

APPENDICES

Appendix A

Connecticut Siting Council

ELECTRIC SUBSTATION FACILITY

September 19, 2000

This application guide is to assist applicants in filing for a Certificate of Environmental Compatibility and Public Need (Certificate) from the Connecticut Siting Council (Council) for the construction of an electric substation facility. Such facilities are defined in General Statutes § 16-50i (a) (4).

Applicants should consult General Statutes §§ 16-50g through 16-50aa and Sections 16-50j-1 through 16-50z-4 of the Regulations of Connecticut State Agencies to assure complete compliance with the requirements of those sections. Where appropriate, statutory and regulatory references are noted below.

Pre-Application Process (General Statutes § 16-50l (e))

At least 60 days prior to the filing of any application with the Council, the applicant shall consult with the municipality in which the facility may be located and with any adjoining municipality having a boundary not more than 2500 feet from such facility concerning the proposed and alternative sites of the facility. Such consultation with the municipality shall include, but not be limited to good faith efforts to meet with the chief elected official of the municipality. At the time of the consultation, the applicant shall provide the chief elected official with any technical reports concerning the public need, the site selection process and the environmental effects of the proposed facility. The municipality may conduct public hearings and meetings as it deems necessary for it to advise the applicant of its recommendations concerning the proposed facility. Within 60 days of the initial consultation, the municipality shall issue its recommendations to the applicant. No later than 15 days after submitting the application to the Council, the applicant shall provide to the Council all materials provided to the municipality and a summary of the consultations with the municipality including all recommendations issued by the municipality.

I. Application to Municipal Agencies (General Statutes § 16-50x (d))

Municipal zoning and inland wetland agencies may regulate and restrict the location of an electric substation facility. Such action must be taken within 30 days of application filed with the Council. Orders made by the municipal zoning and inland wetland agencies may be appealed within thirty days by any party or municipality required to be served with a copy of the application.

II. Quantity, Form, and Filing Requirements (Regs., Conn. State Agencies § 16-50j-12)

A. Except as may be otherwise required, at the time applications are filed with the Council, there shall be furnished to the Council an original and 20 copies.

B. All filings from the applicant, parties, or intervenors must consist of an original and 20 copies, labeled with the docket number, properly collated and paginated, and bound.

C. Applications filed for the purpose of any proceeding before the Council shall be printed or typewritten on paper cut or folded to letter size, 8 1/2 by 11 inches. Width of margins shall be not less than one inch. The impression shall be on only one side of the papers, unless printed, and shall be double spaced, except that quotations in excess of five typewritten lines shall be single spaced and indented. Mimeographed, multigraphed, photoduplicated, or the like copies will be accepted as typewritten, provided all copies are clear and permanently legible. In accordance with the State Solid Waste Management Plan, all filings should be submitted on recyclable paper, primarily regular weight white office paper. Applicants should avoid using heavy stock paper, colored paper, and metal or plastic binders and separators.

D. Every original shall be signed by the applicant or by one or more attorneys in their individual names on behalf of the applicant. All applications shall be filed at the office of the Council, 136 Main Street, Suite 401, New Britain, Connecticut 06051. Service of all documents and other papers filed as applications, briefs, and exhibits, but not limited to those categories, shall be by personal delivery or by first class mail to the Council and all parties and intervenors to the proceeding, unless service has been waived.

E. Any exhibits, sworn written testimony, data, models, illustrations, and all other materials that the applicant deems necessary or desirable to support the granting of the application shall be attached to the application. In addition, annexed materials shall include such exhibits, sworn written testimony, and other data that any statute or regulations may require. The applicant may request that administrative notice be taken of and refer in the application to portions of other Council docket records and generic hearings or statements prepared by the Council as a result of generic hearings.

F. Applicants may present material in a sequence and format most appropriate for the particular proposal. To allow timely Council review, include with the application a copy of this form with page references for each item required in Section VII below.

III. Application Filing Fees (Regs., Conn. State Agencies § 16-50v-1a)

The filing fee for an application is determined by the following schedule:

<u>Estimated Construction Cost</u>	<u>Fee</u>
Up to \$5,000,000	0.05% or \$1,000.00, whichever is greater;
Above \$5,000,000	0.1% or \$25,000.00, whichever is less.

All application fees shall be paid to the Council at the time an application is filed with the Council. Additional assessments may be made for expenses in excess of the filing fee. Fees in excess of the Council's actual costs will be refunded to the applicant.

IV. Proof of Service (General Statutes § 16-501 (b))

Each application shall be accompanied by proof of service of such application on:

A. The chief elected official, the zoning commission, planning commission, the planning and zoning commissions, and the conservation and wetlands commissions of the site municipality and any adjoining municipality having a boundary not more than 2500 feet from the facility;

B. The regional planning agency that encompasses the site municipality;

C. The State Attorney General;

D. Each member of the Legislature in whose district the facility is proposed;

E. Any federal agency which has jurisdiction over the proposed facility; and

F. The state departments of environmental protection, public health, public utility control, economic and community development, and transportation; the council on environmental quality; and the office of policy and management.

V. Public Notice (General Statutes § 16-501 (b))

Notice of the application shall be published at least twice prior to the filing of the application in a newspaper having general circulation in the site municipality or municipalities. The notice shall state the name of the applicant, the date of filing, and a summary of the application. The notice must be published in not less than ten point type.

VI. Notice to Abutting Landowners (General Statutes § 16-501 (b))

Notice of the application shall be sent by certified or registered mail to all abutting landowners of the proposed and alternative sites of the facility. Notice shall be sent at the same time that notice of the application is given to the general public.

The application shall be accompanied by an affidavit of notice to all abutting landowners and an affidavit of publication each time notice of application is published.

VII. Contents of Application (General Statutes § 16-501 (a) (1))

An application for a Certificate for the construction of an electric substation facility should include or be accompanied by the following:

A. A brief description and the location of the proposed facility, including an artist's rendering and/or narrative describing its appearance.

B. A statement of the purpose for which the application is being made.

C. A statement describing the statutory authority for such application.

D. The exact legal name of each person seeking the authorization or relief and the address or principal place of business of each such person. If any applicant is a corporation, trust association, or other organized group, it shall also give the state under the laws of which it was created or organized.

E. The name, title, address, and telephone number of the attorney or other person to whom correspondence or communications in regard to the application are to be addressed. Notice, orders, and other papers may be served upon the person so named, and such service shall be deemed to be service to the applicant.

F. A description of the proposed facility including:

1. Itemized estimated costs;
2. Comparative costs of alternatives considered;
3. Facility service life;
4. Bus and specifications;
5. Overhead take-off design, appearance, and heights, if any;
6. Length of interconnections to transmission and distribution;
7. Initial and design voltages and capacities;
8. Rights-of-way and accessway acquisition;
9. Transmission connections and distribution feeders; and
10. Service area.

G. A statement and full explanation of why the proposed facility is needed and how the facility would conform to a long-range plan for the expansion of the electric power grid serving the state and interconnected utility systems that would serve the public need for adequate, reliable, and economic service, including:

1. A description and documentation of the existing system and its limitations;
2. Justification for the proposed in-service date;
3. The estimated length of time the existing system is judged to be adequate with and without the proposed facility;
4. Identification of system alternatives with the advantages and disadvantages of each; and
5. If applicable, identification of the facility in the forecast of loads and resources pursuant to General Statutes § 16-50r.

H. A proposed site map at a scale no smaller than one inch = 40 feet and aerial photos of suitable scale showing the site, access, and abutting properties including proximity of the following:

1. Settled areas;
2. Schools and daycare centers;
3. Hospitals;
4. Group homes;
5. Forests and parks
6. Recreational areas;
7. Seismic areas;
8. Scenic areas;
9. Historic areas;
10. Areas of geologic or archaeological interest;
11. Areas regulated under the Inland Wetlands and Watercourses Act;
12. Areas regulated under the Tidal Wetlands Act and Coastal Zone Management Act;
13. Public water supplies;
14. Hunting or wildlife management areas; and
15. Existing transmission lines within one mile of the site.

I. A justification for selection of the proposed site including a comparison with alternative sites which are environmentally, technically, and economically practicable. Include enough information for a complete comparison between the proposed site and any alternative site contemplated.

J. Safety and reliability information, including:

1. Provisions for emergency operations and shutdowns; and
2. Fire suppression technology.

K. A description of the effect that the proposed facility would have on the environment, ecology, and scenic, historic, and recreational values, including effects on:

1. Public health and safety;
2. Local, state, and federal land use plans;
3. Existing and future development;
4. Roads;
5. Wetlands;
6. Wildlife and vegetation, including rare and endangered species, and species of special concern, with documentation by the Department of Environmental Protection Natural Diversity Data Base;
7. Water supply areas;
8. Archaeological and historic resources, with documentation by the State Historic Preservation Officer; and
9. Other environmental concerns identified by the applicant, the Council, or any public agency.

L. A statement explaining mitigation measures for the proposed facility including:

1. Construction techniques designed specifically to minimize adverse effects on natural areas and sensitive areas;
2. Special routing or design features made specifically to avoid or minimize adverse effects on natural areas and sensitive areas;
3. Establishment of vegetation proposed near residential, recreational, and scenic areas; and
4. Methods for preservation of vegetation for wildlife habitat and screening.

M. Justification that the location of the proposed facility would not pose an undue safety or health hazard to persons or property at the site of the proposed facility including:

1. Measurements of existing electric and magnetic fields (EMF) at site boundaries, and at boundaries of adjacent schools, daycare facilities, playgrounds, and hospitals, with extrapolated calculations of exposure levels during expected normal and peak normal line loading;
2. Calculations of expected EMF levels at the above-listed locations that would occur during normal and peak normal operation of the facility; and
3. A statement describing consistency with the Council's "Best Management Practices for Electric and Magnetic Fields," as amended.

N. A schedule of the proposed program for right-of-way or property acquisition, construction, rehabilitation, testing, and operation.

O. Identification of each federal, state, regional, district, and municipal agency from which approvals have been obtained or will be sought, copies of approvals received, and a schedule for obtaining approvals not yet received.

P. Bulk filing of municipal zoning, planning, planning and zoning, conservation, and inland wetland regulations and by-laws.

Q. Such information any department or agency of the state exercising environmental controls may, by regulation, require.

R. Such information the applicant may consider relevant.

VIII. Procedures

A. The Council will review and may reject the application within 30 days if it fails to comply with specific data or exhibit requirements or if the applicant fails to promptly correct deficiencies. (Regs., Conn. State Agencies §§ 16-50l-4 through 16-50l-5)

B. The Council and any party or intervenor to the proceeding may file exhibits and interrogatories requesting supplemental or explanatory materials. All filings will be subject to cross-examination and the Council's discretion for admission into the record. (General Statutes § 16-50o)

C. A public hearing must be held in the county of the proposed site, usually in the site municipality, with one session held after 6:30 p.m. for the convenience of the public. The Council's record must remain open for 30 days after the close of the hearing. (General Statutes § 16-50m)

D. The Council must render a decision within 180 days of receipt of the application, or within 12 months of receipt of the application if the application was incorporated with an application for an electric transmission line, extendible by 180 days upon consent of applicant. (General Statutes § 16-50p)

Appendix B

Electric and Magnetic Field Best Management Practices

February 11, 1993

Although scientific knowledge does not at this time permit firm judgments about possible health effects of 60 hertz electric and magnetic field (EMF) exposures from electric generation, substation and transmission facilities, the Connecticut Siting Council has adopted a cautious approach to the issue by adopting the following Best Management Practices. These practices are intended to recognize the latest information as well as effective technologies and management techniques on a project-specific basis to protect the public and maximize the efficiency of the electric generation, transformation, and transmission industry.

1. Administratively notice and recognize completed and ongoing scientific EMF research.
2. Require individual project-specific assessments of EMF.
 3. Require detailed project-specific assessments of need and non-structural alternatives.
 4. Require EMF assessments for project alternatives.
 5. Require EMF assessments to consider exposure levels and durations with respect to existing and planned land uses.
 6. Require baseline, preconstruction measurements of EMF during siting of new facilities.
 7. Require post-construction measurement of EMF to extrapolate values for normal, peak, and maximum allowable continuous operating levels.
 8. Require adoption and use of a uniform measurement protocol.
 9. Solicit specific comments from the DEP, DPUC, and DOHS regarding EMF exposure during siting of new facilities.
 10. Require consideration of low-EMF designs during the siting and construction of new facilities, including use of:
 - a. Compact spacing;
 - b. Optimum phasing of conductors; and
 - c. Applicable and appropriate new field management technologies.
3. Consider project-specific exposure limits for EMF.
4. Recognize the possibility for future standards and consider conditioning approval on retrofitting or elimination of facilities to meet future federal and State standards.

All council proceedings are conducted at publicly noticed meetings and hearings offering full opportunity for participation and due process as afforded by federal and State law.

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Appendix C

LOAD FLOW PATTERNS FOR PROPOSED TRUMBULL SUBSTATION FACILITY

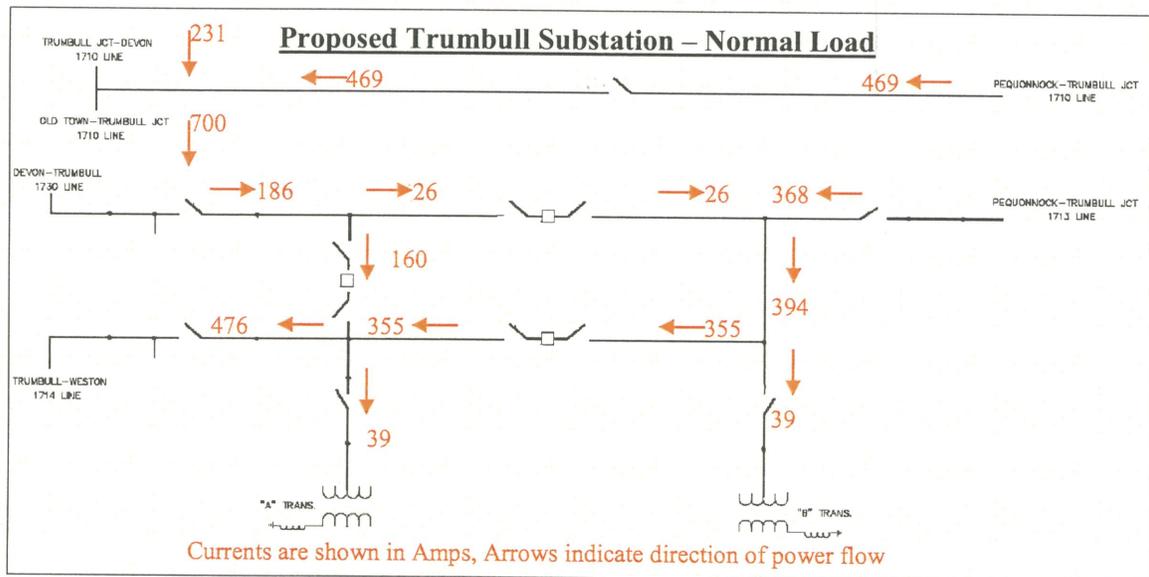


Figure C-1. Calculated Load Flow Patterns for the Proposed Trumbull Substation Normal 115 kV Loading for the “Post-Bethel/Norwalk” Configuration

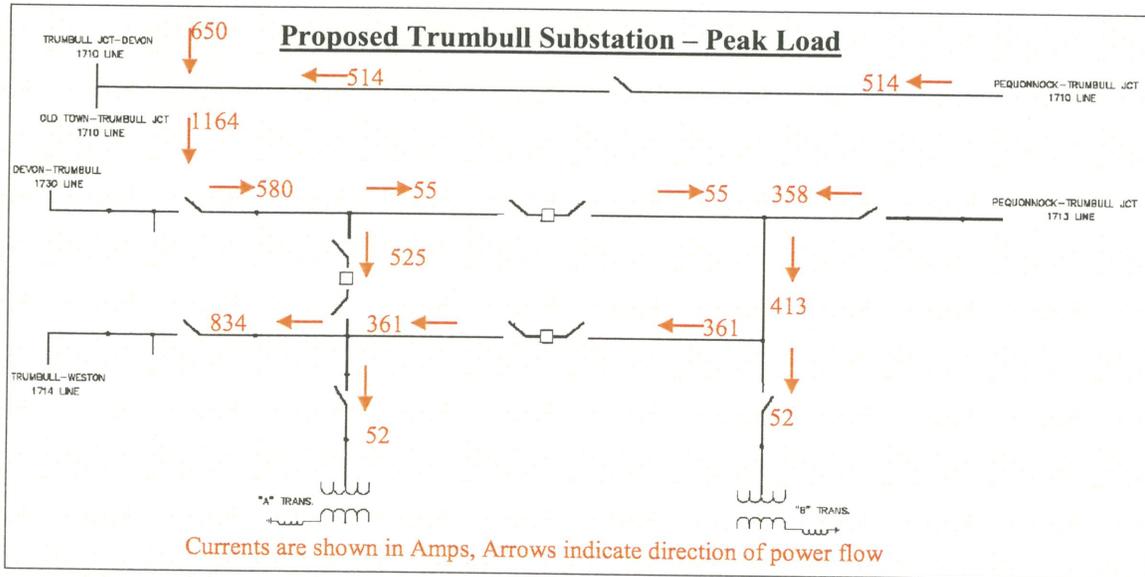


Figure C-2. Calculated Load Flow Patterns for the Proposed Trumbull Substation Peak 115 kV Loading for the "Post-Bethel/Norwalk" Configuration

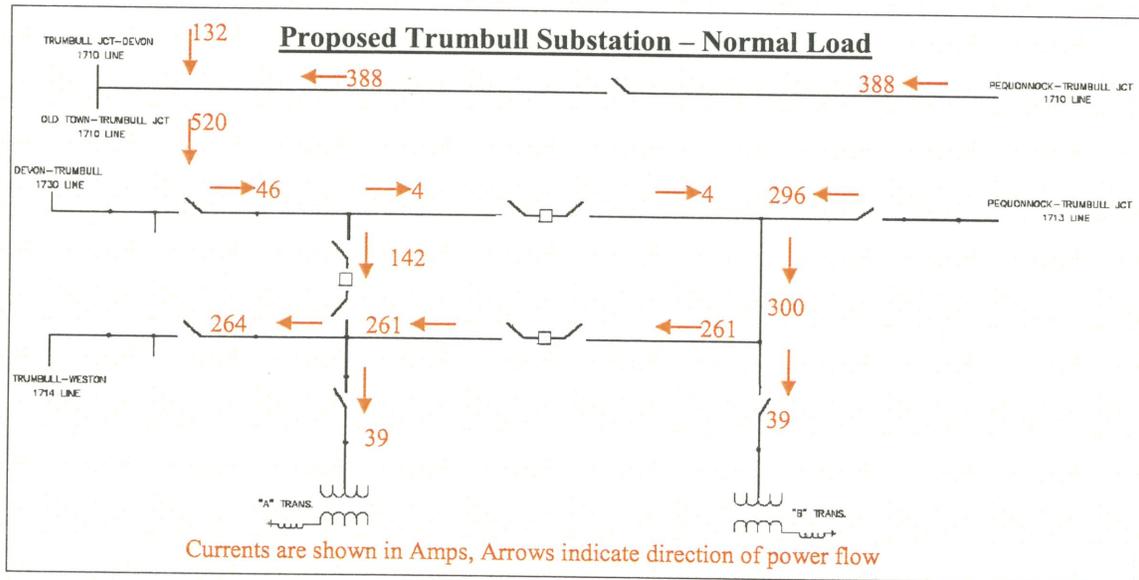


Figure C-3. Calculated Load Flow Patterns for the Proposed Trumbull Substation Normal 115 kV Loading for the "Post-Middletown/Norwalk" Configuration

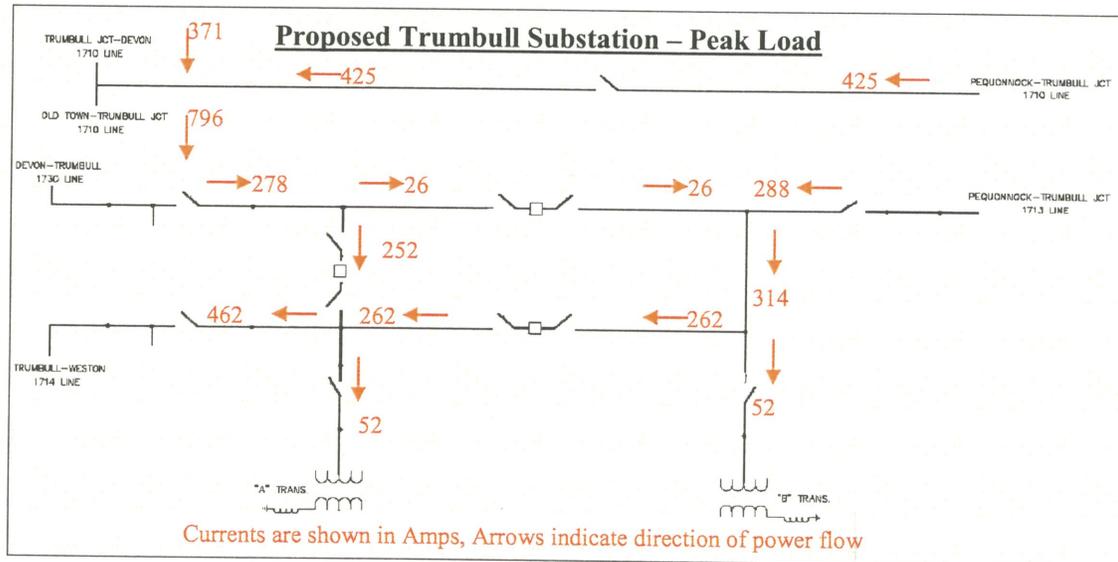


Figure C-4. Calculated Load Flow Patterns for the Proposed Trumbull Substation Peak 115 kV Loading for the “Post-Middletown/Norwalk” Configuration