field and 85 mG for magnetic field. Massachusetts Electric Company New England Power Company, 13 DOMSC 119, at 228-242 (1985) (“1985 MeCo/NEPCo Decision”). In later reviews of proposed electric facilities, the Siting Board has compared estimated EMF impacts to the edge-of-ROW impacts accepted in the 1985 MECo/MEPCo Decision, and as applicable considered whether based on such comparison estimated EMF impacts are unusually high. 2008 BELD Decision at 145; Sithe Mystic Decision at 181-183; Hingham Municipal Lighting Plant, 14 DOMSC 7, at 28 (1986).

The Siting Board did not conclude in the 1985 MECo/MEPCo Decision or any later review referencing that decision, that an edge-of-ROW magnetic field of 85 mG is a level above which harmful effects would necessarily result. Sithe Mystic Decision at 181. Rather, the Siting Board has held that the edge-of-ROW magnetic field level of 85 mG serves as a benchmark of a previously accepted impact along a transmission right-of-way in Massachusetts, not as a limit of acceptable impact. Id.

Here, the record shows that outside the facility site, electric field would be essentially unchanged by the project, and edge-of-ROW levels for both fields would remain below levels previously accepted by the Siting Board. The record shows, however, that the largest change in edge-of-ROW magnetic field would be a fivefold increase from 12.93 mG to 66.23 mG, occurring at both the edges of Line 1302 ROW between the generating facility and Pochassic Substation to the South. Maximum edge-of-ROW levels could extend to one residence located adjacent to the ROW; however, other residences would be minimally affected. The Siting Board notes that, with the current configuration of a single line on the right-of-way, reverse phasing cannot be implemented and no other feasible means to reduce electromagnetic fields was identified.

The record shows, however, that final interconnection plans have not been determined. Because the proposed project would contribute to higher power flows on area transmission lines, the Siting Board seeks to remain informed about PVEC’s interconnection plans and any associated transmission upgrades as they may relate to EMF impacts. Accordingly, the Siting Board directs the Company to report to the Board regarding the progress and the outcome of the

Company's interconnection plans and on designs for any transmission upgrades, as well as any measures incorporated into transmission upgrade designs to minimize magnetic field impacts within two weeks of reaching a final agreement with all transmission providers regarding interconnection.

Accordingly, the Siting Board finds that with implementation of the above EMF information condition, the EMF impacts of the proposed facility would be minimized.

10. Land Use

This section describes the land use impacts of the proposed facility, including the impacts to wildlife species and habitat, and significant cultural resources.

a. Description

The Company stated that the site for the proposed generating facility is a 45-acre parcel located entirely within an Industrial A zoning district (Exh. WLDC-1, at 95-96). Neighboring properties are also within the Industrial A zone, and existing neighboring uses include light industrial and commercial uses (*id.*). The closest residentially zoned property to the generating facility is 1635 feet away, and the closest existing residence is approximately 1950 feet away (Exhs. EFSB-LU-4; EFSB-LU-5). The generating facility would be located within 13 contiguous acres in the northwest portion of the parcel (Exh. WLDC-1, at App. A, drawing G1).

An additional eight to ten acres of the site would be disturbed during construction, but would contain no permanent development (Tr. 4, at 435). The generating facility site lies within mapped Priority Habitat and Estimated Habitat attributable to the eastern box turtle, a species of "Special Concern" listed by the Massachusetts Division of Fisheries and Wildlife (Exh. WLDC-1, at 88). PVEC must obtain a Conservation and Management Permit from the Massachusetts Natural Heritage and Endangered Species Program ("NHESP") which would serve to minimize impacts (Exh. WLDC-5, at 94). The Company stated that it would locate facility equipment according to recommendations from NHESP to minimize destruction of habitat (Exh. WLDC-1, at 89). Furthermore, the Company stated that following construction, the approximately 33 acres of the parcel that are not developed for the generating facility will be placed under conservation restriction explicitly for the protection of eastern box turtle habitat (Exh. WLDC-5, at 61).

The Company indicated that no impact to historical or archaeological resources is anticipated as a result of the project (Exh. WLDC-1, at 103).

b. Analysis

The record shows that the 45-acre site is within an area zoned for industrial use and that areas immediately surrounding the proposed site are predominantly industrial and undeveloped. The Siting Board concludes that the construction and operation of the proposed facility is compatible with surrounding uses.

The record shows that the Company intends to use 13 acres in the northwest portion of the site for the generation facility and will place the remaining approximately 33 acres under conservation restriction. In prior cases, the Siting Board has included conditions regarding land conservation. See, e.g., IDC Bellingham, LLC, 9 DOMSB 225, at 333-334 (1999); Nickel Hill Decision, at 214, 218. The Siting Board directs the Company to provide the Siting Board a copy of a conservation restriction agreement or other documentation that formalizes the disposition of the parcel to serve as conservation land, open space, or permanent undeveloped buffer, including any recording made in relation thereto, within two weeks of the later of finalization or recording of any such documentation. The Siting Board finds that, with implementation of this condition, the land use impacts of the proposed generating facility would be minimized.

11. Cumulative Health Impacts

This section describes the cumulative health impacts of the proposed facility. The Siting Board considers the term “cumulative health” to encompass the range of effects that a proposed facility could have on human health through emission of substances over various pathways, as well as possible effects on human health unrelated to substances. The Siting Board considers these effects in the context of existing background conditions, existing baseline health conditions, and, when appropriate, likely changes in the contributions of other major emissions sources. 2008 BELD Decision at 150; 2008 MMWEC Decision at 298; Sithe Mystic Decision at 189-190.

a. Baseline Health Conditions

PVEC provided a summary of asthma prevalence and cancer incidence study findings for Westfield, available from the Massachusetts Department of Public Health (Exh. EFSB-H-2). Reported pediatric asthma rates for 2005-2006 are statistically lower than Massachusetts as a whole (*id.*). For asthma prevalence among adults for 2005-2006, Westfield is grouped in the "Western Massachusetts" category which has a higher prevalence rate than the overall statewide average (*id.*). Westfield rates for "all cancers" for 2001-2005 are slightly below the average for Massachusetts; for lung cancer in males, the rate is statistically above the average for Massachusetts (*id.*).

b. Criteria Pollutants

The USEPA developed NAAQS to regulate emissions of the criteria pollutants: SO₂, particulate matter, NO₂, CO, ground-level ozone, and lead (Exh. WLDC-1, at 47). The NAAQS, set by the USEPA consist of primary standards and secondary standards, of which the primary standards are intended to protect public health (*id.*).

PVEC stated that the closest ambient monitoring stations to the site are in Chicopee and Springfield and that both stations are appropriate for representing the existing background air quality in the area of the proposed site (Exh. WLDC-4, at 38). The Company indicated that the Chicopee station is most like the site, because it too is in a suburban location, but that the Chicopee station has monitors for only NO₂ and PM_{2.5} (*id.* at 38-39). The Company provided ambient data from Chicopee for NO₂ and PM_{2.5}, and from Springfield for all other criteria pollutants except ozone (*id.* at table 6-18). Monitoring data from these locations 2005 to 2007 did not exceed the NAAQS for pollutants other than ozone (*id.* at tables 6-18, 6-19). Therefore, with the exception of ozone, background levels of criteria pollutants are within standards set for the purpose of protecting public health. As further discussed in Section II.C.2, above, the Company's modeling of background levels plus project impacts indicate that PVEC's cumulative predicted air quality concentrations are below the applicable NAAQS (*id.* at 39, table 6-19).

With respect to criteria pollutants, the record shows that the Company has presented background data and modeled emissions impacts which fall below USEPA's health protective NAAQS with the exception of ozone. Ground-level ozone is known to result from regional upwind sources of ozone precursors, and as such is not a project-related concern in the vicinity

of the proposed plant. Instead, ozone is regulated as a regional pollutant by MADEP and USEPA. PVEC emissions of ozone precursors would be limited by NO_x controls and fuel technologies as described in Section II.C.2, above, in accordance with health-based MADEP and USEPA regulations. Accordingly, the Siting Board finds that the health impacts of criteria pollutants would be minimized.

c. Air Toxics

PVEC cited a USEPA report that the primary air toxics emitted from natural gas and distillate oil fired combustion turbines would be formaldehyde, polycyclic aromatic hydrocarbons (“PAH”), benzene, toluene and xylenes, while small amounts of metallic hazardous air pollutants carried over from the fuel constituents would also be present (Exh. WLDC-3, at 38). PVEC also cited an industry study that concluded that distillate fuel stocks used in the power industry are “essentially free of toxic metals and pose no risk to the public when fired in a gas turbine” (*id.* At 49). The Company stated that modeled downwind concentrations of each air toxics compound from the proposed facility would be less than the MADEP 24-hour-average Threshold Effects Exposure Limit (“TEL”) and annual average Allowable Ambient Limit (“AAL”) (*id.*). The TPS are also met and the Siting Board finds that the health impacts of non-criteria pollutants would be minimized.

d. Discharges to Ground and Surface Waters

The Company stated that the generating facility’s wastewater would be discharged to the Westfield wastewater system, and that Westfield has sufficient capacity to receive the generating facility’s wastewater. The Company stated that concrete containment areas would be installed under and around electrical equipment and tanks housing fuels and oils, with runoff from these areas directed to oil/water separators prior to discharge (Exh. WLDC-1, at 73). Also, the Company stated that its stormwater management plan for the generating facility complies with MADEP’s Stormwater Management Policy (*id.*). The record shows that the Company would dispose of wastewater directly in the City of Westfield’s waste water system, and that all potentially contaminated stormwater runoff will be contained within the stormwater system and treated before release back into the environment. Accordingly, the Siting Board finds that the health impacts of discharges to ground and surface waters would be minimized.

e. Noise

As discussed in Section II.C.6, above, the Company has proposed to implement noise mitigation at the generating facility sufficient to keep increases at residential receptors to 5 dBA or less. Also noted in Section II.C.6, the noise at the generating facility site boundaries may exceed MADEP's noise criteria of a 10 dBA increase. However, due to the non-noise sensitive nature of abutters, the Company will seek a waiver of this policy from MADEP. In sum, identified project-related increases in noise levels are not expected to pose health concerns. Consequently, the Siting Board finds that, with implementation of the Option 1 noise mitigation condition, health effects of the proposed facility related to noise would be minimized.

f. Handling and Disposing of Hazardous Materials

In Section II.C.7, above, the Siting Board reviewed the Company's plans for storage and handling of hazardous materials, including 19% aqueous ammonia, ULSD, and limited amounts of industrial chemicals for facility maintenance and operation. Section II.C.7 outlines the Company's plans for minimizing and responding to accidental releases of oil or other hazardous materials. With respect to handling and disposal of hazardous materials, the record shows that the Company will establish plans for minimizing and responding to accidental releases of oil, ammonia or other hazardous materials. The Siting Board finds that, with implementation of the conditions set forth in Section II.C.7, above, the health impacts of hazardous materials handling would be minimized.

g. EMF

As discussed in Section II.C.9, above, the power from the proposed facility would be transmitted via existing 115 kV transmission elements that run through the generating facility site. The proposed project would have a negligible impact on electric fields, and maximum edge-of-ROW magnetic fields would increase from 12.93 mG to 66.23 mG (Exh. EFSB-E-1(S)(2)).

The Siting Board has found that although some epidemiological studies suggest a correlation between exposure to magnetic fields and childhood leukemia, there is no evidence of a cause-and-effect relationship between magnetic field exposure and human health. Southern Energy Kendall, LLC, 11 DOMSB 255, at 385-386 (2000); Nickel Hill Decision at 235;

Sithe Mystic Decision at 198-199. The proposed project would not lead to an exceedance of the Siting Board's edge-of-ROW precedent of 1.8 kV/m for electric field or 85 mG for magnetic field. Also, no practical means to reduce EMF was identified. The Siting Board finds that, with implementation of the EMF information condition set forth in Section II.C.9, above, health effects of the proposed facility related to EMF would be minimized.

h. Conclusion on Cumulative Health Impact

The record shows that health indices in Westfield are lower for pediatric asthma, higher for adult asthma, higher for male lung cancer, and lower for total cancer than for the state as a whole. The record shows that impacts from air, water, hazardous materials, noise, and EMF would be minimized.

Consequently, the Siting Board finds that there is no evidence that the proposed facility would exacerbate existing health problems in the communities surrounding the proposed facility. Synergistic (*i.e.*, more than additive) effects among these impacts were not identified. The Siting Board finds that cumulative health impacts would be minimized.

12. Conclusions on Environmental Impacts

Based on the information in Section II.C, above, the Siting Board finds that the Company's description of the proposed project and its environmental impacts is substantially accurate and complete.

In Section II.C.2, the Siting Board found that air quality impacts of the proposed facility would be minimized.

In Section II.C.3, the Siting Board found that with the implementation of the water mitigation funding condition, the water resources and wetlands impacts of the proposed facility would be minimized.

In Section II.C.4, the Siting Board found that the solid waste impacts of the proposed facility would be minimized.

In Section II.C.5, the Siting Board found that with implementation of the visual mitigation conditions, the visual impacts of the proposed facility would be minimized.

In Section II.C.6, the Siting Board found that with the implementation of the implementation of the noise mitigation condition, the noise impacts of the proposed facility would be minimized.

In Section II.C.7, the Siting Board found that with implementation of the ammonia storage tank and reporting conditions, the safety impacts of the proposed facility would be minimized.

In Section II.C.8, the Siting Board found that with implementation of the traffic mitigation and reporting conditions, the traffic impacts of the proposed facility would be minimized.

In Section II.C.9, the Siting Board found that with the EMF reporting condition, the EMF impacts of the proposed facility would be minimized.

In Section II.C.10, the Siting Board found that with implementation of the land conservation condition, the land use impacts of the proposed facility would be minimized.

In Section II.C.11, the Siting Board found that the cumulative health impacts of the proposed facility would be minimized.

Accordingly, the Siting Board finds that, with implementation of the above-listed conditions, the Company's plans for the construction of the proposed generating facility would minimize the environmental impacts of the proposed facility consistent with the minimization of costs associated with the mitigation, control, and reduction of the environmental impacts of the proposed generating facility. In addition, the Siting Board finds that an appropriate balance would be achieved among conflicting environmental concerns as well as between environmental impacts and costs.

III. ANALYSIS OF THE PROPOSED GAS PIPELINE

A. Need Analysis

1. Standard of Review

In accordance with G.L. c. 164, § 69H, the Siting Board is charged with the responsibility for implementing energy policies in its statute to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. In carrying out this statutory mandate with respect to proposals to construct natural gas pipelines, the Siting Board evaluates whether there is a need for additional natural gas pipelines in the

Commonwealth to meet reliability, economic efficiency, or environmental objectives. See Colonial Gas Company, d/b/a KeySpan Energy Delivery New England, 15 DOMSB 269, at 280 (2006); Berkshire Gas Company, 15 DOMSB 208, at 216 (2006); Massachusetts Electric Company and New England Power Company, 18 DOMSC 383, at 393 (1989) (“MECo/NEPCo Decision”).

In evaluating the need for new energy facilities to meet reliability objectives, the Siting Board may evaluate the ability of its existing system to accommodate changes in aggregate demand or supply, to serve major new loads, or to maintain reliable service in certain contingencies. The Siting Board previously has approved proposals to construct gas pipelines to accommodate load growth within a utility’s service territory (Boston Gas Company, 17 DOMSC 155 (1988)) and to transport natural gas to generating facilities. See 2001 NSTAR Gas Decision, 13 DOMSB at 149; Berkshire Gas Company (Phase II), 20 DOMSC 109 (1990); Bay State Gas Company, 21 DOMSC 1 (1990). In such cases, the proponent must demonstrate that additional energy resources are necessary to meet reliability objectives by establishing that the existing fuel supply system is inadequate to serve the anticipated load with acceptable reliability.¹⁰

2. Description of the Existing System

Westfield Gas & Electric owns, operates, and maintains hundreds of miles of natural gas distribution pipeline in Westfield, all operating below 90 psig (Exh. WLDC-1, at 28). In 2007, the maximum daily sendout by WG&E was 11,065 million Btus (“MMBtu”) (Exh. WLDC-1, at 28). WG&E receives gas through a branch line it operates that interconnects at a point on the Northampton lateral operated by Tennessee Gas Pipeline (“TGP”) (*id.*). TGP operates an interstate natural gas pipeline system that runs from the Gulf of Mexico to eastern Massachusetts and includes the Northampton lateral (Exhs. WLDC-1, at 28; EFSB-G-3). The Northampton lateral extends north from TGP’s main line near Southwick, passes on the east side of Westfield, and terminates in Northampton (Exhs. WLDC-1, at 39, EFSB-G-3). PVEC and WG&E

¹⁰ G.L. c. 164, § 69J requires that a facility proposed by a gas company required to file a long-range forecast pursuant to G.L. c. 164, § 69I be consistent with that company’s most recently approved long-range forecast. WG&E is a municipal gas company, and is not required to file a long-range forecast pursuant to G.L. c. 164, § 69I.

(collectively, the "Pipeline Applicants") stated that TGP has the capacity to supply approximately 1.7 billion standard cubic feet ("BCF") per day to the New England area, including 1.0 BCF per day from the west through Agawam, 0.6 BCF per day from the east through Dracut, and 0.1 BCF per day from Distrigas in Everett (Exh. EFSB-G-3).

The Pipeline Applicants stated that, at present, there is no natural gas service to the project site (Exh. WLDC-1, at 28). WG&E is in the process of constructing a new connection to the TGP system, designated the Southwick lateral, extending 25,900 feet northward from Southwick to its distribution system, terminating in the center of Westfield (Exhs. EFSB-G-4; EFSB-G-5). The Pipeline Applicants stated that the Northampton lateral is insufficient to meet demand of existing customers, and WG&E's firm capacity is insufficient to meet Westfield's needs. The Pipeline Applicants stated that the Southwick lateral is 12-inch diameter steel pipe, with a normal operating pressure not to exceed 99 psig, and an ultimate capacity of 878 psig (Exhs. EFSB-G-4; EFSB-G-5). Should the generation project be constructed with a pipeline on the primary route, WG&E would be able to apply for permission to up-rate the Southwick lateral to deliver gas to PVEC at the pressure required to supply the gas turbines once that pipeline has been in operation for over 24 months (approximately June 2011) (Exh. EFSB-G-4; Tr. 2, at 136).

3. Need for Additional Fuel Capacity

a. Description

PVEC stated that the generating facility would require a maximum fuel input of 2542 MMBtu/hr (Exh. WLDC-3, at 2). The Pipeline Applicants stated that there is no natural gas service in immediate proximity to the proposed generating facility site (Exh. WLDC-1, at 28).

b. Analysis of Need, and Conclusions

Assuming full operation, 2542 MMBtu/hr would constitute 61,000 MMBtu/day of gas service. There is, at present, no natural gas service to the project site. Consequently, the Siting Board finds that the existing fuel supply system is inadequate to serve the anticipated load and, therefore, there is a need for additional gas resources for the proposed generating facility.

B. Comparison of Proposed Project and Project Alternative Approaches

1. Standard of Review

G.L. c. 164, § 69H requires the Siting Board to evaluate proposed projects in terms of their consistency with providing a reliable energy supply to the Commonwealth with a minimum impact on the environment at the lowest possible cost. In addition, G.L. c. 164, § 69J requires a project proponent to present “alternatives to planned action” which may include: (a) other methods of generating, manufacturing, or storing electricity or natural gas; (b) other sources of electrical power or natural gas; and (c) no additional electric power or natural gas. G.L. c. 164, § 69J.

In implementing its statutory mandate, the Siting Board requires an applicant to show that, on balance, its proposed project is superior to alternative approaches in terms of cost, environmental impact, and ability to meet the identified need. Boston Edison Company d/b/a NSTAR Electric, 14 DOMSB 233, at 266 (2005) (“2005 NSTAR Electric Decision”); 2003 KeySpan Decision, 14 DOMSB 49, at 69; Boston Edison Company, 13 DOMSC 63, at 67-68, 73-74 (1985). In addition, the Siting Board requires a petitioner to consider reliability of supply as part of its showing that the proposed project is superior to alternative project approaches. 2005 NSTAR Electric Decision, 14 DOMSB 233, at 266; 2003 KeySpan Decision, 14 DOMSB 49, at 69; MECo/NEPCo Decision, 18 DOMSC at 404-405.

2. Identification of Potential Project Approaches

The proposed project approach is to connect the proposed generating facility to the TGP system with a pipeline capable of transporting 62,000 dekatherms per day (Exhs. WLDC-1, at 6; EFSB-G-3). The Pipeline Applicants evaluated only one project alternative for analysis: the use of liquefied natural gas (“LNG”) for fuel in place of natural gas. LNG would be the only other feasible fuel delivery to supply, a combined-cycle facility and still meet TPS standards (Exh. WLDC-1, at 32).

3. Reliability of Pipeline Alternatives

The Pipeline Applicants stated that delivery of natural gas from TGP would be limited in the winter months by other entities holding firm capacity contracts and by the price of gas (Exh. EFSB-G-4). Nevertheless, the Pipeline Applicants stated that a properly designed and

installed pipeline is the most reliable means of supplying fuel to a gas fired generating facility (Exh. WLDC-1, at 32).

Use of LNG would require a storage facility and fuel vaporization system, as well as regular truck deliveries of fuel (id.). To assure adequate delivery of LNG to the generating facility would require approximately 36 truck deliveries per day on an ongoing basis (id.). The closest LNG terminal to the generating facility site is approximately 100 miles away (id.). Even if the largest practical amount of LNG were stored on-site, regular truck deliveries to fill the tank would be necessary. The Pipeline Applicants asserted that during periods of winter storms or supply shortages, the use of LNG would be significantly less reliable than using the proposed pipeline (id. at 33).

4. Environmental Impacts of Pipeline Alternatives

Environmental impacts of the proposed gas pipeline are temporary impacts from construction including air emissions, wetlands impacts, noise, and traffic impacts. The Pipeline Applicants asserted that there are no significant or long-term environmental impacts associated with the gas pipeline (Exh. WLDC-1, at 32). The Pipeline Applicants assert that environmental impacts associated with the use of LNG include construction of a storage facility and vaporization facility, resulting in overall greater construction impacts, as well as greater long-term air emissions, land use, noise, and traffic impacts (id.). The Pipeline Applicants explained that air emissions related to the generating facility would be increased by use of LNG due to the regular truck deliveries and the fuel burning vaporization system which would be required (id.).

5. Cost of Pipeline Alternatives

The Pipeline Applicants stated that use of LNG would require building a storage tank and vaporization facility with capital costs estimated to be in excess of \$50 million, as well as additional operating costs, and increases fuel cost due to the necessary truck delivery (Exh. WLDC-1, at 34). The Pipeline Applicants stated that capital costs associated with the construction of the proposed gas pipeline would be approximately \$5 million, with minimal operational costs (id.).

6. Analysis of Project Approach, and Conclusions

The Pipeline Applicants limited the scope of their project alternatives analysis for the pipeline to projects that would deliver natural gas, on the basis that natural gas would be the only primary fuel that would meet TPS for the generating facility. This limitation conforms to the analysis in Section II.B, establishing that analysis of technology alternatives is not required in the generation facility analysis. For natural gas fuel, the Pipeline Applicants looked at two gas supply approaches: pipeline gas and truck delivery of LNG. The Pipeline Applicants compared the reliability, cost, and environmental impacts of using pipeline gas from TGP¹¹ versus using LNG trucking.

The record shows that the proposed pipeline would have the capacity to carry 62,000 dekatherms per day – i.e., 62,000 MMBtu/day.¹² The Pipeline Applicants asserted that pipeline gas would provide a more reliable supply than trucking LNG. The record shows that 36 truck deliveries per day of LNG would be needed if the generating facility were in continuous operation, which appears to be the basis of Pipeline Applicants' concern that LNG supply is less reliable than pipeline gas supply. LNG trucking supply is subject to interruption from adverse weather conditions during the winter. However, pipeline gas is also subject to interruption under contingency conditions, such as during extreme cold weather in the winter, because other customers would normally take precedence over an electric generation facility. The record does not quantitatively compare the frequency and duration of interruptions to gas supply between these two sources of gas.

With respect to cost, the record indicates that using LNG would be an order of magnitude more costly than using pipeline gas, including construction costs of \$50 million for LNG compared to \$5 million for the pipeline. And the record indicates that there would be concomitant higher environmental impacts if LNG were selected. With reliability differences indeterminate, the significantly lower cost and environmental impacts of pipeline gas are sufficiently clear to conclude that use of pipeline natural gas would be preferable. Therefore,

¹¹ Although not included in the record, it may be noted that the TGP is closer to the project site than other interstate pipelines such as Algonquin.

¹² This volume, 62,000 MMBtu/day, slightly exceeds the 61,000 MMBtu/day requirement of the generating facility.

weighing need, reliability, environmental impacts and cost, the Siting Board finds that the proposed pipeline project would be superior to alternative approaches to providing the proposed generating facility with gas delivery capacity.

C. Route Selection

1. Standard of Review

G.L. c. 164, § 69J provides that a petition to construct a proposed facility must include “a description of alternatives to [the applicant’s] planned action” including “other site locations.” G.L. c. 164, § 69J. In past reviews of alternative site locations identified by an applicant, the Siting Board has required the applicant to demonstrate that it examined a reasonable range of practical siting alternatives. See CELCo Decision, 12 DOMSB 305, at 326-327; MMWEC Decision, 12 DOMSB 18, at 92; 1998 NEPCo Decision, 7 DOMSB 333, at 374. In order to determine whether an applicant has considered a reasonable range of practical alternatives, the Siting Board has required the applicant to meet a two-pronged test. First, the applicant must establish that it developed and applied a reasonable set of criteria for identifying and evaluating alternative routes in a manner which ensures that it has not overlooked or eliminated any routes which, on balance, are clearly superior to the proposed route. CELCo Decision, 12 DOMSB 305, at 326-327; MMWEC Decision, 12 DOMSB 18, at 92; 1998 NEPCo Decision, 7 DOMSB 333, at 374. Second, the applicant must establish that it identified at least two noticed sites or routes with some measure of geographic diversity. CELCo Decision, 12 DOMSB 305, at 327; MMWEC Decision, 12 DOMSB 18, at 92; 1998 NEPCo Decision, 7 DOMSB 333, at 374.

2. Route Selection Process

According to the Pipeline Applicants, there are just two practical locations for interconnecting the TGP to a new pipeline to the proposed generating facility, with one practical route for each one following previously developed rights-of-way (Exh. EFSB-RS-1). The Pipeline Applicants indicated that other routes would extend off of existing rights-of-way and/or be longer (Exh. EFSB-RS-1).

Once the generating facility site was selected, the Pipeline Applicants identified two pipeline routes for gas delivery to the generating facility, one from WG&E’s pipeline to the south, and one from the Northampton lateral to the east (Exh. WLDC-1, at 39). The Pipeline

Applicants evaluated potential routes on several criteria: overall length of pipe to achieve interconnection; estimated priority habitat that would need to be traversed; presence of Interim Wellhead Protection Areas; number of stream crossings; linear feet of wetland crossing; degree of bedrock associated along potential routes; and availability of existing rights of way to locate the pipeline (id. at 40). The Pipeline Applicants stated that there were no other feasible alternatives which met their route-selection guidelines (id. at 41).

3. Geographic Diversity

The primary route extends from a point south of the generation facility site, northward along a railroad right-of-way, while the noticed alternative extends from a point northeast of the generation facility site, west along a roadway and south along a transmission right-of-way (Exh. WLDC-1, at figs. 1.5-1, 4.2-1). The two routes do not share a common path in any part (id.).

4. Route Selection Process Analysis and Conclusions

The Pipeline Applicants identified two pipeline routes by considering environmental impacts and land use concerns, issues that the Siting Board has found to be appropriate for the siting of energy facilities. See Colonial Gas Company, 15 DOMSB 269, at 325 (2006); Berkshire Gas Company, 15 DOMSB 208, at 238 (2006); 43; New England Power Company, 4 DOMSB 109, at 167 (1995). In some other cases, applicants have formally considered community acceptability as a factor in route selection. Colonial Gas Company, 15 DOMSB 269, at 324; Berkshire Gas Company, 15 DOMSB 208, at 300 (2006); Berkshire Gas Company, 25 DOMSB 1, at 51 (1992); but see Colonial Gas Company, 14 DOMSB 49, at 83; Boston Edison Company, 6 DOMSB 208, at 228 (1997). The Pipeline Applicants did not list acceptability to the community as a factor in its pipeline route selection process.

Where available, existing rights-of-way can be markedly better for pipeline installation purposes than adjacent developed or undeveloped lands. In this case, the Pipeline Applicants identified routes following these types of rights-of-way for their primary and noticed alternative routes. While the site selection process was not deeply developed, the maps in the record do not suggest that there is any significantly superior route to the two that were considered in detail. The Pipeline Applicants reasonably identified two potential routes; the routes thus were not

further screened but retained for comparative analysis as the proposed and noticed alternative routes (see Section III.D, below).

The record indicates that the Pipeline Applicants appropriately considered environmental impacts and land use when identifying the primary and noticed alternative routes. The record shows that the two routes approach the generation facility site from different directions, follow different types of easements, and do not overlap. Consequently, the Siting Board finds that the Pipeline Applicants have identified a range of practical route alternatives with some measure of geographic diversity. The Siting Board also finds that the Pipeline Applicants developed and applied a reasonable set of criteria for identifying and evaluating alternative routes in a manner that ensures that it has not overlooked or eliminated any routes that are clearly superior to the proposed route.

5. Description of the Primary and Alternative Routes

a. Primary Route

The primary route described by the Pipeline Applicants starts on the south side of the Westfield River at the Southwick lateral (near the commercial center of Westfield) and runs north approximately 2.5 miles (Exh. WLDC-1, at 29, 40, fig. 1.5-1). The route starts with a 550-foot HDD across the Westfield River, then continues northward in a longitudinal occupation of, and on property abutting, the right-of-way owned by the Pioneer Valley Railroad (Exh. EFSB-RS-2). The last 0.1 miles of the route turns east off the railroad ROW onto a new easement across property at 66 Ampad Road, to the proposed generating facility site (Exh. WLDC-1, at 40). The primary route crosses Pochassic Street, Notre Dame Street, Twist Street, the Mass Turnpike, Lockhouse Road, Servistar Industrial Way, and Ampad Road, all in Westfield (id. at 40, fig. 1.5-1).

b. Alternative Route

The alternative route is 3.75 miles long and would connect to the existing Northampton Lateral to the east of the generating facility site (“noticed alternative route”) (Exh. WLDC-1, at 41, 42). From an interconnection with the Northampton lateral at the intersection of North Road (U.S. Route 202) and East Mountain Road in the northeast corner of Westfield, the pipeline would follow North Road two miles west to an existing electric transmission easement then one

and three-quarters miles south to the site along the easement (id. at fig. 4.2-1). The alternative route would cross Gun Club Road, Saunders Road, Long Pond Road, Old Apremont Way, Old Stage Road, Jaeger Drive, Southampton Road, and Summit Lock Road (id. at 41).

D. Environmental Impacts, Cost and Reliability of the Primary and Alternative Routes

1. Standard of Review

In implementing its statutory mandate to ensure a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost, the Siting Board requires a petitioner to show that its proposed facility is sited at a location that minimizes costs and environmental impacts while ensuring a reliable energy supply. To determine whether such a showing is made, the Siting Board requires a petitioner to demonstrate that the proposed site for the facility is superior to the noticed alternatives on the basis of balancing cost, environmental impact, and reliability of supply. 2005 NSTAR Electric Decision, 14 DOMSB 233, at 296; 2003 KeySpan Decision, 14 DOMSB 49, at 89; 1997 BECo Decision, 6 DOMSB 208, at 287.

An assessment of all impacts of a proposed facility is necessary to determine whether an appropriate balance is achieved both among conflicting environmental concerns as well as among environmental impacts, cost, and reliability. A facility which achieves that appropriate balance thereby meets the Siting Board's statutory requirement to minimize environmental impacts at the lowest possible cost. 2005 NSTAR Electric Decision, 14 DOMSB 233, at 297; 2003 KeySpan Decision, 14 DOMSB 49, at 89; 1997 BECo Decision, 6 DOMSB 208, at 287.

The Siting Board recognizes that an evaluation of the environmental, cost, and reliability trade-offs associated with a particular proposal must be clearly described and consistently applied from one case to the next. Therefore, in order to determine if a petitioner has achieved the proper balance among various environmental impacts – and among environmental impacts, cost and reliability – the Siting Board first determines whether the petitioner has provided sufficient information regarding environmental impacts and potential mitigation measures to enable the Siting Board to make such a determination. The Siting Board then can determine whether environmental impacts would be minimized. Similarly, the Siting Board determines whether the petitioner has provided sufficient cost and reliability information in order to determine if the appropriate balance among environmental impacts, cost, and reliability would be

achieved. 2005 NSTAR Electric Decision, 14 DOMSB 233, at 297; 2003 KeySpan Decision, 14 DOMSB 49, at 89-90; Commonwealth Electric Company, 5 DOMSB 273, at 337 (1997).

Accordingly, for the gas pipeline, the Siting Board examines in the sections below the environmental impacts, reliability, and cost of the proposed facilities along the primary and alternative gas pipeline routes to determine: (1) whether environmental impacts would be minimized; and (2) whether an appropriate balance would be achieved among conflicting environmental impacts as well as among environmental impacts, cost, and reliability. In this examination, the Siting Board compares the primary and alternative routes to determine which is superior with respect to providing a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

2. Environmental Impacts

In this section, the Siting Board compares the environmental impacts of the proposed facilities along the primary and alternative routes, the proposed mitigation for such impacts, and any options for additional mitigation. The Siting Board then determines whether the environmental impacts of the proposed facilities would be minimized. The subsections below consider impacts to adjacent land resources, wetlands and water resources, noise, and traffic.

a. Land Resources

The primary route is located entirely within Westfield, originating on the south side of the Westfield River and extending north for 2.5 miles to the generating facility site (Exh. WLDC-1, at 97). The majority of the pipeline route is on a railroad right-of-way, and crosses two public roads (*id.* at 98). A section of the proposed pipeline route 1.4 miles long is located within the same "Industrial A" zoning district as the generating facility site (*id.*). The remaining portion passes through "Residential A" and "Commercial A - Neighborhood Commercial" zoning districts, for 0.7 miles and 0.1 miles respectively (*id.*). Approximately one mile of the route is within mapped Priority Habitat and Estimated Habitat associated with the eastern box turtle, a listed species of "Special Concern" (*id.* at 88, Table 4.2-1). PVEC stated that the Conservation and Management Permit needed for the project would cover this portion of habitat associated with the gas pipeline route as well as the generating facility site (Tr. 4, at 438). The Pipeline Applicants stated that the gas pipeline would have no impacts to land use, as the

pipeline will be located underground primarily within the property adjacent to the existing railroad right-of-way (Exh. WLDC-1, at 98).

The alternative route is also located entirely within Westfield, and would connect the generating facility to the Northampton lateral 3.75 miles to the north and east and primarily follow an existing electrical transmission right-of-way and roads (Exh. WLDC-1, at 41). The alternative route would involve three street crossings, and would run along public roadways for two miles (id. at Table 4.2-1). The alternative route would also impact 1.2 miles of Estimated and Priority Habitat of the eastern box turtle, a species of "Special Concern" listed by the Massachusetts Division of Fisheries and Wildlife (id.).

The record shows that land use impacts of the proposed pipeline, using either the primary or the alternative route, would consist primarily of temporary construction impacts. The record also shows that the alternative route would have greater impacts as it is longer overall, affects areas with a higher mix of residential use, and affects slightly more designated habitat.

The Siting Board finds that the primary route is preferable to the alternative route with respect to land resource impacts. The Siting Board finds that the land resources impacts of the proposed pipeline would be minimized.

b. Water Resources

The proposed gas pipeline would cross below the Westfield River by a 550-foot HDD and cross four small streams and wetland buffer zones; otherwise, the primary route would not cross any wetlands (Exh. WLDC-1, at 70). The alternative route would cross five streams and also traverse 264 linear feet of wetlands and 1.74 miles of wellhead protection areas, the proposed route would be confined to the drainage basin of the Westfield River, while the alternative route would have impacts within the drainage basins of both the Westfield River and the Connecticut River (id. at Table 4.2-1).

The Pipeline Applicants stated that during construction there may be temporary impacts to water resources (id. at 70). Impacts would include temporary excavation in and adjacent to wetlands, and in the 100-foot buffer zones and 200-foot riverfront area (id.). All activities in wetland resource areas would take place only after consultation with the Westfield Conservation Commission (id.). Furthermore, the Pipeline Applicants stated that an environmental

construction specification and work plan would be generated prior to construction of the pipeline to protect and prevent impacts to wetlands and other water resources (id.).

The record shows that the primary route would cross fewer streams than the alternative route, and that the primary route would have a lesser impact on wetlands. Construction across streams and wetlands, and buffer zone and riverfront areas, would be implemented with review by the Westfield Conservation Commission.

The Siting Board finds that, with respect to water resources, the primary route would be preferable to the alternative route. The Siting Board finds that the water resources and wetland impacts of the proposed pipeline would be minimized.

c. Noise

PVEC stated that during construction of the primary route, noise would be transitory as the construction moves along the 2.5-mile route, and would primarily be from backhoe and truck diesel engines (Tr. 2, at 199-205). This work would take place primarily within the day time construction hours; however, due to the need to schedule construction to avoid interference with the railroad, some weekend work may be required (id. at 201-202). The HDD operations on the north side of the Westfield River would be of longer duration and involve more noise producing equipment than the rest of the gas pipeline installation (id. at 207). PVEC anticipates that HDD operations would take place for two to four weeks during regular daytime construction hours (Exh. RR-EFSB-11, at 1). However, the Company stated that sub-surface soil conditions may necessitate continuous HDD operations, including nighttime drilling (id.). The closest residence to the noise generating equipment is approximately 170 feet to the west (id. at 4).

Noise modeling of the daytime and nighttime increase in noise level was conducted for the residence closest to HDD operations with and without a temporary sound-attenuating wall (id. at 5). Projected noise levels at the closest residence were provided for each piece of equipment involved in the HDD operation both with and without use of temporary sound wall(s); the projected noise levels are set forth in Table 7, footnotes (b) and (c) (id. at 5, 7).

The conceptual design for the temporary sound wall(s) includes three 22-foot high sections surrounding the HDD equipment on three sides, a 250-foot section, a 200-foot section and a 100-

foot section (*id.* at 6).¹³ These sections would provide roughly 15 dB of noise reduction at the nearest home (*id.*). The Company also provided estimated daytime and nighttime/holiday background noise levels at the closest residence, set forth in Table 7 (*id.*).¹⁴ Based on this information and staff assumptions regarding which equipment will be operating simultaneously, staff estimated the total noise and the increase above background at the nearest residence with the major equipment operating, as shown below in Table 7.

	Noise level at closest residence (dBA)					Westfield Noise Ordinance limit (dBA)
	Background	Total ^a		Increase above background		
		w/out mitigating sound wall ^b	w/mitigating sound wall ^c	w/out mitigating sound wall	w/mitigating sound wall	
Daytime	53	76	61	23	8	85 ^d
Nighttime/holiday	45	76	61	31	16	Residential - 45

(Exh. EFSB-RR-11).

- a Based on staff's assumption that four of the seven listed pieces of equipment would be running simultaneously: electric water pump with generator, drilling rig, mud tank trailer and hydraulic power set.
- b The four pieces of equipment which comprise this total sound level would each contribute a sound level of 70 dBA at the nearest residence, plus or minus 1 dBA.
- c The four pieces of equipment which comprise this total sound level would produce a sound level of 55 dBA each at the nearest residence with installation of a sound mitigating wall, plus or minus 1 dBA.
- d For daytime construction noise, the sound level for any piece of equipment may not exceed 85 dBA at 50 feet from the noise generating source.

¹³ PVEC stated that the specific details of the noise wall have not been finalized, and that it would likely be installed around two or three sides of the HDD equipment area on the north side of the Westfield River (Exh. WLDC-5, at 45).

¹⁴ PVEC estimated background sound levels based on the type of neighborhood, residential suburban near railroad tracks (Exh. WLDC-5, at 44). The ranges and the estimated average were based on figures in reference materials, not on measurements taken at the actual neighborhood in question.

The Westfield noise ordinance has provisions limiting construction noise to 85 dBA at 50 feet; the Company asserted that none of the HDD equipment would exceed Westfield's construction noise limit (Exh. EFSB-RR-11, at 2). The noise ordinance also places limitations on the time of day that construction activities may take place, and a permit for out-of-hours construction must be granted in advance by application to the Superintendent of Building and the Police Chief (*id.* at 3). Furthermore, the ordinance establishes maximum sound levels for out-of-hours construction¹⁵ within the different zoning districts which may not be exceeded in those districts for any reason short of an emergency (*id.*). Therefore, if the Pipeline Applicants should obtain an out-of-hours permit to continue construction on evenings, weekends or holidays, it would still be required to operate within these maximum sound levels (*id.*). The Pipeline Applicants note that even with the sound wall, the predicted noise level in the adjacent residential zoning district is projected to exceed the nighttime maximum noise limit (*id.* at 7). Therefore, if the Pipeline Applicants did need to conduct nighttime drilling, it would need to further mitigate the noise to stay within the City of Westfield's limits (*id.*). The estimated cost of the sound wall was from \$157,000 to \$460,000; the Pipeline Applicants asserted that it cannot make a more precise estimate until further details of the HDD operation are planned (*id.*).

The noise impacts along the 3.7 miles of the alternative route would be similar, but may be greater in aggregate due to the fact that the alternative route is 50% longer than the primary route. There is no specific analysis of the noise impacts of pipeline construction along any portion of the alternative route. The alternative route is longer and it partly follows a paved road with adjacent houses, which could require pavement cutting, but it does not require HDD and it partly follows an overland transmission away from homes.

The record indicates that gas pipeline construction would result in temporary noise resulting in a day's duration along much of the 2.5-mile primary route. With respect to noise from HDD operations with use of the primary route, the record indicates that without mitigation, there would be an increase above background of 31 dBA at night, 23 dBA during the daytime, and a total noise level of 76 dBA day or night at residential locations. The record also indicates

¹⁵ Construction on holidays or outside the hours of 7 a.m. to 9 p.m., Monday through Saturday, noon to 9 p.m. and on Sunday is defined as "out of hours construction" (Exh. WLDC-1, at 108). The Westfield noise ordinance limits the sound level from construction during those hours to 45 dBA in residential zones (Exh. EFSB-RR-11).

that with a sound wall, these increases above background would be 16 dBA at night and 8 dBA during the daytime, a total noise level of 61 dBA. The record shows that any of these noise levels would exceed the City of Westfield's nighttime noise limit of 45 dBA.

Overall, outside the HDD area, the primary route provides some noise impact advantages over the alternative route based on shorter length, but that advantage is limited given that impacts are short-lived in any one location along each route. In the HDD area, however, residential noise impacts would be up to 61 dBA even with possible sound wall mitigation, would extend for several weeks, and could occur on a 24-hour basis. On balance, the Siting Board finds that the alternative route is preferable to the primary route, with respect to noise impacts.

Regarding construction noise, Siting Board has, in past cases, directed companies to provide for public outreach or to consult with public officials. Furthermore, in a recent underground electric transmission case, the Siting Board noted that "offering temporary accommodations for residents interested in relocation during construction" is a possible measure to address evening construction noise, and directed the company to "develop a noise mitigation plan covering each residential area where nighttime construction would take place."

Boston Edison Company, 14 DOMSB 233, at 331 (2005).

The Siting Board directs the Pipeline Applicants to limit the daytime noise level at the nearest residence to the entry point of the proposed HDD operations (on the north side of the Westfield River) to 61 dBA, the level modeled by the Company as achievable with a sound wall, and to limit the daytime noise level at the nearest residence to the exit point of the proposed HDD operations (on the south side of the Westfield River) to 61 dBA. The Siting Board further directs that, should the Pipeline Applicants determine that overnight HDD operations are necessary, the Pipeline Applicants shall comply with the Westfield nighttime noise limitation of 45 dBA unless they obtain prior permission from the appropriate noise or construction enforcement officials of the City of Westfield regarding such operation and any potential further mitigation. In no event, however, shall nighttime noise exceed the 61 dBA daytime limit described above. Prior to conducting any HDD operation, the Pipeline Applicants shall file with the Siting Board a compliance filing demonstrating the means of mitigating noise from daytime HDD operations to 61 dBA or less and plans for addressing the City of Westfield's nighttime noise limitation. The Pipeline Applicants also shall offer to affected residents, prior to any overnight operations, alternative accommodations on any night when overnight operations will

occur and noise levels will exceed Westfield's nighttime noise limitation in the event that Westfield permits an exceedance, including residents within a distance from the HDD entry and exit points which the Pipeline Applicants shall determine in consultation with appropriate noise or construction enforcement officials of the City of Westfield.

The Siting Board finds that, with implementation of the above conditions, the noise impacts of the proposed pipeline would be minimized.

d. Traffic

The Pipeline Applicants asserted that the traffic impacts of the primary route would be negligible (Tr. 2, at 216). For the majority of the pipeline construction work, the crew sizes would be between four and eight construction workers (*id.* at 215). The Pipeline Applicants stated that construction at the HDD site would involve more construction personnel than the rest of the pipeline route, and there may be some short term impacts while bringing large equipment to the HDD site (*id.*). The Pipeline Applicants stated that there would be sufficient space at the HDD site for construction worker parking (*id.*). There is no specific information on the record with respect to the traffic impacts of the alternative route. However, the alternative route involves approximately two miles of construction along a public roadway, as well as three street crossings (Exh. WLDC-1, at table 4.2-1).

The record indicates that traffic impacts of both the primary and alternative routes would be minimal; however, large equipment and construction workers will be using public roads, so some traffic impact would occur. The record also indicates that the alternative route is longer than the primary route and additionally would involve working along public roads for approximately two miles. Work on public roads likely would cause some traffic impacts and the greater length of in-road construction on the alternative route would result in a greater traffic impact, compared to the primary route.

The Siting Board finds that the primary route is preferable to the alternative route with respect to traffic impacts. The Siting Board finds that traffic impacts of the proposed pipeline would be minimized.

e. Conclusions on Environmental Impacts

The Siting Board has reviewed the record evidence regarding construction impacts and permanent impacts of the proposed pipeline, and has imposed mitigation where necessary to minimize the environmental impacts of the proposed pipeline. Based on its review of the record, the Siting Board finds that the Pipeline Applicants have provided sufficient information regarding environmental impacts and potential mitigation measures to allow the Siting Board to determine that the Pipeline Applicants have achieved the proper balance among environmental impacts. The Siting Board found that the primary route would be preferable to the alternative route with respect to land use, water resources, and traffic impacts. The Siting Board found that the alternative route would be preferable to the primary route with respect to noise impacts. On balance, the Siting Board finds that, with above-directed mitigation, the greater noise impacts of the primary route are outweighed by its benefits with respect to land use, water resources, and traffic impacts. Overall, the Siting Board finds that the primary route would be preferable to the alternative route with respect to environmental impacts. Furthermore, with implementation of the noise mitigation condition, the Siting Board finds that the environmental impacts of the proposed pipeline along the primary route would be minimized.

3. Cost and Reliability

The noticed alternative route is 50% longer than the primary route and includes 1.7 miles in which bedrock is present, while the primary route has no areas containing bedrock (Exh. WLDC-1, at 42). The Pipeline Applicants stated that by constructing the pipeline within the Pioneer Valley Railroad right-of-way of the primary route, the regulatory approvals would be minimized, and public way crossings would be avoided (id. at 43). All of these factors contribute to the primary route being less costly than the noticed alternative route; the Pipeline Applicants estimated that the primary route would cost \$5 million, and the noticed alternative route would cost \$8 million (id.).

The Pipeline Applicants stated that the reliability of both routes is roughly comparable, but the primary route has somewhat less potential for unexpected disruptions in service because it is shorter (Exh. WLDC-1, at 43). The Pipeline Applicants also stated that the primary route would provide for easier maintenance because the majority of the pipeline would be within a single, existing, private right-of-way, as opposed to the noticed alternative route involving

several public ways, resulting in somewhat limited access to the pipe itself (id.). The Pipeline Applicants concluded that the primary route is slightly superior to the noticed alternative route with respect to reliability (id.).

The estimated cost of constructing the proposed pipeline along the primary route is approximately \$3 million lower than the estimate for the alternative route. The record shows that the primary route is preferable to the alternative route with respect to cost. With respect to reliability, the record shows that the primary route may have a slight advantage over the alternative route. Accordingly, the Siting Board finds that the primary route is preferable to the alternative route with respect to cost and with respect to reliability.

4. Conclusions on Facility Routing

The Siting Board found, above, that the primary route would be preferable to the alternative route with respect to environmental impacts, cost, and reliability. Based on the review of the record the Siting Board finds that the Pipeline Applicants have provided sufficient information regarding costs, reliability, and environmental impacts to allow the Siting Board to determine whether it has achieved the proper balance between environmental impacts, cost, and reliability. Accordingly, the Siting Board finds that the primary route is preferable to the alternative route with respect to providing a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

IV. CONSISTENCY WITH THE POLICIES OF THE COMMONWEALTH

A. Standard of Review

G.L. c. 164, § 69J $\frac{1}{4}$ requires the Siting Board to determine whether the plans for construction of a proposed generating facility are consistent with current health and environmental protection policies of the Commonwealth and with such energy policies of the Commonwealth as are adopted by the Commonwealth for the specific purpose of guiding the decisions of the Siting Board. Similarly, G.L. c. 164, § 69J requires the Siting Board to determine that plans for construction of a new facility are consistent with the current health, environmental protection, and resource use and development policies as adopted by the Commonwealth. The health, environmental protection, and resource use and development policies applicable to the review of a generating facility or pipeline vary considerably depending

on the unique features of the site and technology proposed; however, they may include existing regulatory programs of the Commonwealth relating to issues such as air quality, water-related discharges, noise, water supply, wetlands or riverfront protection, rare and endangered species, and historical or agricultural land preservation. Therefore, in this section, the Siting Board summarizes the applicable policies of the Commonwealth, and discusses the extent to which the proposed facility complies with these policies.

B. Analysis

In Sections II through IV, above, the Siting Board has reviewed the process by which PVEC and WG&E sited and designed the proposed generating facility and gas pipeline, and the environmental and health impacts of the proposed generating facility and gas pipeline as sited and designed. As part of this review, the Siting Board has identified a number of Commonwealth policies applicable to the design, construction, and operation of the proposed facilities. These are briefly summarized below.

As discussed in Section II.C.2, above, the MADEP, in conjunction with the USEPA, extensively regulates emissions of criteria and non-criteria pollutants from new sources such as the proposed facility. PVEC has demonstrated that it expects to comply with all applicable MADEP and USEPA standards.

As discussed in Section II.C.3 and III.D.2.b, above, the MADEP, in conjunction with the USEPA and the Westfield Conservation Commission, regulate various wastewater discharges as well as construction in wetlands and waterway areas. PVEC and WG&E have demonstrated that they expect to comply with MADEP and USEPA standards for water discharges and for work in wetlands and waterway areas.

As discussed in Sections II.C.6, and III.D.2, above, the record indicates that, as mitigated, the noise impacts of the generating facility and pipeline will be minimized. PVEC has maintained that it will limit increases in off-site noise caused by operation of the proposed facility to less than 10 dBA at the nearest residences and property lines, and has represented that it will seek a waiver from MADEP for noise increases on adjacent non-residential properties, consistent with MADEP policy 90-001, which limits such increases to 10 dBA. In Section III.D.2.c., the Siting Board directed the PVEC and WG&E to mitigate daytime HDD noise. Additionally, the Siting Board directed the Pipeline Applicants to comply with the

Westfield noise ordinance for nighttime construction unless they obtain prior approval from the appropriate officials of the City of Westfield. In no event may PVEC and WG&E exceed the daytime noise limit of 61 dBA during nighttime construction.

As discussed in Sections II.C.10 and III.D.2.a, above, the record indicates that the proposed project is not likely to adversely impact endangered species or historical and archaeological resources. PVEC and WG&E have demonstrated that they expect to comply with policies of the Massachusetts Natural Heritage and Endangered Species Program and the Massachusetts Historical Commission.

Accordingly, based on its review above, the Siting Board finds that plans for construction of the generation facility and proposed pipeline are consistent with current health and environmental protection policies and resource use and development policies of the Commonwealth and with such energy policies of the Commonwealth as have been adopted for the specific purpose of guiding the decisions of the Siting Board.

V. DECISION

The Siting Board's enabling statute directs the Siting Board to implement the energy policies contained in G.L. c. 164, §§ 69H-69Q to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. G.L. c. 164, § 69H. Section 69J $\frac{1}{4}$ requires that, in its consideration of a proposed generating facility, the Siting Board review inter alia the site selection process, the environmental impacts of the proposed project, and the consistency of the plans for construction and operation of the proposed project with the environmental policies of the Commonwealth.

Sections II and IV, above, address the proposed generating facility.

In Section II.A, above, the Siting Board found that PVEC provided an accurate description of its site selection process.

In Section II.C, above, the Siting Board found that with the implementation of the listed conditions relative to operation on oil and to water resources, visual, noise, safety, traffic, and EMF impacts, PVEC's plans for the construction of the proposed generating facility would minimize the environmental impacts of the proposed project consistent with the minimization of costs associated with the mitigation, control, and reduction of the environmental impacts of the proposed project.

In Section IV, above, the Siting Board found that the plans for the construction of the proposed generation facility are consistent with current health and environmental protection policies of the Commonwealth and with such energy policies of the Commonwealth as have been adopted by the Commonwealth for the specific purpose of guiding the decisions of the Siting Board.

Accordingly, the Siting Board finds that, upon compliance with the conditions set forth above and listed below, the construction and operation of the proposed generating facility will provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

Sections III and IV, above, address the gas pipeline.

In Section III.A, above, the Siting Board found that the existing system is inadequate to serve the anticipated load and, therefore, there is a need for additional gas resources for the proposed generating facility.

In Section III.C, above, the Siting Board found that the Company has examined a reasonable range of practical siting alternatives.

In Section III.D, above, the Siting Board found that, with the implementation of listed conditions regarding construction noise, the proposed project would be superior to alternative approaches with respect to providing a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

In Section IV, above, the Siting Board has found that the plans for the construction of the proposed pipeline are consistent with current health and environmental protection policies and resource use and development policies of the Commonwealth and with such energy policies of the Commonwealth as have been adopted by the Commonwealth for the specific purpose of guiding the decisions of the Siting Board.

Accordingly, the Siting Board finds that, upon compliance with the conditions listed below, the construction and operation of the proposed gas pipeline will provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

Accordingly, the Siting Board APPROVES the petition of Pioneer Valley Energy Center, LLC to construct a 400 MW generating facility in Westfield, Massachusetts using either of two proposed water supply line routes, and APPROVES the proposal of Pioneer Valley Energy

Center, LLC, and Westfield Gas & Electric to construct an approximately 2.5-mile, 12-inch diameter gas pipeline in the City of Westfield along the primary route, subject to the conditions below.

- A. The Siting Board directs the Company to limit operation on oil in any one year to the hourly equivalent of 60 days, including no more than 46 days from January 1st to November 30th (and not during ozone season) and reserving at least 14 days for December 1st to December 31st, provided that this limitation on operation on ULSD oil will not apply when natural gas is unavailable to operate the proposed facility (either due to gas transportation disruptions, or supply disruptions or curtailment), the Company has used either its pre-December allotment of 46 days (equivalent), and/or its December allotment of 14 days (equivalent) for any reason, and ISO-NE calls on the facility to operate out of economic merit. The Siting Board further directs the Company to provide the Board with a report of the hours of ULSD use and the reasons therefor, for each day ULSD was used, for each calendar year, by the following February 1st.
- B. The Siting Board directs the Company to provide Holyoke Water Works with the \$80,000 proposed to perform leak detection, repair and other water supply system improvements and also to work in conjunction with Holyoke Water Works in support of customer water conservation education efforts.
- C. The Siting Board directs the Company to provide the Board, within two weeks of its execution, a copy of any agreement reached with the Westfield Water Resources Department regarding use of Westfield water for cooling tower backup, should such an agreement be reached. Further, the Siting Board directs the Company to inform the Board if and when discussions regarding backup water supply have ceased and no agreement is reached.
- D. The Siting Board directs the Company to design and operate the proposed project so that all ammonia transfer from parked delivery trucks to the ammonia storage tank is diked or otherwise contained.

- E. The Siting Board directs the Company, prior to the commencement of operation, to provide to the Siting Board a recycling plan, and to report on the Company's recycling rate for construction debris and its anticipated recycling rate for operational wastes.
- F. The Siting Board directs the Company to pursue discussions with the owner of the vacant parcel between the generating facility site and Root Road regarding the possibility of planting conifers on the parcel, such that views of the generating facility are obscured.
- G. The Siting Board directs the Company, with the permission of and in consultation with, the City of Westfield to plant vegetative screening along the eastern side of the Root Road public way near Hampden Village, as is practical, such that views of the generating facility are obscured.
- H. The Siting Board directs the Company to provide, as requested by individual property owners or appropriate municipal officials, reasonable off-site mitigation of visual impacts, including shrubs, trees, window awnings, or other mutually agreeable measures that would screen views of the proposed generating facility and related facilities at affected residential properties and roadways up to one mile from the site where residents may experience changed views, as further set forth in Section II.C.5.b, above. Further, the Siting Board directs the Company to maintain the good appearance of the facility, including the stack and on-site landscaping, for the life of the project.
- I. The Siting Board directs the Company to implement cooling tower design modifications for additional noise mitigation (Option 1 in Section II.C.6.a, above).
- J. The Siting Board directs the Company to use an aqueous ammonia storage tank of stainless steel construction.
- K. The Siting Board directs the Company to provide the Board with a Spill Prevention, Control and Countermeasure plan which covers the procedures to be followed in the event of an aqueous ammonia or ULSD spill, as well as a safety plan for offloading ammonia, prior to the start of operations testing.

- L. The Siting Board directs that, during operation of the proposed facility, except in the case of a fuel-supply emergency such as may occur in a cold snap, the Company shall avoid peak travel hours, as determined by the City of Westfield, for bulk truck deliveries to the proposed facility.
- M. The Siting Board directs the Company to report to the Board, prior to construction, on any traffic plans or agreements developed with local agencies.
- N. The Siting Board directs the Company to report to the Board regarding the progress and the outcome of the Company's interconnection plans and on designs for any transmission upgrades, as well as any measures incorporated into transmission upgrade designs to minimize magnetic field impacts within two weeks of reaching a final agreement with all transmission providers regarding interconnection.
- O. The Siting Board directs the Company to provide the Siting Board a copy of a conservation restriction agreement or other documentation that formalizes the disposition of the parcel to serve as conservation land, open space, or permanent undeveloped buffer, including any recording made in relation thereto, within two weeks of the later of the finalization or recording of any such documentation.

- P. The Siting Board directs the Pipeline Applicants to limit the daytime noise level at the nearest residence to the entry point of the proposed HDD operations (on the north side of the Westfield River) to 61 dBA, the level modeled by the Company as achievable with a sound wall, and to limit the daytime noise level at the nearest residence to the exit point of the proposed HDD operations (on the south side of the Westfield River) to 61 dBA. The Siting Board further directs that, should the Pipeline Applicants determine that overnight HDD operations are necessary, the Pipeline Applicants shall comply with the Westfield nighttime noise limitation of 45 dBA unless they obtain prior permission from the appropriate noise or construction enforcement officials of the City of Westfield regarding such operation and any potential further mitigation. In no event, however, shall nighttime noise exceed the 61 dBA daytime limit described above. Prior to conducting any HDD operations, the Pipeline Applicants shall file with the Siting Board a compliance filing demonstrating the means of mitigating noise from daytime HDD operations to 61 dBA or less, and plans for addressing the City of Westfield's nighttime noise limitation. The Pipeline Applicants also shall offer to affected residents, prior to any overnight operations, alternative accommodations on any night when overnight operations will occur and noise levels will exceed Westfield's nighttime noise limitation in the event that Westfield permits an exceedance, including residents within a distance from the HDD entry and exit points which the Pipeline Applicants shall determine in consultation with appropriate noise or construction enforcement officials of the City of Westfield.

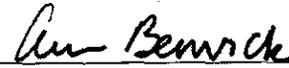
Because issues addressed in this Decision relative to this facility are subject to change over time, construction of the proposed generating facility must be commenced within three years of the date of the decision.

In addition, the Siting Board notes that the findings in this decision are based upon the record in this case. A project proponent has an absolute obligation to construct and operate its facility in conformance with all aspects of its proposal as presented to the Siting Board. Therefore, the Siting Board requires Pioneer Valley Energy Center, LLC, its successors in interest, and Westfield Gas and Electric to notify the Siting Board of any changes other than minor variations to the proposals so that the Siting Board may decide whether to inquire further into a particular issue. Pioneer Valley Energy Center, LLC, its successors in interest, and Westfield Gas and Electric are obligated to provide the Siting Board with sufficient information on changes to the proposed project to enable the Siting Board to make these determinations. With respect to the conditions in this decision requiring the Applicants to submit certain documentation to the Board [conditions A, C, E, K, M, N, O, and P], the Siting Board reserves the right to request additional materials or information from the Applicants if it determines that the information provided is insufficient.


Selma Urman
Presiding Officer

Dated October 19, 2009

APPROVED by the Energy Facilities Siting Board at its meeting of October 8, 2009, by the members and designees present and voting. **Voting for** approval of the Tentative Decision, **as amended**: Ann Berwick, Undersecretary for Energy (Acting EFSB Chair/Designee for Ian A. Bowles, Secretary, Executive Office of Energy & Environmental Affairs); Robert Sydney (Designee for Commissioner, DOER); James Colman (Designee for Commissioner, MADEP); Robert Mitchell (Designee for Secretary, EOHEd); Tim Woolf, DPU; Jolette Westbrook, DPU; and Dan Kuhs, Kevin Galligan, and Penn Loh, Public Members.



Ann Berwick, Acting Chair
Energy Facilities Siting Board

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).

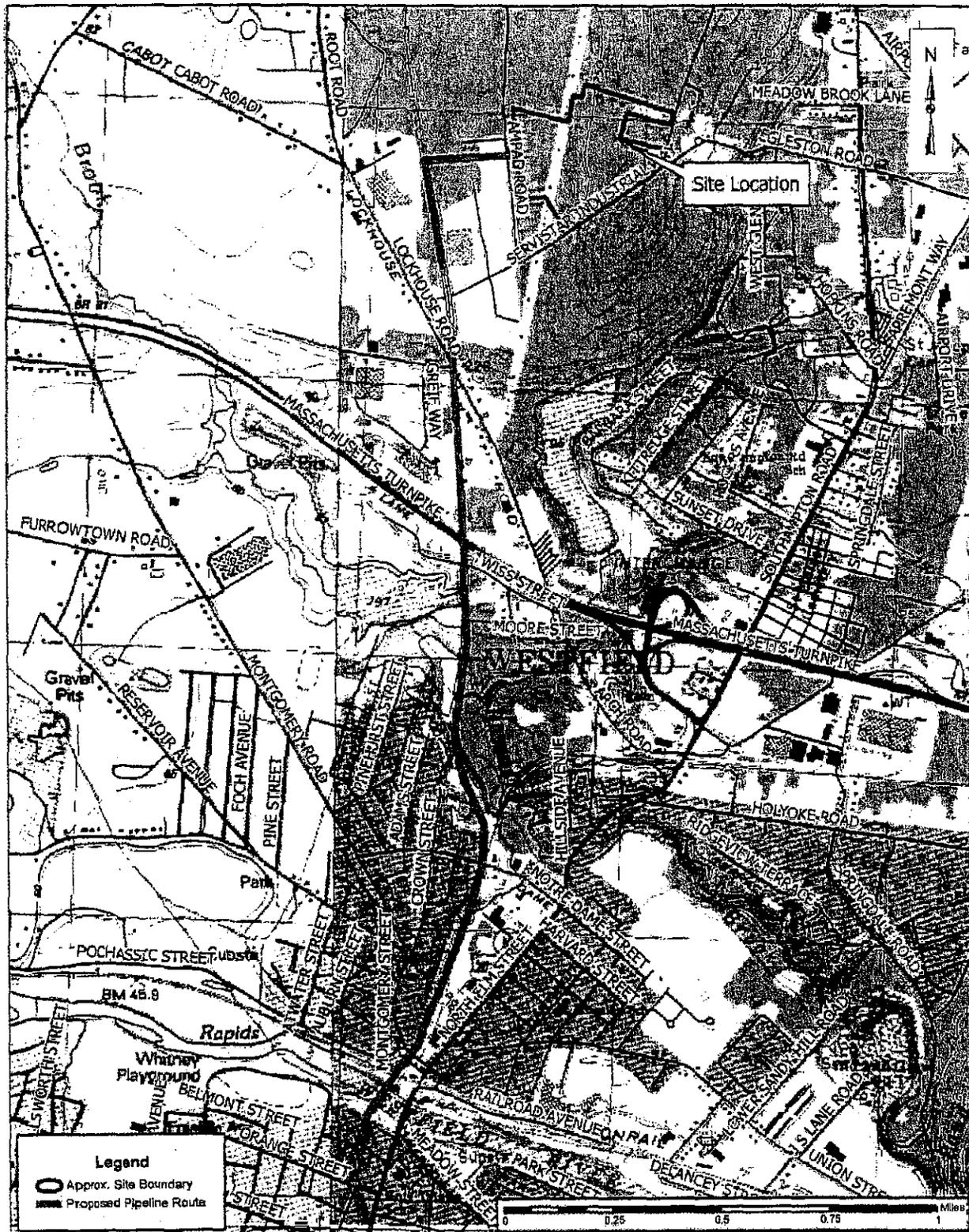


Figure 1. PVEC Generation Facility Site and Proposed Gas Pipeline Route (Exh. WLDC-1 at Figure 1.5-1)

EFSB-08-1

COMMONWEALTH OF MASSACHUSETTS
Energy Facilities Siting Board

Proposed Rulemaking to Amend the Regulations
Governing the Conduct of Energy Facilities
Siting Board Adjudicatory Proceedings and
General Information and Conduct of Board Business

EFSB 08-RM-1

FINAL DECISION
ADOPTION OF FINAL REGULATIONS AT 980 CMR § 1.00 AND 980 CMR § 2.00

M. Kathryn Sedor
Stephen August
Presiding Officers
January 14, 2010

The Energy Facilities Siting Board (“Siting Board”) hereby adopts final regulations at 980 CMR § 1.00, “Rules for the Conduct of Adjudicatory Proceedings” and at 980 CMR § 2.00, “General Information; Conduct of Board Business” (“Final Regulations”).

I. STATUTORY BACKGROUND

In 1975, the Energy Facilities Siting Council (“Siting Council”), the predecessor to the Siting Board, initially promulgated its procedural regulations at 980 CMR § 1.00 and 980 CMR § 2.00. In 1992, the Siting Board was established to replace the Siting Council. St. 1992, c. 141 (“merger legislation”). The merger legislation placed the seven-member Siting Board within the Department of Public Utilities (“Department”), but not under the supervision or control of the Department, and assigned certain of the Board’s prior duties to the Department. The merger legislation also changed the composition of the Siting Board¹ and gave the Siting Board authority to review certain matters referred to it by the Department. Further, the merger legislation established a facility siting division within the Department to administer, implement, and enforce the Siting Board’s statutory obligations.

Two bills passed in the late 1990s further altered the role and structure of the Siting Board. The Electric Restructuring Act of 1997 altered the scope of the Siting Board’s review of generating facility proposals and revised the Siting Board’s fundamental mandate, directing it to provide a “reliable,” rather than a “necessary,” energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. St. 1997, c. 164. In 1999, further legislation was passed that increased the Siting Board from seven to nine members. St. 1999, c. 127, § 152.² On September 13, 2002, 980 CMR 1.00 and 980 CMR 2.00 were amended in EFSB 02-RM-1 to reflect the statutory changes that had occurred since 1975.

On April 11, 2007, Chapter 19 of the Acts of 2007 (“Act”) was enacted pursuant to Article 87 of the Amendments to the Massachusetts Constitution. The Act, among other things, reorganized the Governor’s Cabinet and certain agencies of the Commonwealth such as the Siting Board. The Act placed the Department under the supervision and control of the Commonwealth Utilities Commission, within the Executive Office of Energy and Environmental Affairs. The Act retained a nine-member Siting Board, but changed the

¹ As a result of the merger legislation, the Siting Board consisted of: three Commissioners of the Department; the Secretary of Environmental Affairs; the Secretary of Economic Affairs; and two public members appointed by the Governor.

² The nine members were: the Chairman of the Department and two additional Commissioners of the Department; the Secretary of Environmental Affairs; the Director of Economic Development; the Commissioner of Energy Resources; and three public members appointed by the Governor.

composition to include the Secretary of Energy and Environmental Affairs as the Chairman; the Secretary of Housing and Economic Development; the Commissioner of the Department of Environmental Protection; the Commissioner of the Department of Energy Resources; two Commissioners of the Commonwealth Utilities Commission; and three public members to be appointed by the Governor.

II. PROCEDURAL HISTORY

On April 11, 2008, the Siting Board opened this rulemaking amending existing 980 CMR § 1.00 and 980 CMR § 2.00 (“existing regulations”), in order to implement the statutory changes made to the composition of the Siting Board, and to provide additional procedural efficiency and clarity to certain provisions of the existing regulations. On May 15, 2008, after notice duly issued, the Siting Board conducted a public hearing concerning its proposed rulemaking. Written comments regarding the proposed rulemaking were accepted through May 15, 2008. Comments were received from the National Grid companies; Western Massachusetts Electric Company; NSTAR Electric Company and NSTAR Gas Company; and the Massachusetts Municipal Association.

After considering the oral and written comments received and upon its own recommendations, the Siting Board has issued the attached Final Regulations. The following section first discusses the two major revisions to the existing regulations that were initially proposed in April 2008 and that appear, as substantially proposed, in the Final Regulations. See Sections III.A and B, below. The section then discusses two changes that were proposed in April 2008 but that have not been included in the Final Regulations.³ See Sections III. C and D, below.

III. REVISIONS TO THE EXISTING REGULATIONS

A. New 980 CMR 1.03 (8): Ex Parte Provisions

The Siting Board has added a new provision, § 1.03 (8), to its existing regulations, codifying Siting Board practice regarding ex parte communications. The new provision prohibits ex parte communications from the initial filing in an adjudicatory proceeding through the rendering of a final decision. It requires that a report of any such prohibited communications be placed in the case docket of the proceeding, and that the report include a statement as to whether recusal of the Siting Board member or staff person involved in the communications is appropriate. The new provision reflects the importance that the Siting

³ The changes discussed in Section III constitute the major substantive changes to 980 CMR 1.00. Smaller changes to 980 CMR 1.00 and 980 CMR 2.00 also have been made.

Board attaches to preventing ex parte communications, and to identifying and responding to such communications should they occur.

B. Amended 980 CMR 1.04 (3) (d): Timing of Intervention

The Siting Board has amended existing § 1.04 (3) (d) regarding the timing of intervention petition filings. Currently, the Board's regulations require that potential intervenors in an adjudicatory proceeding be given a filing period of at least 21 days, which is measured from the date on which notice of the public hearing is published. The amended provision allows a filing period of at least 14 days, but the period is measured from the date on which the public hearing is actually held. In general, this will allow parties two weeks rather than one week after the public hearing to file petitions to intervene. In measuring the intervention period from the fixed date of the public hearing, rather than a variable date before the public hearing, it is the Board's intention to ensure that parties have both an adequate and a consistent amount of time to decide whether, and on what bases, to intervene, and that they are able to make that decision with the benefit of the information obtained through the public hearing process.

C. Amended 980 CMR 1.08 (2): Tentative Decisions

In its April 11, 2008 decision, the Siting Board proposed amending existing § 1.08 (2) regarding issuance by the Board of tentative decisions. Under the Siting Board's existing regulations, a tentative decision is issued for review and comment prior to the issuance of any final decision in an adjudicatory proceeding, unless the Board has heard the matter or read the evidence. The amended provision, incorporating statutory language from G.L. c. 30A, § 11, identified additional circumstances in which the issuance of a tentative decision would not be required. Under revised § 1.08 (2), as under G.L. c. 30A, § 11, a tentative decision would be required only if: (1) a majority of the Board has neither read nor heard the evidence in the proceeding; (2) the Board's decision is adverse to a party and (3) a party has requested a tentative decision in advance of hearings. See G.L. c. 30A, § 11 (7). Amended § 1.08 (2) was intended to expedite the adjudicatory process by allowing the Siting Board under certain conditions to issue a final decision without first issuing a tentative decision.

The Siting Board has reconsidered its proposal to amend § 1.08 (2). The Siting Board concurs with comments received from interested parties arguing that incorporation of the language from G.L. c. 30A would add uncertainty to an established and important public aspect of the Siting Board review process, with correspondingly little gain in efficiency since all parties are likely to preserve their right to a tentative decision by requesting one prior to hearings. The Siting Board also notes that G.L. c. 164, § 69 J (petition to construct for non-generating facilities) provides that the Board may delegate to Siting Board Staff the authority to conduct hearings, but that Staff "shall report back to the board with recommended decisions for

final action.” The Siting Board accordingly has withdrawn its April 11, 2008 proposal to amend § 1.08 (2) of the existing Siting Board regulations.

D. Proposed 980 CMR 1.06 (4): Interlocutory Review

The Siting Board initially proposed to add a new provision, § 1.06 (4), to allow parties to seek review by the Board of interlocutory decisions issued by a Presiding Officer during the course of an adjudicatory proceeding. Neither Siting Board regulations nor Board practice has previously afforded parties this right. Three of the four commenters strongly opposed this addition to the regulations, on the ground that it would likely add considerable delay to the Siting Board review process. The Siting Board has reconsidered its proposed addition of this provision to the regulations. The Board finds that the potential for delay is significant. The Board also finds that existing avenues for the challenge of interlocutory rulings, such as motions for reconsideration and the ultimate appeal of such rulings to the Supreme Judicial Court, have to date proven adequate to avoid any potential hardship to parties. Accordingly, the Siting Board has withdrawn its April 11, 2008 proposal to add 980 CMR § 1.06 (4) to the existing Siting Board regulations.

III. ORDER

Accordingly, after due notice, hearing and consideration it is hereby:

ORDERED: That, in accordance with G.L. c. 164, § 69H and G.L. c. 30A, the Final Regulations amending 980 CMR 1.00 and 980 CMR 2.00, as attached hereto, are hereby ADOPTED; and it is

FURTHER ORDERED: That the Director of the Siting Board attest to a true copy of this Order amending 980 CMR 1.00 and 980 CMR 2.00 and transmit said attested true copy to Office of the Secretary of State for the Commonwealth for publication in the Massachusetts Register; and it is

FURTHER ORDERED: That the rules and regulations of the Energy Facilities Siting Board are amended as set forth in the Final Regulations attached to this decision, and shall take effect upon publication in the Massachusetts Register.



M. Kathryn Sedor

Dated this 14th day of January, 2010

APPROVED by the Energy Facilities Siting Board at its meeting of January 14, 2010, by the members and designees present and voting. **Voting for** approval of the Tentative Decision, **as amended:** Ann Berwick, Undersecretary for Energy (Acting EFSB Chair/ Designee for Ian A. Bowles, Secretary, EOEEA); Robert Sydney (Designee for Commissioner, DOER); James Colman (Designee for Commissioner, DEP); Robert Mitchell (Designee for Secretary, EOHED); Jolette Westbrook, Commissioner, DPU; Tim Woolf, Commissioner, DPU; and Penn Loh and Kevin Galligan, Public Members.



Ann Berwick, Acting Chair
Energy Facilities Siting Board

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).

980 CMR 1.00: RULES FOR THE CONDUCT OF ADJUDICATORY PROCEEDINGS

Section

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1.01: Scope and Construction of Rules

(1) Scope. 980 CMR 1.00 shall govern the conduct of adjudicatory proceedings before the Energy Facilities Siting Board.

(2) Application of 980 CMR 1.00. 980 CMR 1.00 shall apply to all adjudications conducted by the Board except when a specific provision of 980 CMR indicates otherwise.

(3) Effective Date. Revisions to 980 CMR 1.00 shall take effect on [TBD, 2010], and shall apply to proceedings initiated after that date.

(4) Definitions. For the purpose of 980 CMR, the following definitions shall apply unless the context or subject matter requires a different interpretation:

Applicant means a person who submits to the Board an application or petition seeking determination of a matter within the Board's jurisdiction, or who, pursuant to M.G.L. c. 25, § 4, has a matter referred to the Board by the Chairman of the Department of Public Utilities pursuant to M.G.L. c. 164, § 69H.

Board means the Energy Facilities Siting Board.

Board Member means any of the nine persons set forth in 980 CMR 2.03(1) or any person named to serve as a designee under the terms of 980 CMR 2.03(3).

Chairman means the Chairman of the Energy Facilities Siting Board, as described in 980 CMR 2.03(2).

Director means the person appointed by the Chairman of the Department of Public Utilities to direct the work of the siting division and to conduct the day-to-day business of the Board as well as to perform any other duty delegated by the Chairman.

Hand Delivery means delivery by methods other than pre-paid U.S. mail (e.g., FedEx or paid courier service). Hand delivery shall not include delivery by

electronic mediums such as facsimile or e-mail unless authorized by the Presiding Officer.

Facility means any "facility" described in M.G.L. c. 164, §69 G including:

(a) any generating unit designed for or capable of operating at a gross capacity of 100 megawatts or more, including associated buildings, ancillary structures, transmission and pipeline interconnections that are not otherwise facilities, and fuel storage facilities;

(b) a new electric transmission line having a design rating of 69 kilovolts or more and which is one mile or more in length on a new transmission corridor;

(c) a new electric transmission line having a design rating of 115 kilovolts or more which is ten miles or more in length on an existing transmission corridor except reconductoring or rebuilding of transmission lines at the same voltage;

(d) an ancillary structure which is an integrated part of the operation of any transmission line which is a facility;

(e) a unit, including associated buildings and structures, designed for, or capable of, the manufacture or storage of gas, except such units below a minimum threshold size as established by regulation;

(f) a new pipeline for the transmission of gas having a normal operating pressure in excess of one hundred pounds per square inch gauge which is greater than one mile in length except restructuring, rebuilding, or relaying of existing pipelines of the same capacity; and

(g) any new unit, including associated buildings and structures, designed for, or capable of, the refining, the storage of more than 500,000 barrels or the transshipment of oil or refined oil products and any new pipeline for the transportation of oil or refined oil products which is greater than one mile in length except restructuring, rebuilding, or relaying of existing pipelines of the same capacity.

Generating Facility means any generating unit designed for or capable of operating at a gross capacity of 100 megawatts or more, including associated buildings, ancillary structures, transmission and pipeline interconnections that are not otherwise facilities, and fuel storage facilities.

Limited Participant means any person allowed to participate in an adjudicatory proceeding pursuant to M.G.L. c. 30A, § 10, and 980 CMR 1.05(2). A limited participant is not a party.

Party means an applicant, any person allowed to intervene in an adjudicatory proceeding pursuant to M.G.L. c. 30A, § 1(3), and 980 CMR 1.05(1), or any person who intervenes in an adjudicatory proceeding by right.

Person means a natural person, partnership, corporation, association, society, authority, agency or department of the State, or any body politic or political subdivision of the State including municipal corporations.

1.02: Rules of General Applicability

(1) Waiver of Rules. Where good cause appears, not contrary to statute, the Board and any Presiding Officer may permit deviation from any rules contained in 980 CMR.

(2) Severability. If any provision of 980 CMR is held to be invalid, such invalidity shall not affect the provisions or the applications thereof not specifically held invalid.

1.03: General Procedures

(1) Docket. A numbered docket shall be maintained for all adjudicatory proceedings and shall contain all documents filed in a proceeding and other relevant material.

(2) Filing of Documents with the Board.

(a) Filing.

(i) Any document to be filed with the Board pursuant to 980 CMR 1.00 shall be hand delivered, or mailed first class, to the Energy Facilities Siting Board or to the Presiding Officer at the Energy Facilities Siting Board. The Presiding Officer may allow documents to be filed by other means.

(ii) A document shall be deemed to be filed on the date stamped "Received" by the Board or its agent during usual business hours. Documents received after usual business hours shall be deemed filed on the following business day.

(b) Filing Format.

(i) Printing Requirements. All documents filed for possible inclusion in the record shall be clear and legible and shall be presented in accordance with the standards established by the Presiding Officer.

(ii) Form. Every document filed shall contain a title which indicates the nature of the proceeding, the name of the applicant, and the docket number if available. The Director or Presiding Officer shall determine the number of copies to be filed. The Board may provide forms to be used for specific purposes by any person or party; in such cases, use of forms provided shall be mandatory.

(3) Electronic Filing. The Presiding Officer may require documents to be filed electronically. Where documents are required to be filed electronically, a separate paper copy must also be served in accordance with 980 CMR 1.03(4).

(4) Service to Board, Parties and Participants.

(a) Service of a document upon the Board or the Presiding Officer shall be in accordance with 980 CMR 1.03(2).

b) Any person filing documents with the Board or Presiding Officer shall simultaneously serve a copy on all parties and limited participants required to be served in the proceeding, by hand delivery or by first class mail postage prepaid using the name(s) and address(es) stated on the service list issued by the Presiding Officer. The Presiding Officer may allow documents to be served by other means.

(c) All documents filed with the Board or the Presiding Officer shall be accompanied by a statement certifying the date and means of service and the persons to whom service was made. Failure to comply with these rules may be grounds for the Board or Presiding Officer to refuse to accept documents for filing.

(d) Documents shall be deemed served on the day of hand delivery or, if mailed, on the earlier of receipt or three days after mailing. The postmark shall be evidence of the date of mailing.

(5) Signatures. Every document filed pursuant to 980 CMR 1.03(2) or served pursuant to 980 CMR 1.03(4) shall be signed by the party making such filing or service or by the party's authorized representative. Such signature shall constitute certification by the signatory or authorized representative that he or she has read the document, that, to the best of his or her knowledge, every statement contained in the document is true, and that the document is not being filed to delay the proceeding.

(6) Computation of Time. Unless otherwise specifically provided by 980 CMR 1.00 or 2.00 or by other applicable law, computation of any time period referred to in 980 CMR 1.00 or 2.00 shall begin with the first day following the act which initiates the running of the time period. The last day of the time period is included unless it is a Saturday, Sunday, or legal holiday or any other day on which the office of the Board is closed, in which case the period shall run until the end of the next following business day. When the time period is less than seven days, intervening days when the office of the Board is closed shall be excluded.

(7) Extensions of Time. At the discretion of the Board or the Presiding Officer, for good cause shown, any time limit prescribed or allowed in 980 CMR may be extended. All requests for extensions of time must be made either by oral motion during a hearing or conference or by written motion served upon all parties or as directed by the Presiding Officer. All requests for extensions of time must be made before the expiration of the original time period or before the expiration of any subsequent extension(s) granted. Provisions contained in 980 CMR 1.03(7) shall not apply to any limitation of time prescribed by statute, unless extensions are permitted by the applicable statute.

(8) Ex Parte Communications in Adjudicatory Proceedings.

(a) From the initial filing in an adjudicatory proceeding until the rendering of a final decision, no party or limited participant may communicate ex parte with the Presiding Officer, any board member or the Siting Board staff involved in the decision process for the adjudicatory proceeding regarding the merits of such adjudicatory proceeding.

(b) Communications concerning scheduling and other procedural matters, as well as the receipt of information available in the public docket file are not prohibited by this regulation.

(c) If a party or limited participant makes or attempts to make an ex parte communication prohibited by (a) of this section, the Board member, Presiding Officer, or staff member shall advise the person that the communication is prohibited and shall immediately terminate the prohibited communication.

(d) If a Board member, Presiding Officer, or staff member violates the ex parte rule, he or she shall, no later than two business days after determining that the communication was prohibited, serve on each party and place in the docket file associated with the adjudicatory proceeding the following:

1. A written statement including the substance and circumstances surrounding the communication; the identity of each person who participated in the communication; the time, date, and duration of the communication; and whether, in his or her opinion, the receipt of the ex

parte communication disqualifies him or her from further participation in the adjudicatory proceeding; and

2. Any written or electronic documentation of the communication. The above documents shall be placed in the docket file associated with the adjudicatory proceeding but shall not be made a part of the evidentiary record.

(e) The Board may, upon the motion of any party or on its own motion, accept or require the submission of additional evidence of the substance of a communication prohibited by 980 CMR 1.03(8).

(f) Where a party or limited participant has violated this rule, the Board or Presiding Officer may take such action as is deemed appropriate within the circumstances.

1.04: Institution of an Adjudicatory Proceeding

(1) Commencement of Proceeding. Proceedings may be initiated by a petition to construct, a petition for a certificate of environmental impact and public interest, a petition for other matters over which the Board has jurisdiction, or the Board's own motion.

(2) Presiding Officer

(a) A Presiding Officer shall be assigned by the Director to conduct each adjudicatory proceeding. The Presiding Officer shall have the authority to take all actions necessary to ensure a fair, orderly and efficient proceeding. Such actions may include, but are not limited to: conducting evidentiary and public comment hearings; conducting site visits; ruling on petitions to intervene or to participate in a proceeding; establishing ground rules for a proceeding; holding procedural or other conferences; regulating the course of the hearing; prescribing the order in which evidence shall be presented; administering oaths and affirmations; examining witnesses and requiring them to produce evidence which will aid in the determination of any question of law or fact at issue; disposing of procedural requests or similar matters; hearing and ruling upon motions; issuing subpoenas; causing depositions to be taken; ruling upon offers of proof and receiving relevant material and probative evidence; fixing the time for filing briefs, motions and other documents in connection with hearing; and excluding any person from a hearing for disrespectful, disorderly, or contumacious language or conduct.

(b) A Presiding Officer may at any time withdraw from a proceeding if the Presiding Officer deems himself or herself disqualified. Should a Presiding Officer withdraw, another Presiding Officer shall be appointed. Any party who becomes aware of grounds that may exist for the disqualification of a Presiding Officer must immediately file an affidavit which clearly sets forth the grounds for the disqualification.

(3) Notice of Adjudication

(a) Notice shall be given at the beginning of any adjudicatory proceeding. The Presiding Officer shall give notice or shall require the applicant to give notice of an adjudication.

(b) A notice shall set forth a summary statement of the matter to be adjudicated. The notice shall state: (1) the name and address of the applicant;

(2) the address of the Board and the statement that any person desiring further information or wishing to participate in the proceeding may contact the Board; and (3) the date, time, and address of any scheduled public comment hearing.

(c) In cases where a proposed facility is the subject of the proceeding, notice shall be given by publication in at least two newspapers available in the vicinity of the proposed facility and as otherwise ordered by the Presiding Officer. In cases where a proposed facility is not the subject of the proceeding, notice by publication shall be given as ordered by the Presiding Officer. Notice shall further be given by first class mail or hand delivery to any person required by law or regulation to be so notified and to such other persons as the Presiding Officer may direct. Additional notice or publication shall be made, if required by statute or regulation, in the manner prescribed therein. Unless otherwise directed by the Board or Presiding Officer, the applicant is responsible for all costs related to the publication and distribution of notice.

(d) In cases where a proposed facility is the subject of the proceeding, the notice shall contain a deadline for the filing of petitions to intervene as a party or participate as a limited participant. This deadline shall be no less than 14 days after the public comment hearing.

(e) In cases where a proposed facility is not the subject of the proceeding, the deadline for the filing of petitions to intervene as a party or participate as a limited participant shall be as ordered by the Presiding Officer.

(4) Repository of Documents. The Presiding Officer may require an applicant to place certain documents in one or more repositories to provide for public access to these documents. A repository of documents is a public library, public office, applicant's office, or similar location where documents involved in a particular proceeding may be kept and made available to members of the public. If a repository is required, the applicant shall be responsible for placing the documents therein and making adequate arrangements for convenient public access to the documents.

(5) Public Comment Hearing. When required by statute or otherwise determined appropriate by the Presiding Officer, the Board shall hold a public comment hearing in one or more of the affected cities or towns. A public comment hearing shall be conducted to afford members of the general public an opportunity to comment on that matter. A public comment hearing shall be held as soon as practicable after the commencement of a proceeding. Comments made at a public comment hearing are not deemed to be evidence.

1.05: Intervention

(1) Parties.

(a) Any person who desires to intervene as a party in any proceeding shall file a written petition to intervene as a party.

(b) If a petitioner desires to intervene pursuant to M.G.L. c. 30A, § 10, the petition shall state the name and address of the petitioner, the manner in which the petitioner is substantially and specifically affected by the proceeding, the representative capacity, if any, in which the petition is brought, and shall state the contention of the petitioner and the purpose for which intervention is requested.

(c) If ten or more persons desire to intervene pursuant to M.G.L. c. 30A, § 10A, the petition shall state the names and addresses of the petitioners, the representative capacity, if any, in which the petition is brought, and the damage to the environment as defined in M.G.L. c. 214, § 7A that is or might be at issue. Intervention pursuant to M.G.L. c. 30A, § 10A shall be limited

to the issue of damage to the environment and the elimination or reduction thereof in order that any decision in such proceeding shall include the disposition of such issue.

(d) Each petitioner under c. 30A, § 10A shall file an affidavit stating the intent to be part of the group and to be represented by its authorized representative.

(e) In accordance with c. 30A, § 10A, an intervenor pursuant to c. 30A, § 10A may introduce evidence, present witnesses and make written or oral argument, excepting that the Presiding Officer may exclude repetitive or irrelevant material.

(f) The Presiding Officer shall rule on the petitions to intervene as a party under c. 30A, § 10 and § 10A, and may condition any allowance of a petition on such reasonable terms as he or she may set or as otherwise required by law.

(g) Persons who are granted leave to intervene as a party must comply with all requirements of 980 CMR 1.00 and with all directives of the Presiding Officer. In addition, parties may be required to respond to discovery by the Presiding Officer and by other parties if allowed by the Presiding Officer after motion.

(h) Generally, the rights of a person who is granted leave to intervene as a party include the right to present witnesses, the right to cross-examine witnesses, the right to file a brief, the right to file comments on a tentative decision and the appellate status as a party in interest who may be aggrieved by any final decision. In addition, persons who are granted leave to intervene as a party may also be afforded an opportunity to issue discovery and to present oral or written comments regarding a tentative decision under such conditions as the Board may provide.

(i) Except for an individual appearing *pro se*, all parties to a proceeding shall be represented by an attorney in good standing. The Presiding Officer may grant a waiver for good cause shown. A request for a waiver shall include: (1) an affidavit stating the good cause and naming a duly authorized representative; and (2) an affidavit by the duly authorized representative accepting the appointment and certifying that he or she will abide by the procedural rules set forth in 980 CMR and the Presiding Officer's directives.

(2) Participation.

(a) Any person who desires to participate as a limited participant in any proceeding shall make a written request for such status. Every request to participate as a limited participant shall describe the manner in which the petitioner is interested and his or her representative capacity, if any, and it shall state the contention of the petitioner and the purpose for which participation is requested.

(b) The Presiding Officer may grant leave to a person to participate as a limited participant and may condition any grant on such reasonable terms as he or she may set.

(c) Unless otherwise provided for in these regulations or directed by the Presiding Officer, a limited participant's rights shall be limited to filing a brief and to filing comments on a tentative decision pursuant to 980 CMR 1.08(2). A limited participant may be afforded an opportunity to present oral comments regarding a tentative decision under such conditions as the Board may provide.

(d) Limited participants are not parties. Therefore, a grant of leave to participate as a limited participant in a proceeding, unless so stated, does not confer status as a party in interest who may be aggrieved by any final decision.

1.06: Conduct of Adjudication

(1) Procedural Conferences.

(a) The Presiding Officer may schedule a procedural conference, either on his or her own initiative or upon written request by a party.

(b) At a procedural conference the following matters may be considered:

(i) the schedule for the proceeding;

(ii) simplification and limitation of issues; and

(iii) such other matters as will aid in the efficiency of the proceeding.

(c) Unless the Presiding Officer has approved a stipulation to the contrary, statements made by any person at a procedural conference shall not be evidence in the proceeding or in any subsequent proceeding.

(2) Evidentiary Record. For every adjudicatory proceeding, there shall be an evidentiary record which shall include testimony as well as exhibits properly entered into evidence.

(3) Motions.

(a) Any party may request that the Presiding Officer take any action by filing a motion which clearly states the order or action sought and the grounds therefor. Such a motion may either be made during a hearing or timely filed in writing. The Presiding Officer may require any oral motion made to be reduced to writing. A copy of all motions made in writing or reduced to writing shall be served upon all parties in accordance with 980 CMR 1.03(4).

(b) Unless the Presiding Officer directs otherwise, a party may file a written response to a written motion with the Presiding Officer within seven days after such motion is filed. The moving party may then file a written reply within seven days after such response is filed. Additional filings will be permitted at the discretion of the Presiding Officer only.

(c) A party may request a hearing on the motion at the time the motion is filed or with a response or reply filed timely in accordance with 1.06(3)(b). It is within the Presiding Officer's discretion to determine whether a hearing on the motion is necessary.

(d) Motions, except motions seeking intervention, responses to motions and replies to motions may be filed only by parties.

(4) Evidence; Privileges.

(a) All parties shall have the right to introduce both oral and documentary evidence. All witnesses shall testify under an oath or affirmation administered by the Presiding Officer and shall be subject to cross-examination.

(b) Evidence shall be submitted in accordance with the schedule established by the Presiding Officer. Generally, parties will be required to submit documentary evidence, including exhibits and written direct testimony, in advance of evidentiary hearing.

(c) The Presiding Officer shall be guided by, but need not observe, the rules of evidence observed by Massachusetts state courts.

(d) The Board shall observe the rules of privilege recognized by law.

(5) Discovery. Discovery is allowed at the discretion of the Presiding Officer.

(a) Purpose. The purpose of discovery is to facilitate the hearing process by permitting the parties and the Board to gain access to all relevant information in an efficient and timely manner. Discovery is intended to reduce hearing time, narrow the scope of issues, protect the rights of the parties, and ensure that a complete and accurate record is compiled.

(b) Rules Governing Discovery. In exercising his or her discretion, the Presiding Officer may be guided by the principles and the procedures underlying the Massachusetts Rules of Civil Procedure, Rule 26 *et seq.* These rules, however, shall be instructive, rather than controlling.

(c) Information Requests. After the commencement of an adjudicatory proceeding, a party may serve written information requests, as permitted by the Presiding Officer, for the purpose of discovering relevant information. A party may serve information requests only during the time specified by the Presiding Officer. The Presiding Officer may, at his discretion, serve written information requests on any party to the proceeding.

(d) Responses to Information Requests. Each information request shall be separately and fully answered under the penalties of perjury by the witness(es) who can testify during hearings regarding the content of the response, unless an objection to the information request with supporting reason is stated in lieu of a response. A response shall be served within 14 days of service of the information request, or within such other time as the Presiding Officer may specify. Responses shall be filed in the form specified by the Presiding Officer.

(e) Motions to Compel Discovery. A party may move for an order to compel compliance with its discovery request. Unless otherwise permitted by the Presiding Officer for good cause shown, such motion shall be made no later than seven days after the deadline for responding to the request. If the Presiding Officer finds that a party has failed to comply in a reasonable manner with a legitimate discovery request without good cause, he may, after issuance of an order compelling discovery, order whatever sanctions are deemed to be appropriate, including, but not limited to, suspending proceedings until the party has complied with the order or other appropriate sanctions listed in Rule 37 of the Massachusetts Rules of Civil Procedure. These rules, however, shall be instructive, rather than controlling. A party's failure to file a motion to compel discovery in a timely manner, absent a showing of good cause, may result in a waiver of its right to compel the response.

(f) Protective Orders. Upon a request for protective treatment of documents and a showing that a protective order is necessary, the Presiding Officer may make an order to protect any such document(s). The Presiding Officer may be guided by the principles and the procedures underlying the Massachusetts Rules of Civil Procedure, Rule 26 *et seq.* These rules, however, shall be instructive, rather than controlling.

(6) Evidentiary Hearings.

(a) Purpose. Evidentiary hearings will be held when required by law or at the discretion of the Presiding Officer in order to allow Board staff and parties to examine witnesses with respect to the content of their pre-filed testimony and any responses to relevant information requests.

(b) Hearing Schedule. Prior to commencement of evidentiary hearings, the Presiding Officer shall notify all parties and limited participants, and any persons whose petitions to intervene or participate are pending, of the hearing schedule. The hearing schedule shall include the times, dates, place, and nature of the hearings. There may be multiple hearing dates and times during the course of a proceeding. Hearing dates and times may change. It is the responsibility of each party and limited participant to keep abreast of all changes to the hearing schedule.

(c) Rescheduling. The Presiding Officer may grant a request to reschedule a hearing. A request for rescheduling should be made timely and in writing so as not to burden or delay the proceedings.

(d) Location. All evidentiary hearings shall be held at the Boston offices of the Board, unless a different location is designated by the Board or the Presiding Officer or a different location is required by statute.

(e) Public Access. All evidentiary hearings of the Board shall be open to the public and the press to the extent required by law.

(f) Off The Record Discussions. The Presiding Officer may go off the transcribed record during the course of any hearing for consultation among the parties if the Presiding Officer deems that such consultation would facilitate the conduct of the hearing. In the absence of a stipulation to the contrary, statements made by any person during such consultation shall not be considered as evidence in the proceeding or any subsequent proceeding.

(g) Record Requests. During the course of evidentiary hearings, the Presiding Officer or parties may ask witnesses to provide documents or written responses to questions asked at the hearing. Responses to record requests are written substitutes to oral answers where fault of memory, complexity of subject or lack of immediate access to documentation precludes a responsive answer by the witness in the hearing. Upon proper filing, responses to record requests become part of the record and the evidence, unless challenged as unresponsive and expunged in whole or part. Record requests shall not be used as a substitute for discovery. The ordinary time for response will be seven calendar days following the day on which the request is made. Objections to record requests shall be made at the time the request is made, and in no event later than the end of the next business day. Objections to the response given to a record request shall be made within seven (7) days unless otherwise allowed by the Presiding Officer.

(h) Transcript.

(i) The Presiding Officer shall arrange for the hearing to be reported by a court reporter. The transcript shall be included in the evidentiary record of the proceeding. Obtaining a copy of the transcript shall be the responsibility of each person. The Presiding Officer has discretion to order expedited preparation of transcripts as the needs of the case may warrant.

(ii) Any objections regarding the accuracy of the transcripts shall be brought to the attention of the Presiding Officer. Objections not raised within 30 days after the transcript is made available to the parties shall be deemed to be waived. If the accuracy of the reporting of witness testimony is in question, the Presiding Officer may require an affidavit of the witness who gave such testimony or may require further inquiry. The cost of the transcript preparation shall be the responsibility of the applicant. The cost of copies of the transcript shall be the responsibility of the person requesting the copies.

(7) Matters for Official Notice.

(a) Official notice may be taken in such matters as might be judicially noticed by the courts of the United States or of Massachusetts. The Presiding Officer also may take notice of general, technical, or scientific facts within the Board's specialized knowledge, provided that parties are afforded an opportunity to contest the matters of which official notice is to be taken.

(b) Official notice also may be taken of any facts found in any other Board proceeding. In all circumstances where such notice is taken, the parties shall be afforded an opportunity to contest the matter of which official notice is to be taken.

(c) Any party requesting that any fact be officially noticed must supply every party with a copy of the fact they are requesting to be noticed.

1.07: Post-Hearing

(1) Briefs. The Presiding Officer may set a schedule for the filing of briefs to be submitted by parties and limited participants. The purpose of briefs is to allow parties and limited participants to provide written argument based on the evidence properly entered into the record. Briefs also may be used to address specific briefing questions posed by the Presiding Officer. Briefs may not be used to submit new evidence.

(2) Oral Arguments. Oral argument at the close of a hearing may, upon motion, be allowed at the discretion of the Presiding Officer.

(3) Other Post Hearing Filings. No post-hearing filings other than those allowed for in 980 C.M.R. 1.07(1) may be made without the permission of the Presiding Officer.

1.08: Rendering of Decisions in Adjudicatory Proceedings

(1) Form of Decisions. Every tentative and final decision shall be in writing and shall contain a statement of the reasons therefor, including a determination of issues of fact or law necessary to the decision.

(2) Tentative Decisions.

(a) A written tentative decision shall be issued on each matter adjudicated by the Board unless a quorum of the Board has heard the matter or has read the evidence.

(b) A copy of any tentative decision shall be sent to each party and limited participant in the proceeding. The Presiding Officer shall designate a comment period, extending at least seven days from the issuance of the tentative decision, during which parties and limited participants may file written comments regarding the tentative decision.

(3) Final Decisions.

(a) Every final decision of the Board in an adjudicatory proceeding shall be issued following a vote taken at a meeting of the Board conducted pursuant to 980 CMR 2.04.

(b) If a tentative decision was issued in a matter, the Board shall meet following the comment period to vote on the tentative decision. At such meeting, parties and limited participants may be afforded an opportunity to present oral comments under such conditions as the Board may provide. The Board shall render a final decision after considering the tentative decision, all timely-filed written comments and any oral comments permitted. The Board need not consider written comments received after the close of the comment period.

(c) If a quorum of the Board has heard a matter, the Board may at its discretion render a final decision without first issuing a tentative decision pursuant to 980 CMR 1.08(2).

(d) Judicial Review. By the terms of M.G.L. c. 25, § 5, as made applicable to the Board by M.G.L. c. 164, § 69P, a party may seek judicial review of a final Board decision.

1.09: Supplemental Procedures

(1) Re-Opening Hearings. A party may, at any time before the Board renders a final decision, move that the hearing be reopened for the purpose of receiving new evidence. The motion should clearly show good cause for re-opening the hearing, state the nature and relevance

of the evidence to be offered and explain why the evidence was unavailable at the time of the hearing.

(2) Consolidation. The Presiding Officer may consolidate proceedings involving a common question of law or fact for hearing or decision on any or all of the matters at issue in such proceedings.

(3) Referral by the Department. Acting under the provisions of G.L. c. 25, § 4, in order to promote efficiency in administration, the Chairman of the Department of Public Utilities may refer matters to the Siting Board for review and approval or rejection of petitions pursuant to G.L. c. 164, § 69H(2).

(4) Stipulations. At the discretion of the Presiding Officer, the parties may agree upon any fact or issue pertinent to the proceeding, either by filing a written stipulation at any point in the proceeding, or by making an oral stipulation at the hearing. In making findings, the Board need not be bound by any such stipulation.

(5) Technical Sessions. A technical session is a meeting during which experts may provide detailed oral or written information in order to facilitate understanding of complex technical issues. The Presiding Officer may convene a technical session if he or she deems that such session would facilitate the conduct of the proceeding. The Presiding Officer shall permit representatives of the applicant, parties and limited participants to attend a technical session and shall make a reasonable effort to schedule and notice the time and place of any such session to permit attendance. Unless otherwise required by the Presiding Officer, technical sessions shall not be transcribed and statements made by any person during a technical session shall not be referred to or considered as evidence in the proceeding or in any subsequent proceeding. Board members, staff and parties may ask questions during a technical session.

(6) Subpoenas. The Presiding Officer may issue, vacate or modify subpoenas, in accordance with the provisions of M.G.L. c. 30A, § 12.

(7) Depositions. The Presiding Officer may at his or her discretion allow a deposition to be taken upon a showing that the person to be deposed cannot make an appearance at the hearing without substantial hardship and that the testimony being sought is significant, not privileged and not discoverable by an alternative means. If the Presiding Officer allows the taking of a deposition, the Presiding Officer shall specify the rules and procedures that will govern said deposition.

(8) Reconsideration. Any party may file a written motion requesting the Presiding Officer reconsider a ruling as long as the motion is received within five days of the issuance of the ruling.

(9) Offers of Proof. Any offer of proof made in connection with an evidentiary ruling shall consist of a statement, which may be in writing, of the substance of the evidence the party making the offer contends would be adduced by such testimony. If the offer of proof consists of documentary evidence, a copy of the document shall be marked for identification and shall constitute the offer of proof.

(10) Site Visit of a Proposed Facility. The Board and Board staff may visit a proposed facility site and any alternative sites in order to facilitate an understanding of the pending matter. A site visit is for informational purposes only and shall not be considered as evidence in the proceeding.

(11) Production or View of Objects. Of his or her own accord, or upon the motion of a party, the Presiding Officer may order the production or view of any object which relates to the subject matter of a proceeding.

REGULATORY AUTHORITY

980 CMR 1.00: M.G.L. c.164, § 69H; M.G.L. c. 30A.

980 CMR 2.00: GENERAL INFORMATION AND CONDUCT OF BOARD BUSINESS

Section

- 2.01: Purpose and Scope
- 2.02: Purpose and Functions of the Board
- 2.03: Board Membership
- 2.04: Meetings; Voting
- 2.05: Delegation of Duties; Board Staff
- 2.06: Board Decisions
- 2.07: Action by Consent
- 2.08: Advisory Rulings
- 2.09: Determination of Board Jurisdiction

2.01: Purpose and Scope

(1) Purpose. 980 CMR 2.00 describes the Energy Facilities Siting Board and establishes rules for the conduct of Board business.

(2) Scope. 980 CMR 2.00 is of general applicability and applies, whenever appropriate, to all other sections of 980 CMR.

(3) Effective Date. Revisions to 980 CMR 2.00 shall take effect on [TBD, 2010], and shall apply to proceedings initiated after that date.

2.02: Purpose and Functions of the Board

(1) Purpose of the Board. The Board has been established by M.G.L. c. 164, § 69H, as amended. The Board is responsible for implementing the energy policies contained in its enabling legislation in order to provide a reliable energy supply for Massachusetts with a minimum impact on the environment at the lowest possible cost. The powers and duties of the Board are enumerated in M.G.L. c. 164, § 69H.

(2) Primary Functions of the Board. Matters reviewed by the Siting Board include petitions for:

- (a) electric transmission lines
- (b) electric generating facilities
- (c) gas pipelines and storage facilities
- (d) liquefied natural gas facilities
- (e) oil refining, storage and transportation facilities
- (f) hydropower generation facilities

The Board also has the authority to issue certificates of environmental impact and public interest, to approve the promulgation, amendment or repeal of Siting Board regulations; and to issue civil penalties to any applicant who violates an order of the Board.

(3) Adjudicatory proceedings. The Board reviews the following matters which shall be resolved through adjudicatory proceedings in accordance with M.G.L. c. 30A and 980 CMR 1.00: a hearing on a petition to construct a facility held pursuant to M.G.L. c. 164, §§ 69J or

69J¼; a hearing on an initial petition filed pursuant to M.G.L. c. 164, § 69K or M.G.L. c. 164, § 69K½; a hearing on an Application for a Certificate filed pursuant to M.G.L. c. 164, § 69L or M.G.L. c. 164, § 69L½; and a hearing on appeal under M.G.L. c. 164, § 69H½.

(4) Mailing List. The Board shall maintain a mailing list, shall place upon the list the name and address of any person or group so requesting, and shall give to such persons and groups written notice of activities of the Board for which notice may be appropriate. Failure to give notice to any person or group on the list shall not, in itself, render any act of the Board invalid. The Board may from time to time remove from the list persons or groups no longer expressing interest in receiving notices.

2.03: Board Membership

(1) Description of the Board. Pursuant to G.L. c. 164, § 69H, the Board shall be composed of nine members: the Secretary of Energy and Environmental Affairs; the Secretary of Housing and Economic Development; the Commissioner of the Department of Environmental Protection; the Commissioner of the Department of Energy Resources; two Commissioners of the Commonwealth Utilities Commission; or the designees of any of the foregoing; and three public members appointed by the Governor for a term co-terminus with that of the Governor, one of whom shall be experienced in environmental issues, one of whom shall be experienced in labor issues, and one of whom shall be experienced in energy issues.

(2) Chairman. In accordance with G.L. c. 164, § 69H, the Secretary of the Executive Office of Energy and Environmental Affairs, or the Secretary's designee, shall serve as Chairman of the Board. In the event of the absence, recusal, or disqualification of the Chairman, the Commissioner of the Department of Energy Resources shall appoint an acting chairman from the remaining members of the Board.

(3) Designees. A Board member other than a public member may nominate a designee to serve in his or her stead. Nomination shall be made by a letter addressed to the Chairman and signed by the nominating official. The nominating letter shall state whether the nomination is general or limited. The nominating official may revoke a nomination at any time by letter to the Chairman.

Once nominated, a general designee shall assume all responsibilities of the nominating official pursuant to M.G.L. c. 164, §§ 69G-69S and 980 CMR 2.00. The nominating official may temporarily suspend a general nomination by appearing personally at a Board meeting or proceeding and performing the responsibilities of a Board member.

A limited designee shall assume only those responsibilities set forth in the nominating letter. The nominating official may retain and perform or may further name another designee to perform all other responsibilities.

(4) Replacement of Public Members. In the event of the resignation of a public member, the Board Chairman shall notify the Governor in writing within 15 days and shall request the appointment of a new public member.

(5) Compensation. Any public member appointed by the Governor shall receive compensation for his or her services in the amount allowable by law, and shall be reimbursed

by the State for all reasonable expenses actually and necessarily incurred in the performance of his or her official duties.

(6) Effect of Board Actions. No action taken by the Board pursuant to 980 CMR 2.00 shall bind any member of the Board or any designee for the purposes of any responsibilities of such member or designee not solely related to the operation of the Board.

2.04: Meetings; Voting

(1) Public Meetings. All meetings of the Board shall be open to the public to the extent required by M.G.L. c. 30A, §§ 11A and 11A½. All meetings of the Board shall be open to the press to the extent required by law. The Board may establish specific policies regarding the use of video cameras and other recording devices as necessary.

(2) Notice of Public Meetings. Except in an emergency as provided by 980 CMR 2.04(3), a notice of each meeting of the Board shall be filed with the Secretary of State, and a copy thereof posted in the public office of the Executive Office for Administration and Finance, at least 24 hours, not including Saturdays, Sundays, or legal holidays, prior to the time of such meeting or session.

(3) Emergencies. The Board may conduct a public meeting or executive session without giving notice as required by 980 CMR 2.04(2), if it determines that an emergency exists and that immediate, undelayed action by the Board is imperative.

(4) Executive Sessions. The Board may in the course of a public meeting vote to go into executive session. An executive session may be held only as authorized by M.G.L. c. 30A, §§ 11A, 11A½.

(5) Records of Meetings. The Board shall maintain accurate records of its meetings, setting forth the action taken at each meeting, including executive sessions. Either a full transcript of the meeting or a summary of all matters voted shall be made available with reasonable promptness after each meeting; provided, however, that votes taken in executive session may be withheld from public disclosure for so long as their publication would defeat the lawful purposes of the executive session, but no longer.

(6) Quorum; Voting.

(a) A quorum consisting of four Board members shall be required to conduct any meeting of the Board held for the purpose of considering and voting upon an adjudicatory decision, or a proposal to adopt, amend or rescind regulations, or any other matter requiring a vote of the Board. A majority of members in attendance at a meeting shall be sufficient to dispose of any question properly before the Board during the meeting at which the question is taken up.

(b) Each Board member or designee in attendance at a meeting shall be entitled to vote on any matter which is properly before the Siting Board at that meeting.

2.05: Delegation of Duties; Board Staff

(1) Delegation of Duties. The Board may delegate Board-specific responsibilities other than responsibility for the final decision in any matter to the Board Chairman or to the Board staff. The staff of the Siting Division of the Department of Public Utilities shall serve as Board staff.

(2) Director. The Director of the Board shall be appointed by the Chairman of the Department of Public Utilities pursuant to M.G.L. c. 25, § 12N to direct the work of the Board staff and to conduct the day-to-day business of the Board. The Board, the Chairman, or the Chairman of the Department of Public Utilities may delegate to the Director Board-specific responsibilities other than the responsibility for the final decision in any matter .

(3) Board Staff. The Chairman of the Department of Public Utilities may appoint Board staff to assist the Board in performing its functions. Staff functions shall include, among others: conducting adjudicatory, rulemaking, or public comment hearings; rendering tentative decisions; and intervening in the proceedings of other agencies. The Chairman of the Department of Public Utilities may authorize the Director to appoint a Presiding Officer for an adjudicatory or other proceeding conducted under 980 CMR.

2.06 Board Decisions

(1) Issuance by the Board of a final decision in an adjudicatory proceeding shall be governed by 980 CMR 1.08.

(2) Every final decision shall be in writing, and shall contain a statement of the reasons therefore, including a determination of the facts or law necessary to the decision. A signature page shall be attached to each final decision. The signature page shall be signed by the Board Chairman and shall indicate the vote of each Board member.

2.07: Action by Consent

(1) Scope. Any decision of the Board, except the final decision in any adjudicatory proceeding, may be made by action by consent pursuant to the procedures of 980 CMR 2.07. These procedures shall be used only when the Board, in its discretion, determines that expeditious action is necessary.

(2) Procedure. The Chairman shall prepare a document entitled "Action by Consent" which sets forth the decision proposed to be taken by the Board. The document or copies thereof shall be presented to each member of the Board for review. A member may indicate consent by affixing his signature to the document or copy. The proposed action by consent shall be deemed to have been taken when the document and copies bearing the signatures of all Board members are returned to the Chairman. A proposed action by consent shall become void if it does not receive all required signatures before the beginning of any meeting of the Board held pursuant to 980 CMR 2.04.

(3) Notice.

(a) Except in an emergency, a notice of each proposed "Action by Consent" shall be filed with the Secretary of State, and a copy thereof posted in the public office of the Executive Office for Administration and Finance at least 24 hours, not including Saturdays, Sundays and legal holidays, prior to the circulation of such proposed decision to Board members for signature.

(b) The notice shall state:

(i) that the notice is for an action proposed to be taken by unanimous written consent of the Board rather than by meeting;

(ii) that the proposed action by consent shall become void if not signed by all Board members prior to the next meeting of the Board; and

(iii) the full and complete text of the proposed action by consent, or, if the proposed action by consent consists of more than 200 words, a summary of its terms and a statement that the full text may be obtained at the offices of the Board.

(c) For the purpose of 980 CMR 2.06, "emergency" shall mean a situation in which immediate action without delay is deemed by the Board to be imperative.

(4) Records of Actions by Consent. The Board shall maintain accurate records of all proposed actions by consent. A record of the Board's action on a proposed action by consent shall be made available with reasonable promptness after its approval by all Board members or after it becomes void.

2.08: Advisory Rulings

In accordance with G.L. c. 30A, § 8, any person may at any time request, via written petition, an advisory ruling with respect to the applicability of any statute or regulation enforced or administered by the Board to any person, property or factual situation. A petition shall be signed by the applicant, contain the applicant's address, and state clearly and concisely the substance or nature of the request, and contain an affidavit or attestation that all of the facts presented are true to the best of the applicant's knowledge. The petition shall be accompanied by any supporting data, views or arguments. Upon receipt of the petition, the Board shall consider it and shall, within 60 days after the receipt of the request, notify the applicant either that the request is denied or that the Board will render an advisory ruling. In order to assist the Board in considering the request, the Director may require additional information as he or she deems appropriate. At any time before issuance of an advisory ruling, the Board may rescind a decision to render an advisory ruling. If the advisory ruling is rendered, a copy of the ruling shall be sent to the applicant. A complete record of every advisory ruling shall be maintained by the Board. No advisory ruling shall bind or otherwise estop the Board in any pending or future matter. There shall be no obligation to render an advisory ruling.

2.08: Determination of Board Jurisdiction

(1) An applicant may at any time petition the Board for a determination of whether construction, expansion, or other modification of a proposed electric generating unit, electric transmission line, ancillary structure, natural gas pipeline, natural gas storage facility, oil pipeline, oil refinery, oil storage facility, oil transshipment facility or other facility is subject to Board jurisdiction, is not subject to Board jurisdiction, or may qualify for a Certificate pursuant to 980 CMR 6.00.

(2) The petition shall state the name of the applicant and describe the nature of the facility for which a determination is being sought. The petition shall be accompanied by a draft legal notice for publication and such written legal argument or other information as the applicant may consider appropriate. The Board may require that the applicant provide additional information after the petition is filed.

(3) The applicant shall give notice of the petition by publishing the legal notice approved by the Presiding Officer in at least one newspaper of general circulation and as otherwise ordered by the Presiding Officer. The notice shall specify that any person may submit written legal argument or other information regarding the petition. The notice shall specify the deadline for such submissions, which shall be not less than 14 days after the initial date of publication.

(4) Within four months of the petition filing date, the Board shall issue a final decision on jurisdiction. The final decision shall address only those issues necessary to decide the extent to which a proposed facility is within Board jurisdiction, is not subject to Board jurisdiction, or may qualify for a Certificate pursuant to 980 CMR 6.00. The Board's decision shall be final.

REGULATORY AUTHORITY

980 CMR 2.00; M.G.L. c. 164, § 69H; M.G.L. c. 30A.