

**STATE OF VERMONT  
PUBLIC UTILITY COMMISSION**

Case No. \_\_\_\_\_

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(j) authorizing upgrades to VELCO’s existing Highgate Substation, located in Highgate, Vermont

**PREFILED TESTIMONY OF EDWARD J. MCGANN  
ON BEHALF OF VERMONT ELECTRIC POWER COMPANY, INC.**  
*This testimony and associated exhibits have been filed ePUC*

October 5, 2022

Ed McGann’s testimony describes the proposed Highgate Project’s engineering and design details related to upgrading VELCO’s existing substation located at 2731 Route 78, Highgate, Vermont. Mr. McGann also addresses 30 V.S.A. § 248(b)(5) (public health and safety) in regards to the substation work.

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## **EXHIBITS**

- Exhibit Petitioner EJM-1    Résumé of Edward J. McGann**
- Exhibit Petitioner EJM-2    Highgate Substation One-Line Diagram**
- Exhibit Petitioner EJM-3    Highgate Substation Aerial Photograph**
- Exhibit Petitioner EJM-4    Highgate Substation General Arrangement Plan and Elevations**
- Exhibit Petitioner EJM-5    Highgate Substation Overall Site Plan With Grading Details**

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ON BEHALF OF VERMONT ELECTRIC POWER COMPANY, INC.

1    **Introduction**

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

3    A1.    My name is Ed McGann. I am the Manager of Engineering for Vermont Electric  
4            Power Company, Inc. and Vermont Transco LLC (collectively referred to as  
5            “VELCO” or the “Petitioners”) and I am responsible for the overall technical design  
6            of VELCO’s transmission facilities. I have served in an engineering capacity since  
7            joining VELCO in 2004. My business address is 366 Pinnacle Ridge Road,  
8            Highgate, Vermont 05701.

9

10   Q2.    Please describe your educational background and work experience.

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

15

16   Q3.    Have you previously provided testimony before the Vermont Public Utility  
17            Commission (“the Commission” or “PUC”)?

18   A3.    Yes, I have provided testimony in PUC Docket No. 8604, the PV20 Cable  
19            Replacement Project, PUC Docket No. 8605, the Connecticut River Valley Project,

1 PUC Docket No. 17-3808, the St. Albans Project, and PUC Docket No. 20-0444,  
2 the Sandbar Project.

3

4 Q4. Do you hold any professional licenses or certifications?

5 A4. Yes, I am a registered Professional Engineer in the state of Vermont.

6

7 **2. Testimony Overview**

8 Q5. What is the purpose of your testimony?

9 A5. My testimony addresses VELCO's proposed Highgate Project's engineering and  
10 design details related to upgrading VELCO's existing substation located at 2731  
11 Route 78, Highgate, Vermont, that are not otherwise addressed in Dan Poulin's  
12 prefiled testimony. I also address 30 V.S.A. § 248(b)(5) (public health and safety)  
13 in regards to the substation work.

14

15 Q6. Have you prepared exhibits relating to the proposed substation work?

16 A6. Yes. Exhibits related to the substation include Exhibit Petitioner EJM-2, which  
17 contains a One-Line Diagram of the Highgate substation. Exhibit Petitioner EJM-  
18 3 contains an aerial photograph of the substation. Exhibit Petitioner EJM-4  
19 contains the general arrangement plan and elevation drawings for the substation.  
20 Exhibit Petitioner-EJM-5 contains the overall site plan and grading details for the  
21 substation.

22

23

1 Q7. Please describe the Highgate substation lighting plans.

2 A7. The existing substation lighting plan includes perimeter fence mounted lights.  
3 VELCO will mount supplemental yard lights on the new control building and on  
4 the existing lattice box steel structures. The new lights will consist of high  
5 efficiency Light Emitting Diode (“LED”) down-lights. The building mounted lights  
6 are controlled by a photocell and therefore will be on continuously at night and off  
7 during the day. Perimeter fence lighting and lights mounted to the steel structures  
8 will be manually switched remotely by SCADA and VELCO security or locally by  
9 on-site personnel during emergency repair and security response events.

10

11 Q8. What design standards did VELCO use to design the proposed Highgate substation  
12 upgrades?

13 A8. VELCO followed its Substation Design Standards for the design of the Highgate  
14 substation upgrades. VELCO’s Substation Design Standards are based on industry  
15 standards, including the National Electrical Safety Code (“NESC”), Institute of  
16 Electrical and Electronic Engineers (“IEEE”), American National Standards  
17 Institute (“ANSI”) and National Electrical Manufacturer’s Association (“NEMA”).

18

19 Q9. Does VELCO plan on making any changes to the existing Highgate substation  
20 access driveway? If yes, please describe.

21 A9. Yes. VELCO will need to regrade, widen, and shorten the existing driveway to  
22 accommodate the new entry to the control building. Exhibit Petitioner EJM-5 (Site  
23 Grading Plan).

1

2 Q10. Will VELCO need to perform any grading for the substation upgrades?

3 A10. Yes, VELCO will make minor grade adjustments along the eastern fence sections  
4 being replaced adjacent to the new control building. Please see Exhibit Petitioner  
5 EJM-5 for details on the proposed grading plan.

6

7 Q11. In your opinion, have the Project elements included in the VELCO Highgate  
8 substation proposals, as described in the exhibits you have sponsored, reached a  
9 design level of detail?

10 A11. Yes. The plans and elevations that VELCO has included as exhibits to this  
11 testimony reflect the locations and heights of the equipment proposed for  
12 construction of the Highgate substation.

13

14 **3. Public Health and Safety [30 V.S.A. § 248(b)(5)]**

15 Q12. Will the substation upgrades have any adverse effects on the health, safety, or  
16 welfare of the public or adjoining landowners?

17 A12. No. The substation is an existing facility and not accessible to the general public.  
18 VELCO has designed and will construct the Project in accordance with industry  
19 safety standards, including the National Electric Safety Code requirements.  
20 VELCO will adhere to prudent utility construction practices throughout the  
21 construction phase and the Project will not endanger the public or adjoining  
22 landowners. The substation will be fenced in at all times during and after  
23 construction to protect against unauthorized access. VELCO will operate and

1 maintain the upgraded substation in the same, safe manner that the company  
2 operates and maintains all of its facilities.

3

4 Q13. Does this conclude your testimony at this time?

5 A13. Yes, it does.