

UNITED STATES DEPARTMENT OF ENERGY

Office of Fossil Energy

Washington, D.C.

FE Docket No. PP-82-3

**The Joint Owners of the Highgate
Interconnection Facilities**

Presidential Permit

Order No. PP-82-3

February 7, 2005

PRESIDENTIAL PERMIT

Joint Owners of the Highgate Interconnection Facilities

ORDER No. PP-82-3

I. BACKGROUND

The Office of Fossil Energy (FE) of the Department of Energy (DOE) has the responsibility for implementing Executive Order (EO) 10485, as amended by EO 12038, which requires the issuance of Presidential permits for the construction, connection, operation, and maintenance of electric transmission facilities at the United States international border.

On May 14, 1985, DOE issued Presidential Permit PP-82 to the Joint Owners of the Highgate Project¹ (Joint Owners). The PP-82 facilities, also known as the Highgate Project, consist of a 120,00-volt (120-kV) transmission line that connects the Hydro-Quebec electric system in Canada with the electrical grid in northern Vermont. The line crosses the U.S.-Canadian border in northwestern Vermont and extends approximately 7.5 miles to Highgate Substation located in Highgate, Vermont. Highgate Substation contains a back-to-back converter station that converts alternating current to direct current and then back to alternating current.

On March 1, 1994, DOE issued Presidential Permit PP-82-2 which increased the allowable rate of transmission over the PP-82 facilities in the import mode from 200 megawatts (MW) to 225 MW, subject to certain operating conditions and limitations.

On September 3, 2003, Vermont Electric Power Company (VELCO), acting on its own behalf and as agent for the Joint Owners, filed a single application with DOE to amend Presidential Permits PP-66-1² and PP-82-2 to affect the physical and operational changes to those facilities required to implement VELCO's Northern Loop Project. In that same application, VELCO also requested that Presidential Permit PP-82-2 be amended by changing the names of the entities comprising the Joint Owners and by increasing the allowable rate of transmission in the import mode to 250 MW.

The Northern Loop Project is a proposal by VELCO to convert the transmission system in northern Vermont from a series of radial transmission lines to a networked system with multiple supply points. In part, the Northern Loop Project would disconnect radial load in north-

1 The Joint Owners of the Highgate Project originally included Central Vermont Public Service Corp., Vermont Public Power Supply Authority, Green Mountain Power Corp., Vermont Electric Generation and Transmission Cooperative, Inc., Village of Johnson Electric Light Department, Rochester Electric Light and Power Co., Inc., Citizens Utilities Company (now, Citizens Communications Company; "Citizens"), and the City of Burlington Electric Light Department.

2 The PP-66 facilities consist of one, 120-kV transmission line that crosses the U.S.-Canadian border in the vicinity of Derby Line, Vermont. The transmission line connects to a substation near the border and also to Newport Substation and then extends approximately 52 miles to the west, connecting radially to Citizens' Highgate substation in northwestern Vermont.

central and northwestern Vermont from the PP-66-1 facilities and connect this load to the PP-82-2 facilities. This would result in a decrease in electricity imports from Canada over the PP-66-1 facilities and an increase in imports over the PP-82-2 facilities. It is this shift in power imports that would necessitate an increase in the allowable rate of import over the PP-82-2 facilities to 250 MW. The details of the Northern Loop Project are more fully described in the single application filed in this docket and in the PP-66-2 docket.

Notice of VELCO's application to amend Presidential Permit PP-82-2 appeared in the *Federal Register* on October 9, 2003, (68 FR 58320) requesting that comments, protests, and petitions to intervene be submitted by November 10, 2003. No comments were received.

The Secretary of State and the Secretary of Defense have concurred in the amendment of Presidential Permit PP-82-2.

II. DISCUSSION

The operation of the Highgate converter is coordinated with other utilities in the New England region and PP-82-2 contains conditions requiring adherence to several operating agreements and protocols in scheduling imports over the Highgate facilities.

In support of this application to amend PP-82-2, VELCO has submitted technical studies that demonstrate that the implementation of the Northern Loop Project would tend to improve the reliability of the electric system in northern Vermont. Based in part on these studies, DOE is granting the requested increase in power imports over the PP-82-2 facilities that would be necessary to implement the Northern Loop Project. However, DOE notes that no new information has been submitted which suggests that the existing protocols for operating the Highgate converter would no longer be required. Therefore, although this permit amendment authorizes an increase in the maximum rate of imports through Highgate to 250 MW, DOE will require the Joint Owners to continue to adhere to the operating protocols in the existing Presidential permit for scheduling imports through the Highgate converter.

In its application, VELCO noted that the legal name of the Joint Owners has changed to the "Joint Owners of the Highgate Interconnection Facilities." VELCO also notes that the entities that constitute the Joint Owners have changed because of the bankruptcy of Vermont Electric Generation and Transmission Cooperative, Inc., the merger of Franklin Electric Light Company, Inc. into Citizens, and the transfer of Citizens' share of the Highgate Project to Vermont Electric cooperative, Inc. Therefore, this amendment changes the name of the permit holder to "Joint Owners of the Highgate Interconnection Facilities" and re-defines the entities that constitute the Joint Owners as: City of Burlington Electric Department; Central Vermont Public Service Corporation; Vermont Electric Cooperative, Inc.; Green Mountain Power Corporation; Rochester Electric Light and Power Company, Inc.; Vermont Public Power Supply Authority; and the Village of Johnson Water and Light Department

III. FINDING AND DECISION

DOE has assessed the impact that the amendment of Presidential Permit PP-82-2 of the proposed international transmission facilities would have on the reliability of the U.S. electric power supply system. As a result of this review and as discussed above, DOE has determined that the requested increase in the maximum allowable level of imports through the PP-82-2 facilities, as further limited herein, would not adversely impact the reliability of the U.S. electric power supply system. The technical studies supporting this finding are part of the docket in this proceeding.

DOE has also determined that the amendment of Presidential Permit PP-82-2 as requested by VELCO clearly would not constitute a major Federal action which could significantly affect the quality of the human environment within the meaning of the National Environmental Policy Act of 1969. DOE has documented the rationale supporting this finding in a Finding of No Significant Impact.

IV. ORDER

Pursuant to the provision of EO 10485, as amended by EO 12038, and the Rules and Regulations issued thereunder (Title 10, Code of Federal Regulations, §205.320 *et. seq.*), Presidential Permit PP-82 is hereby amended by changing the name of the permit holder to the Joint Owners of the Highgate Interconnection Facilities (Joint Owners) and by changing the names of the entities that constitute the Joint Owners to be: City of Burlington Electric Department; Central Vermont Public Service Corporation; Vermont Electric Cooperative, Inc.; Green Mountain Power Corporation; Rochester Electric Light and Power Company, Inc.; Vermont Public Power Supply Authority; and the Village of Johnson Water and Light Department. Presidential Permit PP-82 is further amended to read as follows:

Article 1. The facilities herein described shall be subject to all conditions, provisions and requirements of this permit. This permit may be modified or revoked by the President of the United States without notice, or by DOE after public notice, and may be amended by DOE after proper application thereto.

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 three-phase, alternating current transmission line, designed and constructed for 345-kV use but operated at 120-kV, and a back-to-back converter station. The transmission line will extend approximately 7.58 miles from the U.S.-Canadian border near the town of Franklin, Vermont, to the converter station located in the town of Highgate, Vermont. The converter station will be installed to convert electricity from the Hydro-Quebec electric system to direct current and then back to alternating current to allow connection to the existing VELCO 115-kV transmission system.

The facilities authorized by this permit are more specifically shown and described in the application filed in this docket.

Article 3. The facilities described in Article 2 above shall be designed and operated in accordance with all applicable reliability criteria, standards, and guides of the North American Electric Reliability Council, Regional Councils, independent system operators, or Regional Transmission Organizations, as appropriate, and on such terms as expressed therein and as such criteria, standards, and guides may be amended from time to time. Furthermore, the facilities described in Article 2 shall be operated in such a manner that the maximum instantaneous rate of transmission of electric energy entering the United States over the facilities authorized herein shall not exceed 250 MW. Operation of the subject facilities at import levels of up to 250 MW is further conditioned upon the following:

- a. Revision of the pre-contingency dispatch of VELCO's switched capacitors as detailed in Table 1 of the DOE Reliability Determination dated November 26, 1993, to prevent post-contingency reactive deficiency and pre-contingency overvoltages;
- b. Addition of a new relaying scheme whereby imports through the Highgate converter are reduced to 150 MW upon loss of the Sand Bar-Essex 115-kV line;
- c. Establishment of an operating agreement between VELCO and the other members of the New England Power Pool or its successor to limit imports through the Highgate converter to 200 MW whenever electric power is being imported through the Comerford converter; and,
- d. Adherence to the operating procedures outlined in Figure 1 of the DOE Reliability Determination dated November 26, 1993, which limits imports through the Highgate converter for various system operating configurations.

Article 4. No change shall be made in the facilities covered by this permit or in the authorized operation of these facilities unless such change has been approved by DOE.

Article 5. The Joint Owners shall at all times maintain the facilities covered by this permit in a satisfactory condition so that all requirements of the National Electric Safety Code in effect at the time of construction are fully met.

Article 6. The operation and maintenance of the facilities covered by this permit shall be subject to the inspection and approval of a properly designated representative of DOE, who shall be an authorized representative of the United States for such purposes. The Joint Owners shall allow officers or employees of the United States, with written authorization, free and unrestricted access into, through, and across any lands occupied by these facilities in the performance of their duties.

Article 7. The Joint Owners shall investigate any complaints from nearby residents of radio or television interference identifiably caused by the operation of the facilities covered by this permit. The Joint Owners shall take appropriate action as necessary to mitigate such situations. Complaints from individuals residing within one-half mile of the center of the transmission circuit are the only ones which must be resolved. The Joint Owners shall maintain written records of all complaints received and of the corrective actions taken.

Article 8. The United States shall not be responsible or liable: for damages to or loss of the property of, or injuries to, persons; for damages to, or loss of the facilities covered by this permit; or for damages to, or loss of the property of, or injuries to the person of the Joint Owners officers, agents, the Joint Owners' servants or employees or of others who may be on said premises; any of which may arise from or be incident to the exercise of the privileges granted herein; and the Joint Owners shall hold the United States harmless from any and all such claims.

Article 9. The Joint Owners shall arrange for the installation and maintenance of appropriate metering equipment to record permanently the hourly flow of all electric energy transmitted between the United States and Canada over the facilities authorized herein. The Joint Owners shall make and preserve full and complete records with respect to the electric energy transactions between the United States and Canada. The Joint Owners shall furnish annual reports to DOE, by the 15th of February each year, detailing for each month of the previous year: (1) the gross amount of electricity imported into the U.S., in kilowatt hours; (2) the consideration associated with the import; and (3) the maximum hourly rate of transmission, in kilowatts. Annual reports must be filed regardless of current activity and whether or not deliveries of electric energy have been made. If no transactions have been made, a one-sentence report indicating "no activity" for the previous year is sufficient.

Reports shall be submitted to the U.S. Department of Energy, Office of Fossil Energy, FE-27, 1000 Independence Avenue, SW, Washington, D.C. 20585-0305. Properly identified reports will also be accepted via facsimile at (202) 287-5736 to meet time requirements, but original copies should still be filed at the above address.

Article 10. Neither this permit nor the facilities covered by this permit, or any part thereof, shall be transferable or assignable, except in the event of the involuntary transfer of the facilities by the operation of law. In the case of such an involuntary transfer, this permit shall continue in effect for a period of 60 days and then shall terminate unless an application for a new permit pursuant to Title 10, Code of Federal Regulations, section 205.323, has been received by DOE. Upon receipt by DOE of such an application, this existing permit shall continue in effect pending a decision on the new application. During this decision period, the facilities authorized herein shall remain substantially the same as before the transfer.

Article 11. Upon the termination, revocation or surrender of this permit, the 345-kV transmission facilities (operated at 120-kV) which are owned, operated, maintained, and connected by the Joint Owners and described in Article 2 of this permit, shall be removed and the land restored to its original condition within such time as DOE may specify and at the expense of the Joint Owners. If the Joint Owners fails to remove such facilities and/or any portion thereof authorized by this permit, DOE may direct that such actions be taken for the removal of the facilities or the restoration of the land associated with the facilities at the expense

of the Joint Owners. The Joint Owners shall have no claim for damages by reason of such possession, removal or repair. However, if certain facilities authorized herein are useful for other utility operations within the bounds of the United States, DOE will not require that those facilities be removed and the land restored to its original condition upon termination of the international interconnection.

Issued in Washington, D.C., on February 7, 2005.

A handwritten signature in dark ink, appearing to read "Anthony J. Como", is written over a horizontal line.

Anthony J. Como
Deputy Director
Electric Power Regulation
Office of Coal & Power Systems
Office of Fossil Energy

United States
Department of Energy

Office of Electricity Delivery and Energy Reliability

Vermont Electric Power Company, Inc.,
As Agent for the Joint Owners of the Highgate
Project

OE Docket No. PP-82-4



Presidential Permit Amendment
No. PP-82-4

May 3, 2016

**Presidential Permit Amendment
Vermont Electric Power Company, Inc.,
As Agent for the Joint Owners of the Highgate Project**

Order No. PP-82-4

I. BACKGROUND

The Department of Energy (DOE) has the responsibility for implementing Executive Order (E.O.) 10,485, as amended by E.O. 12,038, which requires the issuance of a Presidential permit for the construction, operation, maintenance, or connection of electric transmission facilities at the United States international border.¹ DOE may issue such a permit if it determines that the permit is in the public interest and after obtaining favorable recommendations from the U.S. Departments of State and Defense.

On May 14, 1985, DOE issued Presidential permit PP-82 to the Joint Owners of the Highgate Project² (Joint Owners), authorizing it to construct, operate, maintain, and connect electric transmission facilities at the international border of the United States and Canada. The PP-82 facilities, also known as the Highgate Project, consist of a 120,000 volt (120-kV) transmission line that connects the Hydro-Quebec electric system in Canada border in northwestern Vermont and extends approximately 7.5 miles to Highgate Substation located in Highgate, Vermont. Highgate Substation contains a back-to-back converter station that converts alternating current to direct current and then back to alternating current.

On March 1, 1994, DOE issued Presidential Permit PP-82-2 which increased the allowable rate of transmission over the PP-82 facilities in the import mode from 200 megawatts (MW) to 225 MW, subject to certain operating conditions and limitations.

On February 7, 2005, DOE issued Presidential Permit PP-82-3 which increased the allowable rate of transmission over the PP-82 facilities in the import mode from 225 MW to 250 MW, subject to certain operating conditions and limitations.

On November 4, 2015, Vermont Electric Power Company, Inc. (VELCO), as operating-and-management agent for the Joint Owners, filed an application to amend PP-82. In its application VELCO requested that DOE amend PP-82-3 by removing the last sentence of Article 3's preamble and paragraphs a through d of that article which establish operating conditions and limitations that are no longer necessary for two reasons. First, VELCO asserted that it has made transmission reinforcements to the

¹ The authority to administer the International Electricity Regulatory Program through the regulation of electricity exports and the issuance of Presidential permits has been delegated to the Assistant Secretary for the Office of Electricity Delivery and Energy Reliability (OE), in Redelegation Order No. 00-006.05 issued on November 17, 2014.

² The Joint Owners of the Highgate Project originally included Central Vermont Public Service Corp., Vermont Public Power Supply Authority, Green Mountain Power Corp. (GMP), Vermont Electric Generation and Transmission Cooperative, Inc., Village of Johnson Electric Light Department, Rochester Electric Light and Power Co., Inc., Citizens Utilities Company, and the City of Burlington Electric Light Department. The current Joint Owners include GMP, Vermont Public Power Supply Authority, City of Burlington Electric Department, Village of Johnson Water and Light Department, and Vermont Electric Cooperative, Inc.

Highgate Facilities and other transmission facilities in northern Vermont since 1994. Second, ISO New England Inc. (ISO-NE), as the Regional Transmission Organization (RTO) for the six-state New England region, manages real-time operation of these facilities through its operating procedures.

Furthermore VELCO requested that DOE make note of the change of interest ownership in the Joint Owners by acknowledging that CVPS is no longer a Joint Owner and recognize that GMP's ownership stake has increased to 82.3%. Joint Ownership in the Highgate Project would now be:

City of Burlington Electric Department	7.70%
Vermont Electric Cooperative, Inc.	0.22%
GMP	82.3%
Vermont Public Power Supply Authority	9.36%
Village of Johnson Water and Light Department	0.43%

DOE issued a notice of VELCO's application in the *Federal Register* on December 16, 2015 (80 Fed. Reg. 78208), requesting that any comments, protests, or motions to intervention be filed by February 16, 2016. None were received.

II. DISCUSSION

In support of their application, VELCO submitted a report that describes the analysis conducted to support the recommendation to remove the existing operating conditions due to several system and market condition changes that have occurred since 1994. The report indicates that approximately 460 MVAR of capacitor banks, not including capacitor banks installed on the low voltage system, have been installed in addition to the 210 MVAR modeled in a prior study. More significantly, several dynamic reactive devices have been installed, which removed the reliance on fast post-contingency switching of capacitor banks. In total, approximately 300 MVAR of dynamic reactive support were added to the transmission system in the last few years, not including synchronous condensers installed on the low voltage system. Finally, the transmission network has been strengthened over the years to ensure the system performs adequately based on the planning standards of the North American Electric Reliability Corporation (NERC) and regional reliability standards. This stronger system also has the effect of reducing reliance on specific capacitor bank dispatch and post-contingency switching of capacitor banks. Therefore, paragraph a. of Article 3 in PP-82-3 is no longer necessary.

ISO-NE market rules have been put in place to ensure that the system is operated securely and economically. Dispatch rules described in the ISO-NE tariff and operating procedures determine which resources need to be reduced to prevent system concerns. These market rules supersede VELCO's operating procedures. The ISO-NE dispatch rules and standard operating procedure allows the operators to adjust and optimize the system's configuration based on specific set of circumstances. As a result, paragraph b. Article 3 in PP-82-3 is no longer necessary.

In the current analysis, the Comerford converter was not modeled because it has

been retired. Therefore, the operating agreement discussed in the 1992 study no longer applies. Results of the current study did not show any exposure to voltage collapse. Therefore, paragraph c. of Article 3 in PP-82-3 no longer applies.

The modeling assumptions in the most recent analysis demonstrate that the system can comfortably accommodate higher imports. The results of this current study showed that voltage performance was acceptable with a large reactive margin and no exposure to voltage collapse with a transmission facility out of service. Therefore, paragraph d. of Article 3 in PP-82-3 no longer applies.

The results of the current analysis show that system performance is acceptable with Highgate cross-border flows of 225 MW and 250 MW. As determined by ISO-NE, the study supports the current Hydro Québec TTC request of 225 MW, and would support a maximum 250 MW Total Transfer Capability (TTC) when requested and as currently authorized under Presidential Permit PP-82-3.

DOE staff have determined that the analysis conducted to support the recommendation to remove the above conditions due to several system and market changes that have occurred since 1994 is sufficient and the operating protocols outlined in Article 3 of the prior PP-82-3 permit are not applicable due to these changes. In addition, removal of conditions will not have a negative impact on the reliability of the United States electric grid if operated consistent with both ISO-NE and NERC policies and standards, terms and conditions of the Presidential permit and other regulatory and statutory requirements.

DOE has consistently expressed its expectation that owners of international transmission facilities provide access across the border in accordance with the principles of comparable open access and non-discrimination contained in the Federal Power Act and articulated in the Federal Energy Regulatory Commission's Order No. 888, *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities*.¹ The facilities to be operated by the Joint Owners are deemed suitable for third party access to transmit electricity between the United States and Canada.

¹ *Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, 61 Fed. Reg. 21,540 (May 10, 1996), FERC Stats. & Regs. ¶ 31,036 (1996), *order on reh'g*, Order No. 888-A, 62 Fed. Reg. 12,274 (Mar. 14, 1997), FERC Stats. & Regs. ¶ 31,048 (1997), *order on reh'g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), *order on reh'g*, Order No. 888-C, 82 FERC ¶ 61,046 (1998), *aff'd in relevant part sub nom. Transmission Access Policy Study Group v. FERC*, 225 F.3d 667 (D.C. Cir. 2000) (*TAPS v. FERC*), *aff'd sub nom. New York v. FERC*, 535 U.S. 1 (2002).

III. FINDINGS AND DECISION

In determining whether issuance of a Presidential permit is in the public interest, DOE considers the environmental impacts of the proposed project pursuant to the National Environmental Policy Act (NEPA), determines the project's impact on electric reliability, and weighs any other factors that DOE may also consider relevant to the public interest.

DOE has determined that this action is among those classes of actions not normally requiring preparation of an environmental assessment or an environmental impact statement and, therefore, is eligible for two categorical exclusions (CX) under DOE NEPA Implementing Procedures in 10 CFR Part 1021. The first CX that applies is at B4.6 of Appendix B to Subpart D of the procedures. This CX is for additions or modifications to electric power transmission facilities that would not affect the environment beyond the previously developed facility area including, but not limited to, switchyard rock grounding upgrades, secondary containment projects, paving projects, seismic upgrading, tower modifications, changing of insulators, and replacement of poles, circuit breakers, conductors, transformers, and crossarms. The second CX is found a paragraph A13 appendix A to Subpart D of the procedures and it applies to for administrative, organization, or procedural orders. DOE also assessed the impact that the operation of the proposed international transmission facilities would have on the reliability of the U.S. electric power supply system. Based on the information in the docket and as discussed above, DOE determined that the installation and operation of the proposed international transmission facilities by the Joint Owners, as conditioned herein, would not adversely impact the reliability of the U.S. electric power supply system.

The Secretary of State and the Secretary of Defense concur with the issuance of the amended Permit to the Joint Owners.

Based upon the above discussion and analysis, DOE determines that the issuance of a Presidential permit to the Joint Owners is consistent with the public interest.

IV. DATA COLLECTION AND REPORTING

The responsibility for the data collection and reporting under Presidential permits authorizing electric transmission facilities at the U.S. international border and orders authorizing electricity exports to a foreign country has been transferred from OE to DOE's Energy Information Administration (EIA). The Joint Owners are required to submit Form EIA-111 "Quarterly Electricity Imports and Exports Report" as specified by EIA. The Joint Owners are instructed to follow EIA instructions in utilizing the Data xChange Community Portal. Questions regarding the data collection and reporting requirements can be directed to EIA by email at EIA4USA@eia.gov or by phone at 1-855-342-4872.

V. ORDER

Pursuant to the provisions of Executive Order 10,485, as amended by E.O. 12,038, and the regulations issued thereunder (Title 10, Code of Federal Regulations, Part 205), permission is granted to the Joint Owners of the Highgate Project, to construct, operate, maintain, and connect electric transmission facilities at the international border of the United States and Canada, as further described in Article 2 below, upon the following conditions:

Article 1. The facilities herein described shall be subject to all conditions, provisions and requirements of this Permit. This Permit may be modified or revoked by the President of the United States without notice, or by DOE after public notice, and may be amended by DOE after proper application thereto.

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 three-phase, alternating current transmission line, designed and constructed for 345 kV use but operated at 120-kV, and a back-to-back converter station. The transmission line extends approximately 7.58 miles from the U.S.-Canada border near Franklin, Vermont, to the converter in Highgate, Vermont. The converter station converts electricity from the Hydro-Quebec electric system to direct current and then back to alternating current to allow connection to the existing VELCO 115-kV transmission system.

Article 3. The facilities described in Article 2 above, shall be designed and operated in accordance with all policies and standards of the NERC, Regional Entities, Reliability Coordinators, and independent system operators, or their successors, as appropriate, on such terms as expressed therein and as such criteria, standards, and guides may be amended from time to time.

Furthermore, the facilities described in Article 2 shall be operated in such a manner that the scheduled rate of transmission of electric energy entering the United States over the facilities operated herein shall not exceed 250 MW.

Article 4. No change shall be made in the facilities covered by this Permit or in the authorized operation or connection of these facilities unless such change has been approved by DOE.

Article 5. The Joint Owners shall at all times maintain the facilities covered by this Permit in a satisfactory condition so that all requirements of the National Electric Safety Code in effect at the time of construction are fully met.

Article 6. The operation and maintenance of the facilities covered by this Permit shall be subject to the inspection and approval of a designated representative of DOE, who shall be an authorized representative of the United States for such purposes. The Joint Owners shall allow officers or employees of the United States, with written

authorization, free and unrestricted access into, through and across any lands occupied by these facilities in the performance of their duties.

Article 7. The Joint Owners shall investigate any complaints from nearby residents of radio or television interference identifiably caused by the operation of the facilities covered by this Permit. The Joint Owners shall take appropriate action as necessary to mitigate such situations. Complaints from individuals residing within one-half mile of the centerline of the transmission line must be resolved. The Joint Owners shall maintain written records of all complaints received and of the corrective actions taken.

Article 8. The United States shall not be responsible or liable for damages of any kind which may arise from or be incident to the exercise of the privileges granted herein. Joint Owners shall hold the United States harmless from any and all such claims.

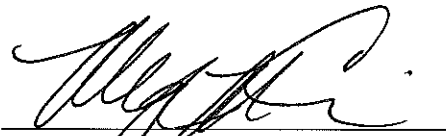
Article 9. The Joint Owners shall arrange for the installation and maintenance of appropriate metering equipment to record permanently the hourly flow of all electric energy transmitted between the United States and Canada over the facilities authorized herein. The Joint Owners shall make and preserve full and complete records with respect to the electric energy transactions between the United States and Canada. The Joint Owners shall collect and submit the data to EIA as required by and in accordance with the procedures of Form EIA-111, "Quarterly Electricity Imports and Exports Report" or its successor form.

Article 10. Neither this Permit nor the facilities covered by this Permit, or any part thereof, shall be transferable or assignable, unless specifically authorized by DOE in accordance with Title 10, Code of Federal Regulations.

Article 11. Upon the termination, revocation or surrender of this Permit, the permitted facilities which are owned, operated, maintained, and connected by the Joint Owners and described in Article 2 of this Permit, shall be removed and the land restored to its original condition within such time as DOE may specify and at the expense of the Joint Owners. If the Joint Owners fail to remove such facilities and/or any portion thereof authorized by this Permit, DOE may direct that such actions be taken for the removal of the facilities or the restoration of the land associated with the facilities at the expense of the Joint Owners. The Joint Owners shall have no claim for damages by reason of such possession, removal or repair. However, if certain facilities authorized herein are useful for other utility operations within the bounds of the United States, DOE may not require that those facilities be removed and the land restored to its original condition upon termination of the international interconnection.

Article 12. Joint Owners have a continuing obligation to give DOE written notification as soon as practicable of any prospective or actual changes of a substantive nature in the circumstances upon which this Order was based, including but not limited to changes in authorized entity contact information.

Issued in Washington, D.C., on May 3, 2016.

A handwritten signature in black ink, appearing to read 'Meghan Conklin', written over a horizontal line.

Meghan Conklin
Deputy Assistant Secretary
National Electricity Delivery Division
Office of Electricity Delivery and
Energy Reliability