Docket No. 398: Sherwood Substation

Attachments to Direct Testimony of Raymond Gagnon

Attachment 1	Resumes
Attachment 2	Section I.3.9 Letter from ISO-NE
Attachment 3	Simulation
Attachment 4	Letter from First Selectman, Gordon Joseloff
Attachment 5	Letter from Dr. Floyd Lapp, SWRPA
Attachment 6	Sign Photographs

RAYMOND GAGNON

Director Transmission Projects
Northeast Utilities System

107 Selden St
Berlin, CT 06037

BACKGROUND

Mr. Gagnon is the Director Transmission Projects responsible for project management of transmission projects in the three-state service area for Northeast Utilities. Mr Gagnon has worked for Northeast Utilities for 24 years in various positions throughout his career.

EXPERIENCE

2008 – Present Northeast Utilities Berlin, CT

Director Transmission Projects

- Responsible for project management of transmission projects in the three-state service area for Northeast Utilities. Responsible for the overall aspects of Transmission Projects management including: project estimating, forecasting, scheduling, contract evaluation, contract administration, project execution, and project closeout. Responsible for the administration of the Transmission Contracts and Project Cost & Scheduling departments.

2003–2008 Northeast Utilities Berlin, CT

Project Manager

- Responsible for managing transmission infrastructure projects in Connecticut and Massachusetts. Primary responsibility is to oversee the project life cycle of an assigned project from the early planning stages through siting/permitting, implementation, follow-up reporting, and Closeout. Responsible for transmission substation and transmission line construction projects.

1995–2002 Northeast Utilities Berlin, CT

Senior Engineer

- Responsible for managing telecommunications projects in Connecticut, Massachusetts and New Hampshire. Primary responsibility is to engineer and design mobile radio, microwave and lightwave telecommunication systems in support of the primary business. Responsible for designing, procurement, siting & permitting, constructing and close out of telecommunication facilities projects.

1988-1995 Northeast Utilities Meriden, CT

Engineer

- For the Telecommunication Department, primary responsible for engineering assignments in support of design, construction, operation and maintenance of telecommunication projects.

1984–1987 Northeast Utilities Berlin, & Meriden, CT

Associate/Assistant Engineer

- For the System Test Department performed engineering assignments supporting the operation and maintenance of process computer systems operated by generation facilities, CONVEX operations center, and the NEPOOL/NEPEX operations center.

EDUCATION

1980-1984 Rensselear Polytechnic Institute Troy, NY

- Bachelor of Science Electrical Engineering

1990-1994 University of New Haven New Haven, CT

- Masters of Business Administration

2002-2003 George Washington University Washington, DC

- Masters Certificate in Project Management

PROFESSIONAL LICENSES/CERTIFICATIONS

Registered Professional Engineer

- Connecticut (# 16704)
- Massachusetts (# 37267)

Certified Project Management Professional (PMP)

- PMP (# 234980)

Kris Aberg

73 Boulder Circle, Glastonbury, CT 06033 • (860) 633-5058 • kris_11@cox.net

SUMMARY

Over 25 years of experience in the field of substation power engineering, project management and regulatory approvals. Presently employed as a Senior Engineer and Team Leader in Northeast Utilities Service Company's Substation Engineering and Design group. Serving as Circuit Breaker Specialist for the Northeast Utilities transmission and distribution systems from 1992 until 2002. Responsible for specifying, ordering and approving substation power circuit breakers, circuit switchers and reclosers applied at operating voltages ranging from 4.8 kV to 345 kV.

EXPERIENCE

9/86 to present **PROJECT ENGINEER/CIRCUIT BREAKER SPECIALIST**
Northeast Utilities, Hartford, Connecticut, USA

2007 Promoted to Project Manager in the Transmission Business Unit with overall responsibility for major transmission projects as well as combined Transmission and Distribution projects.

2003 Promoted to **Project Engineering Manager** with continued managerial responsibility for the Senior Designers as well as complete project responsibility for major substation projects.

2002 Named **Team Leader** with direct managerial responsibilities, incl. Annual Performance Reviews, for 4 Senior Electrical Designers.

1998 Promoted to **Senior Engineer** in July 1998.

1992 Named **Circuit Breaker Specialist** in January 1992 with responsibilities which include preparation of technical specifications, bid evaluation, review of approval drawings, approval of circuit breaker suppliers and maintaining contact with manufacturers of outdoor power circuit breakers, circuit switchers and reclosers applied at operating voltages ranging from 4.8 kV to 345 kV for the NU transmission and distribution systems.

1990 Promoted to **Engineer** in November 1990

1989 Named **Back Up Circuit Breaker Specialist**

1988-1998 **Associate Engineer** Promotion included the following added the responsibilities:

- Maintenance and publication of thermal ratings for the Northeast Utilities Transmission system. Chaired a 1998 comprehensive task force review of the thermal ratings applied throughout the NU System.
- Substation Transformer Noise Specialist responsible for performing sound studies, arranging sound measurements, evaluating compliance with local and state noise regulations, and recommending mitigation if necessary.

Project Engineer for major substation projects with cash flows exceeding $5,000,000. Project Engineering responsibilities includes the responsibility for obtaining all required regulatory approvals which involves coordinating contributions from the Legal Department, the Environmental Planning Department as well as participating at public hearing and testifying in front of local and State Agencies.

1986-1988 **Assistant Engineer** , Substation Engineering Group. Responsibilities included:

- Preparation of technical specifications, project scope and cost estimates for substation projects.
- Budget development, scheduling and management of substation projects.

1985 - 1986 **PROJECT ENGINEER/PROJECT MANAGER**
Brown Boveri Corporation (now ABB) Bergen, Norway.

Employment with this multinational Swiss corporation began as a **Project Engineer** responsible for the engineering of control systems for power generation plants and substations.

EDUCATION

Master of Business Administration (1990) University of Hartford, West Hartford, Connecticut.

Bachelor of Science in Electrical Engineering (1984) South Dakota School of Mines and Technology, Rapid City, South Dakota.

AFFILIATIONS Member Toastmasters International since 1990, ACB. Member IEEE.

Richard N. Servello – Senior Circuit Owner - Asset Management

Connecticut Light & Power Company, 9 Tindall Avenue, Norwalk, CT 06851

Education B.S. in General Studies, Pace University 1994
AAS in civil Technology, Westchester CC 1977

Experience **Connecticut Light & Power Co.**

1998-Present **Senior Circuit Owner**

Perform planning function for the Norwalk District - Norwalk, New Canaan, Redding, Wilton, Weston and Westport. Planning, design, justification and budget appropriation of overhead and underground distribution facilities, including networks and substations for new service, reliability, load relief and relocation projects.

1996-1998 **Senior Consultant**

Acting supervisor for engineering technicians for the Norwalk and Stamford Districts. Design of overhead and underground distribution facilities and services for large commercial, industrial and residential customers

1983-1996 **Senior Consultant/Senior Technician**

Design of overhead and underground distribution facilities and services for large commercial, industrial and residential customers.

1974-1983 **Consolidated Edison Company**

Senior Design Technician
Underground Coordinator
Underground Mechanic

David J. Bebrin, M.S.
61 Idlewood Road
Wolcott, CT 06716
(203) 879-4919
davidbebrin@sbcglobal.net

SUMMARY

Mechanical engineer with expertise in energy analysis of HVAC systems, commercial new construction and design review. Worked for a public utility, engineering consultants, as well as a university. Strengths include problem solving, new installation inspections, client relations, and engineering analysis.

PROFESSIONAL EXPERIENCE

Northeast Utilities Service Company, Berlin, CT

Senior Program Planner (Engineer) ***2008-present***
Senior Program Administrator / Evaluator ***2003-2008***
Senior Program Administrator ***1997 – 2003***

Responsibilities include administration of the Energy Conscious Construction and Tailored HVAC Programs for Connecticut Light & Power and Western Massachusetts Electric Company. The combined budget has been about $8,000,000 annually. Administration includes delivering a cost effective program, interfacing with Demand Side Management Planning and Evaluation as well as providing energy analysis to customers and their design teams. Develop marketing strategies.

- Won national recognition by being named Exemplary Programs by American Council for an Energy-Efficient Economy.
- Provided Quality Assurance/Quality Control of energy studies.
- Provided analysis of custom measures.

Senior Analyst - Market Planning ***1996 - 1997***

Responsibilities included market analysis of different marketing strategies, products and services.

- Developed the marketing model for Northeast Utilities' unregulated subsidiary Select Energy.
- Provided the case management for customers considering co-generation or fuel switching.

Analyst –Demand Side Management Planning (DSM) ***1995 -1996***

Responsibilities included providing analysis for the utility commission DSM filings in Connecticut Light & Power, Western Massachusetts Electric Company, and Public Service of New Hampshire.

- Performed energy savings analysis of new technologies.
- Provided technical assistance for many customers with unique needs.

HEC, Inc., Simsbury, CT

Project Manager ***1994 - 1995***

Responsibilities included evaluating the cost effectiveness of energy efficiency measures, co-generation and overseeing construction of these measures.

Naugatuck Valley Community - Technical College, Waterbury, CT
Part-time Lecturer on Computer Technology *1994 - 1995*

Savage Engineering, Inc., Bloomfield, CT
Project Manager / Project Engineer *1989 - 1994*
Responsibilities included evaluating and reviewing the impact and cost effectiveness of energy efficiency measures.

- Provided Engineering on Utility Cost Allocation Studies.
- Performed field inspections of mechanical equipment, building energy simulations, lighting system retrofits and controls.
- Managed quality control / quality assurance projects for the Northeast Utilities Energy Action Program.
- Consulted with utilities developing demand side management programs.

Self – employed, Wolcott, CT
Home remodeling, design, and renovation *1979 - 1989*

The University of Connecticut, Waterbury, CT
Instructor of Engineering *1982 - 1988*
Teach all freshmen and sophomore engineering courses.

- Served as Engineering Department Head for the Waterbury Campus.

EDUCATION, CERTIFICATIONS, & Papers

MS, Mechanical Engineering, University of Connecticut, Connecticut, specialized in Dynamics and Controls, 1988
BS, Mechanical Engineering, University of Connecticut, Connecticut, 1982
Certified Demand-side Management Professional
Certified Energy Manager
Certified Business Energy Professional
Certified Sustainable Development Professional
UI & CL&P Program Savings Document, Co-Author
Quantifying Energy Savings from Industrial Productivity Improvements, Co-Author
Patent pending – Artificial Holiday Tree Storage Container

AWARDS

Marketing and Conservation Annual Award winner-1995, 1996, 2000
Northeast Utilities Spot Recognition Award, Select Energy Business Plan
Northeast Utilities Spot Recognition Award, Tailored HVAC Program
Northeast Utilities Spot Recognition Award, WMECo 2004 Annual Report

COMMUNITY SERVICE

Vice President – WHS Goal Club
Soccer Coach – WYAA
Baseball Coach - Baseball Association of Wolcott
Risk Management Director - WYAA
Committee Member - Wolcott Schools Building Projects
Committee Member - St. Maria Goretti Parish Center

Christopher C. Swan - Director - Municipal Relations & Siting

Northeast Utilities, 9 Tindall Avenue, Norwalk, CT 06851

(203-845-3421-ofc / 860-543-5363-cell / 203-845-3628-fax)

Chris Swan began his career in 1976 as an Environmental Scientist supporting generating plant siting and operations at Northeast Utilities corporate headquarters in Berlin, CT. For the past 28 years he has held a number of management positions at CL&P in Engineering, Marketing, Sales, Distribution Operations and Transmission. In April, 2006, Swan was appointed to his current position of Director – Municipal Relations and Siting for NU, where he is charged with supporting the municipal outreach and siting of major transmission and substation projects for NU across New England.

Swan is a member of the Boards of Directors of the Greater Norwalk Chamber of Commerce, SoundWaters Environmental Center, and the Stamford Partnership. He is a former director of the Stamford, Westport/Weston and Greater Waterbury Chambers of Commerce. He is also active with The Business Council of Fairfield County and serves on a number of volunteer positions within the community.

A graduate of Staples High School in Westport, CT, Swan attended Union College in Schenectady, NY, where he received a BA in Economics. He served in the Air Weather Service with the United States Air Force following college, then attended Polytechnic University in Brooklyn, NY, receiving a Master of Science in Applied Meteorology. Swan resides in Westport with his wife, Carol. They have two children, Nick Swan and Emily Swan-Bom, and two grandchildren, Trevor and Maren Swan.

Northeast
Utilities System

Resume of Jedidiah E. Kiernan

Title:

Associate Engineer; Transmission Line & Civil Engineering;
Transmission Engineering Department; Northeast Utilities Service Co.

Business Address:

Northeast Utilities Service Company
P.O. Box 270
Hartford, CT 06141-0270

Education:

Bachelor of Science Degree in Civil Engineering;
University of Connecticut; Storrs, CT

Professional Experience:

August 2004 – February 2005: Tectonic Engineering; Staff Engineer
Design and inspection of telecommunication facilities

February 2005 – August 2007: URS Corporation; Structural Engineer
Design of major bridges, commercial buildings, and utility facilities

August 2007 – Present: Northeast Utilities Service Company; Associate Engineer
Transmission Line & Civil Engineering Group; Transmission Engineering Department

Major Projects:

- Stepstone 115-kV Substation Project (Transmission Line Engineer)
- WMECO 345-kV Damaged Structure Replacement Project (Transmission Line Engineer)
- Kleen Energy Interconnect Project (Transmission Line Engineer)
- Rebuild 3533 Line (345-kV) Between Kleen Energy and Middletown Junction (Project Engineer)

Current Assignments:

- Fall Protection
- Composite Insulator Aging

Amanda Mayhew
320 Hill Street
Hamden, Connecticut 06514
(203)715-0323/Mandy_8103@yahoo.com

Experience:

January 2009 to Present — Northeast Utilities — Berlin CT
Transmission Project Management Job Share
As part of the job share program, allocated 25% of time to Optical Groundwire (OPGW) Replacement Program to replace 56 miles of OPGW on the Connecticut Light & Power transmission system. Responsible for a project spend of $9 million, developing and leading a cross-functional team and external contractors, and communicate issues and risks to management.

June 2005 to Present — Northeast Utilities — Berlin CT
Transmission Siting and Permitting- Scientist
Responsible for determining locations and acquiring necessary local, state, and federal permits for transmission capitol projects throughout Connecticut and Massachusetts.

- Hire and manage environmental consultants for wetland delineations, wildlife and habitat assessments, and oversee the assembly of applications to local, state, and federal regulators;
- Review and approve environmental documents and ensure all mandatory commenters' changes are incorporated before production;
- Create landscape plans with direction of landscape architect;
- Draft and send consultation letters to regulators and work with them to determine mitigation and least environmentally damaging impacts;
- Use ERSI's ArcGIS to determine what permits and consultations are needed in the beginning of a project and create visual aids to present in project meetings;
- Conduct Phase One Environmental Site Assessments for the sale or acquisition of property;
- Create Development and Management Plans for use at the Connecticut Siting Council and at construction sites using Connecticut's 2002 Guidelines for Soil Erosion and Sediment Control;
- Testify as lead environmental scientist at Connecticut Siting Council Hearing; and
- Develop relationships with key local, state and federal regulatory agencies.

June 2003 to June 2005 — Northeast Utilities — Berlin CT
Real Estate and Land Planning- Technical Associate

- Worked with customers regarding environmental concerns (ie: unkempt company property, illegal dumping, motorized vehicle trespass);
- Assisted in administering NU's Hunting Program which entailed issuing permits and answering questions about the program; and
- Hired and managed landscape and construction contractors to resolve complaints.

Education:

University of Connecticut	Graduate Business Program*	January 2008-July 2009
University of New Haven	Geographic Information Systems (Cert)	September 2006- July 2007
University of Connecticut	B.S. Environmental Science	September 1999- May 2003

*Admission to program by officer nomination

Interests

Judge for 2009 Connecticut Invention Convention for children from first to eighth grades.
Member- New England Mountain Bike Association.

March, 2009

Robert E. Carberry
Manager – Project Manager, NEEWS Siting and Permitting
Northeast Utilities Service Company
Hartford, Connecticut

Education:

Bachelor of Science in Electric Power Engineering, June, 1972, Rensselaer Polytechnic Institute, Troy, NY

Master of Engineering in Electric Power Engineering, June 1973, Rensselaer Polytechnic Institute, NY

Management Development Program, Hartford Graduate Center, 1989

Experience:

June 1973 to March 1974 - Bechtel Associates Professional Corp., electrical design of Midland nuclear plant including load flow and voltage studies.

March 1974 to March 1975 - NUSCO, Protection Engineering Section. Performed relay settings and assisted Transmission Line Engineering.

March 1975 to March 1984 - NUSCO, Transmission Line Engineering. Standards, investigations and studies for permanent and temporary grounding, radio and audible noise, electrical/biological effects of AC fields, special insulation, thermal rating studies and research projects, high phase order, HVDC, compact line design, insulated shield wires, and lightning performance.

March 1984 to April 1985 - NUSCO, Substation Project Engineering. Project conceptual development and management plus associated studies and standards activities.

April 1985 to March 1988 - NUSCO, Substation Project Engineering Manager.

March 1988 to November 1992 - NUSCO, Manager of Substation Engineering and Design.

December 1992 to June 1997 - NUSCO, Manager of Transmission Line and Civil Engineering.

June 1997 to October 2000 - NUSCO, Manager of T&D Asset Strategy.

October 2000 to September 2001 - NUSCo, Manager of Transmission Engineering.

September 2001 to March 2003 - NUSCO, Project Manager – Bethel to Norwalk Transmission Project.

March 2003 to October 2004 - NUSCO, Project Director – Bethel to Norwalk Transmission Project.

October 2004 to January 2008 – NUSCO, Manager – Transmission Siting and Permitting.

February 2008 to Present – NUSCO, Project Manager, NEEWS Siting and Permitting

NU's EMF expert 1975- present and leader of the NU EMF Task Force established in 1990.

Other Experiences:

Adjunct Faculty Member, University of Hartford, College of Engineering, January to May, 1987. Conducted portions of course in Power Systems Analysis.

T&D Emergency plan assignment as First Deputy to the Director, Electric, a liaison position with the CT Office of Emergency Management, 1985 to 2002.

Member of Advisory Committee serving the Connecticut Interagency EMF Task Force, 1991 to present.

Professional Engineering Registration: Connecticut and Massachusetts

Industry and Professional Society Activities/Senior Member, IEEE (1983)

IEEE Power Engineering Society, Transmission and Distribution Committee memberships.

1) Corona and Field Effects (C&FE) Subcommittee, Member 1976 to 1987, Vice Chairman 1983 to 1985.

2) C&FE Working Groups on AC Fields and Audible Noise, 1976 to 1987.

3) Chairman of C&FE Working Group on Design and Environmental Considerations, 1977 to 1985.

4) Secretary and Vice Chairman of Administrative Subcommittee's Coordinating Group on Environment, Safety and Public Affairs, 1981 to 1984.

IEEE Power Engineering Society, Substations Committee memberships

1) Substations Committee, member 1987 to 1995

2) Environmental Subcommittee and Associated Working Groups, member 1985 to 1995.

3) Various Working Groups of the Distribution Substations Subcommittee and the Gas Insulated Substations Subcommittee, member 1985 to 1995.

Edison Electric Institute - Chairman of the Electric Light and Power group delegation to the American National Standards Committee C63 on Electromagnetic Compatibility, 1980 to 1985.

Electric Power Research Institute - Industry advisor on project RP1591, Assessment of AC Transmission Line Field Effects, 1982 to 1984. NU representative on Transmission Line Business Unit Council, October, 1995 to December, 1996, and on EMF/RF Area Council, 2005-present.

International Electrotechnical Commission, CISPR C - Member of an advisory group assisting the Technical Advisor to the U.S. National Committee of the IEC on matters pertaining to interferences from overhead power lines, 1980 to 1988.

Edison Electric Institute - EMF Task Force, 1990 to present: EMF Steering Committee 1995 to 2003.

Professional Recognitions:

IEEE PES Working Group Recognition and/or Prize Paper Awards

- AC Fields Working Group (1992)
- Working Group on Design and Location of Substations for Community Acceptance (1992)
- "A Survey of Methods for Calculating Transmission Line Conductor Surface Voltage Gradients," 1980
- "Corona and Field Effects of AC Overhead Transmission Lines: Information for Decision Makers," 1986

Exponent

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Linda S. Erdreich, Ph.D.

Senior Managing Scientist

Professional Profile

Dr. Linda S. Erdreich is a Senior Managing Scientist in Exponent's Health Sciences Center for Epidemiology, Biostatistics, and Computational Biology. She is an epidemiologist with 28 years of experience in environmental epidemiology and health risk assessment. She specializes in assessing epidemiological research and integrating this information with that from other disciplines for qualitative and quantitative risk assessments. She has prepared risk assessments for environmental and occupational chemicals, radiofrequency energy, electric and magnetic fields (EMF), and stray voltage. Dr. Erdreich has also prepared analyses of complex epidemiological evidence suitable for communication with interested parties of various backgrounds, including other scientists, executives, elected officials, and the general public. She has been particularly active in updating standards regarding non-ionizing radiation, both low frequencies (EMF) and radio frequencies. Dr. Erdreich has provided support to government agencies and private clients in health risk assessment and epidemiology.

Prior to joining Exponent, Dr. Erdreich was a Principal Scientist with Bailey Research Associates, where she specialized in epidemiologic research and analysis. Before that, Dr. Erdreich managed a research program in risk assessment at the U.S. Environmental Protection Agency and contributed to the development of risk assessment methods and guidelines. Dr. Erdreich has served on advisory committees to government, regulatory organizations, and industry regarding health risk assessments of chemicals and electromagnetic fields. Dr. Erdreich is also an adjunct associate professor at the Robert Wood Johnson Medical School in New Jersey.

Academic Credentials and Professional Honors

Ph.D., Epidemiology, University of Oklahoma, 1979
M.S., Biostatistics and Epidemiology, University of Oklahoma, 1977
M.Ed., Science Education, Temple University, 1968
B.A., Biological Sciences, Temple University, 1964

Fellow, American College of Epidemiology

U.S. Environmental Protection Agency: Special Achievement Award for Development of EPA's Proposed Risk Assessment Guidelines, 1984; Certificate of Achievement, Mentor: Research Apprenticeship Program, 1983; Special Achievement Award for Development of Methodologic Approaches to Risk Assessment Essential to the Agency, 1982

U.S. Public Health Service Traineeship, 1975–1979; Graduate Dean's Research Prize, University of Oklahoma, 1978

Publications

Erdreich LS, Van Kerkhove MD, Scrafford CG, Barraj L, McNeely M, Shum M, Sheppard AR, Kelsh M. Factors that influence the radiofrequency power output of GSM mobile phones. Radiation Res 2007; 168(2):253–261.

Bailey WH, Erdreich LS. Accounting for human variability and sensitivity in setting standards for electromagnetic fields. Health Phys 2007; 92:649–657.

Yarborough CM, Erdreich LS. Child neurocognitive and behavioral outcomes and maternal solvent exposure during pregnancy. Arch Pediatr Adolesc Med 2005; 159:690.

Moulder JE, Foster KR, Erdreich LS, McNamee JP. Mobile phone, mobile phone base stations and cancer: A review. Int J Radiat Biol 2005; 81:189–203.

Erdreich LS, Friedman MA. Epidemiologic evidence for assessing the carcinogenicity of acrylamide. Regul Toxicol Pharmacol 2004; 39:150–157.

Erdreich LS, Klauenberg BJ. Radio frequency radiation exposure standards: Considerations for harmonization. Health Physics 2001; 80:430–439.

Dourson ML, Anderson M, Erdreich LS, MacGregor J. Using human data to protect the public's health. Regul Toxicol Pharmacol 2001; 33(22):234–256.

Haber LT, Diamond GL, Zhao Q, Erdreich LS, Dourson ML. Hazard identification and dose-response of ingested nickel soluble salts. Regul Toxicol Pharmacol 2000; 31:231–241.

Haber LT, Erdreich LS, Diamond DL, Maier AM, Ratney R, Zhao Q, Dourson ML. Hazard identification and dose-response of inhaled nickel soluble salts. Regul Toxicol Pharmacol 2000; 31:210–230.

Foster KF, Erdreich LS. Thermal models for microwave hazards and their role in standards development. Bioelectromagnetics 1999; 20:52–63.

Moulder JE, Erdreich LS, Malyapa RS, Merritt J, Pickard WF, Vijayalaxmi. Cell phones and cancer: what is the evidence for a connection? Radiation Res 1999; 151:513–531.

Foster KR, Erdreich LS, Moulder J. Weak electromagnetic fields and cancer in the context of risk assessment. Proc IEEE 1997; 85:733–746.

Erdreich LS. Scientific evidence—Issues in EMF epidemiology. Shepard's Expert and Scientific Evidence Quarterly 1993; 1:213–226.

Brown K, Erdreich LS. Statistical uncertainty in the no-observed-effect level. Fund Appl Toxicol 1989; 13:235–244.

Hill RN, Erdreich LS, Paynter OE, Roberts PA, Rosenthal SL, Wilkinson CF. Thyroid follicular cell carcinogenesis: a review. Fund Appl Toxicol 1989; 12:629–697.

Hattis D, Erdreich LS, Ballew M. Human variability in susceptibility to toxic chemicals—A preliminary analysis. Risk Anal 1987; 7:415–426.

Erdreich LS, Burnett C. Improving the use of epidemiologic data in health risk assessment. Toxicol Environ Health 1985; 1:65–81.

Stara JF, Erdreich LS (eds). Approaches to risk assessment for multiple chemical exposures. Conference Proceedings, EPA-600/9-84-008, U.S. Environmental Protection Agency, 1984.

Erdreich LS. Comparing epidemiologic studies of ingested asbestos for use in risk assessment. Environ Health Prospect 1983; 43:99–104.

Erdreich LS, Lee, ET. Use of relative operating characteristic analysis in epidemiology—A method for dealing with subjective judgment. Am J Epidemiol 1981; 144:649–662.

Erdreich LS, Asal NR, Hoge AF. Morphological types of breast cancer: Age, bilaterality and family history. Southern Med J 1980; 73:28–32.

West KM, Erdreich LS, Stober, JA. A detailed study of risk factors for retinopathy nephropathy in diabetes. Diabetes 1980; 29:501–508.

West KM, Erdreich LS, Stober JA. Absence of a relationship between smoking and diabetic microangiopathy: A detailed study. Diabetes Care 1980; 3:250–252.

West K, Erdreich LS, Stober J, et al. Risk factors for diabetes related angiopathy. Exerpta Medica 1979; 148:251–252.

Erdreich J, Erdreich LS. Intermodulation products fh+f1 and 2fh+f1: Masking and growth and low frequency primary. J Acoustical Soc Amer 1978; 64.

Book Chapters

Erdreich LS. Using epidemiology to explain disease causation to judges and juries. pp. 173–183. In: Expert Witnessing: Explaining and Understanding Science. Meyer C (ed), CRC Press, Boca Raton, FL, 1999.

Erdreich LS. Combining animal and human studies, resolving conflicts, summarizing the evidence. In: Epidemiology and Risk Assessment. L. Gordis (ed), Oxford University Press, New York, NY. June 18–22, 1995.

Stara JF, Hertzberg RC, Bruins RJF, Dourson ML, Durkin PR, Erdreich LS, Pepelko WE. Approaches to risk assessment of chemical mixtures. In: Chemical Safety Regulation and Compliance. Hamburger F, Marquis JK (eds), 1985.

Erdreich J, Erdreich, LS. Epidemiologic strategies to understanding noise induced hearing loss. In: New Perspectives on Noise-Induced Hearing Loss. Hamernic RP, Henderson NP, Salvi R (eds), Raven Press, New York, NY, 1982.

Books Edited

Stara JF, Erdreich LS (eds). Advances in Health Risk Assessment for Systematic Toxicants and Chemical Mixtures: An International Symposium. Princeton Scientific Publishing Co., Inc., Princeton, NJ, 1985.

Reports

Erdreich LS, Mullin, CS. Hypersusceptible subgroups of the population in multiple chemical risk assessment. In: Approaches to Risk Assessment for Multiple Chemical Exposures. EPA-600/9-84-008. Stara JF, Erdreich LS (eds.), U.S. Environmental Protection Agency, 1984.

Stara JF, Erdreich LS (eds). Selected approaches to risk assessment for multiple chemical exposures. Progress Report on Guideline Development, EPA-600/9-84-014a, 1984.

Non Peer-Reviewed Publications

Erdreich LS, Roberts W. Identifying flawed reasoning in biomedical science: A more cogent argument than "Junk Science." Toxic Torts and Environmental Law Committee Newsletter. American Bar Association, Summer 2006.

Committee on Man and Radiation of the IEEE (COMAR) Technical Reports

The IEEE exposure limits for radiofrequency and microwave energy. IEEE Eng Med Biol 2005; 24 (2):114–117+121.

Electromagnetic hypersensitivity: COMAR Technical Information Statement. IEEE Eng Med Biol 2002; Sept/Oct 173–175.

Human exposure to radio frequency and microwave radiation from portable and mobile telephones and other wireless communication devices. IEEE Eng Med Biol 2001; 20(1):128–131.

Safety issues associated with base stations used for personal wireless communications. COMAR Technical Information Statement September 2000. www.ewh.ieee.org/soc/embs/comar/

Possible hazards from exposure to power frequency electric and magnetic fields. IEEE Eng Med Biol 2000; 19(1):131–137.

Human exposure to electric and magnetic fields from RF sealers and dielectric heaters. IEEE Eng Med Biol 1999; 18(1):88–90.

Biological effects of electric and magnetic fields from video display terminals. IEEE Eng Med Biol 1997; 16(3):87–92.

Invited Presentations

Erdreich L. Epidemiologic methods in analysis of scientific issues in the courtroom. Acoustical Society of American 146th Meeting, Austin, TX, November 2003.

Erdreich, LS. Epidemiology of radio frequency energy exposure and health. Armed Forces Epidemiology Board, San Diego, CA, February 2002.

Erdreich, L. Epidemiology: What it can tell you and what it can't? Short Course on Electromagnetic Energy. RF Safety: Science, Compliance and Communications. Co-sponsored by the Electromagnetic Energy Association and the Center for Environmental Radiation Toxicology of the University of Texas Health Sciences Center at San Antonio, San Antonio, TX, January 2000.

Erdreich L. What are the policy issues? Short Course on Electromagnetic Energy. RF Safety: Science, Compliance and Communications. Co-sponsored by the Electromagnetic Energy Association and the Center for Environmental Radiation Toxicology of the University of Texas Health Sciences Center at San Antonio, San Antonio, TX, January 2000.

Erdreich LS, Moulder JE. Cell phones and cancer: An update on the evidence for a connection. 1st International Medical Scientific Congress "Non-Ionizing High-Frequency EM Radiations: Researching the Epidemiological and Clinical Evidences" Sponsored by the University of L'Aquila and the Italian Society of Medical Statistics, Rome, Italy, November 1999.

Erdreich J, Erdreich LS. Human vibration standards: do we ask the right questions? 133rd Meeting of the Acoustical Society of America, Pennsylvania State University, State College, PA, June 1997.

Erdreich L. Epidemiologic studies of EMF. The EMF Regulation and Litigation Institute: Anticipating, Avoiding and Managing EMF Claims, Business Development Associates, Inc., Washington, DC, April 1996.

Erdreich L. Health issues and radiofrequency devices. Defining the role of local government: antennas, towers, and satellite dishes. Pace University School of Law, White Plains, NY, March 1996.

Erdreich L, Klauenberg BJ. Recent developments in non-cancer risk assessment and optimal use of radiofrequency data. Michaelson Research Conference, Colorado Springs, CO, August 1996.

Erdreich L. Overview of EMF epidemiological research; update. Electric and Magnetic Fields: Science and Policy Update, Sponsored by Northwestern University, University of Illinois, IIT Research Institute and Commonwealth Edison. Chicago, IL, October 1995.

Erdreich L. EMF and residential and occupational health risks. Conference on Electromagnetic Fields—Legal and Technical Update of the Bar of the City of New York and Society for Risk Analysis, September 1995.

Erdreich LS. The two newest studies: what questions should we ask? EMF Seminar: Focus on Research, Electric Power Research Institute, March 1994.

Erdreich LS. Epidemiology in developing exposure standards: science and policy roles. Electromagnetic Energy Association Annual Meeting and Symposium, May 1994.

Erdreich LS. Research: answers or more questions? 9th Annual Meeting and Symposium of the Electromagnetic Energy Policy Alliance, Alexandria, VA, May 1993.

Erdreich LS. EMF research: Summarizing the evidence. Symposium on Possible Health Effects of EMFs Associated with Electric Power Generation and Distribution. Iowa Academy of Science, Des Moines, IA, February 1992.

Erdreich LS. EMF health issues briefing. Residential and Small Commercial Services Seminar, Electric Council of New England, Manchester, NH, May 1991.

Erdreich LS. State policy options for managing extremely low frequency electromagnetic fields. Conference on Health Effects of High Voltage Power Lines, Center for Environmental Health, University of Connecticut, West Hartford, CT, June 1990.

Erdreich LS. Current public health issues in EMF. University of Oklahoma College of Public Health Alumni Day, Oklahoma City, OK, October 1989.

Thorslund T, Erdreich LS, Hegner R. Testing hypotheses of mechanism using epidemiologic data. Presented at the International Symposium on Chemical Mixtures: Risk Assessment and Management, Cincinnati, OH, June 1988.

Erdreich LS, Sonich C. Hypersusceptible subgroups of the population: determining numbers at risk. Presented at Satellite Meeting of the Environmental Mutagen Society, March 1983.

Prior Experience

Bailey Research Associates, Principal Scientist, 1991–1999
Environmental Research Information (ERI), Senior Research Associate, 1989–1991
Clement Associates, Senior Associate, 1987–1989
U.S. Environmental Protection Agency, Office of Research and Development, Methods Evaluation and Development Staff, Group Leader, 1984–1987
U.S. Environmental Protection Agency, Office of Research and Development, Environmental Criteria and Assessment Office, Senior Epidemiologist, 1980–1984

Current Academic Appointments

- Adjunct Associate Professor, Department of Environmental and Community Medicine, Robert Wood Johnson Medical School, University of Medicine & Dentistry of New Jersey, 1993–present

Teaching Appointments

- Lecturer, Short Course on Electromagnetic Energy: University of Texas Health Science Center, Center for Environmental Radiation Toxicology, San Antonio, Texas (1998, 2000
- Adjunct Assistant Professor, Institute of Environmental Health, University of Cincinnati Medical Center, 1982–1987
- Teaching Assistant, Department of Biostatistics and Epidemiology, University of Oklahoma School of Public Health, 1975–1979
- Teacher of Biology and Chemistry, Ann Arbor, MI; Philadelphia, PA; Montgomery County, MD, 1964–1972

Advisory Positions

- Institute of Electrical and Electronics Engineers (IEEE), 1992–present
  - Chair, Epidemiology Workgroup of Subcommittee 4 Safety Level with Respect to Human Exposure to Radiofrequency Fields (3 kHz–33 GHz), for the Standards Coordinating Committee 28 Non-Ionizing Radiation, 1992–2000
  - Member, Standards Coordinating Committee 28 Non-Ionizing Radiation, and Subcommittee 3 Safety Levels with Respect to Human Exposure (0-3 kHz), Institute of Electrical and Electronics Engineers (IEEE)
- Member of the Committee on Man and Radiation (COMAR) of the Engineering in Medicine and Biology Society, 1995–2000; 2002–2007
- Chair of the Expert Panel to advise the Massachusetts Department of Public Health, Bureau of Environmental Health Assessment regarding radio-frequency exposure from the Air Force Space Command's PAVE PAWS radar system on Cape Cod, 1998–1999
- Member of a panel convened by Health Canada to review a toxicity assessment of a priority substance under the Canadian Environmental Protection Act (1,3-butadiene), 1998
- Served on peer review panels for risk assessments for chromium, cadmium, acrylamide, and for methylmercury, convened by Toxicology Excellence for Risk Assessment, a non-profit, 501(c)(3) corporation, 1997–1998

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- Contributor to NATO Standardization Agreement: Evaluation and Control of Personnel Exposure to Radio-Frequency Fields - 3 kHz to 300 GHz, 1995
- At EPA, managed and co-authored the agency's first draft Interim Methods for Development of Inhalation Reference Doses, 1987–1988
- Member of U.S. EPA's work group to develop Oral Reference Doses for non-carcinogens, available on Integrated Risk Information System (IRIS), 1986–1987
- Member of EPA's Risk Assessment Forum's Technical Panel: Developing a Scientific Policy for Thyroid Neoplasia, 1986–1987
- Panel member for an EPA workshop in weight of evidence/hazard identification for non-cancer health endpoints, 1986–1987
- Co-Chair of EPA's agency-wide committee to write Risk Assessment Guidelines for Chemical Mixtures, 1985–1986
- Program Committee to plan a national symposium Epidemiology and Health Risk Assessment, sponsored by private, governmental and academic institutions, 1984–1985
- Member, Environmental Advisory Council to the City of Cincinnati. Appointed to the Executive Committee, 1986, 1984–1987
- Planned and managed an international symposium on "Advances in Risk Assessment of Systematic Toxicants and Chemical Mixtures," held October 1984; co-edited the proceedings, 1983–1984
- Chairperson for two international symposia: "Risk Assessment for Multiple Chemical Exposures," sponsored by EPA, 1981–1983

William L. Kenny, CPWS, ASLA
Principal

WILLIAM KENNY
ASSOCIATES LLC

Mr. William L. Kenny has more than 20 years of experience in site and environmental planning and construction. Mr. Kenny is a Certified Professional Wetland Scientist, a Soil Scientist, Certified Organic Land Care Professional and Registered Landscape Architect. Prior to establishing William Kenny Associates, Mr. Kenny was a senior project manager at Triton Environmental, Inc of Guilford, CT and a project manager at Jay Fain & Associates of Southport, CT; Divney Tung Schwalbe, LLP of White Plains, NY; Towers/Golde, PC of New Haven, CT; and Winter Ridge Nursery of Hamden, CT.

Education

University of Massachusetts, 1993-1995. Post graduate studies in soil science.

Yale University, MEM, 1992. Masters Degree in Environmental Management. Concentration and thesis work in ecosystem ecology, hydrology, and restoration.

University of Connecticut, BS, 1987. Bachelor of Science Degree in Landscape Design.

Representative Project Experience

Wetland Delineation, Assessment, and Impact Mitigation
Mr. Kenny has extensive experience with tidal and inland wetland and watercourse delineation, assessment, and impact mitigation projects and obtaining related regulatory approvals as a project scientist and manager. Project work has included approval and construction documents for residential, commercial, recreational, and institutional developments. Specific tasks Mr. Kenny has completed include: (1) wetland delineations and functional assessments in Connecticut and New York in accordance with federal, state, and local requirements; (2) development planning and design consultation to minimize wetland impacts; (3) impact assessments and wetland construction mitigation designs; and (4) hydrologic evaluations for inland and tidal wetland restoration and creation projects.

Water Resource Management
Mr. Kenny has a wide range of experience with water resource management projects and attaining related development approvals and permits as a project manager and scientist. Project work has included stormwater pollution prevention plan preparation in accordance with New York City, New York State, and Connecticut requirements; stormwater treatment Best Management Practices design; stormwater pollutant loading and BMP effectiveness modeling; groundwater modeling for subsurface sanitary disposal systems, and erosion and

sediment control plan preparation for residential, commercial, recreational, and institutional developments.

Ecological Inventories and Impact Assessments

Mr. Kenny has broad experience with preparing ecological inventories and impact assessments and attaining related development approvals and permits as a project manager and scientist. Project work included Environmental Impact Statement (EIS) preparation to fulfill New York State requirements. Specific management or technical responsibilities included mapping and assessing existing conditions and potential impacts to bedrock and surficial geology, soils, vegetative communities, wetlands, surface and groundwater bodies, and wildlife and their habitat.

Site Planning and Landscape Architecture

Mr. Kenny has more than 20 years experience with site planning and landscape architectural projects either as the primary designer and project manager, a collaborating design professional, or construction contractor. Mr. Kenny has design and management experience with all project phases: from master planning and conceptual design to construction and bid document preparation and construction observation.

Regulatory Agency Consulting

Mr. Kenny has been retained by Connecticut municipalities to conduct analyses and prepare reports regarding inland wetlands and watercourses permit applications to be heard by local agencies. This work includes the review of wetland boundary delineations.

Professional Training

Organic Land Care
CT DEP Master Wildlife Conservationist Program
Pond Management
Wetland Construction
Wetland Functional Assessment Techniques
Urban Stormwater Management Practices
Erosion and Sediment Control
Soil Sciences
Computer Aided Drafting

Stephen J. Rourke
Vice President, System Planning

January 7, 2009

Mr. Allen W. Scarfone
Mr. Paul Liang
Northeast Utilities Service Company
P.O. Box 270
Hartford, CT 06141-0270

Subject: Sherwood 18P Substation – NU-08-T76

Dear Messrs. Scarfone and Liang:

ISO New England has determined pursuant to Section I.3.9 of the ISO New England Inc. Transmission, Markets and Services Tariff ("ISO Tariff") that implementation of the Participant's Proposed Plan identified in the following application will not have a significant adverse effect on the stability, reliability or operating characteristics of the Northeast Utilities System Companies' ("NU") transmission facilities, the transmission facilities of another Transmission Owner, or the system of a Market Participant, subject to satisfaction of conditions identified below with respect thereto:

- NU's Transmission Facilities Proposed Plan Application NU-08-T76 to construct a new 115/13.8 kV Sherwood 18P Substation to be located in Westport, Connecticut ("the Project"), as detailed in Mr. Paul Liang's December 9, 2008 transmittal to Mr. Donald Gates, Chairman, NEPOOL Reliability Committee. The Project will provide a permanent solution for the failed Green Farms 22W Substation transformer and transfer up to 44 MVA of load in aggregate from the Compo, Norwalk, Sasco Creek and Weston Substations. The proposed in-service date for Sherwood 18P Substation is April 2011.

As described in the Proposed Plan Application, the Project will include the following additions and modifications:

1. Looping of the 115 kV #1890 Ely Ave-Sasco Creek Line into the new substation to supply two new 36/48/60 MVA 115/13.8 kV two-winding transformers.
2. The two transformers will be connected to a 115 kV bus having a 115 kV bus tie circuit breaker with ratings of 2,000 A continuous and 40 kA interrupting capability.
3. Additionally, two high-speed protection groups will be installed for protection of the resulting three-terminal Sherwood-Norwalk Harbor-Glenbrook Line.

A determination under Section I.3.9 of the ISO Tariff is limited to a review of the reliability impacts of a proposed project as submitted by Participants and does not constitute an approval of a proposed project under any other provisions of the ISO Tariff.

Sincerely,

Stephen J. Rourke
Vice President, System Planning

cc: Proposed Plan Applications

ISO New England Inc.
One Sullivan Road, Holyoke, MA 01040-2841
www.iso-ne.com T 413 535 4306 F 413 540 4203

PHOTOGRAPHIC SIMULATION

VIEW 2

THIS IS THE VIEW FROM BEACHSIDE AVENUE, ADJACENT TO THE ENTRANCE TO GREENS FARMS ACADEMY, LOOKING TO THE NORTHWEST, ACROSS THE SALT MARCH AND TOWARDS THE INTERSECTION OF MAPLE LANE AND NEW CREEK ROAD, WITH OUR SITE IN THE DISTANCE.

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1,062 FEET +/-

Connecticut Light & Power

VHB

WESTPORT, CONNECTICUT

GORDON F. JOSELOFF
First Selectman

December 10, 2009

Mr. Christopher Swan
Director - Municipal Relations,
Siting and Permitting
Northeast Utilities Service Company
9 Tindall Avenue
Norwalk, CT 06851

Re: Sherwood Substation, Westport
Municipal Consultation Filing

Dear Chris:

This letter is in response to the Municipal Consultation Filing for the proposed Sherwood Substation, filed with the Town of Westport. The town supports the Sherwood Substation to be located at 6 New Creek Road, in the manner proposed by CL&P.

Over nearly the past four years, CL&P representatives have had discussions with town officials regarding the reliability of the electric service provided to customers in Westport, and in particular, in the Greens Farms area. The town has become aware of the temporary measures undertaken by CL&P at area substations. We understand that a more permanent solution is essential to ensure that service to CL&P's customers is reliable and that capacity is available to meet future needs in Westport.

We are pleased that CL&P is proposing the Sherwood Substation, a new state-of-the-art facility, to serve Westport customers and that it will replace the aging Greens Farms Substation and the temporary measures in place, including the transformer at Sasco Creek Substation.

CL&P has provided to the town detailed information and plans for the substation design, which has been reviewed by Westport's Conservation Commission, Planning and Zoning Commission and town staff from various departments, including emergency responders. The town has furnished comments to CL&P at every stage of the process and is satisfied with CL&P's responses and plan changes.

We look forward to continuing our dialogue with CL&P as the Sherwood Substation proceeds forward through the Connecticut Siting Council application process.

Sincerely,

Gordon F. Joseloff
First Selectman

GFJ:ps

{W1765403}

Stamford Government Center
888 Washington Boulevard, 3rd Floor
Stamford, Connecticut 06901
203 316 5190 Phone
203 316 4995 Fax
www.swrpa.org

SWRPA

March 2, 2010

Mr. Kris Aberg
CL&P, Northeast Utilities System
107 Selden Street
Berlin, CT 06037

RE: Application to the Connecticut Siting Council for a Certificate of Environmental Compatibility and Public Need-Sherwood Station, Westport

Dear Mr. Aberg:

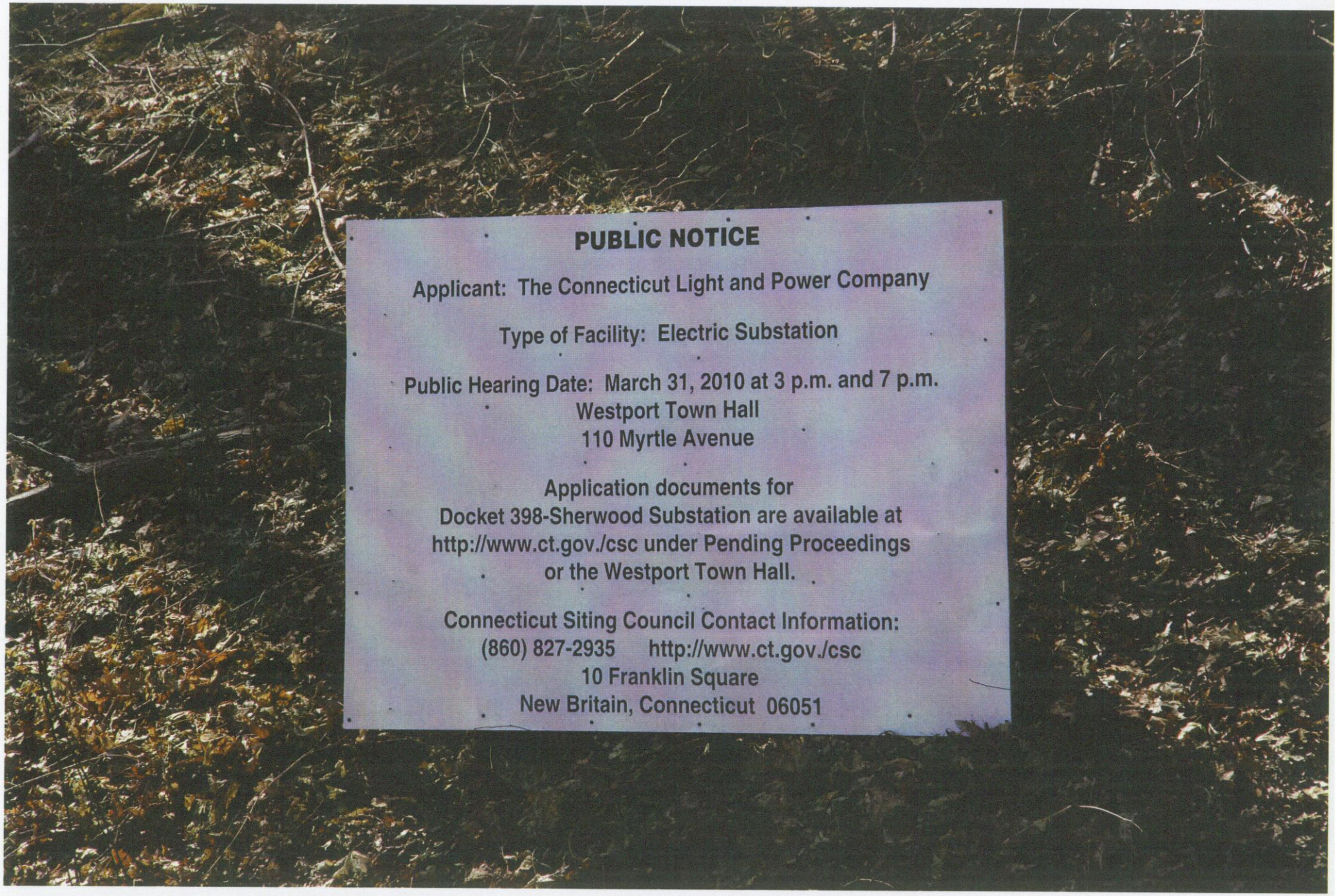
We are in receipt of the above referenced application. It is evident that your office has worked closely with the Town of Westport throughout the preliminary planning process for the proposed substation. Furthermore, we note the other agency approvals and the fact that our advisory referrals process does not include this type of application.

Thank you for notifying this Agency of the application process.

Sincerely,

Floyd Lapp
Executive Director

cc: Mr. Gordon F. Joseloff, First Selectman, Town of Westport


PUBLIC NOTICE
Applicant: The Connecticut Light and Power Company
Type of Facility: Electric Substation
Public Hearing Date: March 31, 2010 at 3 p.m. and 7 p.m.
Westport Town Hall
110 Myrtle Avenue
Application documents for
Docket 398-Sherwood Substation are available at
http://www.ct.gov./csc under Pending Proceedings
or the Westport Town Hall.
Connecticut Siting Council Contact Information:
(860) 827-2935 http://www.ct.gov./csc
10 Franklin Square
New Britain, Connecticut 06051