# United States
# Department of Energy

## Office of Electricity

## **TransCanada Energy Sales Ltd.**

## OE Docket No. EA-468

Order Authorizing Electricity Exports to Canada

Order No. EA-468

May 13, 2019

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# Authorizing Electricity Exports to Canada

## I. BACKGROUND

The Department of Energy (the Department or DOE) regulates electricity exports from the United States to foreign countries in accordance with section 202(e) of the Federal Power Act (FPA) (16 U.S.C. § 824a(e)) and regulations thereunder (10 C.F.R. § 205.300 *et seq.*). Sections 301(b) and 402(f) of the DOE Organization Act (42 U.S.C. §§ 7151(b), 7172(f)) transferred this regulatory authority, previously exercised by the now-defunct Federal Power Commission, to DOE.

An entity that seeks to export electricity must obtain an order from DOE authorizing it to do so. Under FPA section 202(e), DOE "shall issue such order upon application unless, after opportunity for hearing, it finds that the proposed transmission would impair the sufficiency of electric supply within the United States or would impede or tend to impede the coordination in the public interest of facilities subject to the jurisdiction of [DOE]." 16 U.S.C. § 824a(e). DOE has discretion to condition the order as necessary or appropriate; the Department "may by its order grant such application in whole or in part, with such modifications and upon such terms and conditions as [DOE] may find necessary or appropriate, and may from time to time, after opportunity for hearing and for good cause shown, make such supplemental orders in the premises as it may find necessary or appropriate." *Id.*

### A. Application for Export Authorization

TransCanada Energy Sales Ltd. (TCES or Applicant) is a power marketer seeking an export authorization to sell electric energy into Canada. In its Application, the Applicant requests export authorization for a term of five years. *See* Application of TransCanada Energy Sales Ltd. for Authorization to Export Electric Energy to Canada (Mar. 6, 2019) (Application or App.) at 1.

TCES is organized and incorporated under the laws of Alberta, Canada, and has its principal place of business in Calgary, Alberta, Canada. App. at 2. TCES is also an indirect wholly-owned subsidiary of TransCanada Corporation (TransCanada). *Id.* TCES is authorized by the Federal Energy Regulatory Commission (FERC) to make wholesale sales of energy, capacity, and ancillary services in the United States at (market-based) rates. *See id.*

TCES states that it "does not own or control any generation, transmission, or distribution facilities within the United States and does not have a franchised electric power service area." App. at 2. The electric energy that TCES proposes to export to Canada will be purchased from third parties, such as electric utilities and federal power

marketing agencies, pursuant to voluntary agreements, and thus surplus to the needs of the selling entities. *See id.* at 4.

The electric energy that TCES proposes to export will be wheeled over transmission facilities owned and operated by other parties. Under this model, TCES will comply with terms and conditions for cross-border facilities as well as any other export limitations DOE deems appropriate. *See* App. at 5. TCES will schedule each transaction with the appropriate balancing authority in compliance with applicable reliability standards and guidelines of the North American Electric Reliability Corporation (NERC). *See id.*

As discussed below, TCES contends that its proposed exports will neither jeopardize the sufficiency of electric supply nor the reliability of the transmission grid; thus, the Applicant asserts that it meets the criteria of FPA § 202(e). *See* App. at 4, 5.

### B. Procedural History

On March 6, 2019, TCES filed an application with DOE requesting an export authorization for a term of five years. On March 21, 2019, DOE published notice of the application in the *Federal Register*. 84 Fed. Reg. 10,485 (Mar. 21, 2019). DOE asked for any interested parties to submit comments on the application by April 22, 2019. No comments were received.

## II. DISCUSSION AND ANALYSIS

DOE is statutorily obligated under FPA § 202(e) to grant requests for export authorization unless the Department finds that the proposed export would negatively impact either (i) the sufficiency of electric supply or (ii) the coordination of the electric grid. Regarding the first exception criterion, DOE shall approve an electricity export application "unless, after opportunity for hearing, it finds that the proposed transmission would impair the sufficiency of electric supply within the United States ...." 16 U.S.C. § 824a(e). DOE has interpreted this criterion to mean that sufficient generating capacity and electric energy must exist such that the export could be made without compromising the energy needs of the exporting region, including serving all load obligations in the region while maintaining appropriate reserve levels. *See, e.g.*, *BP Energy Co.*, OE Order No. EA-314, at 1-2 (Feb. 22, 2007), *renewed*, OE Order No. EA-314-A, at 2 (May 3, 2012).

Under the second exception criterion, DOE shall approve an electricity export application "unless, after opportunity for hearing, it finds that the proposed transmission would ... impede or tend to impede the coordination in the public interest of facilities subject to the jurisdiction of [DOE]." 16 U.S.C. § 824a(e). DOE has interpreted this criterion primarily as an issue of the operational reliability of the domestic electric transmission system. Accordingly, the export must not compromise transmission system security and reliability. *See, e.g.*, OE Order No. EA-314, at 2; OE Order No. EA-314-A, at 2.

## A. TCES's Requested Authorization Will Not Impair the Sufficiency of Electric Supply in the U.S.

Sufficiency of supply, the first exception criterion, addresses whether regional electricity needs are met in the current market. DOE has analyzed this issue from both an economic and a reliability perspective. The economic perspective concerns the supply available to wholesale market participants. The reliability perspective focuses on preventing problems that could result from inadequate supplies. Taken together, DOE examines whether existing electric supply is available via market mechanisms and whether potential reliability issues linked to supply problems are mitigated by reliability enforcement mechanisms.

From an economic perspective, DOE finds that the wholesale energy markets are sufficiently robust to make supplies available to exporters and other market participants serving United States regions along the Canadian and Mexican borders. Following enactment of the Energy Policy Act of 1992, Pub. L. No. 102-486, which encouraged FERC to foster competition in the wholesale energy markets through open access to transmission facilities, energy markets developed across the United States to provide opportunities for a more efficient availability of supply. Subsequently, the Energy Policy Act of 2005, Pub. L. No. 109-58, reaffirmed the Government's commitment to competition in wholesale energy markets as national policy. FERC has continued to encourage the expansion of wholesale energy markets through its orders to remove barriers[1] and to ensure that these markets are functioning properly.[2] As a result, market participants have access to traditional bilateral contracts, as well as organized electricity markets run by regional transmission organizations or independent system operators (RTOs/ISOs). FERC oversees these interstate wholesale electricity markets across most of the lower 48 states. Absent an indication in the record that the geographic markets relevant to this export authorization analysis are flawed and result in uneconomic exports that jeopardize regional supply, DOE finds that the proposed transmission for export does not impair the sufficiency of electric supply within the United States.

From a reliability perspective,[3] DOE focuses on the prevention of cascading outages and other problems that could result from inadequate resources.[4] Reliability issues are addressed by the authority granted to FERC through the Energy Policy Act of 2005. That Act added section 215 to the FPA, which directed FERC to certify an

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[1] *See, e.g., Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 Fed. Reg. 12,266 (Mar. 15, 2007), FERC Stats. & Regs. ¶ 31,241, *order on reh'g*, Order No. 890-A, FERC Stats. & Regs. ¶ 31,261 (2007), *order on reh'g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh'g*, Order No. 890-C, 126 FERC ¶ 61,228 (2009).

[2] *See, e.g., Wholesale Competition in Regions with Organized Electric Markets*, Order No. 719, FERC Stats. & Regs. ¶ 31,281 (2008), *as amended*, 126 FERC ¶ 61,261, *order on reh'g*, Order No. 719-A, FERC Stats. & Regs. ¶ 31,292, *reh'g denied*, Order No. 719-B, 129 FERC ¶ 61,252 (2009).

[3] A related reliability analysis follows in the next section of this Order.

[4] This focus should not be confused with resource adequacy planning and capacity requirements that have traditionally been the domain of state regulatory commissions, NERC-certified Regional Entities, and RTOs/ISOs.

electric reliability organization and develop procedures for establishing, approving, and enforcing mandatory electric reliability standards. 16 U.S.C. § 824o. FERC certified NERC in 2006 to establish and enforce reliability standards for the bulk-power system in the United States. *Order Certifying NERC as the Electric Reliability Organization and Ordering Compliance Filing*, FERC Docket No. RR06-1-000, 116 FERC ¶ 61,062 (July 20, 2006). NERC Reliability Standards address areas such as resource and demand balancing, critical infrastructure protection, communications, emergency preparedness and operations, facilities design, transmission operations, transmission planning, modelling, nuclear, personnel performance and training, protection and controls, voltage and reactive, interchange scheduling and coordination, and interconnection reliability operations and coordination.

NERC Reliability Standards are enforceable throughout the continental United States, most of Canada south of the 60th parallel, and the Mexican state of Baja California Norte. Through enforcement by FERC, NERC, and seven Regional Entities overseen by NERC,[5] all bulk-power system owners, operators, and users are held responsible for complying with reliability standards. The reliability standards are structured so that many entities have overlapping responsibility for the electric grid, thereby resulting in several layers of reliability monitoring. Entities such as reliability coordinators and balancing authorities coordinate power generation and transmission among multiple utilities to serve demand within an integrated regional wholesale market. One of the principal functions of these entities is to schedule adequate generating and reserve capacity. This allows them to serve demand at the regional level and to ensure that there is sufficient power supply to maintain system reliability. Reliability Standard IRO-001-4 "establish[es] the responsibility of Reliability Coordinators to act or direct other entities to act."[6] Requirement R1 requires that "[e]ach Reliability Coordinator shall act to address the reliability of its Reliability Coordinator Area via direct actions or by issuing Operating Instructions."[7] Reliability oversight is designed through coordinated efforts amongst Reliability Coordinators to preserve the benefits of interconnected operations and ensure that operations in one area will not adversely impact other areas.[8] Reliability Standard IRO-014-3 R1 provides that "[e]ach Reliability Coordinator shall have and implement Operating Procedures, Operating Processes, or Operating Plans, for activities that require notification or coordination of actions that may impact adjacent Reliability Coordinator Areas, to support Interconnection reliability."[9] DOE finds that NERC's FERC-approved comprehensive enforcement mechanism ensures that bulk-power system owners, operators, and users have a strong incentive both to maintain system resources and to prevent reliability problems that could result from movement of electric supplies through export. As a result of this

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[5] The seven entities are the Florida Reliability Coordinating Council, Midwest Reliability Organization, Northeast Power Coordinating Council, Reliability*First* Corporation, SERC Reliability Corporation, Texas Reliability Entity, and Western Electricity Coordinating Council.

[6] Standard IRO-001-4 (Reliability Coordination – Responsibilities), at ¶ A.3.

[7] *Id.* ¶ B.R1.

[8] *See* Standard IRO-014-3 (Coordination Among Reliability Coordinators), at ¶ A.3.

[9] *Id.* ¶ B.R1.

reliability oversight, DOE finds that the sufficiency of supply is not impaired by TCES's proposed export authorization.

DOE's sufficiency of supply findings are further supported by the fact that power marketers, such as TCES, do not have an obligation to serve a franchised territory. Before the current role of power marketers emerged in the industry, the FPA § 202(e) inquiry into sufficiency of supply had a narrower focus and was designed for an applicant that was a vertically-integrated utility[10] with an obligation to serve native load. Under that traditional scenario, the inquiry regarding sufficiency of supply logically sought to confirm that exports would be surplus to the needs of a vertically-integrated utility's native load obligations and reserve margins. As explained in DOE's notice of the first application by a power marketer for export authorization, the sufficiency of supply inquiry became unnecessary when applied to power marketers:

> The Applicant also is required to demonstrate that it would have sufficient generating capacity to sustain the proposed export under the terms and conditions of its export agreement, while still complying with any established reserve criteria.
>
> Since marketers generally could not be seen as having any "native load" requirements, the latter criterion of maintaining sufficient reserve margins appears inappropriate and unnecessary in this instance.

59 Fed. Reg. 54,900 (Nov. 2, 1994). Power marketers such as TCES do not have franchised service areas and, consequently, do not have native load obligations like a traditional local distribution utility that could be impaired by exports.

In sum, market mechanisms and reliability oversight protect against TCES exports that would jeopardize domestic sufficiency of supply. Therefore, an export by TCES would not trigger the first exception criterion of FPA § 202(e) regarding the sufficiency of electric supply within the United States.

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[10] The Supreme Court of the United States has explained: "In 1935, when the FPA became law, most electricity was sold by vertically integrated utilities that had constructed their own power plants, transmission lines, and local delivery systems...[M]ost operated as separate, local monopolies subject to state or local regulation. Their sales were 'bundled,' meaning that consumers paid a single charge that included both the cost of the electric energy and the cost of its delivery. Competition among utilities was not prevalent." *New York v. FERC*, 535 U.S. 1, 5 (2002).

## B. TCES's Requested Authorization Will Not Adversely Affect Either the Reliability or the Security of the U.S. Electric Transmission System

Reliability, the second exception criterion under FPA § 202(e), addresses operational reliability and security of the domestic electric transmission system. In evaluating the operational reliability impacts of export proposals, DOE has used a variety of methodologies and information, including established industry guidelines, operating procedures, and technical studies where available and appropriate. When determining these impacts, it is convenient to separate the export transaction into two parts: (i) moving the export from the source to a border system that owns the international transmission connection, and (ii) moving the export through that border system and across the border.

**Moving Electricity to a Border System.** Moving electricity for export to a border system necessarily involves the use of the bulk-power system. As noted in the preceding section, bulk-power system reliability concerns are addressed under the FPA by FERC and NERC and involve the enforcement of mandatory reliability standards. These standards ensure that all owners, operators, and users of the bulk-power system have an obligation to maintain system security and reliability. The standards are structured so that there are always entities with broader responsibilities than the applicant, such as reliability coordinators and balancing authorities, to keep a constant watch over the domestic transmission system.

To deliver the export from the source to a border system, the applicant must make the necessary commercial arrangements and obtain sufficient transmission capacity to wheel the exported energy to the border system. The applicant would be expected to follow FERC orders regarding open transmission access and to schedule delivery of the export with the appropriate RTO, ISO, and/or balancing authority (formerly the control area operator).

It is the responsibility of the RTO, ISO, and/or balancing authority to schedule the delivery of the export consistent with established and mandatory operational reliability criteria. During each step of the process of obtaining transmission service, the owners and/or operators of the transmission facilities will evaluate the impact on the system and schedule the movement of the export *only* if it would not violate established operating reliability standards. As a failsafe, the reliability coordinator in each region has the authority and responsibility to curtail, cancel, or deny scheduled flows to avoid shortages or to restore necessary energy and capacity reserves. Reliability Standard EOP-011-1 R2 provides that "[e]ach Balancing Authority shall develop, maintain, and implement one or more Reliability Coordinator-reviewed Operating Plan(s) to mitigate Capacity Emergencies and Energy Emergencies within its Balancing Authority Area."[11]

[11] EOP-011-1 (Emergency Operations), at ¶ B.R2.

Specifically, the reliability coordinator has the authority to suspend exports if the electric energy would be needed to support the regional power grid. *See* Reliability Standard IRO-001-4 R1 ("Each Reliability Coordinator shall act to address the reliability of its Reliability Coordinator Area via direct actions or by issuing Operating Instructions...to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay."), R2 ("Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's Operating Instructions unless compliance with the Operating Instructions cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements"), and R3 ("Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator of its inability to perform the Operating Instruction issued by its Reliability Coordinator in Requirement R1").

DOE has determined that the existing industry procedures for obtaining transmission capacity on the domestic transmission system (described above) provide adequate assurance that any particular export will not cause an operational reliability problem. Therefore, TCES's export authorization has been conditioned to ensure that the export will not cause operational issues on regional transmission systems to fall outside of established industry reliability criteria, or cause or exacerbate a transmission operating problem on the U.S. electric power supply system (*see* Order below, Section VII, paragraphs C, D, and I).

**Moving Electricity Through a Border System.** The second part of DOE's reliability inquiry, addressing the transmission of the export through a border system and across the border, is a question of whether the border system is reliable and secure. To a large extent, this question is addressed by the jurisdiction of NERC. NERC and Regional Entities—including the Midwest Reliability Organization, the Northeast Power Coordinating Council, and the Western Electricity Coordinating Council—oversee the United States-Canadian border system and a significant part of the United States-Mexican border system. Those border systems are generally subject to the same reliability standards as domestic systems. *See, e.g.*, http://www.ieso.ca/sector-participants/system-reliability/reliability-standards-framework.

DOE also relies on the System Impact Studies submitted in conjunction with an application for a DOE-issued Presidential permit[12] to construct a new international transmission line. As DOE has previously reviewed System Impact Studies submitted with Presidential permit applications,[13] DOE does not need to perform additional impact assessments here, provided the maximum rate of transmission for all exports through a border system does not exceed the authorized limit of the system (paragraph (A) of this Order). In its Application, TCES committed to complying with all reliability limits on

[12] DOE issues Presidential permits pursuant to Executive Order 10,485, as amended by Executive Order 12,038. *See* 10 C.F.R. §§ 205.320-205.329.

[13] *See, e.g.*, *AEP Tex. Cent. Co.*, OE Order No. PP-317, at 2-3 (Jan. 22, 2007); *Mont. Alta. Tie Ltd.*, OE Order No. PP-305, at 2-4 (Nov. 17, 2008).

border facilities. App. at 5. The second part of the reliability inquiry is therefore satisfied by DOE regulatory oversight in addition to NERC's reliability enforcement.

## III. FINDINGS AND DECISION

### A. TCES Meets the Statutory Requirements to Export Electric Energy to Canada

As explained above, DOE has assessed the impact that the proposed export would have on the reliability of the U.S. electric power supply system. DOE has determined that the export of electric energy to Canada by TCES, as ordered below, would not impair the sufficiency of electric power supply within the United States and would not impede or tend to impede the coordination in the public interest of facilities within the meaning of FPA § 202(e).

### B. TCES Qualifies for a NEPA Categorical Exclusion for Exports of Electric Energy

TCES's Application qualifies for DOE's categorical exclusion for exports of electric energy under the National Environmental Policy Act of 1969, as amended (NEPA), 42 U.S.C. § 4321 *et seq*. DOE's regulations set forth this categorical exclusion, codified as "B4.2," as follows:

> Export of electric energy as provided by Section 202(e) of the Federal Power Act over existing transmission lines or using transmission system changes that are themselves categorically excluded.

10 C.F.R. Part 1021, App. B to Subpart D, § B4.2.

DOE has determined that actions in this category do not individually or cumulatively have a significant effect on the human environment and that, therefore, neither an environmental assessment nor an environmental impact statement normally is required. 10 C.F.R. § 1021.410(a). Further, in 2011, DOE formally reviewed its NEPA regulations and categorical exclusions and determined that it was appropriate to retain the B4.2 categorical exclusion. *See* National Environmental Policy Act Implementing Procedures, 76 Fed. Reg. 214, 217 (Jan. 3, 2011).

To invoke this categorical exclusion, DOE must determine that, in relevant part, "[t]here are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal," and that "[t]he proposal has not been segmented to meet the definition of a categorical exclusion." 10 C.F.R. § 1021.410(b)(2), (3). "Extraordinary circumstances" include "unique situations" such as "scientific controversy about the environmental effects of the proposal." *Id.* § 1021.410(b)(2). DOE finds that TCES's Application does not present such a circumstance, nor has it been segmented for purposes of this exclusion. TCES seeks to deliver electricity over existing transmission lines, which fits squarely within the B4.2

categorical exclusion. For these reasons, DOE will not require more detailed NEPA review in connection with this Application. *See, e.g., id.* §§ 1021.400(a)(1), 410; 40 C.F.R. § 1501.4(a).

### C. Response to Comment

No comments were received.

### D. Conclusion

DOE grants TCES's request for a five-year term. The Applicant is authorized to export electricity to Canada over any authorized international transmission facility that is appropriate for open access transmission by third parties, subject to the limitations and conditions described in this Order.

## IV. DATA COLLECTION AND REPORTING REQUIREMENTS

The responsibility for the data collection and reporting under orders authorizing electricity exports to a foreign country currently rests with the U.S. Energy Information Administration (EIA) within DOE. The Applicant is instructed to follow EIA instructions in completing this data exchange. 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.

Additionally, any change to the tariff of an entity with an export authorization must be provided to DOE's Office of Electricity. 10 C.F.R. § 205.308(b).

## V. COMPLIANCE

Obtaining a valid order from DOE authorizing the export of electricity under FPA § 202(e) is a necessary condition before engaging in the export. Failure to obtain such an order, or continuing to export after the expiration of such an order, may result in a denial of authorization to export in the future and subject the exporter to sanctions and penalties under the FPA. DOE expects transmitting utilities owning border facilities and entities charged with the operational control of those border facilities, such as ISOs, RTOs, or balancing authorities, to verify that companies seeking to schedule an electricity export have the requisite authority from DOE to export such energy.

DOE expects TCES to abide by the terms and conditions established for its authority to export electric energy to Canada, as set forth below. DOE intends to monitor TCES's compliance with these terms and conditions, including the requirement in paragraph G of this Order that TCES create and preserve full and complete records and file reports with EIA as discussed above.

A violation of any of those terms and conditions, including the failure to submit timely and accurate reports, may result in the loss of authority to export electricity and subject TCES to any applicable sanctions and penalties under the FPA.

## VI. OPEN ACCESS POLICY

An export authorization issued under FPA section 202(e) does not impose a requirement on transmitting utilities to provide service. However, DOE expects transmitting utilities that own border facilities to provide access across the border in accordance with the principles of comparable open access and non-discrimination contained in the FPA and articulated in FERC Order No. 888 (Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, FERC Statutes and Regulations ¶ 31,036 (1996)), as amended. The actual rates, terms, and conditions of transmission service should be consistent with the non-discrimination principles of the FPA and the transmitting utility's Open-Access Transmission Tariff on file with FERC.

All recipients of export authorizations, including owners of border facilities for which Presidential permits have been issued, are required by their export authorization to conduct operations in accordance with the applicable principles of the FPA and any pertinent rules, regulations, directives, policy statements, and orders adopted or issued thereunder, which include the comparable open access provisions of FERC Order No. 888, as amended. Cross-border electric trade ought to be subject to the same principles of comparable open access and non-discrimination that apply to transmission in interstate commerce. *See Enron Power Mktg., Inc. v. El Paso Elec. Co.*, 77 FERC ¶ 61,013 (1996), *reh'g denied*, 83 FERC ¶ 61,213 (1998). Thus, DOE expects owners of border facilities to comply with the same principles of comparable open access and non-discrimination that apply to the domestic, interstate transmission of electricity.

## VII. ORDER

Accordingly, pursuant to FPA § 202(e) and the Rules and Regulations issued thereunder (10 C.F.R. §§ 205.300-309), it is hereby ordered that TCES is authorized to export electric energy to Canada under the following terms and conditions:

(A) The electric energy exported by TCES pursuant to this Order may be delivered to Canada over any authorized international transmission facility that is appropriate for open access transmission by third parties in accordance with the export limits authorized by DOE.

(1) The following international transmission facilities located at the United States border with Canada are currently authorized by Presidential permit and available for open access transmission:[14]

[14] This Order authorizes the export of electricity over any "authorized international transmission facility," which is intended to include both large transmission lines and smaller distribution lines that have received a Presidential permit. However, the list in subparagraph (A)(1) of current facilities only includes transmission lines.

| Present Owner | Location | Voltage | Presidential Permit No.[15] |
|---|---|---|---|
| Bangor Hydro-Electric Company | Baileyville, ME | 345-kV | PP-89 |
| Basin Electric Power Cooperative | Tioga, ND | 230-kV | PP-64 |
| Bonneville Power Administration | Blaine, WA | 2-500-kV | PP-10 |
| | Nelway, WA | 230-kV | PP-36 |
| | Nelway, WA | 230-kV | PP-46 |
| Eastern Maine Electric Cooperative | Calais, ME | 69-kV | PP-32 |
| International Transmission Company | Detroit, MI | 230-kV | PP-230 |
| | Marysville, MI | 230-kV | PP-230 |
| | St. Claire, MI | 230-kV | PP-230 |
| | St. Claire, MI | 345-kV | PP-230 |
| ITC Lake Erie Connector | Erie County, PA | 320-kV | PP-412[16] |
| Joint Owners of the Highgate Project | Highgate, VT | 120-kV | PP-82 |
| Long Sault, Inc. | Massena, NY | 2-115-kV | PP-24 |
| Maine Electric Power Company | Houlton, ME | 345-kV | PP-43 |
| Maine Public Service Company | Limestone, ME | 69-kV | PP-12 |
| | Fort Fairfield, ME | 69-kV | PP-12 |
| | Madawaska, ME | 138-kV | PP-29 |
| | Aroostook, ME | 2-69-kV | PP-29 |
| Minnesota Power, Inc. | International Falls, MN | 115-kV | PP-78 |
| Minnesota Power, Inc. | Roseau, County, MN | 500-kV | PP-398[17] |
| Minnkota Power Cooperative | Roseau County, MN | 230-kV | PP-61 |
| Montana Alberta Tie Ltd. | Cut Bank, MT | 230-kV | PP-305 |

[15] These Presidential permit numbers refer to the generic DOE permit number and are intended to include any subsequent amendments to the permit authorizing the facility.

[16] These transmission facilities have been authorized but not yet constructed or placed in operation.

[17] These transmission facilities have been authorized but not yet constructed or placed in operation.

| | | | |
|---|---|---|---|
| New York Power Authority | Massena, NY | 765-kV | PP-56 |
| | Massena, NY | 2-230-kV | PP-25 |
| | Niagara Falls, NY | 2-345-kV | PP-74 |
| | Devils Hole, NY | 230-kV | PP-30 |
| Niagara Mohawk Power Corp. | Devils Hole, NY | 230-kV | PP-190 |
| Northern States Power Company | Red River, ND | 230-kV | PP-45 |
| | Roseau County, MN | 500-kV | PP-63 |
| | Rugby, ND | 230-kV | PP-231 |
| Sea Breeze Olympic Converter LP | Port Angeles, WA | ±450-kV DC | PP-299[18] |
| Vermont Electric Power Co. | Derby Line, VT | 120-kV | PP-66 |
| Vermont Electric Transmission Co. | Norton, VT | ±450-kV DC | PP-76 |

(2) The following are the authorized export limits for the international transmission lines listed above in subparagraph (A)(1):

(A) Exports by TCES made pursuant to this Order shall not cause the total exports on facilities authorized by Presidential Permit PP-64 (issued to Basin Electric Power Coop.) to exceed an instantaneous transmission rate of 150 megawatts (MW). The gross amount of energy that TCES may export over the PP-64 facilities shall not exceed 900,000 megawatt-hours (MWH) during any consecutive 12-month period.

(B) Exports by TCES made pursuant to this Order shall not cause the total exports on the facilities authorized by Presidential Permit PP-32 (issued to Eastern Maine Electric Coop.) to exceed an instantaneous transmission rate of 15 MW. The gross amount of energy that TCES may export over the PP-32 facilities shall not exceed 7,500 MWH annually.

(C) Exports by TCES made pursuant to this Order shall not cause the total exports on a combination of the facilities authorized by Presidential Permit PP-230 (issued to International Transmission Company) to exceed a coincident, instantaneous transmission rate of 2.2 billion volt-amperes (2,200 MVA).

(D) Exports by TCES made pursuant to this Order shall not cause the total exports on a combination of the facilities authorized by Presidential

[18] These transmission facilities have been authorized but not yet constructed or placed in operation.

Permit PP-412 (issued to ITC Lake Erie Connector) to exceed an instantaneous transmission rate of 1,000 MW.

(E) Exports by TCES made pursuant to this Order shall neither cause the total exports on the facilities authorized by Presidential Permit PP-82 (issued to the Joint Owners of the Highgate Project) to exceed an instantaneous transmission rate of 200 MW, nor cause a violation of the following security constrained export limits:

| Vermont Total Load (MW) | Security Constrained Maximum Export (MW) |
|---|---|
| 1000 | 0 |
| 900 | 40 |
| 800 | 90 |
| 700 | 125 |
| 600 | 150 |
| 500 | 170 |

(F) Exports by TCES made pursuant to this Order shall not cause the scheduled rate of transmission over a combination of facilities authorized by Presidential Permits PP-43 (issued to Maine Electric Power Company) and PP-89-1 (issued to Bangor Hydro-Electric) to exceed 550 MW.

(G) Exports by TCES made pursuant to this Order shall not cause the total exports on the combination of facilities authorized by Presidential Permits PP-12 and PP-29 (issued to Maine Public Service Company) to exceed a coincident, instantaneous transmission rate of 97.8 MW.

(H) Exports by TCES made pursuant to this Order shall not cause total exports on the facilities authorized by Presidential Permit PP-78-1 (issued to Minnesota Power) to exceed an instantaneous transmission rate of 100 MW. Exports by TCES may cause total exports on the PP-78-1 facilities to exceed 100 MW only when total exports between the Mid-Continent Area Power Pool (MAPP) and Manitoba Hydro are below maximum transfer limits and/or whenever operating conditions within the MAPP system permit exports on the PP-78-1 facilities above the 100-MW level without violating established MAPP reliability criteria. However, under no circumstances shall exports by TCES cause the total exports on the PP-78-1 facilities to exceed 150 MW.

(I) Exports made by TCES pursuant to this Order shall not cause total exports on the facilities authorized by Presidential Permit PP-398 (issued to Minnesota Power) to exceed an instantaneous transmission rate of 750 MW.

(J) Exports by TCES made pursuant to this Order shall not cause total exports on a combination of the international transmission lines authorized by Presidential Permits PP-45 and PP-63 (issued to Northern States Power), PP-61 (issued to Minnkota Power), and PP-231 (issued to Northern States Power/Xcel), to exceed an instantaneous transmission rate of 700 MW on a firm basis and 1050 MW on a non-firm basis.

(K) Exports by TCES made pursuant to this Order shall not cause the total exports on the facilities authorized by Presidential Permit PP-66 (issued to Vermont Electric Power Co.) to exceed an instantaneous transmission rate of 50 MW. The gross amount of energy that TCES may export over the PP-66 facilities shall not exceed 50,000 MWH annually.

(L) Exports by TCES made pursuant to this Order shall not cause the total exports on the facilities authorized by Presidential Permit PP-56 (issued to NYPA) to exceed an instantaneous transmission rate of 1000 MW.

(M) Exports by TCES made pursuant to this Order shall not cause: (a) the total exports on the facilities authorized by Presidential Permits PP-25, PP-30, PP-74, and PP-190 (issued to NYPA and Niagara Mohawk) to exceed a combined instantaneous transmission rate of 1650 MW; and (b) the total exports on the 115-kV facilities authorized by Presidential Permit PP-24 (issued to Long Sault, Inc.) to exceed an instantaneous transmission rate of 100 MW. In addition, the gross amount of energy that TCES may export over the PP-24 facilities shall not exceed 300,000 MWH annually.

(N) Exports by TCES made pursuant to this Order shall not cause total exports on the two 500-kV lines authorized by Presidential Permit PP-10, the 230-kV line authorized by Presidential Permit PP-36, and the 230 kV line authorized by Presidential Permit PP-46 (issued to BPA) to exceed the following limits:

| Condition | PP-36 & PP-46 Limit | PP-10 Limit | Total Export Limit |
|---|---|---|---|
| All lines in service | 400 MW | 1500 MW | 1900 MW |
| 1-500 kV line out | 400 MW | 300 MW | 700 MW |
| 2-500 kV lines out | 400 MW | 0 MW | 400 MW |
| 1-230 kV line out | 400 MW | 1500 MW | 1900 MW |
| 2-230 kV line out | 0 MW | 1500 MW | 1500 MW |

(O) Exports by TCES made pursuant to this Order shall not cause a violation of the following conditions as they apply to exports over the facilities authorized by Presidential Permit PP-76, as amended (issued to the Vermont Electric Transmission Company):

| Exports Through | NEPOOL Load Condition | Export Limit |
|---|---|---|
| Comerford converter | Summer, Heavy | 650 MW |
| Comerford converter | Winter, Heavy | 660 MW |
| Comerford converter | Summer, Light | 690 MW |
| Comerford converter | Winter, Light | 690 MW |
| Comerford & Sandy Pond converters | All | 2,000 MW |

(P) Exports by TCES made pursuant to this Order over the international transmission facilities authorized by Presidential Permit PP-305 (issued to Montana Alberta Tie Ltd.) shall not exceed an instantaneous transmission rate of 300 MW.

(Q) Exports by TCES made pursuant to this Order over the international transmission facilities authorized by Presidential Permit PP-299 (issued to Sea Breeze Olympic Converter LP) shall not exceed an instantaneous transmission rate of 550 MW.

(B) Changes by DOE to the export limits in other orders shall result in a concomitant change to the export limits contained in subparagraph (A)(2) of this Order. Changes to the export limits contained in subparagraphs (A)(2)(J), (K), and (L) will be made by DOE after submission of appropriate information demonstrating a change in the transmission transfer capability between the electric systems in New York State and Ontario and New York State and Quebec, and between BPA and BC Hydro or BPA and West Kootenay Power. Notice of these changes will be provided to TCES.

(C) TCES shall obtain any and all other Federal and state regulatory approvals required to execute any power exports to Canada. The scheduling and delivery of electricity exports to Canada shall comply with all reliability criteria, standards, and guidelines of NERC, reliability coordinators, Regional Entities, RTOs, ISOs or balancing authorities, or their successors, as appropriate, on such terms as expressed therein, and as such criteria, standards, and guidelines may be amended from time to time.

(D) Exports made pursuant to this authorization shall be conducted in accordance with the applicable provisions of the FPA and any pertinent rules, regulations, directives, policy statements, and orders adopted or issued thereunder, including the comparable open access provisions of FERC Order No. 888, as amended.

(E) The authorization herein granted may be modified from time to time or terminated by further order of DOE. In no event shall such authorization to export over a particular transmission facility identified in subparagraphs (A)(1) and (2) extend beyond the date of termination of the Presidential permit or treaty authorizing such facility.

(F) This authorization shall be without prejudice to the authority of any state or state regulatory commission for the exercise of any lawful authority vested in such state or state regulatory commission.

(G) TCES shall make and preserve full and complete records with respect to the electric energy transactions between the United States and Canada. TCES 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," and all successor forms.

(H) In accordance with 10 C.F.R. § 205.305, this export authorization is not transferable or assignable, except in the event of involuntary transfer by operation of law. Provided written notice of the involuntary transfer is given to DOE within 30 days, this authorization shall remain in effect temporarily. The authorization shall terminate unless an application for a new export authorization has been received by DOE within 60 days of the involuntary transfer. Upon receipt by DOE of such an application, this existing authorization shall continue in effect pending a decision on the new application. In the event of a proposed voluntary transfer of this authority to export electricity, the transferee and the transferor shall file a joint application for a new export authorization, together with a statement of the reasons for the transfer.

(I) Nothing in this Order is intended to prevent the transmission system operator from being able to reduce or suspend the exports authorized herein, as necessary and appropriate, whenever a continuation of those exports would cause or exacerbate a transmission operating problem or would negatively impact the security or reliability of the transmission system.

(J) TCES has 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 or NERC compliance registry status.

(K) This authorization shall be effective as of May 6, 2019, and remain in effect for a period of five (5) years from that date. Application for renewal of this authorization may be filed within six (6) months prior to its expiration. Failure to provide DOE with at least sixty (60) days to process a renewal application and provide adequate opportunity for public comment may result in a gap in TCES's authority to export electricity.

Signed in Washington, D.C., on May 13, 2019.

Julia A Smith FOR

Catherine Jereza
Deputy Assistant Secretary
Transmission Permitting & Technical Assistance
Office of Electricity