AMENDMENT TO PRESIDENTIAL PERMIT PP-76
AUTHORIZING THE VERMONT ELECTRIC TRANSMISSION COMPANY
TO CONSTRUCT, CONNECT, OPERATE AND MAINTAIN
ELECTRIC TRANSMISSION FACILITIES AT THE
INTERNATIONAL BORDER BETWEEN
THE UNITED STATES AND CANADA

Background

On March 4, 1985, the Vermont Electric Transmission Company (VETCO) applied to the Economic Regulatory Administration (ERA) of the Department of Energy (DOE), pursuant to Executive Order No. 10485, as amended by Executive Order No. 12038, to amend Presidential Permit PP-76, issued to VETCO on April 5, 1984. Presidential Permit PP-76 authorized the construction, connection, operation, and maintenance of a ± 450 kilovolt (kV), direct current (DC) transmission line, which crosses the U.S. international border near Norton, Vermont, and extends approximately 59.5 miles south, terminating at a converter station located in Monroe, New Hampshire. These previously permitted facilities were placed in operation on October 1, 1986. The reliability condition imposed by the permit limited the normal operation of these facilities to a maximum import level of 690 megawatts (MW).

In its amendment application, VETCO now seeks permission to extend the ± 450 kV DC transmission line approximately 133 miles south along existing transmission rights-of-way to a site in the towns of Ayer and Groton, Massachusetts, located adjacent to the Sandy Pond Substation. Additionally, VETCO requests permission to construct another converter station at the new southern

terminus of the DC line and to construct two new 345 kV alternating current (AC) transmission lines in order to integrate the proposed DC facilities with the existing AC transmission system.

With the installation of these new facilities, and as a result of a new firm energy contract between the New England utilities and Hydro-Quebec (signed on October 14, 1985), VETCO also is requesting that the combination of the existing and proposed facilities be permitted to operate up to a maximum level of 2000 MW of power transfer in the import mode.

On November 13, 1987, the DOE published a final Environmental Impact Statement (EIS) in compliance with the requirements of the National Environmental Policy Act of 1969, as implemented by the regulations promulgated by the Council on Environmental Quality (40 CFR 1500-1508) and the DOE's implementing guidelines (45 CFR 20694). Based on the analysis in this EIS, on September 16, 1988, the DOE issued a Record of Decision (53 FR 37837) in which it was determined that the proposed action was the most environmentally preferred alternative.

On August 24, 1988, the Administrator of the ERA concluded that the construction and operation of the proposed facilities (subject to certain conditions and limitations) would not adversely impact on the reliability of the U.S. electric power supply system.

Finally, the Secretary of State by letter dated September 8, 1988, and the Secretary of Defense by letter dated September 6, 1988, concurred in the decision to grant the requested amendment to Presidential Permit PP-76.

Upon consideration of this matter, the Administrator of the Economic Regulatory Administration finds that the issuance of the amendment to the aforesaid Presidential permit, as hereinafter provided, is appropriate and consistent with the public interest.

Authorization

Pursuant to the provisions of Executive Order No. 10485, as amended by Executive Order No. 12038, and the Rules and Regulations thereunder (Title 10, Code of Federal Regulations, section 205.320 et seq.), Presidential Permit PP-76 hereby is amended by substituting the following for Article 2, Article 3, and Article 12 as contained therein, provided that all other terms and conditions of that permit shall remain in full force and effect:

Article 2. The facilities covered by and subject to this permit shall include the following facilities, and all supporting structures within the right-of-way occupied by such facilities:

One direct current, bipolar, overhead transmission line with a design voltage of ± 450,000 volts. The permitted line extends approximately 59.5 miles from the U.S.-Canadian

international border in the town of Norton, Vermont, to a DC/AC converter station located near the site of the existing Comerford generating station in the town of Monroe, New Hampshire. From this point, the permitted line extends approximately 133 miles south along existing transmission rights-of-way to another DC/AC converter station at a site in the towns of Ayer and Groton, Massachusetts, located adjacent to the existing Sandy Pond substation.

Additionally, this permit covers two, three-phase, overhead, alternating current transmission lines with a design voltage of 345,000 volts. One of these alternating current lines extends from the Sandy Pond substation approximately 36 miles along existing transmission rights-of-way to the Millbury No. 3 substation located in Millbury, Massachusetts. The second alternating current line extends from the Millbury No. 3 substation approximately 16 miles along existing transmission rights-of-way to the West Medway substation located in Medway, Massachusetts. The facilities authorized by this permit include the said direct current and alternating current transmission lines and the converter stations located at Comerford and at the site adjacent to the Sandy Pond substation.

These facilities are more specifically shown and described in the Presidential permit applications filed by VETCO with the ERA on December 11, 1981, and on March 4, 1985.

Article 3. The facilities described in Article 2 will be designed and operated in accordance with the applicable criteria established by the Northeast Power Coordinating Council, and consistent with those of the North American Electric Reliability Council. Furthermore the proposed facilities will be operated under the following conditions and limitations:

1. The facilities permitted herein normally shall be operated in such a manner that the maximum power entering the New England Power Pool (NEPOOL) system through the Comerford converter station shall be 690 megawatts (MW). However, when required for operational purposes, the applicant may import as much as 725 MW of electrical power through the Comerford converter station for periods of time not to exceed 6 hours per day.

2. Upon completion by the applicant of appropriate power flow and stability studies designed to demonstrate the operation of the NEPOOL system during operation of the Comerford converter station at up to 775 MW of imports, and acceptance of the results of these studies by the Administrator of the ERA, the Comerford converter station may be operated normally at a maximum power level of 725 MW.

3. After completion of the studies described in subparagraph 2 above, and upon determination by the

applicant that an emergency exists in either its system or in the Hydro-Quebec system, the Comerford converter station may be operated up to its emergency rating of 775 MW for a period of time consistent with the definition of the emergency rating. If such an emergency situation occurs, VETCO shall submit to the DOE a detailed description of the event which initiated the emergency not later than thirty (30) days after such an occurrence.

4. The combination of the Comerford and Sandy Pond converter stations shall be operated at appropriate levels of import, up to a maximum combined level of 2000 MW, that do not jeopardize regional reliability or place restrictions on the MEN system,[1] unless such restrictions are agreed to by affected parties within the interconnected systems in accordance with applicable interpool operating agreements.

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1 The term "MEN system" refers to the utility systems within the MEN regions. MEN is the acronym for the combined regions of the Mid-Atlantic Area Council (MAAC), the East Central Area Reliability Coordination Agreement (ECAR), and the Northeast Power Coordinating Council (NPCC). These are three of the nine regional reliability councils which form the North American Electric Reliability Council. MAAC includes the utilities in New Jersey, Delaware, the District of Columbia, central and eastern Maryland, and most of Pennsylvania. NPCC includes the utilities in New England and New York State as well as Hydro-Quebec, Ontario Hydro, the New Brunswick Electric Power Commission, and Nova Scotia Power Corp. ECAR is comprised of the utilities in Michigan, Indiana, Ohio, West Virginia, Kentucky, western Pennsylvania, and southwestern Virginia.

5. Various operating studies shall be performed on an ongoing basis in order to:

a) identify, from time to time, regional conditions under which the permitted facilities may be operated in isolated mode[2] at the 2000 MW level, without jeopardizing regional reliability or placing restrictions on the MEN system;

b) identify, from time to time, conditions on the MEN system under which operation of the permitted facilities in isolated mode must be limited to less than the 2000 MW level and the magnitude of those limitations;

c) establish, from time to time, the total amount of power which may be exported from Hydro-Quebec over all DC transmission ties, with the permitted facilities operated in synchronous mode, without jeopardizing regional reliability or placing restrictions on the MEN system, unless such

2 The isolated and synchronous modes of operation refer to the manner in which the generating units at the La Grande hydroelectric project in Quebec are connected to the permitted facilities and the Hydro-Quebec AC system. In isolated mode, a fixed number of generating units at the La Grande complex will be connected only to the permitted facilities and will not be supplying power to the rest of the Hydro-Quebec AC system. In synchronous mode, all La Grande generating units will be connected to the Hydro-Quebec AC system and the permitted facilities at the same time.

restrictions are agreed to by affected parties within the interconnected systems in accordance with applicable interpool operating agreements;

d) establish operating measures designed to ensure that all aspects of station service and/or controls that could impact the isolated operation of the permitted facilities and associated generating units be permanently and electrically isolated at all times from the Hydro-Quebec AC system.

6. Procedures shall be established by the applicant in conjunction with other MEN member systems for determining the allowable level of operation of the facilities permitted herein during MEN system operating conditions which are not covered by the operating studies required under subparagraph 5 above.

7. None of the conditions and limitations contained in subparagraphs 4 through 6 above shall be interpreted as superseding the conditions and limitations contained in subparagraphs 1 through 3 above. Rather, the conditions and limitations contained in subparagraphs 1 through 6 above shall be effective concurrently.

Article 12. Two final Environmental Impact Statements entitled "New England/Hydro Quebec ± 450 kV Direct Current Transmission Line Interconnection" (DOE/EIS-0103) and "New England Hydro-Quebec ± 450 kV Transmission Line Interconnection -- Phase II" (DOE/EIS-0129F) were produced as a requirement for granting the original permit and this amendment. To the maximum extent practical and reasonable, the recommended mitigation measures specified in Section 4.3 of DOE/EIS-0103 and in Sections 2.1.5 and 4.1.10 of DOE/EIS-0129F, as they apply to the corridor and facilities described in Article 2 above, hereby are incorporated into the terms and conditions of this permit.

This amendment shall be valid upon receipt by the DOE of the Testimony of Acceptance properly executed.

In witness whereof, I, Chandler L. van Orman, Deputy Administrator, Economic Regulatory Administration, hereunto sign my name this 16 day of September, 1988, in the city of Washington, District of Columbia.

Chandler L. van Orman
Deputy Administrator
Economic Regulatory Administration