STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Eversource Energy Application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a 115-kilovolt (kV) bulk substation located at 290 Railroad Avenue, Greenwich, Connecticut, and two 115-kV underground transmission circuits extending approximately 2.3 miles between the proposed substation and the existing Cos Cob Substation, Greenwich, Connecticut, and related substation improvements.	DOCKET NO. 461 August 25, 2015

Resumes of The Connecticut Light and Power Company
Doing Business as Eversource Energy Witnesses Filing Direct Testimony
and Potential Additional Witnesses

Witnesses: Kenneth B. Bowes
Raymond Gagnon, P.E.
Jacqueline A. Gardell

Potential Additional Witnesses:

1. John C. Case
2. Robert J. Russo, P.E.
3. Salvatore Giuliano
4. David A. Ferrante, P.E.
5. Joseph R. Swift
6. Gabor Mezei, M.D., Ph.D.
7. Leslie Hinzman

BIOGRAPHICAL INFORMATION

Kenneth B. Bowes

Kenneth B. Bowes is Vice President – Engineering for Eversource Energy ("the Company"). Mr. Bowes is responsible for engineering activities for the electric distribution system including: distribution planning, distribution engineering and design, substation engineering, protection and control engineering, telecommunications engineering, and the geographic information systems for electric and gas operations. Mr. Bowes establishes the reliability, asset management and system resiliency strategies for the annual program development and the five year capital program. He also manages the distributed generation, micro-grid, new technology and R&D activities for the Company. Additionally, he executes the System Resiliency Program and the Stamford and Greenwich Infrastructure Improvement Projects. Mr. Bowes serves as the lead witness for regulatory proceedings and serves as the Connecticut Incident Commander for system restoration activities.

A native of New Hampshire, Bowes joined Eversource in July 1984 in the System Test department. He has held several engineering and management positions in the Energy Delivery organizations becoming the Director – Transmission and Distribution Maintenance in 1999, Director – Transmission Construction, Test, and Maintenance in 2002, Director – Transmission Projects in 2004, Vice President – Customer Operations in 2008, and Vice President of Energy Delivery in 2010.

Bowes earned a Bachelor of Electrical Engineering degree from the University of New Hampshire and a Master's Degree in Electrical Engineering from Rensselaer Polytechnic Institute. Bowes is the past Chairman of the Edison Electric Institute's Transmission Committee and presently serves on the EEI Transmission and EEI Security Committees.

PUBLICATIONS AND PREVIOUS TESTIMONY

Kenneth B. Bowes

Publications:

- Bowes K., Beehler M., "Defining the Value of the Grid", IEEE, The Sixth Annual IEEE PES Conference on Innovative Smart Grid Technology, February, 2015
- Bowes K., Hogan J., "CL&P Explores Sustainable Solutions", Transmission & Distribution World Magazine, January 2012, Volume 64, Number 1, pp. 24-31.
- IEEE Working Group on Nonsinusoidal Situations, "Practical Definitions for Powers in Systems with Nonsinusoidal Waveforms and Unbalanced Loads: A Discussion", 95 WM 040-6 PWRD, 1995
- IEEE Working Group on Nonsinusoidal Situations, "A Survey of North American Electric Utility Concerns Regarding Nonsinusoidal Waveforms", 95 WM 036-4 PWRD, 1995
- Bowes, K. B., "The Effects of Temporary Overvoltage (TOV) on Consumer Products", POWER QUALITY '91 USA, Official Proceedings of the Third International Power Quality Conference, Universal City, CA, September 22-27, 1991
- Bowes, K. B., Lorusso, A., "Harmonic and Power Characteristics of Electronic Ballasts for Fluorescent Lighting Applications", POWER QUALITY '90 USA, Official Proceedings of the Second International Power Quality ASD Conference, Philadelphia, PA, October 21, 29, 1990
- Anderson, L.M., Bowes, K.B., "The Effects of Power-line Disturbances on Consumer Electronic Equipment", IEEE Transactions on Power Delivery, Volume 5, Number 2, pp. 1062-65, April 1990
- Bowes, K. B., "The Effects of Power-line Disturbances on Electronic Products", POWER QUALITY '89 USA, Official Proceedings of the First International Power Quality Conference, Long Beach, CA, October 15-20-1989 (Also edited and reprinted in Power Quality Magazine - Premier V Issue)

Mr. Bowes has testified extensively in many cases in a variety of forums, including;

- Connecticut Siting Council Docket No. 292 – The Connecticut Light & Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction and operation of 8.7 miles of new underground 115-kilovolt electric transmission cables extending from CL&P's existing Glenbrook Substation in the City of Stamford, through the Town of Darien, to CL&P's existing Norwalk Substation in the City of Norwalk;

- Connecticut Siting Council Docket No. 302 – Northeast Utilities Service Company, on behalf of The Connecticut Light and Power Company (CL&P) application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of the proposed Killingly 2G Substation at 193 Tracy Road and 227-257 Park Road in the Towns of Killingly and Putnam, and the proposed connections to the existing #347 345-kV line and the existing #1607 and #1505 115-kV lines;
- Connecticut Siting Council Docket No. 311 – Northeast Utilities Service Company, on behalf of The Connecticut Light and Power Company (CL&P) Application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of the proposed Wilton 35A Substation at 53 Old Danbury Road in the Town of Wilton;
- Connecticut Siting Council Docket No. 326 – The Connecticut Light and Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a proposed substation located at Stepstone Hill Road, Guilford, Connecticut; and
- Connecticut Siting Council Docket No. 327 – The Connecticut Light and Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a proposed substation located off Commerce Drive, Oxford, Connecticut.
- Connecticut Siting Council Docket No. 352 – The Connecticut Light and Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a proposed substation located at 264 Rood Avenue and 25 Shelley Avenue, Windsor, Connecticut;
- Commonwealth of Massachusetts, Energy Facilities Siting Board, EFSB 07-4/D.P.U. 07-35/07-36, Petition of Russell Biomass, LLC. and Western Massachusetts Electric Company for a proposed project consisting of (1) an approximately 5.3-mile, 115 kilovolt transmission line from the proposed Russell Biomass generating facility in Russell to Western Massachusetts Electric Company's ("WMECo") transmission system in Westfield, and (2) a new switching station facility in Westfield.
- Connecticut Superior Court, Allyn vs. CL&P, CV-96-0109273-S;
- Connecticut Superior Court, Scanlon vs. CL&P, CV-96-0536911S;
- Connecticut Superior Court, Segalla vs. CL&P, X-04-CV-98-0117225S;
- DSV MR. SONNY: Damage to submarine electric cables in Long Island Sound. Complex, multi-party limitation of liability proceeding in U.S. District Court for the Eastern District of New York. Settled at mediation;
- Connecticut DPUC Docket No. 94-05-35 - DPUC Investigation Into Stray Voltage On Dairy Farms;
- Connecticut DPUC Docket No. 08-02-06, DPUC Investigation into The Connecticut Light and Power Company's Billing Issues;
- Connecticut DPUC Docket No. 09-12-05 - Application of The Connecticut Light and Power Company to Amend Its Rate Schedules;
- Connecticut DPUC Docket No. 10-03-08 – Investigation of the Service Response and Communications of The Connecticut Light and Power Company (CL&P) and The United

Illuminating Company (UI) Following the Outages from the Severe Weather over the Period of March 12 through March 14, 2010;

- Connecticut DPUC Docket No. 10-05-09 - DPUC Investigation of the Safety of the Connecticut Light and Power Company Underground Electric Distribution System in Waterbury;
- Connecticut PURA Docket No. 11-03-07, PURA Investigation Into The Appointment Of A Third Party Statewide Utility Telephone Pole Administrator For The State Of Connecticut; and,
- Connecticut PURA Docket No. 11-09-09 - PURA Investigation of Public Service Companies' Response to 2011 Storms;
- Connecticut PURA Docket No. 12-01-07 – Application for Approval of Holding Company Transaction Involving Northeast Utilities and NSTAR;
- Connecticut PURA Docket No. 12-01-10 - Investigation into the Tree Trimming Practices of CT Utility Companies;
- Connecticut PURA Docket No. 12-06-09 - PURA Establishment of Industry Performance Standards for Electric and Gas Companies;
- Connecticut PURA Docket No. 12-07-06RE01 – Application of the Connecticut Light and Power Company For Approval of its System Resiliency Plan – Expanded Plan;
- Connecticut PURA Docket No. 12-06-12 – PURA Investigation of the Feasibility of the Establishment of a Program to Reimburse Residential Customers for Spoilage Loss of Food items or Refrigerated Medications Caused by a Lack of Refrigeration During Electric Service Outages;
- Connecticut PURA Docket No. 12-09-13 – PURA Investigation of the Best Practices of Other State Public Utility Commissions, Public Utility Companies and Municipal Utilities' Emergency Management Best Practices;
- Connecticut PURA Docket No. 12-11-07, PURA Investigation into the Performance of Connecticut's Electric Distribution Companies and Gas Companies in Restoring Service Following Storm Sandy;
- Connecticut PURA Docket No. 13-03-23, Petition of the Connecticut Light and Power Company for Approval to Recover its 2011-2012 Major Storm Costs;
- Connecticut PURA Docket No. 14-05-06 – Application of the Connecticut Light and Power Company To Amend Rate Schedules;
- Connecticut PURA Docket No. 14-07-18 – PURA Report to the General Assembly Concerning its Review of Each Electric Distribution Company's Vegetation Management Practices;
- Connecticut PURA Docket No. 15-01-27 - Attorney General and Office of Consumer Counsel Request for Investigation of Northeast Utilities Facilities Closures in Connecticut

RAYMOND GAGNON

Director Transmission Projects
Eversource

56 Prospect Street
Hartford, CT 06103

BACKGROUND

Mr. Gagnon is the Director Transmission Projects responsible for project management of transmission projects in the three-state service area for Eversource. Mr Gagnon has worked for Eversource for 30 years in various positions throughout his career.

EXPERIENCE

2008 – Present Eversource Hartford/Berlin, CT
Director Transmission Projects

- Responsible for project management of transmission projects in the three-state service area for Eversource. 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 Eversource (formally 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, engineering, construction, follow-up reporting, and Closeout. Responsible for transmission substation and transmission line construction projects.

1995–2002 Eversource (formally Northeast Utilities) Berlin, CT
Senior Engineer

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

1988-1995 Eversource (formally Northeast Utilities) Meriden, CT

Engineer

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

1984–1987 Eversource (formally Northeast Utilities) Berlin, & Meriden, CT

Associate/Assistant Engineer

- Worked in the System Test Department performing engineering assignments in support of 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)

Jacqueline A. Gardell

Eversource Energy Service Company 56 Prospect Street Hartford, CT 06103

PROFILE

Ms. Gardell has over twenty eight years of diversified experiences in project management, regulatory filings, asset management, T&D operations, design, development and analysis of electrical transmission and distribution systems.

PROFESSIONAL EXPERIENCE

Eversource Energy Service Company / Northeast Utilities Service Co.,
Hartford/Berlin, CT 2009 - Present
Transmission Project Manager

Greenwich Substation
Transmission Project Manager to site and build a new 115-kV GIS substation and two new 115-kV transmission lines in the Town of Greenwich. Responsible to obtain siting approval and to complete construction of the project.

Cost Allocation Regulatory Filings and Other Regulatory Requests

Greater Springfield Reliability 345-kV Project
Transmission Project Manager for the Transmission Cost Allocation (TCA) application for the Greater Springfield Reliability Project (GSRP). GSRP was a large multi-state transmission project that required a comprehensive application to be filed with ISO-NE to seek regional cost recovery for the project. Led the application process, managed planning engineers, project managers, Cost and Scheduling analysts and various other support groups that included internal and contractor personnel. Developed and presented the TCA application for the ISO-NE Reliability Committee review.

Cost Allocation Regulatory Filings for Multiple Transmission Projects across Three States
Managed, presented and explained multiple transmission project cost allocation applications to ISO-NE.

FERC Audits and FERC Filings
Transmission Project Manager for supporting FERC audits and FERC filings.

Northeast Utilities Service Co., Berlin, CT 2006 – 2009
Middletown – Norwalk 345-kV Project Manager

Transmission Project Manager for the Middletown – Norwalk (M-N) 345-kV Project. Responsible for creating an effective working relationship between Northeast Utilities Service Co., United Illuminating, the M-N Contractor Team,. Managed the development of ISO-NE cost allocation application for the M-N Project. This project was a joint effort between CL&P and United Illuminating and a joint application was brought to ISO-NE for regional cost allocation.

Northeast Utilities Service Co., Berlin, CT 2004 - 2006
Manager – Transmission Asset Management

Manager for Transmission Asset Management for all Northeast Utilities system transmission assets throughout Connecticut, Massachusetts and New Hampshire. Responsible for the development of the 5-year transmission capital budget. Developed comprehensive rationale for prioritization and ranking using an asset investment model. Supported the capital budget process. Ensured overall strategy for the transmission system from a planning, operations, maintenance and financial standpoint. Managed reliability metrics for goal reporting and the analysis for performance improvement. Proactively managed benchmarking efforts, asset management improvements throughout the transmission organization. Managed and drove the completion of Summer Capacity Action Items that improved the performance of the transmission system. Managed generation interconnections with experienced in FERC interconnection agreements, procedures, and the execution of such agreements with ISO-NE and generators.

Northeast Utilities Service Co., Berlin, CT 2002 - 2004
Connecticut and Massachusetts Transmission Project Manager

Project Manager for large Transmission and Substation projects throughout Connecticut and Massachusetts. Responsible for cost, schedules and risk management. Transmission Project Manager for Southwest Connecticut Summer Capacity. Experienced in capacity situations, CONVEX and distribution operations.

The Connecticut Light and Power Company, Hartford, CT 2000 - 2002
Supervisor Substation & Equipment

Supervisor for a fifteen-employee department. Responsible for day-to-day routine maintenance as well as resolving substation events. Promoted on the job safety, proper personal protective equipment (PPE) and proper handling of hazardous waste.

The Connecticut Light and Power Company - Multiple Engineering Positions

Asset Management – Senior Engineer/Senior Circuit Owner – Cheshire, CT 1998 – 2000

Engineering team leader responsible for reliability and loading of an older distribution system with a densely concentrated commercial, industrial, and residential customer base. Designed and developed improvements on both overhead and underground distribution systems with multiple voltages.

Regional Systems Engineering – Engineer - Hartford, CT 1992 – 1998

Project manager for large capital distribution projects in multiple field offices.

Customer Engineering and Marketing Services – Associate Consultant - East Hampton, CT 1989 – 1992

Distribution Planning – Assistant Engineer - Meriden, CT 1987 - 1989

EDUCATION

Rensselaer Polytechnic Institute, Hartford, CT
M.S. Management, 1999

Worcester Polytechnic Institute, Worcester, MA
B.S. Electrical Engineering, 1987

CERTIFICATES AND TRAINING

Master's Certificate in Project Management
George Washington University
ESI Project Management Certificate Program

Crisis Project Management
Worcester Polytechnic Institute

GE WorkOut Facilitator
C. A. Schifman Consulting

JOHN C. CASE

42 Warren Glen
Burlington, CT 06013

H: (860) 673-2447
W: (860) 728-4695

PROFESSIONAL EXPERIENCE

Manager Transmission Line, Civil Engineering and Estimating 2014 - Present
Eversource Energy – Hartford, CT

Direct Management of 3 Engineering Departments that including 25 engineers, designers, drafters and estimators with responsibility for all Transmission Line and Civil Engineering capital projects, standards and specification development, construction and maintenance support and new project development (2015 Capital Expenditures of $500M).

Manager – Transmission Estimating 2013 - 2014
Northeast Utilities Service Company - Hartford, CT

Direct Management of a team of 7 estimators with responsibility to generate estimates for all Transmission Projects, including alternatives analysis, bid review and Transmission Cost Allocation filings and life-cycle analysis. Responsibilities include presentations of Projects for regulators. Directly involved in the oversight of estimates and project scope for large area planning studies in the Greater Boston, Southwest Connecticut and Greater Hartford areas.

Lead Project Manager – NEEWS Engineering 2007 - 2013
Northeast Utilities Service Company - Hartford, CT

Responsible for the oversight and management of all aspects of engineering on the New England East-West group of projects. Projects involve significant reliability upgrades in the Southern New England area, totaling an estimated $1.5 billion. This position involved the coordination of the System Planning and Engineering functions to establish the most cost-effective solutions for the project needs, establishing the base estimate for all projects, review of all siting and engineering documents, management and coordination of the engineering effort (internal and consulted), engineering responsibilities in the procurement effort and oversight of the final outage planning and commissioning for the projects.

Project Manager – Transmission Projects 2006 - 2007
Northeast Utilities Service Company - Berlin, CT

Overall management responsibility over all aspects of assigned transmission projects, including schedule, risk analysis and mitigation, siting and permitting, budget, contracting and closeout. Projects ranged in magnitude from $500,000 substation upgrades to $5,000,000 transmission line projects.

Construction Manager – Transmission Construction, Test and Maintenance 2003 - 2006
Connecticut Light and Power Company - Newington, CT

Responsibility for Owner's oversight and management of the construction effort on portions of the Bethel – Norwalk project including contractor coordination, site safety, compliance to specifications and contracts, outage clearance tag holder and change order negotiation. This was a $350,000,000 project to construct a 20+ mile transmission line in Southwest Connecticut. This project involved 345-kV and 115-kV overhead and XLPE underground cable, 345-kV HPFF cable, 3 intermediate 345-kV transition stations and two significant 345-kV GIS substation expansions.

Senior Engineer- Transmission Line and Civil Engineering 1990 - 2003
Northeast Utilities Service Company - Berlin, CT

Project Engineer on a variety of construction projects involving all tasks associated with engineering, design, estimating, securing regulatory approvals, and drafting construction specifications.

EDUCATION

Master of Business Administration May, 1998
University of Connecticut - West Hartford, CT
Bachelor of Science degree in Civil/Environmental Engineering May, 1990
Clarkson University - Potsdam, NY
Associates of Science degree in Engineering Sciences May, 1988
Broome Community College - Binghamton, NY

HONORS AND ACTIVITIES

Major Project Achievements:

- Engineering New Record – Project of the Year Winner; New England
  - Greater Springfield Reliability Project – Engineering Project Manager
- Edision Electrical Institute Award
  - Bethel – Norwalk 345-kV line – Lead Project Engineer, Construction Manager
- Chairman's Award Nominee
  - NEON / NU Fiber optic backbone system – 250 miles fiber optic installation– Lead Project Engineer in CT and MA
- President's Award Winner
  - North Bloomfield – Agawam – Emergency reconductor of 18 miles of 115-kV double-circuit transmission line
- World Construction Record
  - Devon Station Generation - Connect emergency gas turbine generators to system

Robert J. Russo, P.E

55 Cambridge Drive ◆ Cheshire, CT 06410

Phone: (203) 271-1092 ◆ E-mail: robert.russo@eversource.com

Summary:

- Professional engineer for 24 years in the electric utility industry including 19 years of long-term and operational transmission planning experience in Connecticut.
- Manager of the Eversource Energy's Transmission Planning Connecticut Studies Group.
- Eversource Energy's representative on the ISO/TO Study Coordination Group and alternate representative on Northeast Power Coordinating Council's Task Force on System Studies.

Professional Experience and Accomplishments:

Eversource Energy System, Berlin/Hartford, CT

March 2006 to Present: Manager – Transmission Planning

- Perform 345-kV and 115-kV transmission planning studies for Eversource Energy's subsidiary; Connecticut Light & Power Company.
- Develop transmission line and substation equipment reinforcement plans to comply with the North American Reliability Corporation's mandatory transmission planning standards.
- Perform and coordinate system impact studies for merchant generating plants connected to the 345-kV and 115-kV transmission systems.
- Technical mentor to junior staff engineers and engineering technicians.
- Member of ISO/TO Study Coordination Group.
- Eversource Energy's representative on Northeast Power Coordinating Council's Task Force on System Studies.

March 2004 to March 2006: Senior Engineer – Transmission Planning

- Perform 345-kV and 115-kV transmission planning studies for Eversource Energy's subsidiary; Connecticut Light & Power Company.
- Obtain technical and cost allocation approval of transmission planning studies from ISO-NE.
- Eversource Energy's representative on Northeast Power Coordinating Council's Task Force on System Studies

June 2003 to March 2004: Engineering Analysis Team Lead – CONVEX

- Oversee day-to-day activities and work plan for the CONVEX Engineering Analysis Group.
- Perform operational planning studies and develop guidelines which ensure secure and reliable operation of the transmission system including development of thermal and voltage transfer limits.
- Provide technical expertise to System Operations Supervisors, Transmission Planning, and other Transmission Business Unit Engineers.
- Responsible for maintenance of CONVEX Energy Management System engineering applications.
- Member of NEPOOL Voltage Task Force.

July 2001 to June 2003: Senior Engineer – CONVEX

- Perform operational planning studies and develop guidelines which ensure secure and reliable operation of the transmission system including development of thermal and voltage transfer limits.
- Maintained state-estimator solution for use in real-time transmission thermal and voltage analysis.
- Provided technical support to CONVEX System Operations Supervisors, various groups at Eversource Energy, United Illuminating, and ISO-NE.
- Responsible for maintenance of engineering applications related to CONVEX Energy Management System.
- Member of NEPOOL Voltage Task Force.

Professional Experience and Accomplishments:
The United Illuminating Company, Shelton, CT

February 2001 to July 2001: Principal Engineer – Transmission Services

- Responsible for the completion of long range Transmission plans including cost estimates and alternatives.
- Responsible for all UI Company responses to NEPOOL for NERC/NPCC Reliability Compliance Program.
- Member of NEPOOL Reliability Committee
- Member of NEPOOL Planning Process Subcommittee
- Member of NEPOOL Stability Task Force.
- Member of NEPOOL OASIS Working Group
- Member of NEPOOL Voltage Task Force.

April 1997 to February 2001: Lead System Planning Engineer

- Performed thermal and voltage load flow analysis to promote an efficient and economical operation of the transmission and distribution system while ensuring consistency between Transmission and Distribution Operations.
- Assisted Eversource Energy and The Connecticut Valley Exchange (CONVEX) in the development of operating guidelines for operation of Connecticut's bulk transmission system.
- Operated and maintained the Open Access Same Time Information System (OASIS).
- Performed Transmission and Distribution Operations Engineers' responsibilities as needed.
- Performed transmission and distribution fault locating using digital fault recorders and Power Quality Nodes.
- Member of NEPOOL Stability Task Force.
- Member of NEPOOL Voltage Task Force.
- Member of NEPOOL Transmission Maintenance and Outage Coordination (Ad Hoc Committee of the NEPOOL Reliability Committee).
- Member of NEPOOL Information Policy Working Group.
- Member of NEPOOL OASIS Working Group

November 1991 to April 1997: Protection, Control & Metering Engineer

- Project manager and lead engineer of several transmission and distribution protective relaying projects.
- Analyzed protective relay performance resulting from transmission system disturbances.
- Maintained short-circuit database used for fault calculations.

July 1988 to November 1991: Transmission Planning Engineer

- Created seasonal, thermal, and voltage operational guidelines for efficient and economical operation of the Southern Connecticut bulk transmission system.
- Provided electric system transmission operating personnel with guidance when planning outages affecting the Southern Connecticut bulk transmission system.

Professional Affiliations

- Registered Professional Engineer by the State of Connecticut since 1995.
- Received Engineer-In-Training Certificate in 1990.
- IEEE Power Engineering Society Member since 1998.
- IEEE Member since 1988.

Education

- B.S., Electrical Engineering, May 1988, Worcester Polytechnic Institute, Worcester, MA
  Major: Electrical Power Systems.
- Completed a two-year series of seminars covering a wide range of power system engineering topics - seminars taught by Power Technologies, Inc. of Schenectady, NY.

Related Skills

- Extensive working knowledge of PSS/E loadflow and IPLAN software, short-circuit digital transient recorders and their associated software.
- Basic knowledge of SCADA system operation.

SAL GIULIANO

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PROFESSIONAL EXPERIENCE

1985 – present **EVERSOURCE ENERGY, Berlin, CT**

MANAGER – CORPORATE REAL ESTATE *(1994 to present)*

Significant Accomplishments:
$ 82M cumulative gross real estate asset sales.
$ 98M cumulative third party lease revenues.
$ +770 revenue and expense lease agreement portfolio.
$ 15M cumulative tax savings from tax reduction programs.
Conveyed +0.6M square feet of building space reflective corporate optimization.
Integrated real estate portion of corporate M&A activities.
Conveyed largest former Manufactured Gas Plant site (Stamford, CT) for brownfield redevelopment.
Conveyed 1,400 acres to Massachusetts Division of Fishers and Wildlife Protection.
Developed Real Estate Lease Management System for system-wide portfolio management.
Acquired Corporate Headquarters location in Hartford, CT.
Established Eversource Energy Land Trust to hold +1100 acres of conservation land rights.

Serve as lead real estate advisor to corporation. Responsible for directing work activities of corporate real estate function for New England based electric & gas and utility ensuring successful completion corporate objectives and achieving regulatory compliance. Accountable for real estate transaction including: acquisitions, dispositions, leasing and management of utility real estate and telecommunications interests encompassing +5 million square feet of office/industrial buildings and ±42,000 acres of land. Possess keen focus on enhancing portfolio value by optimizing revenues, divesting of underutilized assets, lowering O&M and carrying costs, and leveraging assets for corporate objectives. Develop forecasts, manage budgets, authorize expenditures, and monitor financial progress/results.

Led corporate real estate teams through several merger & acquisition initiatives. Performed due diligence, identified and compared work processes, and implemented best practices. Successfully consolidated Northeast Utilities/Yankee Gas real estate operations. Developed transition strategy for proposed Con Ed/Northeast Utilities merger. Completed divestiture of electric generation plant sites (nuclear, fossil fuel and hydro-electric) achieved $1.3B sales price. Led Northeast Utilities/NSTAR real estate due diligence and integration processes, and implemented one-company vision for 2012 approved corporate merger.

Provide expert witness testimony for legal, regulatory and governmental hearings, capital projects; land use and legislative hearings. Foster and maintain business relationships with corporate real estate professionals, attorneys, consultants and governmental officials.

Direct implementation of highly praised Land Management programs on undeveloped land portfolio, including: public recreation, forest and open space management, wildlife management, and tax abatement initiatives.
Maintain close relationships with Connecticut Department of Energy & Environmental Protection (CTDEEP), the Connecticut Forest & Park Association, and several key open space stakeholder groups. Developed and manage cooperative wildlife management partnerships ensuring compliance with agency focus while balancing core business needs. Successfully created Eversource Energy Land Trust the first public utility land trust in the US holding title to approximately 1,150 acres of land and conservation easements over key open space tracts and sensitive species.

Formulate real estate strategies, business plans and develop and implement process improvements. Built and foster an expert employee workforce focused on team success. Successfully sponsored key employee recognized as Northeast Utilities prestigious Chairman's award recipient.

1981 - 1985 **LAN ASSOCIATES DEVELOPMENT COMPANY, Enfield, CT**

REAL ESTATE DEVELOPMENT REPRESENTATIVE

Responsible for marketing, negotiating, leasing and managing +1.3 million square feet of office and industrial properties in central and northern New Jersey. Analyzed and managed landlord/tenant lease agreements, brokerage listings, joint venture financing partnerships and mortgage commitments. Negotiated and coordinated all aspects of leasehold transactions including tenant improvements, interfacing with legal representatives, architects, engineers, construction managers and subcontractors.

EDUCATION

The University of Connecticut, Storrs Connecticut
Bachelor of Science, Finance, May 1980
Strong concentration in engineering, mathematics and physics.
Northeast Utilities Finance Academy Graduate - 2011

PROFESSIONAL ENHANCEMENT

Extensive formal course work and professional seminars in real estate contract law, landlord/tenant relationships, BOMA standards, appraisals, valuation and investment analysis, construction management, cost estimating and employee management.

Licensed Connecticut Real Estate Broker.

Guest panelist for the Real Estate Appraisal Institute. Participate in numerous forums involving building management, industry benchmarking/best practices studies and valuation of utility real estate.

UNITED WAY/COMBINED HEALTH APPEAL LOANED EXECUTIVE

Selected by senior management to represent Northeast Utilities as 1991 and 1992's United Way/Combined Health Appeal Loaned Executive for the Capital Region Campaign.

Selected as Northeast Utilities system-wide campaign manager for 1998 corporate United Way/Combined Health Appeal Campaign (raised $1.4M).

David A. Ferrante, P.E.

25 Esterly Farms Road, Madison, CT 06443

(203) 641-2778
dferrante14@gmail.com

PROFILE

An experienced energy industry professional with a highly successful track record and demonstrated expertise in: distributed generation, renewable energy resources, microgrids, energy efficiency, demand response, building automation, facility management, project management, construction management, and customer service.

EXPERIENCE AND SELECTED ACCOMPLISHMENTS

EVERSOURCE ENERGY (FORMALLY NORTHEAST UTILITIES), Berlin, CT **2005 - Present**

Manager, Distributed Energy Resources and Technology, October 2014 – present

- Managing the Connecticut team facilitating the interconnection distributed generation and renewable generation projects onto the Company's electric distribution grid. Current capacity is over 590 MW and 10,000 customer owned generation. Ranked number 1, by EQ Research, out of 34 utilities in 13 stated, in issuing permission to operate authorizations.
- Technical advisor to the Connecticut Department of Energy and Environmental Department's Bureau of Energy's micro grid team. Integral member of the team that developed the State's multi-year $45 million nationally recognized microgrid program.
- Working on distributed energy resources and technology projects and standards to enable an integrated electric grid.

Supervisor, Distributed Resources, March 2008 – October 2014

- Led the Connecticut team working with developers and customers to facilitate the interconnection distributed generation and renewable generation projects onto the Company's electric distribution grid. Managed over 7,000 customer owned generator interconnection with an installed capacity of 550 MW's. Generation technologies connected include photovoltaic, hydro-electric turbines, wind turbines, fuel cells, internal combustion engines, an gas turbines.
- Facilitated a team of 11 associates on a four month special Customer Billing project to reduce a backlog of over 9,000 account transactions after a system conversion.
- Responsible for developing and implementing the strategy and policies of interconnecting distributed generation to the electric distribution grid owned by the Company in Connecticut.

Senior Contract Administrator, October 2005 – March 2008

- Provided Strategic Sourcing for key construction projects for the Company's natural gas and electric distribution and transmission business units. Successfully sourced an automated metering infrastructure pilot project.
- Initiated competitive bidding and negotiated engineering, procurement, and construction projects valued over $100 million.
- Participated on a special team to develop programs to capture incentive income that now total's over $18 million.

TOTAL FACILITIES MANAGEMENT ASSOCIATES, INC., Reading, MA **2003 – 2005**

A privately owned full service integrated property and facilities maintenance organization with annual gross sales of approximately $5million.

Regional Director, August 2003 – September 2005

- Directed over $500,000 in annual commercial maintenance and construction projects for major retailers and landlords throughout the Northeast Region. Clients include major multi-site chains and national landlords such as: Starbucks, Shaw's, Home Depot, Bright Horizons, The Wilder Companies, Kimco Realty, and United Natural Foods.
- Major responsibilities included: new business development, key account management, project/construction management and operations.

AMES DEPARTMENT STORES, INC., Rocky Hill, CT **1998 - 2003**

Director, Energy / Utilities / Facilities, July 2002 – August 2003

- Managed $85 million energy, HVAC, lighting, utility, and repair and maintenance and capital spend for the Company's retail, distribution and corporate facilities. Directed a staff of six associates.
- Led a staff of four associates while the corporation was in chapter 11 to maintain department store operation until liquidation.
- During liquidation managed the wind down of operations directed repairs, maintenance and building services. Provided property and facilities management to over 240 properties throughout the northeast by managing a network of over 200 contracted service providers.
- Interfaced with the Company's executives to facilitate the sale and transfer of over $500 million worth of assets.

AMES DEPARTMENT STORES, INC., Rocky Hill, CT **1998 - 2003**

Manager, Energy and Utilities, 1998 - 2002

- Managed $70 million energy, HVAC, lighting and utility budgets for 476 stores, four distribution centers, and a corporate facility (over 22 million square feet) in 15 states.
- Implemented energy efficient technologies reducing electric and heating expenses from $1.65 to less than $1.55 per square foot. Developed energy savings plan projected to reduce $8 million in annual operating expenses.
- A retail industry electric restructuring leader as Chairman of the International Retailers Association's - Energy Committee. Responsible for procuring electricity, natural gas, propane, and oil for the corporation from energy suppliers and utility companies.
- Re-engineered the utility bill payment and auditing process saving the company in excess of $150,000 annually.
- Saved over $3.5 million in adequate assurance utility payments by efficient management of our utility bill payment process and by providing expert testimony to corporate counsel.

YANKEE GAS SERVICES, Meriden, CT **1989 - 1998**

Director of Customer Service, 1997 - 1998

- Led team to restructure company operations during first quarter 1998. Streamlined business process resulting in immediate savings of $1 million. Directed customer service field operations consisting of 120 professionals ($10 million in operating and capital expenditures annually).
- Reduced operational expenses by 10% and increased competitive service revenues 14% within the last fiscal year.
- Created new products that added $500K in 1997 in sales to firm's competitive energy service business.

Manager, Customer Measurement, 1995 - 1996

- Managed state-of-the-art energy measurement systems and staff of 16 professionals.
- Implemented reengineering recommendations for customer measurement processes resulting in $300K savings in annual operations.

Business Manager, 1992 - 1995

- Managed three business offices, 15 professionals, credit/collections, customer services, and division budget.
- Managed and directed intensive, team-based, customer-focused re-engineering effort establishing breakthrough business process improvements. This transformation project resulted in over $5 million in annual cost savings.
- Designed processes reducing sales order fulfillment from three weeks to less than one day.
- Performed financial analyses and economic evaluations for new business projects resulting in $5 million in increased service/sales. Calculated rates of return, contribution levels, cash flow projections, and wrote and administered 50 customer agreements per year to manage over $2 million in annual capital expenditures.

Senior Marketing Consultant, 1989 – 1992

- Account Executive and Sales Consultant for a territory of large industrial and commercial clients.
- Developed active and profitable business relationships with key industrial and commercial customers, representing over $30 million in gross annual revenues.
- Established and developed over 100 new commercial and industrial business accounts between 1989 and 1992 to add an additional $12 million in gross annual revenues.
- Provided energy analyses and detailed cost comparisons to key commercial and industrial clients, recommending efficient energy technologies and processes.

NORTHEAST UTILITIES, Berlin, CT **1982 - 1989**

Engineer, 1982-1989

- Launched company-wide gas chromatography odorant testing program. Developed quality control specifications and testing policy, wrote operating procedures, and trained technical personnel.
- Engineer and project manager for construction of natural gas pipeline distribution, pressure regulating, and measurement systems valued over $15 million.
- Led teams of Field Technicians in various assignments through the Company's service territory.
- Supervised safe operation and emergency response of natural gas pipeline systems.

EDUCATION

University of Hartford, Hartford, CT; *MBA*
University of Vermont, Burlington, VT; *BS, Civil Engineering*

REGISTRATIONS

Registered Professional Engineer, State of Connecticut
Chartered Industrial Gas Consultant, AGA/IGT

PROFESSIONAL AFFILIATIONS

Association of Energy Engineers, Senior Member
Connecticut Power and Energy Society, Member
ISO-NE Distributed Generation Forecast Working Committee, Member
Esterly Farms Homeowners Association, Board of Directors, Treasurer, Past Secretary and Past President
International Mass Retailers Association – Energy Committee, Past Chairman and Vice Chairman

PUBLICATIONS

Controlling nitrogen oxide emissions in a combined cycle cogeneration plant, *The Cogeneration Journal*, Vol.6, No.4, Fall 1991, Lilburn, GA

Joseph R. Swift

26 Berkshire Road ♦ Rocky Hill, CT 06067 ♦ (860) 538-6025 ♦ Joseph.R.Swift@gmail.com

Mechanical Engineer and Energy Conservation Specialist with expertise in planning, design and evaluation of conservation programs. Adept at mastering highly technical issues. Able to analyze information and make quick, effective and accurate decisions. Excellent communication, writing, computer and presentation skills. Currently working towards an MS Engineering Degree in Power Systems Management.

PROFESSIONAL EXPERIENCE

Northeast Utilities, 1995 – present

Supervisor, Conservation and Load Management *2005 – present*

- Oversee elements of electric and natural gas energy efficiency programs including planning, reporting, tracking, evaluation, implementation and payment processing.
- Coordinate departmental regulatory activities including written interrogatory and evaluation responses; serve as a Company witness at hearings and meetings with state regulatory staff.
- Oversee the development of annual Energy Efficiency Plans and the energy efficiency section of the Connecticut Integrated Resource Plan.
- Conduct conservation program benefit-cost screening.
- Supervised staff including hiring and conducting of performance reviews.

Senior Program Analyst, Conservation and Load Management *2002 – 2005*

- Designed, planned and implemented conservation programs for CL&P, WMECO and Yankee Gas. Annual budgets up to $180 million.
- Prepared regulatory filings and information requests for regulators, ISO, Siting Council, Energy Efficiency Board, and other outside agencies.
- Played a lead role in development and EPA approval of streamlined Energy Star standards for homes in Connecticut and Massachusetts. *"Connecticut Quality Innovation Award"* as a result of these efforts.
- Lead role in the development of nationally recognized Home Energy Solutions Program in Connecticut.
- Oversaw process, market and impact evaluations in Connecticut and Massachusetts.
- Review, analyze and summarize technical reports including avoided cost studies, market research, impact evaluations, non-electric benefits, measure lives, etc.
- Worked with Yankee Gas and the Energy Efficiency Board to develop and enhance current gas conservation programs based on potential studies and other programs.
- Conducted benefit cost testing for measures and programs using electric system and total resource cost test. Developed streamlined benefit cost model, which was adopted by utilities in four New England states for screening of programs and measures.
- Represented the Company in the regulatory hearings in Connecticut including Conservation and Load Management, Connecticut Siting Council, and Connecticut Integrated Resource Plans.
- Worked with regional utilities to develop common programs, savings assumptions, impact factors and evaluation methodologies.
- Represented company in meetings with other utilities, regulators, EPA, special interest groups, etc.
- Supplied long-range conservation forecasts to the NU Load Forecasting Department, ISO, and Energy Information Association.

Energy Star Home Program Administrator *1997-2002*

- Analyzed and reported on residential energy consumption using energy-use software.
- Addressed efficiency, comfort and safety issues with customers and contractors. Recommended cost effective measures to optimize performance in new homes.
- Inspected and tested homes using Minneapolis blower door, duct blaster and flow hood.

- Designed and taught monthly building workshops at the Smart Living Center.
- Lead role in developing and writing an illustrated new construction manual.

Marketing Support Associate *1995-1997*

- Worked within various departments to develop strategies for trade shows and advertising.
- Managed logistics of company participation in shows, events and sponsorships.
- Designed and fabricated displays, exhibits, graphics and other marketing support collateral.
- Developed and implemented databases to track marketing materials and costs.

Regional School District #17, Higganum CT *1990-1992*

Mathematics Teacher

- Taught all levels of high school math. Assistant Cross-country and Track Coach.

PUBLICATIONS

- ***Energy Efficient Construction Practices for Homes***. Illustrated field guide for energy efficient new construction. 2002
- **"Connecticut's New Construction Program – A New Approach"**, with Colin Odell, ICF Consulting, 15th Annual AESP Conference, December 2004.
- ***UI/CL&P Program Savings Documentation – annual publication, 2006 – 2015.***
- **"Ductless Heat Pumps for Residential Customers in Connecticut"**, with Rebecca Meyer (CL&P), presented at the International Energy Program Evaluation Conference, June 2010.
- **"Cold Climate Ductless Heat Pump Performance"**, with Jane Bugbee (CL&P), for the World Energy Engineering Congress Conference, October 2011.

EDUCATION

Bachelor of Science Mechanical Engineering University of Rhode Island

- Pi Tau Sigma National Honor Society member.
- Two year captain of the cross-country team

Secondary Mathematics Teaching Certification Central Connecticut State University

Graduate Certificate, Power Systems Management Worcester Polytechnic Institute

- 3.7 GPA
- MS Engineering degree expected in 2016.

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Gabor Mezei, M.D., Ph.D.
Senior Managing Scientist

Professional Profile

Dr. Gabor Mezei is a Senior Managing Scientist in Exponent's Health Sciences Center for Epidemiology and Computational Biology. Dr. Mezei has over 25 years of experience in health research including epidemiological studies of both clinical outcomes and environmental and occupational health issues. His current work primarily focuses on health research related to electromagnetic fields (EMF) and asbestos exposures, and wearable electronics. He has considerable experience in conducting complex health assessment and exposure characterization studies related to power frequency and radiofrequency EMF. Previously, at the Electric Power Research Institute, he was responsible for leading a multidisciplinary scientific research program aimed at addressing potential human health effects associated with residential and occupational exposure to power frequency and radiofrequency EMF. Dr. Mezei oversaw studies on potential EMF effects on animal health and welfare and directed occupational health and safety research focusing on injury surveillance, ergonomics evaluations of electric utility workers' tasks, and occupational exposure assessments within the electric power industry. Earlier, as a research associate at the Toronto Western Hospital, University of Toronto, he conducted research studies on adverse clinical outcomes and hospital readmissions following ambulatory surgery.

Dr. Mezei trained as a medical doctor (M.D.) at the Semmelweis University of Medicine in Budapest, Hungary, and as an epidemiologist (Ph.D.) at the School of Public Health of the University of California in Los Angeles (UCLA). He was the recipient of Fogarty and Fulbright Fellowships. He served as an affiliate associate professor in the Department of Environmental and Occupational Health Sciences of the University of Washington in Seattle, Washington, and as a visiting scientist at the Hungarian National Research Institute for Radiobiology and Radiohygiene in Budapest, Hungary. Dr. Mezei lectured at Stanford University, the UCLA School of Public Health, and the Electrotechnical Committee of the Hungarian Academy of Sciences. Dr. Mezei appeared as an EMF health expert in hearings at several state (US) and provincial (Canada) public utility commissions and a parliamentary committee in Ireland.

Dr. Mezei is an author or co-author of over 60 scientific publications and book chapters on topics related to epidemiology of environmental and occupational exposures and chronic diseases (such as cancer and neurodegenerative diseases), adverse clinical outcomes, and environmental exposure assessment.

Academic Credentials and Professional Honors

Ph.D., Epidemiology, University of California, Los Angeles, 1995
M.D., Medicine, Semmelweis University of Medicine, Hungary, 1990

Fogarty Fellowship, 1992–1995
Fulbright Fellowship, 1994–1995

Languages

Hungarian

Academic Appointments

Affiliate Associate Professor, Department of Environmental and Occupational Health Sciences, University of Washington, Seattle, 2010–2014

Peer-Reviewed Scientific Publications

Kheifets L, Crespi C, Hooper C, Oksuzyan S, Cockburn M, Ly T, Mezei G. Epidemiologic study of residential proximity to transmission lines and childhood cancer in California: Description of design, epidemiologic methods and study population. Journal of Exposure Science and Environmental Epidemiology 2015; 25(1):45–52.

Vergara X, Kheifets L, Mezei G. Case-control study of occupational exposure to electric shocks and magnetic fields and mortality from amyotrophic lateral sclerosis in the U.S., 1991–1999. Journal of Exposure Science and Environmental Epidemiology 2015; 25(1):65–71.

Mezei G, Sudan M, Izraeli S, Kheifets L. Epidemiology of childhood leukemia in the presence and absence of Down syndrome. Cancer Epidemiology 2014; 38(5):479–489.

Slusky DA, Does M, Metayer C, Mezei G, Kavet R, Selvin S, Buffler PA. Potential role of selection bias in the association between childhood leukemia and residential magnetic field exposure: a population-based assessment. Cancer Epidemiology 2014; 38(3):307–313.

Souques M, Plante M, Ostiguy G, Goulet D, Deschamps F, Mezei G, Modolo J, Lambrozo J, Legros A. Anecdotal report of magnetophosphene perception in 50 mT 20, 50 and 60 Hz magnetic fields. Radioprotection 2014; 49(1):69–71.

Okokon E, Roivainen P, Kheifets L, Mezei G, Juutilainen J. Indoor transformer stations and ELF magnetic field exposure: use of transformer structural characteristics to improve exposure assessment. Journal of Exposure Science and Environmental Epidemiology 2014; 24(1):100–104.

Frei P, Poulsen AH, Mezei G, Pedersen C, Salem LC, Johansen C, Roosli M, Schuz J. Residential distance to high voltage power lines and risk of neurodegenerative diseases: A Danish population-based case-control study. American Journal of Epidemiology, 2013; 177(9):970–978.

Tell RA, Kavet R, Mezei G. Characterization of radiofrequency field emissions from smart meters. Journal of Exposure Science and Environmental Epidemiology 2013; 23 (5):549–553.

Vergara X, Kheifets L, Oksuzyan S, Cho YS, Mezei G. Occupational exposure to extremely low frequency magnetic fields and neurodegenerative diseases: A meta-analysis. Journal of Occupational and Environmental Medicine 2013; 55(2):135–146.

Oksuzyan S, Crespi CM, Cockburn M, Mezei G, Kheifets L. Birth weight and other perinatal factors and childhood CNS tumors: A case-control study in California. Cancer Epidemiology 2013; 37(4):402–409.

Schüz J, Grell K, Kinsey S, Linet MS, Link MP, Mezei G, Pollock BH, Roman E, Zhang Y, McBride MN, Johansen C, Spix C, Hagihara J, Saito AM, Simpson J, Robison LR, Dockerty JD, Feychting M, Kheifets L, Frederiksen K. Extremely low frequency magnetic fields and survival from childhood acute lymphoblastic leukemia: An international follow up study. Blood Cancer Journal 2012; 2: e98.

Oksuzyan S, Crespi CM, Cockburn M, Mezei G, Kheifets L. Birth weight and other perinatal characteristics and childhood leukemia in California. Cancer Epidemiology 2012; 36: e359–e365.

Tell RA, Sias GG, Vazquez A, Sahl J, Turman JP, Kavet RI, Mezei G. Radiofrequency fields associated with the Itron smart meter. Radiation Protection Dosimetry 2012; 151(1):17–29.

Hicks JB, McCarthy SA, Mezei G, Sayes CM. PM1 particles at coal- and gas-fired power plant work areas. Annals of Occupational Hygiene 2012; 56(2):182–193.

Slusky DA, Mezei G, Metayer C, Selvin S, Von Behren J, Buffler PA. Comparison of racial differences in childhood cancer risk in case-control studies and population-based cancer registries. Cancer Epidemiology 2012; 36(1):36–44.

Roosli M, Jenni D, Kheifets L, Mezei G. Extremely low frequency magnetic field measurements in buildings with transformer stations in Switzerland. Science of the Total Environment 2011; 409(18):3364–3369.

Stone A, Marklin R, Seeley P, Mezei G. A collaborative effort to apply ergonomics to electric utility workers at generating stations. WORK: A Journal of Prevention Assessment and Rehabilitation 2011; 39(2):103–111.

Kheifets L, Ahlbom A, Crespi CM, Feychting M, Johansen C, Monroe J, Murphy M, Oksuzyan S, Preston-Martin S, Roman E, Saito T, Savitz D, Schüz J, Simpson J, Swanson J, Tynes T, Verkasalo P, Mezei G. A pooled analysis of extremely low frequency magnetic fields and childhood brain tumors. American Journal of Epidemiology 2010; 172(7):752–761.

Hareuveny R, Kandel S, Yitzhak NM, Kheifets L, Mezei G. Exposure to 50 Hz magnetic fields in apartment buildings with indoor transformer stations in Israel. Journal of Exposure Science and Environmental Epidemiology 2011; 21(4):365–371.

Fordyce TA, Morimoto L, Coalson J, Kelsh M, Mezei G. Neck injuries among electric utility workers, 1995–2007. Journal of Occupational and Environmental Medicine 2010; 52(4):441–449.

Kheifets L, Ahlbom A, Crespi CM, Draper G, Hagihara J, Lowenthal RM, Mezei G, Oksuzyan S, Schüz J, Swanson J, Tittarelli A, Vinceti M, Wunsch Filho V. Pooled analysis of recent studies of magnetic fields and childhood leukemia. British Journal of Cancer 2010; 103(7):1128–1135.

Mezei G, Gadallah M, Kheifets L. Residential magnetic field exposure and childhood brain cancer: a meta-analysis. Epidemiology 2008; 19(3):424–430.

Mezei G, Spinelli JJ, Wong P, Borugian M, McBride ML. Assessment of selection bias in the Canadian case-control study of residential magnetic field exposure and childhood leukemia. American Journal of Epidemiology 2008; 167(12):1504–1510.

Kheifets L, Monroe J, Vergara X, Mezei G, Afifi AA. Occupational EMF and leukemia and brain cancer: An update to two meta-analyses. Journal of Occupational and Environmental Medicine 2008; 50(6):677–688.

Thuroczy G, Janossy G, Nagy N, Bakos J, Szabo J, Mezei G. Exposure to 50 Hz magnetic fields in apartment buildings with built-in transformer stations in Hungary. Radiation Protection Dosimetry 2008; 131(4):469–473.

Ilonen K, Markkanen A, Mezei G, Juutilainen J. Indoor transformer stations as predictors of residential ELF magnetic field exposure. Bioelectromagnetics 2008; 29(3):213–218.

Kheifets L, Bowman JD, Checkoway H, Feychting M, Harrington M, Kavet R, Marsh G, Mezei G, Renew D, van Wijngaarden E. Future needs of occupational epidemiology of extremely low frequency (ELF) electric and magnetic fields (EMF): Review and recommendations. Occupational and Environmental Medicine 2009; 66(2):72–80.

Li CY, Mezei G, Sung FC, Silva M, Chen PC, Lee PC, Chen LM. Survey of residential extremely-low-frequency magnetic field exposure among children in Taiwan. Environment International 2007; 33(2):233–238.

Li CY, Sung FC, Chen FL, Lee PC, Silva M, Mezei G. Extremely-low-frequency magnetic field exposure of children at schools near high voltage transmission lines. Science of the Total Environment 2007; 376(1–3):151–159.

Mezei G, Benyi M, Muller A. Mobile phone ownership and use among school children in three Hungarian cities. Bioelectromagnetics 2007; 28(4):309–315.

Li CY, Mezei G, Sung FC, Silva M, Lee PC, Chen PC, Chen LM. Assessment of nonresponse bias in a survey of residential magnetic field exposure in Taiwan. Bioelectromagnetics 2007; 28(5):340–348.

Schuz J, Svendsen AL, Linet MS, McBride ML, Roman E, Feychting M, Kheifets L, Lightfoot T, Mezei G, Simpson J, Ahlbom A. Nighttime exposure to electromagnetic fields and childhood leukemia. An extended pooled analysis. American Journal of Epidemiology 2007; 166(3):263–269.

Foliart DE, Mezei G, Iriye R, Silva JM, Ebi KL, Kheifets L, Link MP, Kavet R, Pollock BH. Magnetic field exposure and prognostic factors in childhood leukemia. Bioelectromagnetics 2007; 28(1):69–71.

Foliart DE, Pollock BH, Mezei G, Iriye R, Silva JM, Ebi KL, Kheifets L, Link MP, Kavet R. Magnetic field exposure and long-term survival among children with leukemia. British Journal of Cancer 2006; 94(1):161–164. (Corrigendum. British Journal of Cancer 2006; 94(6):940).

Savitz DA, Herring AH, Mezei G, Evenson KR, Terry JW, Kavet R. Physical activity and magnetic field exposure in pregnancy. Epidemiology 2006; 17(2):222–225.

Mezei G, Kheifets L. Selection bias and its implications for case-control studies: a case study of magnetic field exposure and childhood leukemia. International Journal of Epidemiology 2006; 35(2):397–406.

Poole C, Greenland S, Luetters C, Kelsey JL, Mezei G. Socioeconomic status and childhood leukemia: A review. International Journal of Epidemiology 2006; 35(2):370–384.

Mezei G, Borugian MJ, Spinelli JJ, Wilkins R, Abanto Z, McBride ML. Socioeconomic status and childhood solid tumor and lymphoma incidence in Canada. American Journal of Epidemiology 2006; 164(2):170–175.

Szabo J, Mezei K, Thuroczy G, Mezei G. Occupational 50 Hz magnetic field exposure measurements among female sewing machine operators in Hungary. Bioelectromagnetics 2006; 27(6):451–457.

Kheifets L, Mezei G, Greenland S. Comment concerning "Childhood leukemia and residential magnetic fields: Are pooled analyses more valid than the original studies?" Bioelectromagnetics 2006; 27(8):674–675.

Mezei G, Bracken TD, Senior R, Kavet R. Analyses of magnetic-field peak-exposure summary measures. Journal of Exposure Science and Environmental Epidemiology 2006; 16(6):477–485.

Borugian MJ, Spinelli JJ, Mezei G, Wilkins R, Abanto Z, McBride ML. Childhood leukemia and socioeconomic status in Canada. Epidemiology 2005; 16(4):526–531.

Mezei G, Cher D, Kelsh M, Edinboro C, Chapman P, Kavet R. Occupational magnetic field exposure, cardiovascular disease mortality and potential confounding by smoking. Annals of Epidemiology 2005; 15(8):622–629.

Forssen UM, Mezei G, Nise G, Feychting M. Occupational magnetic field exposure among women in Stockholm County, Sweden. Occupational and Environmental Medicine 2004; 61(7):594–602.

Mezei G, Kavet R. Power frequency magnetic field exposure and childhood leukemia—Epidemiologic evidence and research perspectives. Central European Journal of Occupational and Environmental Medicine 2004; 10(2):115–126.

Tong D, Wong J, Chung F, Friedlander M, Bremang J, Mezei G, Streiner D. Prospective study on incidence and functional impact of transient neurologic symptoms associated with 1% vs 5% hyperbaric lidocaine in short urologic procedures. Anesthesiology 2003; 98(2):485–494.

Higgins PP, Chung F, Mezei G. Postoperative sore throat after ambulatory surgery. British Journal of Anaesthesia 2002; 88(4):582–584.

Foliart DE, Iriye RN, Silva JM, Mezei G, Tarr KJ, Ebi KL. Correlation of year-to-year magnetic field exposure metrics among children in a leukemia survival study. Journal of Exposure Analysis and Environmental Epidemiology 2002; 12(6):441–447.

Sahl J, Mezei G, Kavet R, McMillan A, Silvers A, Sastre A, Kheifets L. Occupational magnetic field exposure and cardiovascular mortality in a cohort of electric utility workers. American Journal of Epidemiology 2002; 156(10):913–918.

Mezei G, Kheifets LI. Clues to the possible viral etiology of childhood leukemia. Technology 2002; 9(1–2):3–14.

Mezei G, Kheifets LI, Nelson LM, Mills KM, Iriye R, Kelsey JL. Household appliance use and residential exposure to 60-Hz magnetic fields. Journal of Exposure Analysis and Environmental Epidemiology 2001; 11(1):41–49.

Chung F, Mezei G. Adverse outcomes in ambulatory anesthesia—What can we improve? Ambulatory Surgery 2000; 8(2):73–78.

Chung F, Mezei G, Tong D. Adverse events in ambulatory surgery: A comparison between elderly and younger patients. Canadian Journal of Anesthesia 1999; 46(4):309–321.

Chung F, Mezei G. Adverse outcomes in ambulatory anesthesia. Canadian Journal of Anesthesia 1999; 46(5/II):R18–34.

Sinclair DR, Chung F, Mezei G. Can postoperative nausea and vomiting be predicted? Anesthesiology 1999; 91(1):109–118.

Chung F, Mezei G, Tong D. Pre-existing medical conditions as predictors of adverse events in day-case surgery. British Journal of Anaesthesia 1999; 83(2):262–270.

Mezei G, Chung F. Return hospital visits and hospital readmissions after ambulatory surgery. Annals of Surgery 1999; 230(5):721–727.

Chung F, Mezei G. Factors contributing to a prolonged stay after ambulatory surgery. Anesthesia & Analgesia 1999; 89(6):1352–1359.

Book Chapters

Mezei G, Vergara X. Adult cancer and extremely low-frequency magnetic fields. In: Röösli M. Epidemiology of Electromagnetic Fields, Chapter 10, pp 161-184. CRC Press, Taylor & Francis Group, Boca Raton, Florida, 2014.

Kheifets L, Mezei G. Extremely low frequency electric and magnetic fields. In: Hunter's Diseases of Occupations, 10th edition. Baxter PJ, Aw TC, Cockcroft A, Durrington, Harrington JM (eds), Chapter 55, pp. 663-674, Hodder Arnold, United Kingdom, 2010.

Mezei G, Kheifets L. Radiofrequency fields. In: Hunter's Diseases of Occupations, 10th edition. Baxter PJ, Aw TC, Cockcroft A, Durrington, Harrington JM (eds), Chapter 56, pp. 675–681, Hodder Arnold, United Kingdom, 2010.

Kheifets L, Mezei G. Extremely low frequency electric and magnetic fields. In: Encyclopedia of Quantitative Risk Assessment. Everitt B, Melnick E (eds), pp. 691–693, John Wiley & Sons, United Kingdom, 2008.

Editorial Board Member

- Journal of Exposure Science and Environmental Epidemiology (2008 to present)

Peer Reviewer

- American Journal of Epidemiology (2005, 2007, 2008, 2009)
- Bioelectromagnetics (2004, 2007, 2008, 2012, 2013)
- Environmental Health Perspectives (2005)
- Epidemiology (2006)
- European Journal of Pediatrics (2007)
- International Journal of Cancer (2008)
- Journal of Exposure Science and Environmental Epidemiology (2006)
- Pediatric Blood & Cancer (2006)

LESLIE HINZMAN

SENIOR PROJECT ENGINEER

YEARS OF EXPERIENCE
40

EDUCATION
> B.S., Electrical Engineering, South Dakota School of Mines and Technology, 1992

AREAS OF EXPERTISE
> HV and EHV overhead & underground transmission lines
> Distribution lines
> HPFF pipe-type systems
> HPGF pipe-type systems
> SCFF cable systems
> Submarine cable systems
> Extruded dielectric cable systems
> Horizontal directional drilling
> Pipejacking

SPECIAL TRAINING
> University of Wisconsin, Transmission Line Design Seminar
> Missouri Valley Line Constructors Apprenticeship Training, IBEW, 1980 (7,000 hours)
> Mitchell Vocational Technical School, Power Line Construction and Maintenance Training, 1976

AFFILIATIONS
> IEEE
> Power Engineering Society
> Insulated Conductors Committee

EXPERIENCE SUMMARY

Mr. Hinzman has been involved in the power industry since 1975. His experience includes overhead and underground transmission and distribution line design, project and construction management, and power line construction, operation and maintenance. He has layout, routed, surveyed, profiled, spotted, engineered, staked and constructed overhead and underground lines from 5 kV through 500 kV. Activities include line design, transmission line electrical interference studies, conductor and cable economic analysis, conductor and cable ampacity studies, cable pulling calculations, estimating, project evaluation, specifications preparation, material purchasing, contract administration, field investigation, and line assessment. Mr. Hinzman also is responsible for coordinating and supervising team members for engineering design, field activities, and construction management to include engineering support.

Eversource Energy, Stamford Underground 115 kV Reliability Cable Project, Connecticut

Project Engineer responsible for engineering and design of a new 115 kV underground transmission line between Connecticut Light & Power's Glenbrook and South End Substations. The project consists of a 1.5 mile 115 kV single-circuit XLPE cable system routed through both commercial areas and residential neighborhoods in the City of Stamford, Connecticut. Responsibilities included coordination of team members during route analysis, design of duct bank, splicing vaults, termination structures and foundations, as well as a 200-foot pipe jack crossing under the Metro North Railroad corridor. POWER also provided the construction management and engineering support during construction.

Oncor Electric Delivery, Dallas-Fort Worth Airport 138 kV Upgrade Project, Texas

Project Engineer on the upgrade of two existing Liggett-Euless 138 kV HPFF circuits to two cables per phase on lines extending 2.8 miles between DFW E-East and D-West switching stations; responsible for coordinating design and construction support efforts for the installation of parallel cable circuits including tasks for: survey, geotechnical and geothermal investigations, underground facility location, permitting support with the Airport Authority and TXDOT, horizontal directional drill design, design of pipe bridge for creek crossing, termination structure and foundation design, specifications and drawings.

Eversource Energy, 115 kV Cable Extension at Glenbrook, Connecticut

Project Engineer responsible for design and construction support of the 115 kV underground cable tap connecting the 1977 Transmission Line to

Glenbrook Substation. The project required jack and bore construction to route the six 3,200 kcmil copper conductors under the Metro-North Railway, the major railroad artery connecting Boston and New York City. The project also included the design and installation of approximately 7,500 feet of fiber optic overhead ground wire to replace existing shield wire.

GenOn Bowline, West Haverstraw 345 HPFF Emergency Restoration Project, New York

Project Engineer for an emergency repair of an existing 345 kV HPFF circuit in West Haverstraw, New York. Performed a survey and investigation to evaluate the condition of the existing HPFF pipe system and cathodic protection system. Performed fluid testing to analyze the condition of the fluid and resolve requirements for the restoration work. Evaluations included the existing pumping plants to determine any modifications or repairs that will be required to place the circuit back into operation. Developed a specification and procedures for the restoration effort.

Eversource Energy, 115 kV Cable Extension at Glenbrook, Connecticut

Project Engineer responsible for design and construction support of the 115 kV underground cable tap connecting the 1977 Transmission Line to Glenbrook Substation. The project required jack and bore construction to route the six 3,200 kcmil copper conductors under the Metro-North Railway, the major railroad artery connecting Boston and New York City. The project also included the design and installation of approximately 7,500 feet of fiber optic overhead ground wire to replace existing shield wire.

Oncor Electric Delivery, West Levee-Norwood 345 kV HPFF Underground Transmission Line, Texas

Project Engineer responsible for geotechnical design of horizontal directional drill and route. Also responsible for coordinating survey and pipe system design for the connecting substations. Performed cable system design, cost estimates and oversight of construction duties. POWER provided design and construction support services for a complete 345 kV high-pressure fluid-filled pipe-type (HPFF) underground cable system, transition structures, and substation modifications for this project. The double-circuit transmission line is approximately 0.90 miles in length with three cables per phase and required six horizontal directional drilled crossings averaging around 450 feet each. POWER's scope included the design of site layout, cable pipe routing and horizontal directional drilled crossings, and cable system design.

City of Tallahassee, Eastern 115 kV Underground Project, Florida

Project Engineer responsible for overseeing all aspects of project design and design team and coordinating subcontractors. POWER performed design and permitting for two miles of 115 kV XLPE underground transmission line. Responsibilities include facets of the design including: survey, permitting, geotechnical and geothermal investigations, underground facility investigation, route selection, duct bank and manhole design, jack and bore design, substation termination structure and riser pole design, development of erosion control/storm water management plan, construction specifications and drawings, contractor selection and construction support.