D.T.E. 03-83

Petition of USGen New England, Inc., pursuant to G.L. c. 40A, § 3, for exemption from the Zoning Ordinance of the City of Salem for purposes of construction and use of an emissions control project at Salem Harbor Station.

APPEARANCES: Mary Beth Gentleman, Esq.
Noah Sachs, Esq.
Susan Snyder, Esq.
Foley Hoag LLP
155 Seaport Boulevard
Boston, Massachusetts 02210
FOR: USGen New England, Inc.
Petitioner

Robert Sydney, Esq.
Division of Energy Resources of the
Commonwealth of Massachusetts
100 Cambridge Street, Suite 1020
Boston, Massachusetts 02114
FOR: Division of Energy Resources
Intervenor

Paige Graening, Esq.
National Grid USA Service Company
25 Research Drive
Westborough, Massachusetts 01582
FOR: New England Power Company
Intervenor

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I. INTRODUCTION

A. Description of the Proposed Project

On August 28, 2003, pursuant to G.L. c. 40A, § 3, USGen New England, Inc. ("USGenNE" or "Company") filed a petition with the Department of Telecommunications and Energy ("Department") seeking an exemption from the operation of the City of Salem's zoning ordinance ("Zoning Ordinance") , with the exception of Section 7-18, with respect to the construction and use of an Emissions Control Plan ("ECP") project proposed for Salem Harbor Station ("Salem Harbor").[1] USGenNE stated that the purpose of the ECP project is to comply with requirements of the Massachusetts Department of Environmental Protection ("DEP") pursuant to 310 C.M.R. § 7.29 ("7.29 Regulations") and with an Administrative Consent Order ("ACO") entered into by USGenNE, DEP, the City of Salem, and various public interest and environmental organizations (Exh. USGenNE-1, at 13; App. 1, at 1).

USGenNE states that Salem Harbor consists of three primarily coal-fired boilers ("Units 1, 2, and 3") and one oil-fired boiler ("Unit 4"), with a total generating capacity of approximately 755 megawatts (Exh. USGenNE-1, App. 2, at 2-1). The Company states that the facility is currently in compliance with all applicable air quality standards (Tr. at 118). However, according to the Company, the 7.29 Regulations impose new facility-wide annual emissions limits for nitrogen oxides ("NO_X") and sulfur dioxide ("SO_2") (id., App. 2, at 1-2,

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[1] USGenNE does not seek an exemption from Section 7-18 of the Zoning Ordinance. The Company indicated that it had filed with the City of Salem Planning Board an application for Site Plan Review pursuant to Section 7-18 of the Zoning Ordinance (Exh. USGenNE-1, at 11). On December 18, 2003, the City of Salem Planning Board approved, with conditions, USGenNE's application for Site Plan Review (Exh. NEP 1-1, Att. (Supp.1-1)).

1-7). The Company states that the proposed ECP project is designed to ensure compliance with these regulations, as well as to reduce mercury and particulate emissions, and to help the facility meet its carbon dioxide ("CO_2") offset obligations (id., App.2, at 2-1 - 2-3; Tr. at 63-64).[2]

USGenNE states that the proposed project would consist of the installation of the following emission control equipment: (1) one Selective Catalytic Reduction ("SCR") unit for the control of NO_X, capable of treating combined flue gas from Units 1, 2, and 3; (2) one dry Flue Gas Desulfurization ("FGD") and Fabric Filter ("FF") system to control the SO_2 emissions from Units 1, 2, and 3; (3) one Selective Non-Catalytic Reduction ("SNCR") system for the control of NO_X emissions from Unit 4; and (4) a multiple hearth system for implementing an ash recycling process ("ARP") (Exh. USGenNE-1, at 3; App. 2, at 2-1 - 2-3; Tr. at 63). According to USGenNE, the ARP will recycle the unburned carbon in the fly ash, and permit the remaining ash to be used as a substitute for cement in the concrete manufacturing process (Exh. USGenNE-1, App. 2, at 2-3; Tr. at 113). In addition, the Company states that the proposed project would require the construction of the following ancillary structures: (1) a 34,000 square foot crane platform; (2) water tanks and filtration equipment; (3) a new ignition fuel tank; (4) gas metering and pipeline equipment; (5) concrete tie blocks; and (6) two new transformers to serve the emission control equipment (Exh. USGenNE-1, App. 2, at 1-2). The project also would require the relocation of a

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[2] The Company states that the CO_2 portion of the 7.29 Regulations and the process for certifying CO_2 reductions are not finalized (Tr. at 64). However, the Company expressed confidence that its proposed ash recycling process will earn it offsets that could be applied to Salem Harbor's future CO_2 reduction obligations (id. at 63).

propane tank and expansion of the existing 115 kV electrical switchyard (id., App. 2, at 1-2, 4-5).

Salem Harbor is located within an industrial district, as defined in the Zoning Ordinance (Exh. USGenNE-1, App. 17). The Company states that, although Salem Harbor is legally nonconforming[3] with respect to dimensions and use, zoning relief is required if USGenNE performs certain activities at the site (id. at 7). Pursuant to Section 5-3(j), Article VIII and Section 9-4 of the Zoning Ordinance, nonconforming structures and nonconforming uses of land and structures may not be altered, reconstructed, changed, enlarged, extended or expanded unless a special permit is granted by the City of Salem Zoning Board of Appeals (Exh. USGenNE-1, App. 3, at 21, 50, 54-55). According to the Company, the proposed project exceeds the dimensional requirements of the Zoning Ordinance (Exhs. DTE-3-1; DTE-3-2). Accordingly, the Company is requesting, pursuant to G.L. c. 40A, § 3, to be exempted from operation of the Zoning Ordinance in connection with construction and use of the ECP project.

B. Procedural History

1. Administrative Consent Order

In June 2003, USGenNE entered into a settlement with DEP, the City of Salem, the Conservation Law Foundation, HealthLink, the Wenham Lake Association, Clean Water Action and MASSPIRG with respect to USGenNE's compliance with the 7.29 Regulations

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[3] Since Salem Harbor was built and was operating prior to the enactment of the Zoning Ordinance, the current operation of Salem Harbor is considered a legally nonconforming use (Tr. at 54).

(Exh.USGenNE-1, at 13). The terms of that settlement are contained in the June 19, 2003 ACO[4] and include USGenNE's commitment to implement near term and long-term compliance measures to satisfy the requirements of the 7.29 Regulations (id., App. 1).

The long-term compliance measures apply to all four units at Salem Harbor, which ISO New England, Inc. ("ISO-NE") has deemed necessary to ensure NEPOOL system reliability (Exh. USGenNE-1, at 14).[5] Pursuant to the ACO, USGenNE agreed to achieve compliance with the Phase I NO_X and SO_2 provisions of the 7.29 Regulations on or before July 31, 2006, so long as the "Compliance Equipment Funding Date" is achieved by December 1, 2003 (id. at 15). The ACO includes schedules with target dates for the Company to complete various permitting processes, including the Department zoning exemption process, in order to reach July 31, 2006 compliance with the 7.29 Regulations (id., App. 1, at 14-15).

2. Department Proceedings

Pursuant to notice duly issued, on October 7, 2003, the Department held a public hearing in the City of Salem to afford interested persons an opportunity to be heard regarding the Company's petition. The Hearing Officer granted the petitions for leave to intervene filed

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4 Administrative Consent Order # ACO-NE-O3-7001 regarding compliance with air emission regulations at 310 C.M.R. § 7.29.

5 On April 25, 2003, in accordance with the procedures under Rule 18.4 of the Restated NEPOOL Agreement, USGenNE applied to ISO-NE to cease operation of the four units at Salem Harbor (Exh. USGenNE-1, at 14, n.5). Pursuant to a letter dated July 22, 2003, ISO-NE determined that all of the units at Salem Harbor "are vital for NEPOOL system reliability until vital transmission improvements in the North Shore and Boston Import areas are completed" (id. at 14).

by the Massachusetts Division of Energy Resources ("DOER") and New England Power Company ("NEP").

The Department held evidentiary hearings on January 13, 2004 at the Department's offices in Boston. In support of its petition, the Company sponsored the testimony of Louis M. Arak, project manager for the ECP project; Anthony C. Agresti, environmental consultant for TRC Environmental Corporation ("TRC"); H. Jeffrey Brandt, environmental consultant for TRC; Charles Cooper, director of environmental permitting and planning for TRC; Joseph C. Correnti, Esq., local counsel for USGenNE; Michael A. Fitzgerald, general manager of Salem Harbor Station; Ernest C. Greer, principal engineer at Salem Harbor Station; David J. Shotts, manager of air quality engineering for TRC; and Phillip C. Smith, director of regional Affairs for National Energy and Gas Transmission Company.

The evidentiary record contains 93 exhibits that consist primarily of Company responses to information requests and record requests issued by the Department and NEP.[6] The Company and NEP submitted initial briefs and reply briefs on January 23, 2004 and January 30, 2004, respectively.

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[6] In its initial brief, NEP requested that the Department incorporate by reference NEP's filing in D.T.E. 03-128, NEP's petition for a zoning exemption for its proposed expansion of the 115 kV switchyard at Salem Harbor (NEP Brief at 2). The Department noted at the close of evidentiary hearings that the record would remain open only for responses to outstanding record requests (Tr. at 135). NEP does not state a reason for its proposed introduction of evidence after resting its case in the proceeding (see NEP Brief). The Department finds that NEP has failed to show good cause in accordance with 220 C.M.R. § 1.11(8) for its failure to move to introduce the proposed evidence before resting its case in the instant proceeding. Accordingly, the Department denies NEP's request to introduce the proposed evidence.

II. STANDARD OF REVIEW

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 bylaw 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 a zoning exemption(s). 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. 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)").

A. Public Service Corporation

In determining whether a petitioner qualifies as a "public service corporation" for the purposes of G.L. c. 40A, § 3, the Massachusetts Supreme Judicial Court ("SJC") 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, 366 Mass. 667, 680. See also, Boston Gas, D.T.E. 00-24, 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 at 407. 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.

B. 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. See MECo (2002), D.T.E. 01-77, at 4-5; Tennessee Gas (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 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 v. Department of Public Utilities, 365 Mass. 407 (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 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, D.T.E. 00-24, at 2-6; MECo (2002), D.T.E. 01-77, at 5-6; Tennessee Gas (2002), D.T.E. 01-57, at 5-6; Tennessee Gas Company, D.T.E. 98-33, at 4-5 (1998).[7]

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[7] In addition, the Massachusetts Environmental Policy Act 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" ("Section 61 findings"). G.L. c. 30, § 61. Pursuant to 301 C.M.R. § 11.12(5), Section 61 findings are required if the Secretary of Environmental Affairs has required an Environmental Impact Report ("EIR") for the project. On August 8, 2003, the Executive Office of Environmental Affairs notified the Company that no EIR is required for the proposed project (Exh. USGenNE-1, App. 15). Accordingly, Section 61 findings are not necessary in this case.

III. PUBLIC SERVICE CORPORATION

A. Position of the Company

USGenNE maintains that it qualifies as a public service corporation ("PSC") under G.L. c. 40A, § 3 with respect to its operation of Salem Harbor (Exh. USGenNE-1, at 1-2). As noted above, the pertinent considerations to determine whether a petitioner qualifies as a PSC 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 or 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 366 Mass 681.

USGenNE asserts that it meets the first consideration identified in Save the Bay (Exh. USGenNE-2, at 4, citing Save the Bay, 366 Mass 681; Berkshire Power at 31). The Company states that although it is not organized pursuant to a franchise, the SJC and the Department have given a broad interpretation of this consideration and focus on whether a company meets a demonstrated public need and not merely on how it is organized (id.). For example, USGenNE notes that the Supreme Judicial Court of the Commonwealth has upheld the Department's designation of a liquified natural gas ("LNG") company as a PSC even though it was not organized under Chapter 164 and did not operate under a franchise (Exh. USGenNE-2, at 4).

USGenNE states that, pursuant to the current configuration of the New England bulk power system, ISO-NE, which is subject to the review of the Federal Energy Regulatory

Commission ("FERC"), makes the initial determination of whether the public convenience and necessity requires the operation of particular generation facilities (Exh. USGenNE-2, at 6). The Company argues that the determination and directive of ISO-NE should be provided the same consideration as one issued by FERC itself (id.).

USGenNE asserts that Salem Harbor provides a necessity to the public not otherwise available through the ordinary channels of private business. In support of this claim, the Company notes that the Department has recognized that the provision of electricity over an integrated and regulated system is not comparable to the furnishing of a product through the ordinary channels of business (Exh. USGenNE-2, at 7). While USGenNE acknowledges that its "obligation to serve" is not the same as that required of an electric company or a gas company, the Company contends that it has an obligation to serve based on ISO-NE's determination that Salem Harbor remain operational (id.). USGenNE asserts that the fact that ISO-NE rejected its application to retire the units at Salem Harbor illustrates that the Company is not a "private business" operating through "ordinary channels" (id. at 8).

Regarding the second pertinent consideration identified in Save the Bay, "whether the corporation is subject to the requisite degree of governmental control and regulation", the Company argues that USGenNE is subject to regulatory oversight on both the federal and state levels that would satisfy this requirement (Exh. USGenNE-2, at 8-9). USGenNE states that it is a public utility under the terms of the Federal Power Act and that its rates are subject to the exclusive oversight of FERC (id. at 9). The Company further states that it is a member of NEPOOL, which the Department previously has found to exercise regulatory control over a corporation (id. at 9-10, citing Berkshire Power at 35; Braintree Electric Light Department,

D.P.U. 90-263, at 38 (1991)).

Finally, the Company argues that the construction of the ECP project will provide a substantial public benefit (Exh. USGenNE-2, at 10). The Company states that ISO-NE has determined that there is a public need to keep Salem Harbor operational in order to ensure generation resource adequacy and to guarantee sufficient operating reserve capacity in the Boston import area (id. at 11). The Company states that, in order to keep Salem Harbor operational, it must implement its ECP project (id.). The Company maintains that the reduction in emissions that will result from the implementation of the ECP project will provide environmental benefits to the public (id.).

B. Analysis and Findings

In determining whether USGenNE qualifies as a PSC under G.L. c. 40A, § 3, we take into account the purposes of the statute, the pertinent considerations identified by the SJC in Save the Bay, supra, and the precedent of the courts and the Department on this issue.

No definition for the term "public service corporation" has been provided by the courts. Rather, in its decision in Save the Bay at 685-686, the SJC has provided a list of "pertinent considerations" that could used when making a determination as to whether an entity is a PSC.

The first "pertinent consideration" identified in Save the Bay at 636, is "whether the corporation is organized pursuant to an appropriate franchise from the State to provide for a necessity or convenience which could not be furnished through the ordinary channels of private business." Since the Department has determined that a lack of a franchise is not a barrier to obtaining public corporation status, we will address whether the Company satisfies

the remaining clause of the first consideration in Save the Bay (i.e., whether an entity provides for a necessity or convenience to the general public which could not be furnished through the ordinary channels of private business). In Berkshire Power at 33, the Department found that the generation and transmission elements of the electric power industry are entitled to the same [G.L. c. 40A, § 3] safeguards as the distribution element. The Department found that, even with the introduction of competition in the generation segment of the electric industry, "the provision of electricity over such an integrated and regulated system is not comparable to the furnishing of a product through the ordinary channels of business." Id. at 32. The Department, therefore, finds that USGenNE as a wholesale generator of electricity in an integrated and regulated system provides a necessity to the general public which could not be furnished through the ordinary channels of private business.

The second "pertinent consideration" identified in Save the Bay at 680, is "whether the corporation is subject to the requisite degree of governmental control and regulation." Here again, neither the statute nor Court decisions have identified the level of governmental control and regulation that is required to satisfy this criterion of Save the Bay. The Department has indicated that such regulation, as it has been applied to other PSCs, "can include oversight of entry, siting, rates and tariffs, financing, safety, and resolutions of consumer complaints at the federal and/or state level." Nextel at 18. The Department also has not attempted to define minimum requirements for such control and regulation but rather has decided the issue based on the specific circumstances of each case. Further, we have never held that any one specific type of regulatory oversight is necessary for an entity to be considered a PSC.

USGenNE is a wholesale generation company as defined by G.L. c. 164, § 1. It is a "public utility" under the terms of the Federal Power Act 16 U.S.C. § 824 whose rates are subject to the exclusive jurisdiction of FERC. Accordingly, the Department finds that USGenNE is subject to sufficient governmental control and regulation to satisfy the second consideration identified in Save the Bay.

The third "pertinent consideration" identified in Save the Bay at 680, is the "nature of the public benefit to be derived from the service provided." The "service provided" by USGenNE in its role as owner/operator of the Salem Harbor power plant, is the generation of electricity at a specific location. As the Department stated in Berkshire Power,

> The generation of electricity is a public necessity that is critical to public health and safety, and fundamental to the Massachusetts economy…. Because of the unique role that electricity plays in the economy of the Commonwealth and the lives of its citizens, the Department must be able to ensure that critical infrastructure for the generation, transmission and distribution of electricity can be sited whenever and wherever it is reasonable necessary to the public convenience and welfare.

Berkshire Power at 35-36.

The unique role of electricity certainly has not declined since the Department issued the Berkshire Power decision. The Department concludes that the nature of the public benefit provided by USGenNE is consistent with standing as a PSC.[8]

Therefore, the Department finds that USGenNE, in its capacity as the owner of Salem Harbor, has demonstrated that its purpose comports with the goals of the statute and with the

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[8] The Department also notes that ISO-NE has concluded that the specific generation provided by USGenNE at Salem Harbor is, at least in the short term, necessary to ensure the reliability of the New England electric grid. While USGenNE's status as a PSC does not hinge on ISO-NE's finding, the finding further supports the conclusion that USGenNE provides a service with significant public benefits.

criteria of Save the Bay. Accordingly, we find that USGenNE, in its capacity as owner of Salem Harbor, is a PSC.[9]

IV. NEED FOR REQUESTED EXEMPTIONS

USGenNE states that, under the Zoning Ordinance, the structures at Salem Harbor are legally nonconforming with respect to certain dimensions, and the generation of electric power is a legally nonconforming use (Exh. USGenNE-1, at 7; Tr. at 54). The Company explains that the construction and operation of the ECP facilities would require zoning relief (Exh. USGenNE-1, at 7). As discussed below, the Company identifies several specific provisions of the Zoning Ordinance from which it would need exemption based on its current plans for the project, but notes that other features of the project could evolve during permitting or construction, necessitating additional exemptions (id. at 6). Therefore, USGenNE requests a comprehensive exemption from the operation of the Zoning Ordinance (id. at 1).

A. Height and Dimensional Requirements

The record shows that Section 4-1(2)(a) of the Zoning Ordinance prohibits the construction or alteration of a building or structure that exceeds the height specified for the district in which it is located (Exh. USGenNE-1, App. 3, at 10). In addition, the record

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[9] The Department notes that this analysis could be applied to any generator serving the New England market. We conclude that any corporation that owns generating assets in Massachusetts, and makes those assets available to serve the New England market, is a public service corporation. However, we emphasize that petitioners seeking a zoning exemption must demonstrate, in accordance with G.L. c. 40A, § 3, that the "present or proposed use of the land or structure is reasonably necessary for the convenience or welfare of the public." Not all projects undertaken by public service corporations will meet this test.

shows that Section 4-1(2)(d) of the Zoning Ordinance prohibits the construction or alteration of any building or structure to have narrower or smaller front, side, or rear yards or other open spaces than those specified for the district in which it is located (id.).

The record shows that Article VI, Table II of the Zoning Ordinance limits the height of buildings in industrial zones to 45 feet (Exh. USGenNE-1, App. 3, at 24). The Company indicates that nine of the proposed structures would be taller than 45 feet: the selective catalytic reduction unit, the flue gas desulfurization ("FGD") absorbers, the lime silos and FGD reagent preparation area, the fabric filter system, gas ductwork, the ARP structures, the fly ash surge silo, the pozzolan silo, and the expanded switchyard (Exh. DTE-3-1, Att. A).

The record also shows that the Zoning Ordinance requires a minimum width or depth of 30 feet for front, side and rear yards in industrial zones (Exh. USGenNE-1, App.3, at 24). USGenNE states that the gas metering station would be located less than 30 feet from Fort Avenue, thereby reducing the depth of the front yard to less than 30 feet (Exh. DTE-3-2). Similarly, the Company states that the water treatment facility would reduce the width of the side yard near the South Essex Sewerage Treatment Plant property line to less than 30 feet, and that an office building associated with the project would reduce the depth of the rear yard (i.e., the distance to the Atlantic Ocean) to less than 30 feet (id.; Tr. at 55). The record shows that USGenNE could apply for variances from the height and yard width/depth requirements pursuant to Section 9-5 of the Zoning Ordinance (Exh. USGenNE-1, App. 3, at 55). However, the Company states that the process for obtaining a variance from the Board of Appeals can take up to 114 days from the submittal of the petition for a variance; including appeal periods, the process could take almost seven months (Exh. USGenNE-1, at 9-10). If

an appeal were filed, the Company states that its ability to start the project would be subject to the uncertainty and delays of the court system,[10] and that the project would almost certainly fail to meet deadlines specified in the ACO (id. at 10). Accordingly, the Company requests an exemption from Article VI, Table II, and Sections 4-1 (2)(a) and (d) and 9-5 of the Zoning Ordinance.

The Department finds that the height and dimensional requirements in Article VI, Table II of the Salem Zoning Ordinance are applicable to the proposed project, and that certain project elements do not meet these requirements. The Department concludes that USGenNE would not be able to construct the proposed project without a variance or other relief from Article VI, Table II of the Zoning Ordinance, and that the variance procedure, with its potential for appeals, could result in unacceptable delays. Accordingly, the Department finds that exemption of the proposed project from Article VI, Table II, and Sections 4-1(2)(a) and (d) and 9-5 of the Zoning Ordinance is required within the meaning of G.L. c. 40A, § 3.

B. Nonconforming Structures and Uses

According to the Company, the Zoning Ordinance defines permitted uses and specially permitted uses (Tr. at 54). The Company explains that within its categories of permitted uses, the Zoning Ordinance does not have any category that would include electrical generating facilities (id.). Because Salem Harbor was built and was operating prior to the enactment of the Zoning Ordinance, the Company explains, it is considered a legally nonconforming use

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[10] The Company states that if the variance were appealed, the matter would go to the Land Court, Superior Court, Housing Court or District Court (Exh. USGenNE-1, at 10).

(id.).

The record shows that Section 5-3(j), Article VIII, and Section 9-4 of the Zoning Ordinance prohibit expansions of existing nonconformities, except as authorized by a special permit granted by the Board of Appeals (Exh. USGenNE-1, App. 3, at 21,52, 54-55). Specifically, the record shows that Section 8-3 of the Zoning Ordinance does not allow nonconformities to occupy a greater area of land than was occupied at the effective date of the ordinance (id., App. 3, at 51). Similarly, Section 8-4 of the Zoning Ordinance does not permit a structure to be "enlarged or altered in a way which increases its nonconformity," or to be increased in height (id.). Finally, Section 8-5 of the Zoning Ordinance prohibits the use of a nonconforming structure that has been enlarged, extended, reconstructed, or altered (id., App. 3, at 53).

The Company indicates that the new structures comprising the ECP project would add over 50,000 square feet of gross building area (Exh. DTE-3-1, Att. A). As discussed above, several of the new structures would not conform to the Zoning Ordinance's height limits. Section 5-3(j) of the Zoning Ordinance provides that an extension of a non-conformity may be granted by the Board of Appeals (Exh DTE-1, App. 3, at 21). Thus, without a special permit issued pursuant to the procedures and conditions set forth in Section 8-6 and Section 9-4 of the Zoning Ordinance, construction of the project would be prohibited by Sections 8-3 and 8-4 of the Zoning Ordinance, and the use of the new structures would be prohibited by Section 8-5. USGenNE argues that although it believes the project meets the criteria for receiving a special permit, the time it would take to obtain the permit would be a substantial impediment to installing the project in accordance with the ACO schedule (Exh. USGenNE-1, at 8).

USGenNE, therefore, requests an exemption from Section 5-3 (j), Article VIII, and Section 9-4 of the Zoning Ordinance (id.).

The record shows that Salem Harbor is nonconforming with respect to both use and structure. The Department finds that, unless a special permit is obtained, the proposed project would constitute an extension of the land occupied by a nonconforming use and an enlargement or alteration of a nonconforming structure, as prohibited by Sections 8-3 and 8-4 of the Zoning Ordinance and would constitute a prohibited use in accordance with Section 8-5. The Department also finds that the potential delays associated with the Special Permit process could delay compliance with the construction schedule of the project as set forth in the ACO. Accordingly, the Department finds that exemption of the proposed project from Section 5-3(j), Article VIII and Section 9-4 of the Zoning Ordinance is required within the meaning of G.L. c. 40A, § 3.

V. PUBLIC CONVENIENCE AND WELFARE

A. Need or Public Benefit of Use

USGenNE states that the ECP project is needed to implement certain terms of the ACO to achieve long-term compliance with the 7.29 Regulations for all units at Salem Harbor (Exh. USGenNE-1, at 13). According to the Company, meeting the output-based emission standards of 1.5 pounds per megawatt-hour ("lb/MWh") of NO_X and 2.0 lb/MWh of SO_2 will result in emissions reductions of more than 2,700 tons of NO_x per year and more than 8,000 tons of SO_2 per year, compared to Salem Harbor's baseline emissions levels (id., App. 2, at 2-1). In addition, the Company states that the project includes an ash recycling process ("ARP") to assist in compliance with the CO_2 standards of the 7.29 Regulations (id., App. 2,

at 1-2).

B. Alternatives Explored

The Company states that it explored an alternative approach to compliance with the 7.29 Regulations that included the use of separate SCRs for Units 1, 2 and 3, located adjacent to the boilers and upstream of the existing electrostatic precipitators ("ESPs"), and use of separate FGD/FF systems for Units 1 and 3, with no new control equipment for Unit 4 (Exh. USGenNE-1, at 16). The Company explained that the advantages of the alternative approach for Units 1,2 and 3 are that it represents a more common configuration at American plants and that there is more experience with it in this country (Tr. at 77-78). However, the Company deemed this approach infeasible due to space constraints at Salem Harbor, and instead selected the proposed configuration, which is more common in Europe and more compatible with the existing Salem Harbor facilities (id.).

USGenNE states that it also explored alternative placements for some of the equipment (Exh. USGenNE-1, at 16). The Company rejected locations to the east and west of Units 1, 2 and 3 because they are occupied by other major structures, including the turbine building and existing switchyard (id. at 17). The Company rejected placing the equipment to the north of Unit 4 because it would have required extremely long duct work, larger foundations and bigger fans (id.). The Company states that this configuration would have resulted in higher capital costs as well as larger losses in plant efficiency as compared to the proposed configuration (id.). The Company states that it selected the proposed configuration despite the need to remove several tanks and relocate some auxiliary equipment, because the length of ductwork would be reasonable and existing switchyard operations would experience only

minimal disruption (id.).

The Company also stated that it was testing a variety of lower-sulfer coals to determine if the use of such coals would allow it to construct a more limited project or defer certain elements of the ECP (Exh. DTE 1-8; Tr. at 71-72).

C. Impacts of the Proposed Use

1. Air Quality

The Company states that, consistent with its purposes, the ECP project will result in the reductions in emissions of several pollutants, including NO_X, SO_2, sulfuric acid, particulate matter and mercury (Exh. USGenNE-1, App. 2, at 2-1). The Company notes, however, that the ECP equipment used to control NO_X emissions from Unit 4 will increase emissions of two other pollutants, carbon monoxide ("CO") and ammonia (Exh. USGenNE-1, App. 2, at 2-3, 2-4; RR-DTE-5).

The Company states that the project will ensure compliance with the 7.29 Regulations' output-based emission standards of 1.5 lb/MWh of NO_X and 3.0 lb/MWh of SO_2 (Exh. USGenNE-1, App. 2, at 2-1).[11] The Company provides the following data comparing emissions of NO_X and SO_2 for 1997-1999 (baseline), 2002, and full compliance with the 7.29 standard:

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[11] USGenNE notes that interim reductions in NO_X already have been achieved as a result of compliance with immediate measures required by the ACO (RR- DTE-3; RR- DTE-4). Specifically, operation of the coal units' SNCR on a year-round basis resulted in a reduction of NO_X from 2.9 lb/MWh to 2.7 lb/MWh for the months of October through December, 2003, compared to the same period in 2002 (Exh. RR- DTE-3). In addition, the Company expects replacement of the burner tips on the oil unit to achieve a reduction in NO_X of up to ten percent (Exhs. USGenNE-1, App. 2, at 2-3; RR-DTE-4).

NO_X and SO_2 Emissions from Salem Harbor Station

	NO_X (lb/MW-hr)			**SO_2** (lb/MW-hr)		
	1997-1999	2002	7.29 Std.	1997-1999	2002	7.29 Std.
Whole Facility	3.5	2.9	1.5	15.8	10.7	3.0
Coal Units Only	3.7	2.8	n/a	13.0	10.6	n/a

(RR- DTE-2).

The Company states that the emissions control equipment is designed to ensure compliance with the 7.29 standards which will result in reductions from baseline levels of more than 2,700 tons of NO_X per year and more than 8,000 tons of SO_2 per year (Exh. USGenNE-1, App. 2, at 2-1).

USGenNE states that it conducted air quality dispersion modeling of post-ECP emissions from the facility as a whole to predict compliance with National Ambient Air Quality Standards ("NAAQS") (Exh. USGenNE-1, App. 2, at 2-4). Based on the results of this modeling, the Company states that, with operation of the ECP, Salem Harbor will not cause any exceedances of the NAAQS for CO, SO_2, particulate matter or NO_2 under maximum capacity operating scenarios (id., App. 2, at 2-4 - 2-5; Tr. at 117-118).[12]

The Company indicates that the reductions in SO_2, NO_X and other pollutants will be achieved through use of SCR and the FGD scrubbing system (Exh. USGenNE-1, App. 2, at 2-2). The Company explains that the SCR injects ammonia into the coal units' flue gas

[12] For ozone, another NAAQS pollutant, the Company notes that the Salem area is currently part of a non-attainment region (Tr. at 118). Ozone forms when NO_X and hydrocarbons react in the presence of sunlight.

stream; the ammonia reacts with NO_X in the flue gas to form nitrogen gas and water (id.)[13] In the FGD, the hot flue gas is sprayed with a finely atomized calcium hydroxide reagent slurry, resulting in steam and dry particulate material (id., App. 2, at 2-2). A fabric filter collects the particulate matter, which is in part recycled back into the FGD for its unreacted reagent, and in part removed for disposal (id., App. 2, at 2-2 - 2-3).

To provide NO_X control for the oil-fired unit, USGenNE proposes SNCR. The SNCR process injects an aqueous solution of urea into the upper furnace region of the boiler, where it reacts with the NO_X and oxygen to form primarily nitrogen gas and water (Exh. USGenNE-1, App. 2, at 2-3).[14] The Company notes that use of SNCR on the oil-fired unit will increases the facility's emission of ammonia (id.; DTE-RR-5; Tr. at 115). The Company's modeling shows that the "ammonia slip" would not exceed 10 parts per million volume dry ("ppmvd") at three percent O_2, the limit specified in the ACO (Exh. USGenNE-1, App. 1, at 24; RR-DTE-5; Tr. at 116).[15] The Company states that this concentration of ammonia in the flue gas exhaust stream is equivalent to 100 tons per year of potential ammonia emissions (Exh. RR-

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[13] The Company explains that the SCR is to be located downstream of the existing ESPs, which will be retained to control particulate emissions (Exh. USGenNE-1, App. 2, at 2-2).

[14] Although the ACO addresses SO_2 reduction from the oil unit, this is to be accomplished through the combustion of oil with a lower sulfur content (Exh. USGenNE-1, App. 1, at 4). The use of low-sulfur oil does not require the construction of any special equipment and is therefore not part of the ECP.

[15] According to the Company, the concentration would not result in any detectable odor at ground level (Exh. USGenNE-1, App. 2, at 2-4).

DTE-5).[16]

The Company states that the SNCR on Unit 4 will increase CO emissions of up to 328 tons per year. The Company indicated that Salem Harbor's Air Plan Approval Application, which is currently under review by DEP, proposes an increase in the CO emission limit from 100 ppmvd at seven percent O_2 (equivalent to 130 ppmvd at three percent O_2) to 150 ppmvd at three percent O_2 for Unit 4 (Exh. RR-DTE-5). As indicated above, however, the Company states that its air quality dispersion modeling shows that facility-wide CO emissions would not result in exceedances of either the 1-hour or 8-hour NAAQS for CO (Exh. USGenNE-1, App. 2, at 2-4 - 2-5; Tr. at 117-118).

USGenNE states that the ECP project would also include an ARP, designed to remove unburned carbon from the coal fly ash, enabling all this ash to be recycled as a replacement for Portland cement in the production of concrete (Exh. USGenNE-1, App. 2, at 2-3). According to the Company, such use of the ash by cement manufacturers reduces CO emissions associated with the concrete manufacturing process (id.). Although the ARP would not reduce CO_2 emissions from Salem Harbor directly, USGenNE expects that use of the ash by cement manufacturers would earn the Company offset credits that would contribute to meeting anticipated CO_2 requirements of the 7.29 Regulations (id.; Tr. at 63-64, 113). Finally, USGenNE states that activated carbon injection and fabric filter baghouses downstream of the ARP will remove mercury from the exhaust gas (Exh. USGenNE-1, App.

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[16] The Company explained that it performed a Best Available Control Technology analysis for ammonia but that the alternative NO_X approaches that emitted less ammonia were deemed economically infeasible, based on dollars per ton of ammonia removed (Exh. RR- DTE-5).

2, at 2-3; Tr. at 110-111).[17]

With respect to visible emissions, the Company states that visible particulate matter from the facility's coal stacks already is near zero, and that it expects these emissions to be further reduced by the ECP (Exh. USGenNE-1, App. 2, at 2-6). However, the Company explains that water vapor emissions from the plant will increase, and that visible vapor plumes extending up to 1500 feet from the stacks will occur with increased frequency (id.; Tr. at 122). Specifically, USGenNE expects the number of hours that vapor plume is visible to increase from the existing average of 25 hours per year to an average of 3,856 hours per year after completion of the ECP, with an average of 1,284 of these hours occurring during the daytime with no obscuring weather (Exh. USGenNE-1, App. 2, at 2-6 - 2-7).

2. Land Use

The Company indicates that Salem Harbor Station is located on a site of approximately 65 acres of land zoned for industrial use, within a Designated Port Area (Exh. USGenNE-1, App. 2, at 1-1, 3-2; App. 17). The site is bounded by the Atlantic Ocean to the southeast, the South Essex Sewerage District's sewage treatment facility to the northeast, residential areas to the northwest and west, and Hawthorne Cove Marina to the southwest (id., App. 2, at 3-1). The Company asserted that the ECP would be compatible with the May 2000 Harbor Plan for Salem Harbor, and would be consistent with the historic utility use of the property (id., App. 2, at 3-2).

USGenNE states that the permanent equipment and structures associated with the

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[17] The Company states that it cannot at this time quantify the mercury reductions that would be achieved (Tr. at 112).

project would occupy approximately two acres within the plant's actively used property, while the total area affected by construction, including parking, construction laydown, excavation and utility work, would be approximately 10 acres (Exh. USGenNE-1, App. 2, at 2-8). The Company notes that two Massachusetts Contingency Plan sites at Salem Harbor have not yet been closed and that construction contractors would work with USGenNE's onsite Environmental Manager and Licensed Site Professional to properly manage contaminated soil and groundwater (id.).

3. Visual

USGenNE provides several visual simulations of the site, with and without the project structures, from various vantage points (Exh. DTE-1-11). The Company states that the architecture of the project will be industrial in nature and will be visually consistent with adjacent generating equipment and structures (Exh. USGenNE-1, App. 2, at 3-2). The Company states that at 170 feet for the SCR and 160 feet for the FGD absorbers, the heights of the tallest components of the ECP will be comparable to the existing power plant building, which reaches 191 feet, not including the stacks (id., App. 2, at 1-5, 3-2; Exh. DTE–3-1). In terms of gross area, the Company indicates that the largest buildings or structures are the fabric filter (12,000 sq. ft.) and the SCR (8,500 sq. ft.) (Exh. DTE-3-1). USGenNE acknowledges that the ECP places the added structural mass of its tallest structures slightly closer to the houses south and southwest of the site than the existing power plant (Exh. DTE-1-12). However, the Company asserts that the change in view from these vantage points would not be significant because the views would encompass the larger, existing structures together with the new structures (id.). Further, the Company noted that several existing oil

tanks would partially block views of the ECP equipment from the south and southwest (id.).

In general, the Company stated that the existing earthen berm, trees, and shrubs along the western edge of the property, which help to screen views of the existing facility from Derby Street and Fort Avenue, would also help screen views of the new structures, although not as effectively in winter as in summer (Exhs. USGenNE-1, App. 2, at 3-3; DTE-1-13). The Company noted that a ten-foot tall gas metering station would be sited in the "front yard" of the site (i.e., within 30 feet of Fort Avenue), but explained that it would be hidden from view behind the existing six-foot high stockade fence located along the property line (Exhs. USGenNE-1, App. 19, at SPS-1007; DTE-1-11, at Fig. 11B; DTE-3-1; DTE-3-2; Tr. at 55).

The Company states that it assessed shadow impacts from the project using computer software that simulates local sun and shadow conditions for different months of the year and times of day (Exh. DTE-1-14). The Company states that the results of this analysis indicate that the existing facility is a greater source of shadows than the new structures would be, and that the new structures would cast shadows beyond the site for only brief periods in the early morning during winter months (id.).

4. Noise

USGenNE states that operation of the emission control equipment could cause increases in sound levels (Exh. USGenNE-1, App. 2, at 2-15). The Company cites fans as the primary source of the additional noise that would emanate from the facility (id., App. 2, at 2-16). The Company also indicates that silencers and enclosures can be used to dampen the noise (id.).

To evaluate the noise impacts from the project, the Company states that in December,

2000, it conducted background sound monitoring at representative receptor locations (Exh. USGen-1, App. 2, at 2-11, 2-15). The Company states that it monitored short-term (30-minute) day- and night-time sound levels at one on-site location, one point along the property line, and seven off-site locations (id., App. 2, at 2-11, Fig. 2). It also monitored continuous (24-hour) sound levels at the two off-site locations that are closest to the facility (id., App.2, at 2-11). The short-term monitoring data yielded night-time L_{90} sound levels[18] from 39 dBA to 48 dBA at residential locations close to the facility (id., App.2, at 2-13). The Company judged the short-term data from the continuously monitored locations to be in good agreement with the continuous data (id., App. 2, at 2-15).

The Company states that it performed computer modeling to calculate sound levels from the project equipment, inclusive of structural mitigation measures, at the monitored receptor locations (Exh. USGenNE-1, App. 2, at 2-16). The Company explains that it then evaluated the sound from the project in the context of the existing night-time sound levels to determine the potential impacts (id.). Based on the results of this modeling and evaluation, the Company concludes that the project would result in noise increases of 3 dBA or less at all off-site locations (Exhs. USGenNE-1, App. 2, at 2-16 - 2-18; DTE-1-18). The Company characterizes these increases as "barely perceptible" (Exh. USGenNE-1, App. 2, at 2-15).

USGenNE states that the expected noise levels from major construction equipment (i.e., excavation, pile driving, and exterior finishing) at a distance of 1000 feet range from 53 dBA for front-end loaders to 65 dBA for cement trucks (Exh. USGenNE-1, App. 2, at 2-15,

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[18] The L_{90} sound level is the level of noise that is exceeded 90 percent of the time.

2-18).[19] At the closest residential and elementary school receptor locations (1200 to1500 feet away), the Company expects the noisiest phases of construction activity to produce sound ranging from 41 to 61 dBA (id., App. 2, at 2-21).[20] For comparison, the Company indicates that the daytime L_{eq} sound level is 64 dBA and 49 dBA, respectively, at the two closest residential receptor locations (id.). In its Site Plan Review Decision, the City of Salem's Planning Board limited blasting, rock crushing, jack hammering, hydraulic blasting, or pile driving for this project to the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (Exh. USGenNE-8, at 3). That decision also requires that advance written notice of construction be provided to all abutters within 300 feet of the site at least 72 hours prior to commencement (id.).

5. Wetlands and Water Resources

USGenNE states that there are no wetlands, marshes, seasonal wet areas, or existing or proposed flood control or wetland easements along the shoreline portion of the property (Exh. USGenNE-1, App. 2, at 2-9). However, the Company proposes to construct a crane to

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[19] The Company initially proposed standard pile driving for the installation of pile supports, which would have generated noise levels of 74 to 76 dBA at these locations (Exh. USGenNE-1, App. 2, at 2-21). However, the Company now indicates that it would instead use augering or pin pile placement to reduce the noise associated with pile installation (Exh. USGenNE-8, at 5;Tr. at 50). According to the Company, these methods would result in outdoor sound levels at the elementary school of approximately 54 dBA, not accounting for any attenuation due to intervening structures (Exh. USGenNE-9). Given existing daytime ambient noise levels at the school in the range of 45 to 55 dBA the Company concludes that no incremental noise due to the placement of piles by these techniques would be noticeable at this location (id.).

[20] The Company states that, in addition to distance, other attenuation factors, such as atmospheric absorption and intervening buildings and topography, will act as barriers to further reduce sound levels at receptor locations (Exh. USGenNE-1, App. 2, at 2-19).

offload large ECP equipment from barges at the north bulkhead, which would require alteration of a portion of the 100-foot buffer zone (id.). The Company states it would perform work in the buffer zone in accordance with an Order of Conditions from the Salem Conservation Commission, dated May 8, 2003 (Exh. USGenNE-1, App. 2, at 2-9, App. B). The record shows that these conditions require: (1) the presence of a Licensed Site Professional on site during the demolition and removal of the fuel tank and during the excavation for installation of the tie blocks; (2) the installation of a boom to collect any debris that may fall into the water; and (3) the presence of spill kits for use in the event of an accidental leak or spill of hydraulic fluid or fuel (id., App. 2, App. B, 4). The record also shows that the Salem Conservation Commission made a Negative Determination of Applicability for the filling of four waste treatment basins and the removal of a windrow storage area, lime equipment, and associated structures (id., App. 2, App. C).

The Company provided a letter from the Massachusetts Environmental Policy Act Unit stating that, while the project would require a new Chapter 91 license, no new non-water-dependent use of tidelands would occur (Exh. USGenNE-1, App. 2, App. F).

USGenNE states that it would prepare a Construction Stormwater Pollution Prevention Plan in accordance with National Pollutant Discharge Elimination System ("NPDES") regulations, and would be required to file a Notice of Intent with the US Environmental Protection Agency prior to beginning construction (Exh. USGenNE-1, App. 2, at 2-10). With regard to permanent erosion and sedimentation controls, the Company states that paved and rock-surface areas within the emissions control equipment area would minimize erosion and sedimentation (id.). The Company explains that stormwater would be collected in a storm

sewer, conveyed to a detention basin for settling, then treated in the facility's existing wastewater treatment system prior to discharge into the Atlantic Ocean, in compliance with applicable NPDES requirements (id.).

To minimize the project's impact on potable water supplies, the Company expects to use treated effluent from the neighboring South Essex Sewerage District's sewage treatment facility to meet most of the ECP project's process water needs (Exh. USGenNE-1, App. 2, at 2-9). The Company proposes to construct a 60-foot by 60-foot water treatment building, and two water tanks (600,00 gallons and 20,000 gallons, respectively) to facilitate use of the effluent (id.).

6. Traffic

USGenNE states that large equipment and ductwork would arrive at the site by barge, while other materials, such as concrete, reinforcing steel, structural steel, electrical equipment, conduit, pipe, and other materials would be delivered by truck (Exh. USGenNE-1, App. 2, at 4-4). The Company estimates the average number of truck deliveries to be 5 per day, with a maximum of 50 per day during foundation construction (id.). The Company also indicates that construction worker trips to the site would reach a peak of approximately 150 per day, with significantly fewer trips per day for much of the 18 to 24-month construction period (id., App. 2, at 4-3). The Company states that both construction workers and trucks would access the site via Bridge Street and Webb Street, entering the premises through the Webb Street Gate, and that all construction parking would be located on the southwest area of the site (id., App. 2, at 4-4).

According to the Salem Planning Board's Site Plan Review Decision, all work

undertaken for the project must comply with the Construction Traffic Management Plan presented to the Planning Board, which details the number of construction vehicles and proposed routes the vehicles should take (Exh. USGenNE-8, at 4). The decision also specifies that USGenNE would discuss possible mitigation measures for intersections and roadways affected by construction traffic with the City's Department of Planning and Community Development, and provide police details or other reasonable mitigation, as directed by the City (id. at 3).

D. Analysis

USGenNE has presented evidence that construction and operation of the ECP project is necessary for compliance with DEP's 7.29 Regulations and the Salem Harbor ACO, and that the ECP project would provide substantial reductions in emissions of NO_X and SO_2 from the Salem Harbor power plant. The record shows that the ECP project's ash reduction process may help Salem Harbor meet its obligations under the 7.29 Regulations with respect to CO_2. Due to these benefits, the Department concludes that the project is in the public interest.

The record also identifies certain negative air quality impacts associated with the ECP project. Specifically, the record shows that ammonia emissions likely would increase, though within the limit specified by the ACO. In addition, CO emissions likely would increase but not exceed of the NAAQS requirements for CO. The record also shows that the number of hours that vapor plumes would be visible would increase substantially.

With respect to visual impacts of the project, the record shows that the new structures would be in keeping with the industrial character of the site. The project would have only a

minimal effect in terms of extending shadows off site or adding structural mass closer to community areas. The record shows that existing structures, fencing and landscaping would partially screen views of the project from many residential vantage points.

The record shows that the operating noise impact of the project would be minor, but that noise from construction would be audible in the surrounding neighborhood. The City of Salem Planning Board's Site Plan Review Decision addresses construction period noise by limiting the noisiest activities to specific weekday hours, requiring prior notice to abutters, and requiring the use of techniques for pile installation that are less noisy than traditional pile driving.

The Salem Planning Board's Decision also addresses construction period traffic issues. In addition to requiring compliance with a Construction Traffic Management Plan, which details the number of construction vehicles and approach routes, the Decision outlines an ongoing relationship between the City and the Company for purposes of mitigating traffic impacts associated with the project.

The record shows that impacts to wetlands and water resources would be minimal. An Order of Conditions from the Salem Conservation Commission would govern work undertaken in the 100-foot buffer zone to the waterfront, while a Construction Stormwater Pollution Prevention Plan, onsite erosion and sedimentation controls, and existing wastewater treatment facilities and NPDES requirements would minimize the effects of stormwater runoff, erosion, sedimentation, and wastewater discharges associated with construction of the ECP project.

The Department finds that, with the mitigation as proposed by USGenNE and required

by the City of Salem, the adverse environmental impacts of the proposed project on the local community would be minimal. Based on the foregoing, the Department finds that the public interest in the construction of the proposed project at Salem Harbor would outweigh the adverse environmental impacts of the project. Consequently, the Department finds that the proposed project is reasonably necessary for the convenience and welfare of the public.

The Department further notes that should the Company defer certain elements of the ECP project, or construct a more limited project, while still achieving compliance with the 7.29 Regulations and the ACO, our finding that the ECP project is reasonably necessary for the convenience and welfare of the public would apply to any such project.

VI. SCOPE OF ZONING EXEMPTION

In Sections IV. A and IV. B, above, the Department found that USGenNE requires an exemption from the following portions of the Zoning Ordinance of the City of Salem: Sections 4-1(2)(a) and (d); 5-3(j); 9-4; 9-5, 9-4 Article VI, Table II and Article VIII. USGenNE also has requested a exemption from all sections of the Zoning Ordinance, with the exception of Section 7-18, for the proposed construction and operation of its EPC project. As the Department has noted, petitions for comprehensive zoning relief are granted infrequently but may be appropriate in certain circumstances. For example, the Department will consider the issuance of comprehensive relief where numerous individual exemptions are required, or where issuance of a comprehensive exemption could avoid substantial public harm by serving to prevent delay in the construction and operation of the proposed use. Commonwealth Electric Company, D.T.E. 03-7, at 33-34 (2003); Massachusetts Electric Company, D.T.E. 01-77, at 30-31(2002); Tennessee Gas Pipeline Company, D.T.E. 01-57, at 11

(2002).

Here, the Company has demonstrated a need to comply with the terms of the ACO in order to satisfy the requirements of the 7.29 Regulations, which impose deadlines for new facility-wide annual emissions limits for NO_X and SO_2. The record shows that the ACO sets forth schedules for target dates for completing permitting processes associated with the ECP project. USGenNE has demonstrated that the time associated with pursuing the special permit and variance processes through the City of Salem could result in the Company's failure to meet the terms of the ACO.

The Department finds that the public interest in the immediate construction and operation of the proposed ECP project outweighs any benefit that could be obtained from further local review, particularly in light of the extensive local review already undertaken by the City's Planning Board. Accordingly, in light of the substantial public interest in the construction of the proposed ECP project, the Department finds that exemption from Sections 4-1(2)(a) and (d); 5-3(j); 9-4; 9-5, Article VI, Table II, and Article VIII of the Zoning Ordinance is required within the meaning of G.L. c. 40A, § 3. In addition, the Department finds that it is appropriate in this case to grant USGenNE's request for a exemption from all sections of the Zoning Ordinance, with the exception of Section 7-18, in connection with the construction and operation of the proposed ECP project.

VII. ORDER

Accordingly, after due notice, hearing and consideration it is hereby

ORDERED: That the petition of USGen New England, Inc. for exemptions from Sections 4-1(2) (a) and (d), 5-3(j), 9-4 and 9-5, Article VI, Table II and Article VIII of the

Zoning Ordinance of the City of Salem is allowed; and it is

FURTHER ORDERED: That the petition of USGen New England, Inc. for an exemption from all sections of the Zoning Ordinance of the City of Salem, with the exception of Section 7-18, is allowed; and it is

FURTHER ORDERED: That USGen New England, Inc. shall obtain all other governmental approvals necessary for this project before construction commences; and it is

FURTHER ORDERED: That the Secretary of the Department shall transmit a certified copy of this Order to the Clerk of the City of Salem; and that USGen New England, Inc. shall serve a copy of this Order on the Salem Planning Board, the Salem Zoning Board of Appeals within five business days of its issuance and shall certify to the Secretary of the Department within ten business days of its issuance that such service has been accomplished.

By Order of the Department:

_____
Paul G. Afonso, Chairman

_____
James Connelly, Commissioner

_____
W. Robert Keating, Commissioner

_____
Eugene J. Sullivan, Jr., Commissioner

_____
Deirdre K. Manning, Commissioner

Appeal as to matters of law from any final decision, order or ruling of the DTE 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 DTE be modified or set aside in whole or in part.

Such petition for appeal shall be filed with the DTE within twenty days after the date of service of the decision, order or ruling of the DTE, 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, § 5; Chapter 164, § 69P).