STATE OF VERMONT

PUBLIC SERVICE BOARD

Petition of Green Mountain Power Corporation for a Certificate of Public Good pursuant to 30 V.S.A. § 248 authorizing the removal of an existing substation and the construction of a new substation in the Town of Rockingham	))))))	Docket No. _____

PREFILED TESTIMONY OF

CHARLES E. WILSON

ON BEHALF OF NEW ENGLAND POWER COMPANY

d/b/a NATIONAL GRID

Summary of Testimony

Mr. Wilson's testimony describes the reconfiguring of National Grid's 46 kV transmission taps to connect to and supply the proposed Green Mountain Power substation and the decommissioning and removal of the National Grid equipment located at the existing Bridge Street #67 Substation.

TESTIMONY OF CHARLES E. WILSON

ON BEHALF OF

NATIONAL GRID

1Q. Please state your name, employer, and current position.

1A. My name is Charles E. Wilson and I am a Principal with Energy Initiatives Group, LLC ("EIG"). EIG is the project manager for New England Power Company d/b/a National Grid ("National Grid") on Green Mountain Power Corporation's ("Green Mountain Power's") Bridge Street Substation project. EIG is an energy consulting company that provides project development, planning, strategy, execution, management, engineering, and operations consulting in the areas of electric transmission, generation, distribution, transportation, and renewable energy services.

2Q. Please state briefly your educational background and business experience.

2A. Exhibit__[CEW-1] is my resume, which states my qualifications. In summary, as a consulting engineer, I have broad expertise and experience in the electric and energy supply arena, including development, design, construction, commissioning, and operation of electrical generation, transmission, and distribution systems. I began my career at General Dynamics, Electric Boat Division as an engineer in the Integrated Logistics Support Department, where I was an electric project engineer involved in designing the TRIDENT nuclear submarine training facility in Kings Bay, Georgia.

Following Electric Boat, I worked for the New England Electric System (NEES) Companies (now National Grid USA) in the areas of generation and substation engineering and project management, and later in operations management. Highlights of my generation and transmission experience include project management of transmission and plant engineering and construction for a 490 MW facility repowering project, and permitting, engineering, and project management for the 26 mile, 46 kV submarine cable to Nantucket Island. Later I became Manager of Relay and Telecommunication Operations.

In early 2000, I joined JM Energy, Inc., and became involved in managing merchant power plant interconnections for both plant owners and investor-owned utilities. My recent experiences include managing the development, engineering, construction, and commissioning of transmission interconnections, and acting as a general high voltage specialist for generation plant developers. I have also been integrally involved in large merchant transmission projects, including several 600 MW HVDC submarine cable links between power supply regions in the northeastern US and southwestern Canada.

I hold a Bachelor of Science Degree in Electrical Engineering from the University of Lowell and a Master of Science in Electrical Engineering, specializing in power engineering, from Northeastern University. I am a Registered Professional Engineer in several states and maintain a current record with the National Council of Examiners for

Engineering and Surveying ("NCEES"). I am a Member of the Institute of Electrical and Electronics Engineers ("IEEE") and its Power Engineering Society.

3Q. Have you ever testified before the Public Service Board?

3A. No.

4Q. Please describe the existing National Grid substation facilities that will be affected by the proposed substation project.

4A. National Grid currently owns and operates equipment in the substation on the southern edge of downtown Bellows Falls, Vermont. The substation, known as the Bridge Street #67 Station (the "Bridge Street Substation") is located on the corner of Bridge Street and Rockingham Street on land that is owned by TransCanada Northeast Inc. ("TransCanada"). National Grid's equipment at the Bridge Street Substation consists of five transformer tanks, disconnect switches and associated busses, structure, foundations, conduits, etc. The existing Bridge Street Substation is supplied by two National Grid-owned underground 6.6 kV cable feeders from the nearby TransCanada hydro electric station. The steel box structures, foundations, fence and certain other electrical equipment and materials are jointly owned by National Grid and Green Mountain Power.

5Q. Please describe National Grid's role in the proposed project.

5A. National Grid is providing support to Green Mountain Power's efforts relating to their Bridge Street Substation Relocation Project. As part of this support, National Grid

proposes to remove its existing substation equipment (including the 6.6 kV underground cable feeders) and together with Green Mountain Power, decommission the existing Bridge Street Substation. Green Mountain Power will then construct a new substation at a location on the other side of the Bellows Falls Canal. In addition, National Grid proposes to reconfigure its 46 kV transmission taps to connect to and supply the proposed Green Mountain Power substation.

6Q. Please describe the lines and structures that National Grid proposes to construct in connection with the proposed project.

6A. National Grid will be reconfiguring its 46 kV transmission taps to connect to and supply the proposed Green Mountain Power substation. With respect to the existing 4401 tap, National Grid will replace the existing single pole structure (located adjacent to the existing National Grid Vilas Bridge substation) with a 40-foot tall H-frame dead end structure. National Grid will then install a new 35-foot tall H-frame terminal structure to house the new 4401 tap to the proposed Bridge Street substation and reconductor the line back to the previous dead-end (about 400 feet). With respect to National Grid's existing 4402 tap, National Grid will remove three of the four related structures outside of its existing Vilas Bridge substation, install one 70-foot tall single steel pole structure to carry the mainline and both taps (Vilas Bridge and New Bridge Street) and reconductor the tap back to the previous dead-end (also about 400 feet). The fourth 4402 tap structure, which is immediately outside of Vilas Bridge substation, may need to be relocated by a few yards. In sum, in addition to reconductoring both 400-foot National Grid transmission

lines, four structures will be removed and three will be added adjacent to the new substation site. Structural drawings showing the designs and heights of new National Grid structures are attached as Exhibit__[CEW-2].

7Q. Does all of the planned National Grid work to the transmission taps adjacent to the proposed Green Mountain Power substation site consist of the replacement of existing facilities with equivalent facilities in the usual course of business?

7A. Yes. The replacement facilities will be functionally equivalent to the ones they replace.

8Q. Will National Grid be placing any poles or other support structures outside the proposed Green Mountain Power fenced substation area?

8A. Yes. The existing 46 kV transmission taps that pass by the proposed Green Mountain Power substation must be reconfigured, as described above. These existing taps are presently installed on poles located in an existing right-of-way – outside of the proposed Green Mountain Power fenced substation area, but within the larger fenced area on which the proposed substation and National Grid's Vilas Bridge Substation sit. The new poles will be located in the vicinity of the existing poles, within the larger fenced area

9Q. Please discuss future plans for the existing substation site.

9A. National Grid and Green Mountain Power will retain an environmental consulting firm experienced in substation testing, decommissioning and removal to prepare a reclamation report advising the companies of the proper procedure for decommissioning the existing substation site. The reclamation report will include recommendations for testing and

removal of material and equipment from the site. Following the transfer of all load from the existing Bridge Street Substation to the proposed Green Mountain Power substation, National Grid and Green Mountain Power will remove and either salvage or discard all equipment from its present location at the Bridge Street Substation. The concrete pads and fence will be left in place pending final disposition of the site by TransCanada, but are expected to ultimately be removed. The Bridge St. Substation is currently scheduled to be fully removed no later than one year after the completion and proof of successful operation of the proposed substation. National Grid currently assumes that this will include removal of the concrete pads and fence, but the timing of this will not be definitively determined until site testing is complete. National Grid and Green Mountain Power will each be responsible for the removal of its own equipment at the existing Bridge Street Substation site. National Grid does not know TransCanada's future plans for the disposition of the Bridge Street Substation property.

10Q. Will National Grid's arrangements with Island Corporation change materially as a result of the proposed project?

10A. No. Under the terms of the existing April 1, 2005 TC Hydro-NEP Wholesale Supply Agreement Related to Island Corporation Indenture (the "Supply Agreement") and the June 1, 1998 Amended and Restated Lease Indenture between Island Corporation, USGen New England ("USGenNE") and New England Power Company ("NEP") (the "Indenture"), (assigned from USGenNE to TransCanada Hydro under the September 29, 2004 Hydro Asset Purchase and Sale Agreement), TransCanada will continue to sell (at

wholesale) 300 kW of electricity ("Contract Quantity") without charge to NEP and NEP shall resell the Contract Quantity to Island Corporation at no charge.

11Q. Does this conclude your testimony?

11A. Yes.