

D.T.E. 03-7

Petition of Commonwealth Electric Company for exemption by the Department of Telecommunications and Energy from operation of the Zoning Ordinances of the Town of Barnstable, Massachusetts with respect to the construction and use of substation facilities, pursuant to G.L. c. 40A, § 3.

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FOR: Commonwealth Electric Company
Petitioner

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I. INTRODUCTION

A. Description of the Proposed Project

Pursuant to G.L. c. 40A, § 3, Commonwealth Electric Company (“Company” or “ComElec”) filed a petition with the Department of Telecommunications and Energy (“Department”) on January 31, 2003, seeking an exemption from the Town of Barnstable Zoning Ordinances (“zoning ordinance”) in connection with the Company’s proposal to construct and operate a new 115 kilovolt (“kV”) to 23 kV bulk distribution substation and related facilities (“Oak Street Substation” or “proposed substation”) in West Barnstable (Exh. CEC-1). The Company stated that the purpose of the proposed substation is to provide a secure and adequate supply of electricity to its customers in the towns of Barnstable, Yarmouth, Sandwich, and Mashpee, Massachusetts (Exh. CEC-1, at 2).

In its petition, ComElec stated that the proposed 169-foot by 182-foot substation would be constructed on an approximately 9.7 acre parcel of Company-owned land on Oak Street in West Barnstable (Exh. CEC-1, at 12, App. D; Tr. at 102). The substation would be located close to an existing ComElec high-voltage transmission right-of-way occupied by three existing 115 kV lines and two existing 23 kV distribution supply system feeders (Exh. CEC-1, at 2). The proposed substation would interconnect with these existing lines (Exh. CEC-1 at 2). ComElec indicated that the substation yard would include the substation control house (21 feet by 17 feet, 16 feet in height), one transformer bank (30 feet by 20 feet, approximately 17 feet in height) on a concrete foundation within an oil-containment pit, an open rack capacitor, a 115 kV circuit switcher, 23kV and 115 kV bus work (approximately 24 feet high with a shielding mast extending another 20 feet), miscellaneous relaying and metering equipment,

foundations, and wiring (Exh. CEC-1, at 2 and App. D; Tr. at 57, 62-63).

The Company stated in its petition that certain provisions of the zoning ordinance appear to prohibit the construction and operation of the proposed substation at the Oak Street site (Exh. CEC-1, at 3). The Company has requested, pursuant to G.L. c. 40A, § 3, to be exempted from seven specific provisions of the zoning ordinance, and also has requested a comprehensive exemption from the zoning ordinance as a whole (*id.* at 3-4; Exh. CEC-6).¹

B. Procedural History

On January 31, 2003, the Company filed a zoning exemption petition with the Department. The Department docketed the petition as D.T.E. 03-7. Pursuant to notice duly issued, the Department held a public hearing on the Company's petition on March 13, 2003, in Barnstable.

The Department conducted an evidentiary hearing on April 14, 2003. The Company presented the testimony of three witnesses: John M. Zicko, P.E., Lead Engineer in NSTAR's Substation Engineering Group and Project Manager for the proposed project, whose testimony included environmental and community impacts; Keith L. Jones, P.E., Senior Planning Engineer in NSTAR's Transmission and Distribution Planning Group, whose testimony included the Company's need analysis for the proposed project; and Peter A. Valberg, Ph.D., Principal at Gradient Corporation, whose testimony included electric and magnetic fields ("EMF") associated with the proposed project.

¹ In a letter dated April 22, 2003, the Company confirmed that it was seeking a comprehensive zoning exemption, in addition to the seven specific exemptions set forth in its petition. This letter has been marked for identification and entered into evidence as Exhibit CEC-6.

On April 18, 2003, the Company filed a brief.

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 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 . . .

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 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, 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”).

B. Exemptions 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, not the Department’s, 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 requested exemptions.

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

C. Public Convenience or Welfare

In determining whether a 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, 366 Mass. 667, 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 petitioner. Save the Bay, 366 Mass. 667, 685; New York Central Railroad, 347 Mass. 586, 592.

With respect to the project site chosen by a petitioner, G.L. c. 40A, § 3 does not require a demonstration that the petitioner's 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. 586, 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 4-6; 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).²

III. ANALYSIS AND FINDINGS

A. Public Service Corporation Status

Commonwealth Electric Company is an “electric company” as defined by G.L. c. 164 (Exh. CEC-1, at 1). See also, Cape and Vineyard Electric Company, D.P.U. 15690, at 2 (1968). Therefore, it qualifies as a public service corporation.

B. Need for the Requested Exemptions

The zoning exemption requests set forth in ComElec’s petition are based on two principal grounds. The Company stated that certain provisions of the zoning ordinance, if applied to the proposed project, would preclude construction of the substation outright. In addition, the Company asserted that the requested exemptions are necessary because construction of the proposed substation is highly time-sensitive. Specifically, the Company

² 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.” See G.L. c. 30, § 61. Pursuant to 301 C.M.R. § 11.01(3), these findings are necessary when an Environmental Impact Report is submitted by a company to the Executive Office of Environmental Affairs, and should be based on such Environmental Impact Report. The Company stated that it was not required to file an Environmental Impact Report for the proposed project (Exh. CEC-1, at 16).

asserted that the proposed substation needs to be operational by the summer of 2003, to prevent possible electrical outages in the mid-Cape area (Brief at 22-23).³

1. Section 2-3.1: Conformance to Use Regulations

Section 2-3.1 of the zoning ordinance⁴ states, *inter alia*, that no building shall be used for any purpose except in conformity with all the regulations for the district in which it is located (Exh. CEC-5, at 9).⁵ The Company's proposed substation is located in a "Residential F District" ("RF District") (Exh. CEC-1 at App. H). The permitted uses for the RF District are listed in Section 3-1.4 of the zoning ordinance; the operation and construction of an electrical distribution substation is not included in the list (Exh. CEC-5, at 25-26). ComElec stated that

³ The evidentiary bases for the Company's assertions regarding the need for, and time-sensitive nature of, the proposed project are discussed more fully in Section III.C.1, below.

⁴ The zoning ordinance was marked for identification both as "CEC-1, App. G" and, for ease of citation, as "Exhibit CEC-5".

⁵ As required by Department practice, the Company submitted a copy of the zoning ordinance, bearing an attestation by the Town Clerk, in accordance with the practice described in G.L. c. 233, § 75, on admissibility of municipal ordinances and by-laws. The copy of the zoning ordinance submitted by the Company did not, however, bear an *original* attestation by the Town Clerk. Accordingly, the Company will be required to file a copy of the zoning ordinance, bearing an original attestation, within 30 days of the issuance of this Order. See Section IV, below. Upon filing, the attested-to copy of the zoning ordinance will be marked as Exhibit CEC-7, and will be entered into the evidentiary record in this proceeding.

In order to ensure that future petitions brought under G.L. c. 40A, § 3, are based on current municipal ordinance or by-law, we will hereafter require (a) that the municipal clerk's *original* attestation also be dated by the clerk not earlier than two months prior to the date the petition is filed and (b) that petitioner's counsel represent to the Department as part of the original filing that no change in the ordinance or by-law, relevant to the petition, has occurred since its attestation date.

because an electrical substation is not a permitted use for the district in which it is located, it cannot construct or operate the proposed substation without an exemption from Section 2-3.1 of the zoning ordinance (Exh. CEC-1, at 4).

The record shows that pursuant to Section 2-3.1 of the zoning ordinance, the proposed substation would have to conform with all the regulations of the RF District. Since the construction and operation of substation is not listed as a permitted use in the RF District, the proposed substation would not conform with the regulations of the district in which it is located. Therefore, the Department concludes that the proposed project cannot be built without relief from Section 2-3.1 of the zoning ordinance. Accordingly, the Department finds that exemption of the proposed project from Section 2-3.1 of the zoning ordinance is required within the meaning of G.L. c. 40A, § 3.

2. Section 3-1.4: RC-1 and RF Residential Districts

Section 3-1.4 of the zoning ordinance enumerates the principal permitted uses, the accessory uses, the conditional uses, and the special permit uses that are allowed in the RF District (Exh. CEC-5, at 25-26). Operation of an electrical substation is not one of the uses listed in Section 3-1-4 (id.). Further, Section 3-1-4(5), requires structures in an RF District to have a minimum lot frontage of 150 feet (id. at 26).

Because operation of a substation is not a use enumerated in Section 3-4.1, the Company stated that it cannot build or operate the proposed substation at the Oak Street site without an exemption from Section 3-4.1 (Exh. CEC-1, at 4). The Company also stated that the proposed site only has 67.33 feet of frontage on Oak Street and, therefore, would not satisfy the minimum lot frontage requirement in Section 3-1.4(5) (Exh. id. at 2).

The record shows that under Section 3-4.1 of the zoning ordinance, the construction and operation of an electrical substation is not a listed principal permitted, accessory, conditional or special permit use in the RF District. Also, because the Oak Street site does not have 150 feet of frontage, it does not meet the minimum frontage requirements under Section 3-4.1(5). Therefore, the Department concludes that the proposed project could not be constructed or operated at the Oak Street site because of the requirements of Section 3-4.1. Accordingly, the Department finds that exemption of the proposed project from Section 3-4.1 of the zoning ordinance is required within the meaning of G.L. c. 40A, § 3.

3. Section 3-5: Special Purpose Districts

Section 3-5 outlines the special purpose districts in Barnstable and states, inter alia, the permitted and prohibited uses within each district (Exh. CEC-5, at 79-90). Section 3-5.2 establishes three “Groundwater Protection Overlay Districts” (Exh. CEC-5, at 82-87). The purpose of Section 3-5.2 is to protect the public health, safety, and welfare by encouraging non-hazardous, compatible land uses within the groundwater recharge areas (id. at 82). Of the three Groundwater Protection Overlay Districts, the Oak Street site is located in the “AP Aquifer Protection Overlay District” (“AP District”) (Exh. CEC-1, at 5 and App. H). Section 3-5.2 of the zoning ordinance states that the permitted uses within the AP District are those uses within the underlying zoning district and that the prohibited uses are the prohibited uses within the underlying district (Exhs. CEC-1, at 5; CEC-5, at 82).

The Company stated that the underlying district is the RF District and construction and operation of an electrical substation is not a permitted use in that district (Exh. CEC-1, at 5). Therefore, according to the Company, the proposed use of the Oak Street site for the

construction and operation of the substation is prohibited by Section 3-5 and its subsections (id. at 4-6).

As discussed in Sections III.B.1 and III.B.2, above, the Oak Street site is located in a residentially zoned district, and the construction and operation of an electrical substation is not a permitted use in such a district. Consequently, at least in the absence of an exemption from the zoning ordinance's use regulations, it is not possible to view the proposed project as an allowed use in the AP District. An argument can be made that where, as here, an otherwise unpermitted use has been exempted from operation of the use regulations, the proposed use becomes allowable in an AP District. However, there is no evidence in the record of this proceeding that would support such an interpretation of the Town's zoning requirements. Accordingly, the Department finds that exemption of the proposed substation from Section 3-5 of the zoning ordinance is required within the meaning of G.L. c. 40A, § 3.

4. Section 4-1: Accessory Uses

Section 4-1.1 of the zoning ordinance permits accessory uses or buildings on the same lot as the principal use or building, provided such use or building is "customarily incidental to and subordinate to" the principal use it serves (Exhs. CEC-1, at 5; CEC-5, at 113, § 4-1.1).

The Company noted that its proposed substation control building is a typical feature of electric substations, and "therefore arguably a permitted accessory use within the definition of the zoning ordinance" (Exh. CEC-1, at 6). However, the Company also noted that since the proposed use of the Oak Street site (i.e., as an electrical substation) is not a permitted principal use in an RF District, it is "unclear" how Section 4-1.1 would apply to allow an accessory structure such as the control house (id.). Additionally, the Company stated that occasional,

temporary laydown and storage of materials may occur on-site during construction and operation of the substation (id.). The Company argued that because such use of the site is not addressed in Section 4-1.1, it presumably is prohibited (id. at 6-7). The Company therefore has requested exemption from this Section to resolve any ambiguity regarding the application of the zoning ordinance to on-site storage (id. at 6-7).

As discussed in Sections III.B.1 and III.B.2, above, the Oak Street site is located in a residentially zoned district, and the construction and operation of an electrical substation is not a permitted use in such a district. Consequently, at least in the absence of an exemption from the zoning ordinance's use regulations, it is not possible to view the control house, or any other structural element of the proposed substation as an accessory use to a *permitted* use. However, an argument can be made that where, as here, an otherwise unpermitted use has been exempted from operation of the district regulations, the accessory use regulations become operable with respect to that use. Because there is no evidence in the record of this proceeding on which to base a determination regarding the appropriateness of Section 4-1.1 in this case, the Department concludes that granting ComElec an exemption is warranted. Accordingly, the Department finds that exemption of the proposed project, including the control house and any laydown and storage of materials from Section 4-1.1 of the zoning ordinance is required within the meaning of G.L. c. 40A, § 3.

5. Section 4-2: Off-Street Parking Regulations

Section 4-2 of the zoning ordinance sets forth off-street parking requirements for new, expanded or intensified uses, including the number of parking spaces required, design and screening standards, and parking lot landscaping requirements (Exh. CEC-5, at 117-125).

Section 4-2.9 consists of a table that sets forth the minimum number of parking spaces required for specific categories of uses. In general, the identified uses are those that can be expected to generate a measurable increase in the need for parking within the Town, such as new or expanded hotels, hospitals, and restaurants (Exh. CEC-5, at 123-124). The table includes a “catch-all” category for all other uses. The number of required parking spaces for uses that fall into the catch-all category is not specified, but is to be determined by the Building Commissioner (id.). Section 4-2 also sets forth a process by which an applicant may seek relief from the off-street parking requirements by demonstrating “special circumstances” (Exh. CEC-5, at 124). Such relief is granted by the Zoning Board of Appeals, in the form of a Special Permit (id.).

The Company stated in its petition that, because electric substations are not included among the specified uses in Table 4-2.9, the proposed project would fall into the Table’s catch-all category and, accordingly, the number of parking places that would be required on the Oak Street site would be left to the discretion of the Town’s Building Commissioner (Exh. CEC-1, at 7). The Company requested exemption from Section 4-2 “[i]n order to remove any uncertainty as to the application of the off-street parking requirements to the Site” (id.). The Company further stated that it does not plan to pave or provide any designated off-street parking on the site, since the substation would be unstaffed, requiring only periodic inspection visits by Company personnel (Exh. CEC-1, at 7).

Based on the Company’s representations that ComElec personnel would visit the substation infrequently and that the Oak Street site could readily accommodate any vehicles

associated with these visits,⁶ the Department concludes that the proposed substation is unlikely to generate parking concerns of the type or magnitude associated with the uses identified in Section 4-2. The Department also notes that application of Section 4-2 to the Oak Street site is not set, but would lie within the discretion of the Building Commissioner; the record contains no information regarding the process by which such determinations are made or how long the process could be expected to take. The Department therefore concludes that the potential for project delay is sufficient to warrant the Company's exemption from Section 4-2. In addition, the Department notes that the specific application of Section 4.2, if it did apply to the site, would need to be determined by the Building Commissioner, and there is no information in the record regarding the process by which such determinations are made. For this reason, the Department concludes that an exemption from Section 4.2 is needed to avoid project delay. Accordingly, the Department finds that exemption of the proposed substation from Section 4-2 of the Barnstable zoning ordinance is required within the meaning of G.L. c. 40A, § 3.

6. Section 4-7: Site Plan Review Provisions

Section 4-7.3 sets forth five categories of development activities for which the preparation of a site plan is required (Exh. CEC-5, at 157-168). As noted by the Company in its petition, construction of the proposed substation would appear to fit within at least two of these categories, since the project would involve "grading, clearing or other land development activity" and "new construction of any building or structure . . . except detached single-family

⁶ The Company acknowledged that a greater number of vehicles would be present during construction of the substation, but that these vehicles also could be parked on the site. See Section III.C.3.a, below.

and two-family dwellings . . .” (id., at 158; Exh. CEC-1, at 8). Section 4-7.4 further provides that neither a building permit nor an occupancy permit may be issued for any use or activity requiring site plan review, until site plan approval has been obtained from the Town Building Commissioner (Exh. CEC-5, at 158).

The Company asserted that comprehensive site plan review is not intended, or appropriate, for smaller scale projects such as the Oak Street Substation, and that compliance with the requirements of Section 4-7 would be costly and burdensome to the Company (Exh. CEC-1, at 8). In addition, the Company asserted that the applicability of many requirements in Section 4-7 is unclear, “leaving open the potential for ambiguity and uncertainty . . . as to whether and how the requirements are met” (id.). ComElec asserted that the site plan review process is potentially iterative and time consuming, which would adversely affect the Company’s ability to meet its projected in-service date for the substation (id.).

The Department has reviewed the site plan review provisions in Section 4-7 of the zoning ordinance. It appears, as the Company has suggested, that relatively large-scale development projects, with likely impacts beyond a developer’s own site, are the primary focus of the site plan review process laid out in this Section. As set forth in Section 4-7.1,

Developments designed to be used for business and professional offices, commercial establishments, industrial facilities, public recreational facilities . . . and multi-family dwellings . . . invite and accommodate varying degrees of open and continuous use by the general public. Owing to their physical characteristics and the nature of their operations, such developments may affect neighboring properties and adjacent sidewalks and streets. It is in the interest of the community to promote functional and aesthetic design, construction and maintenance of such developments and to minimize any harmful effects on surrounding areas.

The Company’s project, in its essence, consists of adding certain equipment and

structures to an already developed and functioning, un-manned site used by the Company for the distribution of electricity. Such a project differs significantly in nature and scope from the types of development projects targeted by the Town's site plan review requirements. In light of this difference and the time-sensitive nature of the Company's project, the Department concludes that exempting ComElec from the site plan review process is necessary if the Company is to achieve its targeted in-service date for the proposed substation. Accordingly, the Department finds that exemption of the proposed substation from Section 4-7 of the zoning ordinance is required within the meaning of G.L. c. 40A, § 3.

7. Section 5-2: Bonds and Permits

Section 5-2 of the zoning ordinance provides for two types of performance bonds, requires certification by a land surveyor of set-back requirements, and addresses the issuance of occupancy permits (Exh. CEC-5, at 180). Pursuant to Section 5-2.1, the Building Commissioner may require the posting of a bond against possible erosion or damage to public rights-of-way. The amount of the bond must be no less than four dollars per square foot of site frontage, and must be provided "prior to the authorization of any new building" (id.). Section 5-2.1 also provides for the posting of a performance bond for "other construction" in an unspecified amount, which is to be held by the Town until an occupancy permit is issued (id.).

With respect to the bonding requirements, ComElec asserted that the Company is sufficiently creditworthy to obviate the need for posting a bond or providing other security for its proposed construction activities (Exh. CEC-1, at 9). Because the amount of the bonds appears to lie within the discretion of the Building Commissioner, ComElec also asserted that

the bonding process may create a burden or uncertainty for the Company (id.). With respect to the need for an occupancy permit, the Company argued that Section 5-2.2 on its face appears to require compliance with the zoning ordinance in its entirety before an occupancy permit may issue (id.). Thus, the Company seeks exemption from Section 5-2.2 based on “the uncertainty in the application of this provision in the context of an exempt project” (id.).

As a general matter, the Department sees no reason why ComElec should not be required, like any other applicant, to post the two performance bonds provided for in Section 5-2.1. However, the time-sensitive nature of the Company’s project must be taken into account in this instance. The amounts of the two bonds are not fixed, but are to be determined by the Building Commissioner, and there is no information in the record regarding the process by which such determinations are made. The Department therefore concludes that the potential for project delay in this case is sufficient to warrant the Company’s exemption from compliance with the bonding requirements of Section 5-2.1.

With respect to the occupancy permit provisions of Section 5-2.2, the Department concludes that it is not possible for the Company, once it has been granted any exemption from the zoning ordinance, to comply with the express terms of this provision. Accordingly, the Department finds that exemption of the proposed substation from Sections 5-2.1 and 5-2.2 of the zoning ordinance is required within the meaning of G.L. c. 40A, § 3.

C. Public Convenience and Welfare

1. Need or Public Benefit of Use

ComElec stated that it forecasts load growth on an annual basis (Exh. DTE 1-18). The

Company stated that average and peak loads are increasing in the mid-Cape area (Tr. at 10).⁷

The current annual growth rate for peak load ranges from 2.1 to 5 percent among individual substations serving different sections of the mid-Cape area (Exh. CEC-1, App. I at 5; Tr. at 10).

The Company indicated that electric power for the mid-Cape is carried by two 115 kV transmission lines, the No. 120 line and the No. 122 line, which run from points in Bourne east to the Barnstable Switching Station (Exhs. CEC-1, App. I at 3; DTE 1-14). A third 115 kV line, the No. 115 line, runs from Falmouth northeast to the Barnstable Switching Station (Exhs. CEC-1, App. I at 3; DTE 1-14). Power at 115 kV is stepped down to 23 kV for local distribution (Exh. CEC-1, App. I at 3-5). As presently configured, power for service in the Barnstable power supply area is transformed to 23 kV at the Sandwich Substation, supplied by the No. 122 line; the Mashpee Substation, supplied from the No. 115 line; and Hyannis Substation, supplied from the Barnstable Switching Station (Exh. CEC-1, App. I at 1; Tr. at 9).

The Company presented its reliability criteria for substation and distribution facilities (Exh. DTE 1-20, Att.). According to the Company's planning criteria for substation and distribution facilities, no element should exceed its normal rating when all elements are in service, and voltages should be within five percent of nominal (Exh. DTE 1-20, Att., at 5, 7). For a single contingency loss of equipment, the Company's planning criteria state that remaining elements should not exceed their emergency capacity rating, and voltages should be

⁷ The Company stated that the term "mid-Cape" includes the towns of Barnstable, Yarmouth, Dennis, Harwich, and Brewster (Exh. DTE 1-18).

within ten percent of nominal (id.).

The Company stated that it has not experienced any equipment failures, outages, or maintenance costs directly related to past overloads on area feeders (Tr. at 11). However, the Company stated that it transfers load from its Mashpee Substation to the Hyannis Substation during the summer to avoid transformer overloads under peak load conditions (Exhs. CEC-1, at 5; DTE 1-16). For projected 2003 peak load, a single-contingency outage of one of the transformers at the Hyannis Substation would result in the following conditions, each of which would lead the Company to shed load: (1) loading on the other Hyannis transformer that is three percent in excess of its 12-hour emergency rating; and (2) loading on the No. 87 distribution line, which runs from Sandwich Substation to Hyannis Substation, that is eight percent in excess of its 12-hour emergency rating (Exhs. CEC-1, at 5; DTE 1-15). A single-contingency outage of the Mashpee Substation transformer under 2003 peak load would result in excessive loading by seven percent on the No. 88 distribution line, which runs from the Mashpee Substation to the Hyannis Substation, leading the Company to shed load; in addition, line voltage would drop to 84 percent of nominal at the end of the line, which is outside the Company's minimum voltage criterion (Exhs. CEC-1, App. I at 5; DTE 1-17; DTE 1-20, Att. at 5; DTE 2-3).

To address these loading and reliability concerns, the Company proposes to build a new substation, to be known as Oak Street Station No. 920, which would tap the No. 122 115 kV line (Exhs. CEC-1, App. I at 1-3; DTE 1-14). The Company stated that the purpose of the proposed substation is to improve distribution capacity for electricity customers in Barnstable, Yarmouth, Sandwich, and Mashpee (Exh. CEC-1, at 2, 9). The proposed substation would

have a 30/40/50 megavolt-ampere (“MVA”) stepdown transformer feeding a 23 kV bus bar with four breaker positions for distribution feeders (Exh. CEC-1, App. I at 2). One of the four feeder connections would pick up load on the No. 87 line to the west of the substation, extending towards the Sandwich Substation (Exh. CEC-1, App. I at 2). A second feeder connection would pick up load on the No. 87 line to the east of the substation, extending towards Hyannis Substation (id.). A third feeder connection would be extended along Oak Street as the No. 518 line and would pick up load from points along the No. 88 line intermediate between the Mashpee and Hyannis Substations (id.; Tr. at 85-87). A fourth feeder connector would run directly into the existing No. 516 distribution line on Oak Street, which serves local customers (Exh. CEC-1, App. I at 2). In addition, the proposed substation would have a three MegaVar (“MVAR”) capacitor bank to provide reactive power and voltage control (id. at 1).

The Company presented a pictorial diagram of load flow transfers indicating that the new substation would absorb approximately 27 megawatts (“MW”) of projected 2003 peak load from the Sandwich, Mashpee, and Hyannis No. 2 transformers, although the precise distribution of the alleviated loads was not established (Exh. CEC-1, App. I at 4, 19, 20; RR-DTE-1; RR-DTE-2(S)). The Company stated that the installation of the substation would increase the capability of the 23 kV distribution system in the mid-Cape area for single-contingency transformer outages (Exh. CEC-1, App. I at 1). The Company anticipated that the area’s substation capacity would then be adequate for at least the next ten years, which is the Company’s system planning horizon (Tr. at 12).

2. Identified Alternative Explored

As an alternative to adding a new substation in West Barnstable, ComElec investigated a set of system upgrades that would provide equivalent capacity and reliability (Exh. CEC-1, at 10-11). The Company stated that the following upgrades would be required, in the alternative package:

- A. Replacing the Mashpee Substation transformer with a 30/40/50 MVA rated unit;
- B. Replacing the Hyannis No. 2 30/40/50 MVA transformer with a 45/60/75 MVA unit; or installing a third 30/40/50 MVA transformer at the Hyannis substation;
- C. Upgrading 13.3 miles of Mashpee-to-Hyannis No. 88 23 kV distribution supply line from steel-reinforced aluminum conductor (“ACSR”) with a cross-sectional area of 477 thousand circular mils (“kcmil”)⁸ to a 795 kcmil line; and
- D. Upgrading the underground getaway cable on the No. 87 23 kV distribution line at Sandwich Substation from 1250 kcmil aluminum cable to a larger size cable, or by installing a parallel set of conductors to increase its capacity (Exh. CEC-1, at 11).

The Company indicated that this alternative would cost approximately \$7.005 million, which is about \$2.5 million more than the cost of the proposed substation (Exh. DTE 1-7(S)). In addition, replacing facilities would require extended planned transformer outages at both the Hyannis and Mashpee substations, which is not feasible from the Company’s standpoint (Exh. CEC-1, at 11). The Company indicated that this alternative also would create safety issues for electrical workers, as it would require live line work along 13 miles of conductor in

⁸ A 1250 kcmil conductor has a cross-sectional area of 0.98 square inches, which is the area of a 1.12-inch diameter disc.

order to maintain service to approximately 21,000 customers in the mid-Cape area; the requisite attendant care would increase the cost and time necessary to perform the upgrade (id.). The Company stated that the proposed substation is less costly, less disruptive to the system, and would result in less risk of service loss, compared to the identified alternative (id. at 12).

The Company stated that the site on Oak Street in Barnstable is well-suited for for the proposed substation for several reasons (id. at 12). The Company stated that the site is immediately proximate to transmission and distribution rights-of-way, so it does not require significant line extensions (id.). The Company stated that construction could be accomplished with no significant service interruptions (id.). The Company stated that necessary transmission structures are already present at the site, that there are few abutters, and that there would be minimal off-site impacts (id.). In addition, the Company already owns the site (id.). The Company stated that it has not identified any alternative locations that would be more suitable from the standpoint of system design, operation, impacts, or compliance with zoning ordinances (id.).

3. Impacts of the Proposed Use

a. Land Use and Water Resource Impacts

ComElec stated that it proposes to construct the 169-foot by 182-foot substation on a Company-owned parcel of approximately 9.7 acres on Oak Street in West Barnstable (Exh. CEC-1, at 12, App. D; Tr. at 102). As proposed, the facility fence would enclose 0.60 acre of the parcel (Exh. CEC-1, App. D). The Company stated that the substation would be constructed near existing 115 kV and 23 kV lines that intersect at the site (Exh. CEC-1, at 12).

The Company indicated that the proposed substation site is located in an RF zoning district (Exhs. CEC-1, at 4; DTE 1-4, Att.).⁹ The Company indicated that abutting land uses include residences, the electric transmission corridor, and undeveloped land (Exh. CEC-1, App. C; Tr. at 103). The parcel to the southwest, along Oak Street, is vacant land owned by the Company (Exh. CEC-1, App. C; Tr. at 47, 103). State Highway 6 (a limited access highway) is located to the south (Exh. CEC-1, App. C). A privately owned abutting parcel to the southeast is landlocked (i.e., it has no road frontage) (Tr. at 103). The closest residential properties are located to the north (Exh. CEC-1, App. C; Tr. at 46). The Company estimated that the closest abutting residence is approximately 300 feet from the fenceline of the proposed substation (Exh. CEC-1, at 17).

The Company stated that it would clear vegetation at the proposed site, consisting mostly of brush and weeds (Exh. CEC-1, at 13). The Company also would clear one-third of an acre of woodland, including approximately 200 six-to-twelve inch diameter trees, in the southeast end of the site, away from Oak Street (RR-DTE-8). The predominant species to be cleared are black oak and pitch pine (id.).

The Company stated that the site is located within the AP Aquifer Protection Overlay District, which imposes no restrictions other than those of the underlying zoning district (Exh. CEC-1, at 5, 14). The Company stated that homes in the vicinity of the proposed

⁹ The principal permitted use in the Town of Barnstable RF District is single-family residential dwellings (Exh. CEC-1, App. G at 25). Renting of rooms and stabling of horses are accessory uses (id.). On receipt of a Special Permit, other uses may be permitted conditionally, including golf courses, windmills, bed-and-breakfast operations, and open space developments (id., App. G at 25, 26).

substation have private wells for their water supply (RR-DTE-5). The Company indicated that there are no wetlands or significant habitat of mapped endangered species at the site (Exh. CEC-1, at 14; RR-DTE-8, Att., n. 5).

After construction, impervious surfaces at the substation would include the 400 square foot control building, the 600 square foot transformer foundation, and various smaller concrete footings (Tr. at 62-63). The Company indicated that it plans to use crushed stone as a surface treatment for access and parking areas on the site (Exh. DTE 1-5). The Company stated that crushed stone controls mud and dust, is an element in providing a layer of uniform electrical resistivity, supports heavy vehicles, allows rain water to soak into the soil, and is used in standard utility practice (id.).

The Company stated that, following completion of construction, the substation typically would be inspected once a week (Exh. DTE 1-5). The Company indicated that after construction the site would be able to accommodate fifteen vehicles either inside or outside the substation fence, and that no on-street parking would be required except for line work along Oak Street (id.; Exh. CEC-1, at 13; Tr. at 62).¹⁰ To discourage unauthorized vehicular entry onto the property, the Company committed to placing barriers such as large boulders next to the Oak Street gate (Tr. at 105).

b. Visual Impacts

¹⁰ The Company estimated that at least 20 vehicles can fit at the site, prior to site development, and that ten vehicles would be able to fit during construction (Tr. at 61). The Company further estimated that eight to ten contract employees would park vehicles on site and that there would be, in addition, working equipment such as dirt-hauling vehicles and concrete trucks (Tr. at 60-61).

ComElec indicated that the structures within the fully built-out substation yard would include the substation control house (21 feet by 17 feet, 16 feet in height), one transformer bank (30 feet by 20 feet, approximately 17 feet in height) on a concrete foundation within an oil-containment pit, an open rack capacitor, a 115 kV circuit switcher, 23kV and 115 kV bus work (approximately 24 feet high with a shielding mast extending another 20 feet), miscellaneous relaying and metering equipment, foundations, and wiring (Exh. CEC-1, at 2 and App. D; Tr. at 57, 62-63). For comparison, the existing transmission structures adjacent to the site are roughly 100 feet tall (Exh. CEC-1, App. C and K). The Company stated that the substation yard would be enclosed by a 10-foot high chain-link fence, without barbed wire (Tr. at 52). The Company indicated that outdoor lighting would be installed but would be used only when work occurs during the night or in cooperation with a law enforcement agency (Tr. at 106).

The Company stated that the substation would be visible from Oak Street and from the driveway of the residential property immediately to the north (Tr. at 45). The Company indicated that, with the leaves off trees, an additional residence on Oak Street is visible from the site (Tr. at 45, 47). The Company provided a rendering of the expected appearance of the substation from Oak Street (Exh. CEC-1, at 13).

The Company indicated a willingness to work with the Town of Barnstable and community groups regarding landscaping to be completed after construction (Tr. at 51). To reduce the visibility of the substation from Oak Street, the Company indicated it would plant vegetation near the gate to the property (Exh. CEC-1, at 14). The Company originally proposed planting Leyland cypress trees with a height at planting of 7 to 8 feet (Exhs. CEC-1,

App. K; DTE 1-13). However, in response to community requests for native vegetation for the visual barrier along Oak Street, the Company stated that it would work with a landscape contractor, landscape designer, or landscape architect to identify vegetation that may meet community concerns better than Leyland cypress (Tr. at 125). The Company also stated that it would consider plantings along part of the substation fence and near the 115 kV overhead lines, or along the adjacent right-of-way edge, to reduce the visibility of the substation from residences located to the north (Tr. at 54-55). The Company explained that vegetation in the right-of-way must be kept low in order to maintain clearance from the power lines (Tr. at 54).

The Company provided a plan showing that there is woodland in the southeastern part of the area proposed for the substation and indicated that one-third of an acre of woodland would be cleared in the southeast end of the site, away from Oak Street (Exh. CEC-1, App. C; RR-DTE-8, Att.). The Company indicated that no trees would be cleared on the Oak Street gate side of the site (RR-DTE-7).

c. Hazardous Materials

ComElec stated that the transformer at the proposed substation would contain approximately 7900 gallons of transformer oil (Exh. DTE 1-12). The Company stated that it would construct a spill containment system for the transformer bank, with a design volume of 12,568 gallons, sufficient to accommodate the volume of oil in the transformer plus 17¾ inches of rainfall (Exhs. CEC-1, at 15; DTE 1-12; RR-DTE-4).

The Company indicated that, for backup power control, the substation also would have a storage battery with a total of 60 gallons of sulfuric acid solution in one-gallon pails (Exh. DTE 1-12(S)). The Company stated that the battery acid could be neutralized with

baking soda and that no secondary containment is needed (Exh. DTE 1-12; Tr. at 37). The Company stated that the batteries would be located inside the control house, over a concrete floor (Tr. at 38).

The Company asserted that there would be no hazardous materials at the proposed substation other than transformer oil and battery fluid (Tr. at 42). The Company stated that it would prepare a Spill Prevention, Control, and Countermeasure Plan for the Oak Street Substation within six months of completing construction, and would file a copy with the Town of Barnstable (Exh. DTE 2-5).

d. Noise

ComElec stated that the construction and testing of the Oak Street Substation would last approximately three months (Tr. at 57-58). The Company stated that it would generally limit construction hours to between 7 a.m. and 5 p.m., six days a week, but some electrical work might be scheduled for nights or weekends (Tr. at 58-59). The Company stated that the noisiest construction activities would be site preparation, installation of foundations, and installation of the transformer bank; it indicated that these activities would occur primarily during normal construction hours (Exh. CEC-1, at 15; Tr. at 59-60).

The Company indicated that the transformer bank would be the main source of sound at the substation after construction (Exh. CEC-1, at 13). The Company asserted that the project is not expected to result in any discernible increase in noise levels at the abutting residences (Exh. CEC-1, at 15). The Company stated that 74 decibels is the standard sound pressure for a transformer of the type to be used at the substation is, but that it plans to use a low-sound transformer with a guaranteed sound level, two meters away, of 65 decibels on an A-weighted

scale (“dBA”) without the fans running, and 68 dBA with the fans on (Exh. CEC-1, at 15 and App. L). The Company calculated that as a result of sound attenuation with distance, the transformer’s sound level at the nearest residence, 91 meters from the transformer, would be 33.2 dBA lower than the transformer’s sound level at two meters (Exh. DTE 1-9; RR-DTE-3).¹¹ The Company indicated that vegetation also attenuates sound (Tr. at 35).

e. EMF

The Company asserted that the new substation would have a minor impact on EMF levels along the boundaries of the site and the adjacent rights-of-way (Company Brief at 19, citing Exh. D.T.E. 1-10(S) and Tr. at 70, 72). In support, the Company provided measurements of existing EMF together with scaled adjustments to reflect peak load conditions for rights-of-way exiting the site, and also provided results of simulations it prepared which projected maximum EMF levels, with operation of the proposed substation, from individual facility elements located on or traversing the site (Exh. DTE-1-10(S); RR-DTE-6). The Company’s simulations indicate that the greatest off-site impact would occur at the property frontage on Oak Street, where the magnetic field from the proposed underground getaway line providing power to overhead lines along Oak Street would be 83 mG (id.). Dr. Valberg testified that the magnetic fields from the underground line would decline rapidly with distance from the line, and that once the lines are transferred to overhead poles on Oak Street, the

¹¹ The Company also provided an estimate of sound level at the nearest residence of 26.3 dBA (Exh. DTE 1-9). The Company indicated that the estimate was based on factory measurements conducted by its supplier, ABB, and attenuation by distance (id.; Exh. CEC-1, App. L; Tr. at 35). However, the Company did not present a noise expert and was unable to explain ABB’s calculations or to defend its own calculation of the noise level from the transformer (Tr. at 27-35).

maximum ground level fields would be lower than along the underground segment (Tr. at 95). Outside of Oak Street, the greatest off-site change in magnetic field would occur along the right-of-way extending west beyond Oak Street, where the maximum magnetic field levels from the No. 122 line would increase from estimated existing levels of 42 mG under the lines and 20 mG at the adjacent northern edge of the right-of-way, to projected 2004 levels of 52 mG under the lines and 25 mG at the northern edge of the right-of-way (RR-DTE-6). The Company projected negligible change in electric field levels at any of the locations in the simulation (Exh. DTE-1-10(S)).¹²

4. Analysis

ComElec has presented documentation showing that the distribution system in the Barnstable area currently does not meet the Company's standards for substation and distribution facility loadings during contingencies, and that the reliability of the existing system would decline further with projected increases in load. The Company also has presented documentation showing that the construction of a new substation at its Oak Street site would bring the distribution system in the mid-Cape area up to its operational and reliability standards. Consequently, the Department finds that construction of the proposed project would be in the

¹² ComElec indicated that one neighbor apparently has experienced persistent stray voltage problems (Tr. at 64-65). The Company stated that stray voltage occurs when the neutral wire on a customer's premises operates at a voltage different from ground (Exh. DTE 1-21; Tr. at 66). The Company contended that the magnetic field of transmission lines would induce a small voltage outside of the right-of-way, but that the voltage would be small and would not contribute to the stray voltage phenomenon (Tr. at 100-102). The Company stated it does not expect the proposed substation to have an effect on stray voltage at customer premises (Tr. at 68, 101, 133).

public interest because it would improve system operability and reliability.

The record shows that the Company considered an alternative approach to address the identified problems, which involves upgrading transformers at the Mashpee and Hyannis Substations and upgrading distribution lines. This alternative would require extended outages to existing facilities and live line work, and would cost approximately \$2.5 million more than the Oak Street Substation. The selected site is owned by the Company, is close to existing transmission and distribution facilities, has few abutters, and construction can be accomplished without significant service interruptions. No more suitable location was identified.

The record shows that the proposed substation would be located on a property that is zoned residential. The property is traversed by and is visually dominated by the two 115 kV transmission lines that run east-west on the mid-Cape. Adjoining parcels are vacant or used as rights-of-way, with residences located primarily to the north. The record indicates that construction of the proposed substation at this location would result in visual, noise, and EMF impacts, but would have minimal potential for water resource impacts, as discussed below.

With respect to visual impacts, the proposed project would be sited adjacent to an existing transmission line right-of-way occupied by several high-voltage and low-voltage power lines, which would continue to visually dominate the site. Tree clearing would be undertaken in the southeast portion of the site, away from Oak Street and residential abutters. The project site is visible from Oak Street and from at least one residence to the north of the existing rights-of-way. The Company proposes mitigation for visual impacts from Oak Street, consisting of planting vegetation in the area of the entrance gate on Oak Street. The Company expressed its willingness to work with town officials and community organizations when selecting the type(s)

of vegetation that would be used for screening. However, the Company is constrained in the use of vegetation for screening due to the need to maintain electrical clearance. Given this constraint and the nature of existing facilities, the existing transmission structures and cables and, to a lesser extent, the proposed substation, would be visible even where plantings are provided.

The Department notes that the Company's proposal to install Leyland cypress at the Oak Street gate was opposed by some community members who prefer use of vegetation indigenous to the local landscape. The Department notes further that vegetation at the gate would not screen the substation from the residential area to the north. Given that there would be views of the substation from at least one residence to the north, in leaf-off conditions, the Department finds that added mitigation should be provided by including tall evergreen plantings along the northern side of the substation or the north side of the adjacent No. 122 115 kV right-of-way. The Department directs the Company to prepare a post-construction landscaping plan in cooperation with town officials and local community groups to select the species to be used along Oak Street, and in cooperation with owners of the closest two residences to the north to select the location of visual screening between the residences and the substation. Further, the Department directs the Company to replace any trees planted to provide visual screening that fail to become established within two years.

The record shows that the Company would use a transformer with a sound level of 68 dBA or less and that sound attenuation by distance to the closest residence to the proposed substation would be at least 33.2 dBA. Therefore, the maximum predicted sound level from the transformer at the nearest residence would be 34.8 dBA. Intervening vegetation,

topography, and other factors not reflected in the Company's analysis would tend to attenuate sound more than predicted. The Department concludes, in light of the proposed use of a low-noise transformer and the maximum predicted sound level of 34.8 dBA at the nearest residence, that noise from the transformer would not cause a noticeable increase in total ambient sound levels at nearby residences. Louder sounds would be produced during construction of the proposed substation. The record shows that during the construction period, site preparation and the installation of foundations would constitute the noisiest activities, but that these activities would be accomplished mostly between the hours of 7 a.m. and 5 p.m.

The record shows that the proposed project at the proposed site is expected to cause negligible changes in electric fields, but would cause some increases in magnetic field levels. The maximum off-site magnetic field strength would be 83 mG at the frontage on Oak Street; this field would decline rapidly with distance from the underground getaway line alignment. For other locations outside the substation site and adjoining rights-of-way, the magnitude of magnetic field increases would be five mG or less.¹³

The record shows that properties in the area of the proposed project are served by

¹³ In a previous review conducted for a zoning override case, the Department accepted a four mG increase in the edge-of-right-of-way magnetic field to 72 mG. Massachusetts Electric Company, D.T.E. 01-77, at 26, 32 (2002). An edge-of-right-of-way level of 85 mG has been accepted for proposed transmission line facilities by the Massachusetts Energy Facilities Siting Board. Massachusetts Electric Company et al., 13 DOMSC 119, at 228-242 (1985). See also, Brockton Power, LLC, 10 DOMSB 157, 236-247; 258-261 (2000); Sithe Edgar Development, LLC, 10 DOMSB 1, 114-117; 137-139 (2000). With the increases predicted for the Oak Street project, the edge-of-right-of-way and substation property line magnetic field levels would be within the levels previously accepted for electric facilities by the Department and by the Energy Facilities Siting Board.

private water wells. The record also shows that the operating substation would contain transformer oil and battery acid, both of which are considered hazardous materials. However, there would be a spill containment area beneath the transformer block more than adequate in volume to contain the all the oil in the transformer. In addition, the battery acid would be contained in separate one-gallon containers and the batteries would be located indoors, where spillage would be onto a concrete floor. The Department therefore concludes that the risk of a spill that contaminates nearby private well water is minimal.

The Department finds that, with the implementation of the proposed mitigation and with use of native species to provide visual screening in accordance with community concerns, as set forth above, ComElec has taken reasonable steps to avoid or minimize the environmental impacts of the project. The Department finds that with the proposed and required mitigation, the environmental impacts of the proposed project on the local community, consisting primarily of views of the substation, would be minimal. Based on the foregoing, the Department finds that the public interest in the construction of the proposed project on the proposed site would outweigh the environmental impacts of the project. Consequently, the Department finds that the proposed project is reasonably necessary for the convenience and welfare of the public.

IV. CONCLUSION

In Section III.A, above, the Department found that ComElec is a public service corporation. In Section III.C, above, the Department found that the proposed project is reasonably necessary for the convenience and welfare of the public.

In Section III.B, above, the Department found that ComElec requires an exemption from the following sections of the Barnstable Zoning Ordinances: (1) Sections 2-3.1 and 3-1.4,

because the project could not be constructed without relief from these sections; (2) Sections 3-5 and 4-1, depending on the interpretation of these sections; and (3) Sections 4-2, 4-7, and 5-2 because of the time-sensitive nature of the project. ComElec also has requested a comprehensive exemption “from the operation of the Barnstable Zoning Ordinances generally in connection with its use of the Site, and the construction, operation and maintenance thereon of the proposed substation” (Exh. CEC-6). As the Department recently has noted, petitions for comprehensive zoning relief are infrequently granted 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 the issuance of a comprehensive exemption could avoid substantial public harm by serving to prevent delay in the construction and operation of the proposed use. 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 time-sensitive need for the proposed project in order to prevent possible electrical outages, particularly during the period of peak summer demand for electricity on the Cape. The record shows that ComElec’s existing mid-Cape area distribution system already is in violation of the Company’s supply and distribution planning guidelines, and that any of several system contingencies could result in extended outages in the area. The Company has taken temporary measures to address existing system overloads; however, these measures have not reduced the extent of possible outages to acceptable levels. The record shows that construction and testing of the proposed substation, which would address the existing problems with the mid-Cape area distribution system, would take approximately three months. If the commencement of construction is delayed for even a few

weeks beyond the effective date of this order, the substation may not be available to meet local electric demands during the summer of 2003. It is therefore critical to the public interest that construction of the proposed substation begin without needless delay.

The Department finds that the public interest in the immediate construction of the proposed substation outweighs any benefit that could be obtained from further local review. Consequently, in light of the substantial public interest in the immediate construction of the substation, the Department finds that exemption from Sections 2-3.1, 3-1.4, 3-5, 4-1, 4-2, 4-7, and 5-2 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 ComElec's request for a comprehensive exemption "from the operation of the Barnstable Zoning Ordinances generally in connection with its use of the Site, and the construction, operation and maintenance thereon of the proposed substation."

V. ORDER

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

ORDERED: That Commonwealth Electric Company's petition for an exemption from Sections 2-3.1, 3-1.4, 3-5, 4-1, 4-2, 4-7, and 5-2 of the Barnstable Zoning Ordinances is allowed; and it is

FURTHER ORDERED: That Commonwealth Electric Company's petition for a comprehensive exemption from the Barnstable Zoning Ordinances is allowed; and it is

FURTHER ORDERED: That Commonwealth Electric Company work with the Town of Barnstable, the neighboring property owners to the north of the site, and representatives of interested community organizations, such as the West Barnstable Civic Association, to develop

and implement a landscaping plan for the site; that the landscaping plan include the planting and maintenance of appropriate vegetation (1) near the Oak Street entrance to the site, to reduce the visibility of the substation from Oak Street, and (2) along part of the substation fence and near the 115 kV overhead transmission lines, to reduce the visibility of the substation from residences located to the north of the site, as described in Section III.C.3; and it is

FURTHER ORDERED: That Commonwealth Electric Company file with the Department, no later than 30 days after issuance of this Order, a copy of the Barnstable Zoning Ordinances effective as of the date on which the Company's petition was filed, and bearing an *original* attestation by the Barnstable Town Clerk; and it is

FURTHER ORDERED: That Commonwealth Electric Company notify the Department of any significant changes in the planned timing, design or environmental impacts of the proposed project; and it is

FURTHER ORDERED: That the Secretary of the Department shall transmit a certified copy of this Order to the Clerk of the Town of Barnstable, and that Commonwealth Electric Company shall serve a copy of this Order on the Barnstable Town Council, Barnstable Planning Board, and Barnstable 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 B. Vasington, Chairman

James Connelly, Commissioner

W. Robert Keating, Commissioner

Eugene J. Sullivan Jr., Commissioner

Deirdre K. Manning, Commissioner

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

Such petition for appeal shall be filed with the Secretary of the Commission within twenty days after the date of service of the decision, order or ruling of the Commission, or within such further time as the Commission may allow upon request filed prior to the expiration of 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. (Sec. 5, Chapter 25, G.L. Ter. Ed., as most recently amended by Chapter 485 of the Acts of 1971).