STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 24-___-PET

Petition of Vermont Transco LLC, and Vermont Electric Power Company, Inc. (collectively, "VELCO"), for a certificate of public good pursuant to 30 V.S.A. § 248 authorizing upgrades to VELCO's existing Windsor Substation, located in Windsor, Vermont	))))))

PREFILED TESTIMONY AND EXHIBITS OF EDWARD J. MCGANN
FOR VERMONT ELECTRIC POWER COMPANY, INC. AND VERMONT TRANSCO LLC

Summary of testimony: Mr. McGann's testimony presents the Windsor Substation Project's engineering and design details and explains why the Project will not have an undue adverse impact on public health and safety per 30 V.S.A. §248(b)(5).

EXHIBIT LIST

Exhibit PET-EJM-1	Resume of Edward J. McGann
Exhibit PET-EJM-2	Windsor Substation One-Line Diagram
Exhibit PET-EJM-3	Windsor Substation Aerial Photograph
Exhibit PET-EJM-4	Windsor Substation General Arrangement Plan and Elevations
Exhibit PET-EJM-5	Windsor Substation Overall Site Plan and Grading Details
Exhibit PET-EJM-6	New 46kV Dead-End Structure Drawing

Introduction

Q1. Please state your name, occupation, and business address.

A1. My name is Ed McGann. I am the Director of Engineering and System Protection for Vermont Electric Power Company, Inc. and Vermont Transco LLC (collectively referred to as "VELCO"), and I am responsible for the overall technical design of VELCO's transmission facilities. I have served in an engineering capacity since joining VELCO in 2004. My business address is 366 Pinnacle Ridge Road, Rutland, Vermont 05701.

Q2. Please describe your educational background and professional experience.

A2. I received my Bachelor of Science degree in Electromechanical Engineering Technology from Vermont Technical College in 1999. Specific information regarding my work experience is detailed in my resume, attached as Exhibit PET-EJM-1.

Q3. What is the purpose of your testimony?

A3. I present the Windsor Substation Project's engineering and design details that are not otherwise addressed in William Allard's testimony. I also explain why the Project's construction and operation will not have an undue adverse impact on public health and safety per 30 V.S.A. §248(b)(5).

Q4. Please identify Exhibits PET-EJM-2, PET-EJM-3, PET-EJM-4, PET EJM-5, and PET-EJM-6.

A4. Exhibit PET-EJM-2 is a One-Line Diagram of the Windsor Substation. Exhibit PET-EJM-3 is a site plan overlaid on an aerial photograph of the substation. Exhibit PET-EJM-4 consists of the general arrangement plan and elevation drawings for the substation. Exhibit PET-EJM-5 presents the overall site plan and grading details for the substation. Exhibit PET-EJM-6 is a drawing of the new 46 kV dead-end support structure that will replace the existing 46 kV structure owned by Green Mountain Power. These exhibits have been prepared under my supervision for VELCO's submission to the Public Utility Commission.

Q5. What design standards did VELCO use to design the Windsor Substation upgrades?

A5. VELCO followed its Substation Design Standards for the design of the Windsor Substation upgrades. VELCO's Substation Design Standards are based on industry standards, including the National Electrical Safety Code (NESC), Institute of Electrical and Electronic Engineers (IEEE), American National Standards Institute (ANSI), and National Electrical Manufacturer's Association (NEMA).

Q6. What level of detail do the plans depicted in Exhibits PET-EJM-2 through PET-EJM-6 present?

A6. The plans and elevations presented in the VELCO Exhibits reflect design-level detail as required by Rule 5.403(C).

Q7. Will VELCO need to perform any grading for the substation upgrades?

A7. Yes, VELCO will adjust the grading on the perimeter fence sections planned for expansion on the north, west, and south side of the property. The substation access drive will also involve grading adjustments. The Project grading will involve approximately 133,048 square feet of soil disturbance. The average cut depth will be approximately 4.16 feet. Please see Exhibit Petitioner EJM-5 for the proposed grading plan.

Q8. Please describe the changes that VELCO will be making to the substation access from Hunt Road.

A8. The existing substation access drive is approximately 12-14 feet wide and intersects Hunt Road at an acute angle along a steep grade, which limits visibility and restricts turning movements and ease of access for trucks. The proposed improvements will realign the substation access road to intersect Hunt Road at nearly a right angle while also reducing the grade and widening the traveled way to VELCO's standard width of 20' to improve visibility and access for all vehicles. These improvements will also facilitate access for oversized equipment should a transformer replacement be needed in a planned or emergency scenario. VELCO will also make provisions for a vehicular turnaround outside of the substation entrance gate. Exhibit Petitioner EJM-5 (Site Grading Plan).

Q9. Please describe the substation's lighting plans.

A9. The existing substation lighting plan includes perimeter fence mounted lights. With replacement of the perimeter fence, the existing fence lights will be removed. For replacement lighting, VELCO will mount yard lights on the building and on the steel structures. The new lights will consist of high efficiency Light Emitting Diode down-lights. The building-mounted lights are controlled by a photocell and therefore will be on continuously at night and off during the day. Lights mounted to the steel structures will be manually switched remotely by SCADA and VELCO security or locally by on-site personnel during emergency repair and security response events. The lighting locations are shown on Exhibit PET-EJM-4.

Section 248(b)(5): Public Health and Safety

Q10. Will the substation upgrades have any adverse effects on the health, safety, or welfare of the public or adjoining landowners?

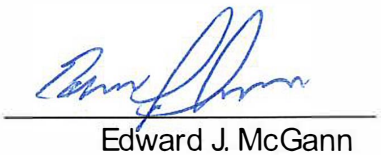
A10. No. The substation is an existing facility and not accessible to the general public. VELCO has designed and will construct the Project in accordance with industry safety standards, including the National Electric Safety Code requirements. VELCO will adhere to prudent utility construction practices throughout the construction phase, and the Project will not endanger the public or adjoining landowners. The substation will be fenced during and after construction to protect against unauthorized access. VELCO will operate and maintain the upgraded substation in the same, safe manner that the company operates and maintains all its facilities.

Q11. Does this conclude your testimony?

A11. Yes.

DECLARATION OF EDWARD J. MCGANN

I declare that the testimony and exhibits that I have sponsored are true and accurate to the best of my knowledge and belief and were prepared by me or under my direct supervision. I understand that if the above statement is false, I may be subject to sanctions by the Commission pursuant to 30 V.S.A. § 30.



Edward J. McGann