

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Case No. 26-__-PET

Petition of Green Mountain Power for a Certificate of Public Good, pursuant to 30 V.S.A. § 248, authorizing the rebuild of the Georgia Substation located at 2066 Ballard Road in the Town of Georgia, Vermont	
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**PETITION OF GREEN MOUNTAIN POWER
FOR A CERTIFICATE OF PUBLIC GOOD
PURSUANT TO 30 V.S.A. § 248**

By this Petition, Green Mountain Power (“GMP” or “Petitioner”) requests that the Vermont Public Utility Commission (“Commission”) issue a Certificate of Public Good (“CPG”), pursuant to 30 V.S.A. § 248, authorizing the rebuild of the Georgia Substation located at 2066 Ballard Road in the Town of Georgia, Vermont (the “Project”). In support of this Petition, GMP states the following based on the prefiled testimony and exhibits submitted by GMP in this Case.

I. DESCRIPTION OF THE PETITIONER

1. GMP is a duly organized public service corporation with a principal place of business at 163 Acorn Lane, Colchester, Vermont, and is subject to the Commission’s jurisdiction pursuant to 30 V.S.A. § 203.

2. Construction of the Project requires a CPG pursuant to 30 V.S.A. § 248.

II. DESCRIPTION OF THE PROJECT

3. The Project is further detailed in the Petitioner’s prefiled testimony. This Project involves the proposed rebuild of the GMP Georgia Substation, the reconfiguration of the 34.5 kV transmission line 127, and proposed modifications of the 12.47 kV distribution circuits. Prefiled Testimony of John Fiske (“Fiske pf.”) at 3.

4. The upgrades to the Georgia Substation replace equipment at the end of its useful life to improve substation safety and reliability for Georgia, West Milton, and St. Albans.

Prefiled Testimony of Kamran Hassan (“Hassan pf.”) at 4-5.

5. The proposed rebuilt GMP Georgia Substation will include the following:

- 1) Installation of a new driveway, vehicle turn around, and access to the transmission line 127. The new proposed gravel driveway is approximately 27’ wide x 123’ long and the associated vehicle turn around is approximately 18’ wide x 20’ long. The new proposed 12’ wide transmission line access road will extend from the eastern end of the substation driveway approximately 272’ feet east where it will intersect with an existing farm road providing access to the transmission line. Upgrades to the existing farm road are not proposed. The new substation driveway and transmission access road is the proposed route to access the temporary substation.
- 2) Installation of a new fence with foundations to create a polygon shaped fenced in yard (approximately 110’ x 135’ in area, 9’ high). The new fence will meet NESC requirements and facilitate access to construction and maintenance vehicles. Substation yard lighting and security cameras will be installed on steel poles inside the substation fence to accommodate maintenance, emergency, and surveillance activities. The steel poles will be approximately 18 feet in height. Additional yard lighting will be installed on the fence. The yard lighting will be operated from a switch located within an enclosure mounted to the substation steel tower leg.
- 3) Installation of new equipment foundations, ground grid, and below grade trench and conduit systems.
- 4) Installation of two (2) new 34.5 kV line vacuum circuit breakers (VCB) (B-34 & B-35), two bays of 34.5 kV steel structure (each 18 feet wide, 26 feet 2 inches tall, and 16 feet deep) with associated 16 foot lightning rods, 34.5 kV bus work and insulators, two (2) sets of three 34.5 kV single blade disconnect switches (349, 348, 359, 358), two (2) gang operated load break (GOLB) switches (X999, 355), two (2) 34.5 kV phase to phase line potential transformers (VT34 & VT35) with associated fusing (PF-VT34 & PF-VT35), three (3) 34.5 kV phase to ground bus potential transformers (VT1) with associated fusing (PF-VT1), and six (6) 34.5 kV intermediate class lightning arresters.
- 5) The existing 10/14 MVA, 34.5/12.5 kV power transformer (T1) will be replaced with an in kind replacement, along with three (3) single blade disconnect switches (929), three (3) 34.5 kV station class lightning arresters, three (3) 12.5 kV station class lightning arresters and one (1) pedestal mounted GOLB switch (928).

- 6) Installation of two (2) new 12.47 kV VCBs (70 & 71), two (2) bays of steel structures (each 18 feet wide, 26 feet 2 inches tall, and 5 feet deep) with associated 16 foot lightning rods, 12.47 kV bus work and insulators, five (5) sets of three 12.47 kV single blade line disconnect switches (719, 718, 709, 708, X888), three (3) 12.47 kV phase to ground bus potential transformers (VT2) with associated fusing (PF-VT2), two (2) 12.47 kV phase to ground line potential transformers (VT70 & VT71) with associated fusing (PF-VT70 & PF-VT71), six (6) 12.47 kV intermediate class lightning arresters, and a station service transformer (SS1) with associated fusing (PF-SS1).
- 7) Installation of six (6) new 438 Amp voltage regulators with associated regulator controls.
- 8) Installation of a new control building (approximately 18 feet wide, 28 feet long, 15 feet tall with a peaked roof). The control building will house the protection and control switchgear, the communications equipment, the DC battery system, the AC and DC distribution panels, the Supervisory Control and Data Acquisition (SCADA) equipment, and other various control equipment. The substation will utilize fiber optic cable for SCADA communications between the GMP Control Center and the Remote Terminal Unit (RTU) in the substation, voice-grade communications, and engineering access for retrieval of fault records from the microprocessor relays. The fault records are utilized to estimate fault locations and analyze power system events for restoration efforts. The SCADA system will provide control and monitoring of the two (2) 34.5 kV VCBs (B-34 & B-35), the two (2) 12.47 kV VCBs (70 & 71), and the regulator controls for the two 12.47 kV distribution circuits. A GPS receiver antenna and a “Gatekeeper” antenna (each approximately 12” in height) will be mounted on the side of the control building. The GPS antenna will provide accurate time stamp for the SCADA system and microprocessor relay event records. The “Gatekeeper” antenna is to collect data from Smart Meters.
- 9) Installation of a new security system. The security system will be housed in the new control building.
- 10) An oil containment system with a perimeter berm including filter drains to allow rainwater to escape. The proposed oil containment system has a volume of no less than 110% of the proposed power transformer’s oil capacity plus 5 inches of freeboard rain.

Fiske pf. at 5-8; Exhibits GMP JRF-2 through GMP JRF-9.

6. The Project includes modifications to existing Transmission Line 127 (TL127). TL127 is a 7.57 mile 34.5 kV networked line that serves three distribution substations. The line serves the Georgia distribution substation with an 0.06-mile-long radial tap off from TL127

P105X. There are no automatic sectionalized devices on the TL127 between Nason Street and Ballard Road substations. The two other distribution stations served off from TL127 are radial taps and have SCADA controlled Motor Operated Load Breaker (MOLB) switches on each side of the radial taps for sectionalizing. Fiske pf. at 8-9.

7. The proposed TL127 modifications include the installation of two (2) 55' poles (P105 & PX106), six (6) 50' pole (P104X, P105-1, P105-2, P105-3, P105-4, & P106) and one (1) 45' pole (P105-2-1), approximately 709' of three phase overhead transmission line, one (1) SCADA controlled MOLB switch (457) to create a loop feed into the Georgia Substation. The line modifications also include the retirement of approximately 382' of three phase overhead transmission line, one (1) 45' 1955 vintage pole, one (1) 45' 1986 vintage pole, one (1) 45' 1988 vintage pole, and one (1) 65' 1978 vintage pole. Fiske pf. at 9.

8. The proposed SCADA controlled MOLB switch (457) and associated lightning arresters will be installed on P105-2-1 to facilitate a bypass of the rebuilt Georgia Substation for future maintenance efforts. This bypass switch is located between the new P105-2 and the new P105-3 on TL127. Fiske pf. at 9.

9. Two sets of three (3) in-line disconnect switches are proposed for working clearance during construction of the proposed rebuilt Georgia Substation and for future maintenance efforts, one set (356) between new P105-2 and new P105-2-1 with the second set (346) between new P105-2-1 and new P105-3. Fiske pf. at 9.

10. The Project also includes distribution line modifications associated with the rebuilt Georgia Substation. There are two (2) existing 12.47 kV three phase overhead distribution circuits (70 & 71) emanating from the Georgia substation. The proposed substation will retain the existing distribution line right of way for both the 70 and 71 circuits. On the 70

circuit, the existing 40' 1986 vintage G70 P1 pole will be replaced with a 50' pole to accommodate the installation of an alternate station service transformer and the installation of secondary cable from G70 P1 to the Georgia Substation. On the 71 circuit, the existing 45' 1977 vintage G71 P1 pole will be replaced with a 50' pole to accommodate the temporary substation connection to the existing distribution line and fiber cable. The existing in-line single blade disconnects on the 70 circuit (632) and 71 circuit (442) will be retired and two sets of pole mounted single blade disconnects will be installed, one on G70 P1(704) and the other on G71 P1 (714). Fiske pf. at 10.

11. A new 50' pole will be installed at G70 P3 equipped with a permanent Gang Operated Load Break switch (7017) to provide a circuit tie for future maintenance needs. Fiske pf. at 10.

12. The construction of the proposed rebuilt Georgia Substation will require the use of a temporary substation to serve customers during construction. The proposed rebuilt Georgia Substation has been designed to accommodate the installation of a portable substation for future needs. The temporary substation will be supplied from the Transmission Line 127 Temporary Pole TP3. Fiske pf. at 10-11; Exhibit GMP JRF-3; Exhibit GMP JRF-10.

13. The plans for the proposed temporary Georgia Substation consist of:
- (1) Installation of a temporary fence to create a fenced in yard (approximately 44' x 80' in area, 8' high). The temporary fence will meet NESC requirements and facilitate access to construction and maintenance vehicles.
 - (2) Installation of a temporary 45' pole (TP4) equipped with a set of three single blade disconnects (T999).
 - (3) Installation of a mobile substation complete with one (1) 34.5 kV GOAB switch (X919), three (3) 34.5 kV power fuses (PF-T1), and three (3) 34.5 kV station class lightning arresters, one (1) 15 MVA Power Transformer, three (3) 12.47 kV station class lightning arresters, one (1) 12.47 kV distribution breaker, three (3) 668-amp bus regulators, one (1) single phase station service transformer (SS1) with associated fuses (TPF-SS1), one (1)

three phase station service (SS2), three (3) – 668 amp regulators, and a new 45' pole (TP5) equipped with a set of three single blade disconnects (T888).

- (4) The temporary substation will be constructed with oil containment with a volume of no less than 110% of the proposed power transformer's oil capacity plus 5 inches of freeboard rain. The oil containment will be constructed with a perimeter berm and include filter drains to allow rainwater to escape.
- (5) Installation of temporary relay and communication equipment cabinets.

Fiske pf. at 11-12.

14. The fence, oil containment berm and filters, poles and all equipment associated with the temporary substation will be removed after the project is complete. The gravel and ground grid will be removed, and the area will be topsoiled, seeded and mulch after construction.

Fiske pf. at 12.

15. Temporary transmission line construction is required to connect the temporary substation. A temporary 34.5 kV line bypass is proposed to maintain continuity of TL127 during construction of the proposed lines into the Georgia Substation. The bypass consists of replacing TL127 P104X with a new 50' pole, addition of two (2) temporary 50' poles (TP1 & TP2) and associated guying, and approximately 225' of three phase 34.5 kV conductor. The proposed temporary GOLB switch (T820) on P106, the set of three in-line disconnects (T643) between PX106 and TP3, the set of three in-line disconnects (T666) between P104X and TP1, and the set of three in-line disconnects (T653) between P104X and P105 will be installed as sectionalizing points to facilitate the installation of a temporary substation and construction of the loop feed into the Georgia Substation without a customer outage. Fiske pf. at 12.

16. Temporary distribution line construction is required to connect the temporary substation to the existing distribution circuits. A temporary three phase overhead 12.47 kV distribution line will extend from the temporary substation pole TP5 to G71 P1, approximately

425 feet via two (2) 50' poles (TP6 & TP7). At G71 P1, the temporary overhead line will connect to the existing 71 circuit. Fiske pf. at 13.

17. The existing pole at G71 P2 will be replaced with a new 50' pole to accommodate the installation of a temporary recloser (TPG71) equipped with six (6) intermediate class lightning arresters and associated bypass fuses (TP-F71). Fiske pf. at 13.

18. The existing pole at G70 P2 will be replaced with a new 50' pole to accommodate the installation of a temporary recloser (TPG71) equipped with six (6) intermediate class lightning arresters and associated bypass fuses (TP-F72). Fiske pf. at 13.

19. Temporary overhead fiber optic cable will be installed from the temporary substation to each of the temporary reclosers at G70 P2 and G71 P2. This temporary fiber will be installed on the temporary distribution line to G71 P1 where it will then follow the existing distribution line to G71 P2 providing communications to the temporary recloser on this pole. The fiber optic cable will then extend from G71 P2 to G70 P2 via G70 P3 to provide communications to the recloser on G70 P3. These reclosers are being installed to maintain reliability of the 70 and 71 circuits while in the temporary configuration and will be removed after the proposed Georgia Substation is commissioned. Fiske pf. at 13.

20. GMP expects that the construction of the substation upgrades will be performed without an outage of the Georgia Substation. Fiske pf. at 14.

21. GMP does not expect that a lay down area will be utilized during construction. Fiske pf. at 14.

III. PROJECT COST AND SCHEDULE

22. GMP estimates that the capital costs of the Project will be approximately \$6,695,781 which includes a 20% contingency. Hassan pf. at 12.

23. Subject to Commission approval, this Project is proposed to commence March 2027 and conclude by September of 2027. Fiske pf. at 14.

24. Construction is planned to take place between the hours of 7:00 A.M. and 7:00 P.M. Monday through Friday, and between 8:00 A.M. and 5:00 P.M. on Saturdays. No construction will take place on Sundays, federal holidays, and state holidays except where construction activities must be performed during required outages needed to maintain system reliability. Fiske pf. at 14-15.

IV. NOTICE OF THE PROJECT

25. Pursuant to 30 V.S.A. § 248(f) and Commission Rule 5.402, GMP provided and served the required advance submission for this Project. Witness Hassan describes the comments received in response to the 45-day notice.

26. Once the Petition is deemed complete by the Commission, service of copies of the Petition filing will be made on the state agency parties specified in 30 V.S.A. § 248(a)(4)(C) by the Commission through ePUC and by GMP to the town and regional planning officials via U.S. mail, and email where authorized. Pursuant to Commission Rule 5.407(B), GMP will also serve the required notices of the Petition filing.

V. COMPLIANCE WITH SECTION 248 CRITERIA

As summarized below (and in the filed Rule 5.403(A)(16) Filing Index) and demonstrated in the prefiled testimony and exhibits submitted by GMP, the Project meets all Section 248 criteria:

<u>Witness</u>	<u>Subject</u>
Kamran A. Hassan	Kamran Hassan provides the estimated Project cost, and explains how the Project complies with 30 V.S.A. §§ 248(b)(2), (b)(3), (b)(4), (b)(6), (b)(7), and (b)(10).

John R. Fiske Describes the Project, and explains how the Project complies with 30 V.S.A. § 248 (b)(5) (public health and safety).

Adam Crary Provides testimony demonstrating that the Project will not interfere with the orderly development of the region consistent with 30 V.S.A. § 248(b)(1). He also describes how the Project will not have undue adverse effects on aesthetics, historic sites, air and water purity, or the natural environment under 30 V.S.A. §§ 248(b)(5) and (b)(8).

VI. CONCLUSION

WHEREFORE, GMP respectfully requests that the Commission:

- (1) Hold a scheduling conference, establish a schedule for this case, and issue an Order approving the Project under 30 V.S.A. § 248.
- (2) Find that the proposed Project will promote the general good of the State of Vermont, and authorize GMP to undertake the actions as described here and in its testimony and exhibits, and issue a Certificate of Public Good to that effect.
- (3) Issue any further relief as the Commission deems just and proper.

DATED at Burlington, Vermont this 8th day of April, 2026.

RESPECTFULLY SUBMITTED,
GREEN MOUNTAIN POWER

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