National Grid

Paige Graening
Counsel

September 21, 2004

Mary L. Cottrell, Secretary
Department of Telecommunications and Energy
One South Station, 2nd Floor
Boston, MA 02110

RE: DTE 03-128 – New England Power Company's Reply Brief

Dear Secretary Cottrell:

Enclosed for filing are one (1) original and twelve (12) copies of New England Power Company's Reply Brief in the captioned docket. An electronic copy is also being sent to the Department.

An additional copy of this filing letter is enclosed, to be date-and time-stamped and returned to me in the enclosed self-addressed, stamped envelope.

Respectfully submitted,

for Paige Graening/CJB

PG/cjb

Enclosures

cc: Selma Urman, Hearing Officer
Mary Beth Gentleman, Esquire (via facsimile and Federal Express)
James G. Gilbert, Esquire (via facsimile and Federal Express)
James Toomey, Esquire (via facsimile and Federal Express)

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COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. 03-128

Petition for Exemption of Electric Substation
Additions from Zoning Ordinance
of Salem, Massachusetts
Pursuant to Mass. Gen. L. c. 40A § 3.

REPLY BRIEF OF NEW ENGLAND POWER COMPANY

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September 21, 2004

I. INTRODUCTION

The case before the Department in this docket is simple: NEP is proposing to use a portion of its perpetual easement at Salem Harbor Station for a capacitor bank installation (the Project), a modestly-priced solution to low voltage problems on the North Shore of Massachusetts. USGenNE's unstated agenda is to forestall or prevent transmission system improvements so that it can maintain its bottleneck on the NEMA Boston import area. The City's interest lies in protecting USGenNE, its largest taxpayer. Ironically, however, the Project proposed by NEP will not cure transmission congestion issues on the North Shore and should be of little concern to USGenNE and the City. Both parties have misunderstood or mischaracterized NEP's Project and seek to prevent or delay it, to the detriment of NEP's transmission customers in the area.

Under its mandates from the Legislature to balance local and larger interests and to foster reliable electric service for all customers, the Department should find that NEP's Project meets the statutory criteria for zoning exemptions and allow the project to go forward. No party in this docket other than NEP has fought on behalf of customers and their needs. Indeed, USGenNE and the City are fighting to protect their own interests. In their briefs, USGenNE and the City have attempted to obfuscate the record by selectively plucking and packaging facts and hypotheticals, twisting them into a profile of the Project that is simply inaccurate. The Department must not be swayed by such misconstructions and should find in favor of customers by granting NEP's Petition in its entirety.

II. ARGUMENT

Collectively, USGenNE and the City of Salem advance three arguments against the proposed Project; all three are erroneous. First, both Parties assert that NEP has failed to demonstrate that the proposed Project is necessary. Second, USGenNE argues the proposed Project could have an adverse impact on Salem Harbor Station. Third, Salem asserts that NEP has failed to identify the individual zoning provisions applicable to the Project and claims that NEP's witness was not qualified to testify on the requested exemptions. As discussed below, the evidence in the record supports none of these arguments.

A. NEP has demonstrated that the proposed Project is necessary to address low voltage problems.

As the record shows, the proposed Project is needed to provide reliable transmission service to customers in the North Shore region. Both USGenNE and Salem pervert the data to disprove the need. Picking and choosing only those elements of the record that support its point of view, USGenNE claims that low voltage problems will dissipate if NEP does nothing. NEP has shown that, during the first year studied, 2006 and the next, 2007, the Schedule Voltage specified by NEPOOL will not be met at Salem Harbor without the addition of the capacitor banks at Salem Harbor under normal "All Lines In" operating conditions. (USGen RR-2; DTE RR-1, Att. A at 3, ¶ 2 and at B3) NEP reached this conclusion by applying its planning criteria -- as well as NEPOOL's – in its planning study. It is mandatory for NEP to apply both sets of criteria. (DTE 1-7,

Att. A at A-2) USGenNE twists the facts to suit its own purposes by applying only the design criterion specified in NEP's Transmission Planning Guide and not NEPOOL's. (USGenNE Initial Brief at 6 and 14) This results in only one-half of the picture and makes it appear that low voltage problems will vanish without any action whatsoever by NEP. As shown in USGenNE RR-2 as amended, the addition of capacitor banks at King Street, as proposed by USGenNE, does not address or solve voltage problems at Salem Harbor Station.

The City argues that the Project as designed by NEP is not needed if the Salem Harbor Plant continues operation and additional transformers are sited at Ward Hill. According to the City, the Salem Harbor Plant and three transformers proposed for Ward Hill will provide all the required voltage support for the region. (Salem Initial Brief at 3 through 6) As fully demonstrated below, both USGenNE's and Salem's arguments against the need for the Project are incorrect.

B. The Project as proposed is needed to meet the Schedule Voltage specified By NEPOOL.

NEP's Transmission Planning Guide specifies that the design criteria range for 115 kV facilities is 0.90 per unit ("p.u.") voltage for the Low Limit and 1.05 for the High Limit. (DTE 1-7, Att. A Table 2, at C-7) However, that criterion is only one set of design criteria that NEP must satisfy. NEPOOL Operating Procedure No. 12 ("OP-12") requires that voltage schedules and limits for generation and key transmission stations throughout New England "should be maintained as closely as possible in system operations … and in offline studies of the power system". (Emphasis added) (DTE RR-1, Att. A at 3, ¶ 2) OP-

12 specifies that the Schedule Voltage at Salem Harbor during the Heavy Load Period is 119 kV. Based upon the forgoing, the criterion the Department must apply in this case is not only NEP's, as USGenNE erroneously argues, but whether the proposed Project will satisfy the design criteria specified by both NEP and NEPOOL.[1]

Without the proposed Project, voltage at Salem Harbor will not meet the NEPOOL specified Schedule Voltage level of 119kV during 2006 and 2007. (USGen RR –2) Under normal or "All Lines In" situations, the voltage at Salem Harbor without the proposed Project will be only 115.7 kV during 2006; during 2007, the voltage will drop to only 115.5 kV. (Id.) While OP-12 does allow deviations from the Schedule Voltage when unavoidable, failing to meet the Schedule Voltage as closely as possible is only infrequently permitted by NEPOOL. (RR-1, Att. A at 2.)

NEP's initial Q-V analysis predicts a voltage level at Salem Harbor of 118.9 kV with the proposed Project for year 2006. (DTE 1-8(b)) Subsequent analysis, which included the addition of three transformers at Ward Hill <u>in addition to the proposed Project</u>, predicts a voltage level at Salem Harbor during 2006 of 119.3 kV and 2007 of 119.1 kV. (USGenNE RR-2) USGenNE implies in argument that since a fluctuation of +/- .1 to .3 kV is acceptable, regular fluctuations of +/- 6 kV[2] are therefore also acceptable. Hence, USGenNE asserts the capacitor bank is not needed since the voltage at Salem Harbor without it during 2006 and 2007 will be 115.7 kV and 115.5 kV, respectively, under an "All Lines In" scenario, neither of which meets with NEPOOL criteria. Similarly, Salem asserts, "with the additional transformation as proposed for the overall upgrade package, the MVAR support required (even without Salem generation) is

[1] Furthermore USGenNE indicates that "reasonable" contingencies are the planning standard when in fact "foreseeable" contingencies is the correct standard. (*See* NEP-JWM at 4 Lines 10-11)
[2] +/- 6 kV is the range between NEPOOL's minimum and maximum voltage 109 kV to 121 kV

reduced to the point where no capacitor banks are required." (Salem Initial Brief at 6) Those assertions are untenable in logic and unsupported in the record of this proceeding.

The assertions of USGenNE and Salem that voltage levels anywhere between 109 kV and 121 kV are sufficient to meet the needs of the transmission system are contrary to NEPOOL's admonition in OP-12 that the Schedule Voltage should be maintained as closely as possible to 119 kV. (DTE RR-1, Att. A at 3, ¶ 2) Furthermore, if it were true that the voltage could fall anywhere between 109 kV and 121 kV, any possible reason for NEPOOL to have established 119 kV as the Schedule Voltage would be negated. Based upon the forgoing, it is clear that the proposed Project is needed to meet the NEPOOL Schedule Voltage as closely as possible.

C. The Project is needed even if the Salem Harbor Plant continues operation and additional transformers are located at Ward Hill.

Even if three additional transformers are installed at Ward Hill, without the proposed capacitor banks, NEP will not be able to maintain Schedule Voltage at Salem Harbor during 2006 and 2007. Similarly, even if Salem Harbor generation is available for years to come, only the proposed Project can assure that the Schedule Voltage NEPOOL requires will be maintained. The Q-V analysis that is part of the record conclusively demonstrates this fact. (USGenNE RR-2)

Q-V analysis illustrates the total need for VARs at a given location for a variety of voltages, regardless of what potential sources of VARs may be available to the given location. (Tr. 82, Lines 7-13) As explained by Mr. Martin during the evidentiary hearings, Q-V analyses are typically done by taking "the bus of concern and providing a

VAR source and then varying the control voltage for that bus". (Id.) The objective of the analysis is to determine how many VARs are needed without regard to what sources are available to provide them. A proxy source is employed to supply the reactive source needed to provide desired voltage at the selected bus. Based upon that modeling, transmission planners can determine "the reactive demand" required at the bus as a function of voltage. (Id.)

Given the conventions of transmission system planning, it was entirely acceptable for Mr. Martin to analyze the situation with no Salem Harbor generation running. The fact that Salem Harbor may or may not be available to provide reactive support is irrelevant to Q-V analysis as typically conducted. In summary, NEP's analysis – or any Q-V analysis for that matter – does not discriminate between VAR sources, whether generation units or capacitor banks. This evidence regarding Q-V analysis controverts Salem's assertion that Mr. Martin's testimony lacked "any explanation why the Harbor Station Plant production of reactive support is no longer considered." (Salem Initial Brief at 4). Salem's efforts to malign NEP's evidence is mere artifice.

USGenNE and Salem assert that all of the Q-V analyses conducted by NEP are flawed because it was incorrect to assume that not a single unit at Salem Harbor was available. They furthermore claim that NEP should have provided sensitivity analyses to demonstrate the impact of some or all of the Salem Harbor generation on maintaining desired voltage. In fact, all of the data needed to conduct such sensitivity analyses is part of the record. (USGenNE RR-1 Att. A at 3; DTE RR-10) Moreover, Mr. Martin explained the results of his sensitivity analyses which showed the need for the cap bank even with the continued operation of the Salem Harbor Plant. (Tr. 108, 7-20)

The aforementioned scenario demonstrates the incorrect nature of Salem's allegation that "while there is a "half –hearted assertion that the Company's analysis includes both operation and non-operation of the Plant, continued operation of the Plant did not enter NEP's analysis." (Salem Initial Brief at 4) Mr. Martin explained in his direct testimony that holding the switchyard to a Schedule Voltage of 119 kV requires a nominal 126 MVAr of reactive support (NEP-JWM at 6, line 3) Based on those values as demonstrated in DTE 1-10, Salem Harbor Station could not provide enough reactive support if Unit 4 were not running. For all of the forgoing reasons the Project is needed even if the Salem Harbor plant continues operation and additional transformers are sited at Ward Hill.

D. The City erroneously implies that USGenNE's Reliability Agreement is sufficient to solve voltage problems.

USGenNE's Reliability Agreement, introduced as evidence in this proceeding by the City (Tr. at 109, line 23 through 117, line 6), is intended to bill transmission and distribution customers to pay for USGenNE's emissions control project, which must be implemented for the plant to stay in business. (U.S. Generating New England, Inc., DTE 03-83 (2004)) Numerous parties, including municipal light departments on the North Shore, other utilities and other generators, are vigorously opposing the agreement at FERC on the grounds that, if allowed to become effective, it will create an uneven playing field for generators in the emerging power supply market and that it will create an unnecessary rate burden for consumers. (Tr. at 111, lines 1-3)

NEP has taken a neutral position in the FERC proceeding, but the City is nonetheless attempting to depict NEP as the proponent of an unnecessary capacitor bank project that is at odds with the Reliability Agreement. (Id.; Id. at 129, lines 6-8) Nothing could be further from the truth. As Mr. Martin testified, the need for the cap bank project is totally independent of the fate of Salem Harbor Station. (Tr. at 129, line 12 through Tr. at 130, line 7) In its recent Motion to Supplement the Record, the City provided a news release from Dominion Power in which that company states that it is seeking to buy the plant next year and, if allowed to do so by the U.S. Bankruptcy Court and numerous other regulators, will seek to operate it in compliance with all applicable environmental laws. This is an admirable plan. However, it is nothing more than mere speculation at this point. NEP cannot live up to its obligations to customers by relying on another party's hoped-for projects, especially one that will be the subject of numerous regulatory proceedings at the state and federal levels. Besides, as NEP has repeatedly stated and proved, the capacitor bank Project is needed <u>with or without</u> all or some of Salem Harbor's generation. NEP is obligated to take assertive action on behalf of its customers, which is the one and only driving factor behind NEP's Petition in this docket.

E. The Project will not adversely impact Salem Harbor Operations.

USGenNE has a legitimate interest in protecting Salem Harbor from damage of any type. However, NEP is not proposing a project that will harm USGenNE in any way. The proposed in-service date for the capacitor bank is December 2005. (Tr. at 26, lines 7 – 11) Just because the capacitor banks will be available (if NEP's Petition is granted) does not mean that they will always be switched in. NEP has no intention, as USGenNE asserts, to operate the capacitor bank in violation of switching criteria. USGenNE may take comfort in the Transient Switching Study commissioned by NEP, which indicates that Salem Harbor will not experience any over-voltages due to capacitor bank switching. (USGenNE RR-8, Att. 8 at v.)

As USGenNE acknowledges, REMVEC operates the transmission system. (Tr. 218, Lines 7-8; 219, Lines 23-24; *see also* Switching Study ¶ 3.) System operators are trained to balance any specific risk to the Salem Harbor Plant against overall system and customer needs. REMVEC, not NEP, will make the determination as to whether the capacitor bank is needed at any particular time, under any particular set of conditions. In fact, REMVEC can call on a variety of sources to add VARs to the transmission system, whether the need is for 5 MegaVARs or 63. (*See* Tr. at 219-220, where USGenNE proposes these numbers. As Mr. Fougere responded, 5 MegaVARs do not represent a reasonable scenario. (Tr. at 220)) REMVEC can call on various sources for MegaVAR production depending on the amount needed and sources available.

USGenNE has asserted that the outage required to tie the Project in with the existing Switchyard is not in the public interest. However, USGenNE's ECP project will also require an outage to tie into NEP's Switchyard at Salem Harbor Station. As is

typical of such situations, NEP and USGenNE will have to negotiate and coordinate outages with each other and with system operators such as ISO and REMVEC to minimize impacts on generators and to manage congestion costs for load.[3] As the Project develops, NEP will be better able to predict the timing and duration when the outage will be needed. There is no reason to reject NEP's Project on grounds that the outage is unreasonable, especially since the Department has already approved USGenNE's ECP project which will itself require an outage.

F. NEP has demonstrated with sufficient particularity the exemptions required from the Zoning Code.

In its Petition and testimony, contrary to the assertions of Salem, the Company has clearly identified all required exemptions that it seeks in preparation for the proposed Project. (NEP -1 as amended at ¶ 11.) Furthermore, the City's objection to Mr. McIntyre's qualifications fly in the face of Department precedent.

1. Salem does not dispute NEP's need for the required exemptions, but merely attacks NEP's presentation style.

NEP identified the specific provisions of the Zoning Ordinance for which exemptions are required in its Petition, subsequently responded to Information Requests about zoning issues and provided relevant testimony during the evidentiary hearings. The City does not dispute the need for the exemptions but rather attacks NEP's presentation style, claiming that NEP was uncertain as to its exemption needs.

[3] Since the close of the evidentiary hearings, E-PRO, engineering consultant to NEP, has indicated that an outage for the installation of the capacitor bank can be as short as two weeks, merely half of what Mr. Fougere stated on the witness stand.

The record however, does not support the City's assertion. During the evidentiary hearings, counsel for the City stipulated to the fact that the Project exceeds the height and side-yard setback requirements of the Zoning Ordinance. (Tr. at 354, lines 6-9) If NEP had failed to specify the need for these exemptions, why did the City's counsel so stipulate? (Id.) The Acting Director of the City's Planning Department, Denise McClure, did not dispute the need for the requested exemptions, but rather gave an opinion on whether the requested relief from zoning and Site Plan Review could be done locally in an expeditious manner. Although she clearly had the opportunity to contest the exemptions requested by NEP, she did not do so at all. The City's statements in its brief are not supported by the testimony of its own witness.

The City's attempts an attack on NEP's credibility and its experience with zoning issues by citing NEP's lack of testimony on the need for a building permit. (Salem Initial Brief at 11, fn. 3) NEP's witness did not provide testimony on a building permit because a building permit is not at issue in this docket. The capacitor bank project does not require a control house or other structure subject to a local building permit (whereas NEP's other ongoing project at Salem Harbor does include a control house). No building permit for the capacitor bank project is necessary because the Massachusetts State Building Code (780 C.M.R. 100 et seq.) expressly incorporates the provisions of the Massachusetts State Electrical Code (527 C.M.R. 1.00 et seq.). Article 90-2(b)(5) of the Electrical Code specifically states that it does <u>not</u> apply to installations under the exclusive control of electric utilities and used for purposes connected with transforming or transmitting electricity. See Appendices A and B. See also Appendix C, the Department's Advisory Opinion (Oct. 31, 1989) supporting this interpretation of the law

and Appendix D, NEP's longstanding interpretation of and position on this matter (Oct. 11, 1989).

In addition, the City requests that NEP be required to engage in Site Plan Review. However, the City misrepresents its own ordinance by asserting that Salem Site Plan Review is not an approval process, but "simply a review process". (Salem Initial Brief at 13) To the contrary, Section 7-18 of the Salem Zoning Code, "Site Plan Review", employs wording such as "approved", "may approve" and "if approved" to describe the process. This disingenuous attempt by the City is further evidence supporting NEP's need to obtain zoning exemptions in the apolitical environment of the Department.

Finally, the City's assertion that NEP is picking and choosing approval conditions at its own discretion is flatly wrong. (Salem Initial Brief at 13) NEP willingly agreed to adopt certain project conditions deemed important by the City and USGenNE. (USGen RR-4) In fact, this demonstrates NEP's long-standing commitment to cooperate with host communities and landowners while meeting its obligation to serve the public need.

2. NEP's witness on zoning issues is qualified, pursuant to Department precedents.

The City objects to Mr. McIntyre's qualifications to testify on zoning provisions and their application to the proposed Project. However, the City conveniently overlooks the fact that Department precedent has long allowed petitions to support requests for zoning exemptions and in-house, company professionals such as Mr. McIntyre to testify on zoning issues. *See, respectively, e.g.,* New England Power Company, EFSB 97-3; Massachusetts Electric Company, D.T.E. 01-77. *See also* the record in D.T.E. 04-4, in

which Mr. McIntyre most recently testified on the need for zoning exemptions.[4] NEP stands by its witness, who is authorized by his company to represent its interests on zoning issues in communities throughout the Commonwealth.

[4] In that case, the Hearing Officer, who is also the General Counsel for the Energy Facility Siting Board, accepted Mr. McIntyre's qualifications and testimony without controversy.

III. CONCLUSION

Misconstruing values, ignoring evidence and mischaracterizing data are the hallmarks of the City's and USGenNE's opposition to NEP's Petition. Notwithstanding the attempts of the City and USGenNE to cloud the record, the Department should rule favorably on NEP's proofs that the capacitor bank project is reasonably necessary to serve the public's needs.

It is clear from the record that both the City and USGenNE regard NEP's proposed Project as unnecessary. It is highly conceivable, then, that NEP would be unable to obtain local permits for the capacitor bank installation. Accordingly, NEP seeks relief from the Department so that it may proceed with its proposed Project. The Department should grant NEP's Petition for specified zoning exemptions as well as its request for a comprehensive zoning exemption. A comprehensive exemption from all elements of the City's Zoning Code will protect NEP from local harassment over zoning issues.

NEP has put the interests of its customers at the forefront of this proceeding. The City and USGenNE, with their own local interests to protect, urge the Department to deny NEP's simple request for zoning exemptions and thus put NEP's transmission customers at risk on the North Shore. Nothing could be further from the Department's responsibilities, which are to balance local interests against those of the general public and to foster reliable electric service for the citizens of the Commonwealth.

WHEREFORE, NEP respectfully requests that the Department find that NEP has met its burdens in this proceeding and shall be granted the requested zoning exemptions so that it may proceed with its Project.

Respectfully submitted,

for Paige Graening/CHB

Paige Graening, Esq.
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25 Research Drive
Westborough MA 01582

Dated September 21, 2004

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. 03-128

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing documents upon all parties in this proceeding in accordance with the requirements of 220 CMR 1.05(1).

September 21, 2004

Christopher J. Bradley

Christopher J. Bradley

100.5 Specialized codes: Specialized codes, rules or regulations pertaining to building construction, reconstruction, alteration, repair, or demolition promulgated, and as amended, from time to time, by the various authorized state agencies shall be incorporated in this code. The said specialized codes, rules or regulations include, but are not limited to, those listed in Appendix G.

SECTION 101.0 APPLICABILITY

101.1 General: The provisions of this code shall apply to all matters affecting or relating to buildings and structures; and shall apply with equal force to municipal, county, state authorities of or established by the legislature and private buildings and structures, except where such buildings and structures are otherwise specifically provided for by statute.

Exceptions:

1. Unless specifically provided otherwise in this code, all existing buildings and structures shall meet and shall be presumed to meet, the provisions of the applicable laws, codes, rules or regulations, bylaws or ordinances in effect at the time such building or structure was erected or substantially altered.

2. In cases where applicable codes, rules or regulations, bylaws or ordinances were not in use at the time of such erection or substantial alteration, the provisions of Section 104.0 of this code shall apply.

3. In cases where the provisions of this code are less stringent than the applicable codes, rules or regulations, bylaws or ordinances in force at the time of such erection or substantial alteration, the applicable provisions of this code shall apply, providing such application of these provisions does not result in danger to the public as determined by the building official.

101.2 Zoning restrictions: When the provisions herein specified for structural strength, adequate egress facilities, sanitary conditions, equipment, light and ventilation, and fire safety conflict with the local zoning bylaws or ordinances, this code shall control the erection or alteration of buildings.

101.3 Matters not covered: Any requirements essential for structural, fire or sanitary safety of an existing or proposed building or structure, or essential for the safety of the occupants thereof, and which is not specifically covered by this code, shall be determined by the building official. The State Board of Building Regulations and Standards (hereinafter referred to as the BBRS) and the

National Electrical Code

NFPA 70

ARTICLE 90 — INTRODUCTION

90-1. Purpose.

(a) Practical Safeguarding. The purpose of this Code is the practical safeguarding of persons and property from hazards arising from the use of electricity.

(b) Adequacy. This Code contains provisions considered necessary for safety. Compliance therewith and proper maintenance will result in an installation essentially free from hazard, but not necessarily efficient, convenient, or adequate for good service or future expansion of electrical use.

(FPN): Hazards often occur because of overloading of wiring systems by methods or usage not in conformity with this Code. This occurs because initial wiring did not provide for increases in the use of electricity. An initial adequate installation and reasonable provisions for system changes will provide for future increases in the use of electricity.

(c) Intention. This Code is not intended as a design specification nor an instruction manual for untrained persons.

90-2. Scope.

(a) Covered. This Code covers:

(1) Installations of electric conductors and equipment within or on public and private buildings or other structures, including mobile homes, recreational vehicles, and floating buildings; and other premises such as yards, carnival, parking and other lots, and industrial substations.

(FPN): For additional information concerning such installations in an industrial or multibuilding complex, see the National Electrical Safety Code, ANSI C2-1984.

(2) Installations of conductors that connect to the supply of electricity.

(3) Installations of other outside conductors on the premises.

(4) Installations of optical fiber cable.

(b) **Not Covered.** This Code does not cover:

(1) Installations in ships, watercraft other than floating buildings, railway rolling stock, aircraft, or automotive vehicles other than mobile homes and recreational vehicles.

(2) Installations underground in mines.

(3) Installations of railways for generation, transformation, transmission, or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communication purposes.

(4) Installations of communication equipment under the exclusive control of communication utilities, located outdoors or in building spaces used exclusively for such installations.

(5) Installations under the exclusive control of electric utilities for the purpose of communication, or metering; or for the generation, control, transformation, transmission, and distribution of electric energy located in buildings used exclusively by utilities for such purposes or located outdoors on property owned or leased by the utility or on public highways, streets, roads, etc., or outdoors by established rights on private property.

(FPN): It is the intent of this section that this Code covers all premises' wiring or wiring other than utility owned metering equipment, on the load side of the service point of buildings, structures, or any other premises not owned or leased by the utility. Also, it is the intent that this Code cover installations in buildings used by the utility for purposes other than listed in (b)(5) above, such as office buildings, warehouses, garages, machine shops, and recreational buildings which are not an integral part of a generating plant, substation, or control center.

(c) **Special Permission.** The authority having jurisdiction for enforcing this Code may grant exception for the installation of conductors and equipment, not under the exclusive control of the electric utilities and used to connect the electric utility supply system to the service-entrance conductors of the premises served, provided such installations are outside a building or terminate immediately inside a building wall.

90-3. **Code Arrangement.** This Code is divided into the Introduction and nine chapters. Chapters 1, 2, 3, and 4 apply generally; Chapters 5, 6, and 7 apply to special occupancies, special equipment, or other special conditions. These latter chapters supplement or modify the general rules. Chapters 1 through 4 apply except as amended by Chapters 5, 6, and 7 for the particular conditions.

Chapter 8 covers communications systems and is independent of the other chapters except where they are specifically referenced therein.

Chapter 9 consists of tables and examples.

Material identified by the superscript letter "x" includes text extracted from other NFPA documents as identified in Appendix A.

90-4. **Enforcement.** This Code is intended to be suitable for mandatory application by governmental bodies exercising legal jurisdiction over electrical installations and for use by insurance inspectors. The authority having jurisdiction of enforcement of the Code will have the responsibility for making interpretations of the rules, for deciding upon the approval of equipment and materials, and for granting the special permission contemplated in a number of the rules.

The authority having jurisdiction may waive specific requirements in this Code or permit alternate methods, where it is assured that equivalent objectives can be achieved by establishing and maintaining effective safety.

This Code may require new products, constructions, or materials which may not yet be available at the time the Code is adopted. In such event, the authority having jurisdiction may permit the use of the products, constructions, or materials which comply with the most recent previous edition of this Code adopted by the jurisdiction.

The Commonwealth of Massachusetts
Department of Public Utilities
100 Cambridge Street — 12th Floor
Boston, Massachusetts 02202
(617) 727-3500

October 31, 1989

Lawson Williams, Esq.
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RE: Request for Advisory Opinion

Dear Mr. Williams:

Your letter of October 10, 1989, asks the Department of Public Utilities ("Department") to render an opinion whether the Department's own engineering review of transmission lines and related facilities under G.L. c. 164, sec. 72, "may be deemed sufficient by the local building inspector so as to relieve him of his obligations for technical inspection and building permit responsibilities in a manner similar to the release that is provided for under the certification provisions of" 780 C.M.R. 108.5 and 111.2.1. We have also received a letter, dated October 11, 1989, from Mark E. Slade, counsel to the New England Power Service Company ("NEPSCo"), arguing that building inspectors do not have authority to enforce building codes in the case of utility construction subject to Section 72. We understand that your request stems from a dispute, currently under litigation, between the building inspector of the Town of Ayer, which you represent as town counsel, and NEPSCo. This dispute arose, we further understand, when the local building inspector caused a summons and complaint to be served upon a NEPSCo employee for commencing certain work without first obtaining a building permit from the town.

Boston Edison Company v. Town of Sudbury, 356 Mass. 406, 420 (1969), cited in your letter, examines legislative intent concerning the place, if any, for local regulation of transmission lines and "conclude[s] . . . that the building by-laws" of a town "can have no application" to electric transmission lines and their constituent structures, other than buildings usually subject to building codes. In 1983, the Court reaffirmed the conclusion of the Sudbury case in New England

Power Company v. Board of Selectmen of Amesbury, 389 Mass. 69. As we read these decisions, the Court views the General Court's delegation to the Department of general regulatory authority over transmission facilities as an exclusive grant.

You point out that the building codes at issue in the Sudbury case were local codes, whereas the State building code Ayer's inspector proposes to enforce is a statewide code and thus not subject to the argument that its enforcement would lead to the balkanization feared by the Sudbury court. In both Sudbury and Amesbury, however, the Court discussed the legislature's intent to grant affirmative transmission safety regulation to the Department, not merely its intent to prevent proliferation of local, potentially inconsistent standards. Sudbury, 356 Mass. at 419-420; Amesbury, 389 Mass. at 77-78. Moreover, local inspection, even when based on a statewide code, has a strong potential for inconsistent and conflicting application. The Department's opinion is that, given the Legislature's express grants of authority, it alone may determine transmission safety concerns.

This opinion is consistent with its concurrence in the exercise of inspection authority by local wiring inspectors under G.L. c. 166, sec. 32. See, Petitions of the Inspector of Wires of the Town of Amherst, D.P.U. 87-146/147 (1989). Joint enforcement authority over wiring arises from statute, and the statutory scheme provides a crucial distinction from the claim at issue in your dispute with NEPSCo. Section 32 provides for an appeal of a wiring inspector's decisions to the Department. The Department's paramount role in supervising electric distribution is thereby preserved. In the absence of a statutory appellate mechanism at the administrative level, a local building inspector's interpretation of the local or state building codes would not be subject to Department review. An electric company could well find itself subject to conflicting requirements levied by the local building inspector and the Department. This outcome would clash with the Legislature's intent as determined by the Court. See also Opinion of the Attorney General, April 13, 1979.

Effective January 1, 1978, the Department exercised its authority over installation, maintenance, and safety of transmission lines through 220 C.M.R. 125.00 and 126.00. While, on their face, these rules do not purport to exercise the full scope of the Department's authority in this area, see 220 C.M.R. 125.11, the rules nonetheless represent the extent to which the Department, consistent with its means of enforcement, has exercised its legislative grant of authority.

We hope that this letter will be of service to you in advising your client. Thank you for calling the matter to our attention.

Sincerely yours,

Bernice K. McIntyre, Chairman

Robert N. Werlin, Commissioner

Susan F. Tierney, Commissioner

cc: Mary Cottrell, Secretary
Mark E. Slade, Esq., NEPSC

Appendix D

New England Power Service

New England Power Service Company
25 Research Drive
Westborough, Massachusetts 01582-0099
Tel. (508) 366-9011

Mark E. Slade
Senior Attorney

October 11, 1989

Ms. Nancy Brockway, Esq.
General Counsel
Department of Public Utilities
100 Cambridge Street
Boston, MA 02202

Dear Nancy:

We spoke on the telephone last week regarding whether building permits are needed for certain work in substations. This issue is the subject of a dispute between New England Power Company and the Town of Ayer. When we spoke, you indicated that the Ayer Town Counsel had requested an opinion from you on this question and you agreed to provide me the opportunity to explain our position prior to your rendering an opinion. Our position and analysis is set out below.

Under existing Massachusetts law, it has been our understanding that construction of foundations and structures to support electrical equipment for transmission lines or in substations does not require local building permits under the Massachusetts Building Code ("MBC," 780 CMR 100 et seq.). However, we do assume that construction of buildings, e.g. control houses, storage buildings, etc., that may be associated with electrical transmission facilities, does require a local building permit. Although there are several avenues of analysis that lead to these conclusions, the overriding consideration is that the Department of Public Utilities ("Department") has been legislatively provided comprehensive authority over the construction and safety of transmission lines and ancillary electrical facilities.

The existing case law leaves no doubt that local regulation of the construction and safety of transmission lines is prohibited. Boston Edison Co. v. Sudbury, 356 Mass. 406, 420, New England Power Co. v. Amesbury, 385 Mass. 609, 76-78. Although the case law is not as well developed for substations, there are several reasons to assume that the same broad authority extends to substations. First, the Department's broad authority to authorize and regulate the construction of transmission lines rings hollow if local permitting authority applies to substations. A transmission line is useless if it

can be deprived of its terminating substations that are necessary to control and transform the electricity to voltages suitable for distribution and consumption. Unless the Department's comprehensive authority extends to substations, it cannot fulfill its role of insuring that transmission lines are constructed so as to benefit the greater interest of the entire state, and not depend upon local preferences.

Further, the Department routinely handles petitions for zoning exemptions for substation sites pursuant to M.G.L. c. 40A § 3. This further demonstrates that the legislature intended that the Department, not municipalities, have control over the siting and construction of substations. In the past, the Department has engaged in a broad review of all aspects of a proposed project when hearing a petition for zoning exemptions. See e.g. Framingham v. DPU, 355 Mass. 138, 146-7. The discretion afforded a municipality in the building permit process could result in local decisions regarding construction and placement of equipment which are inconsistent with a Department order on the same project.

Second, the Department has promulgated regulations for the construction of overhead transmission lines. [220 CMR 125 et seq.] While these regulations do not specifically address substations, many of their provisions are fully applicable to substation structures including terminating structure strength, foundations, etc. These regulations more closely address questions of substation design and construction than the MBC which contains no specific requirements for transmission line or substation structures.

If a building permit was required for substation construction, the lack of relevant standards in the MBC would likely result in it being handled under the "Controlled Construction" provisions of the MBC. Controlled Construction basically looks to a Registered Professional Engineer's Certification for assurance that the project was properly constructed. [780 CMR 127 et seq.] The purpose of this provision is to accommodate construction of specialized structures, which are outside the field of knowledge of the local building inspector. As all our companies' transmission and substation construction is carried out under the auspices of a registered professional engineer, it is unlikely that handling transmission line and substation construction outside of the MBC and the local inspection procedures will eliminate any construction inspections that would otherwise take place.

Finally, we note that the position that building permits are not necessary for foundations and structures for electrical equipment is not inconsistent with the MBC. The Massachusetts State Electric Code is expressly incorporated into the MBC

in MBC § 100.5 and Appendix P. The Massachusetts State Electrical Code clearly excludes "Installations under the exclusive control of electric utilities for the purpose of . . . transformation, transmission and distribution of electric energy . . . ."

For your reference, I am also enclosing a copy of a recent New Hampshire Superior Court decision in which a similar question was presented. In this decision, the court found that the comprehensive state licensing process preempted local requirements for building permits.

If I may be of further assistance in this matter, please do not hesitate to contact me.

Sincerely yours,

Mark E. Slade

Mark E. Slade

bcc: K. Reid

MES:hmg
enclosure