
United States
Department of Energy

Grid Deployment Office

Rainbow Energy Marketing Corporation
GDO Docket No. EA-296-D



Order Authorizing Electricity Exports to Canada

Order No. EA-296-D

May 2, 2023

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I. BACKGROUND

The Department of Energy (DOE or Department) regulates exports of electricity from the United States to a foreign country pursuant to sections 301(b) and 402(f) of the Department of Energy Organization Act (42 U.S.C. 7151(b) and 7172(f)). Formerly, the DOE's Office of Electricity (OE) held the authority to both regulate the export of electric energy to a foreign country pursuant to the provisions of sections 202(e) and 202(f) of the Federal Power Act (16 U.S.C. 824a(e)-(f)) and to authorize the construction, operation, maintenance, or connection of facilities, at the borders of the United States, for the transmission of electric energy between the United States and a foreign country, pursuant to the provisions of Executive Order 10485, as amended by Executive Order 12038. See Redelegation Order No. S4-DEL-OE1-2021-2. On June 13, 2022, this authority was delegated to the DOE's Grid Deployment Office (GDO) under Delegation Order No. S1-DEL-S3-2022-2; Redelegation Order No. S3-DEL-GD1-2022.

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

Rainbow Energy Marketing Corporation (Applicant or Rainbow) is a power marketer seeking renewal of its existing export authorization to sell electric energy into Canada, which was originally granted in Order No. EA-296 on November 9, 2004 and renewed on September 18, 2007 (Order No. EA-296-A), September 20, 2012 (Order No. EA-296-B), and September 17, 2017 (Order No. EA-296-C). In its application, Rainbow requests a renewal of its export authorization for a term of five years. See Renewal Application of Rainbow Energy Marketing Corporation for Authorization to Transmit Electric Energy to Canada (September 16, 2022) (Application or App.) at 1.

Rainbow is a privately owned corporation and is part of a corporate family of companies that comprise United Energy Corporation, which is related by virtue of a common ownership group with United Energy Corporation and is incorporated in the State of North Dakota. Rainbow is authorized to do business in the State of North Dakota and such other states as required by the current nature of its business. Rainbow is authorized by the Federal Energy Regulatory Commission (FERC) to make sales of electric power at wholesale in interstate commerce at negotiated (market-based) rates. App. at 3.

Rainbow represents that it does not own or control any physical electric generation or transmission facilities in the U.S. and does not have any franchised service territory in the U.S. App. at 3. Rainbow asserts that all electricity exported “will be transmitted pursuant to arrangements with utilities that own and operate existing transmission facilities and will be consistent with all applicable export limits on transmission facilities, including those of the border facilities used, and with other terms and conditions contained in existing Presidential Permits and electricity export authorizations associated with these transmission facilities.” App at 4. Rainbow further states that it will “schedule its transactions with the appropriate balancing authorities in compliance with the reliability criteria standards and guidelines established by the North American Reliability Corporation and its member Regional Entities in effect at the time of the export.” See *id.*

B. Procedural History

On September 16, 2022, Rainbow filed an application with DOE requesting a renewal of their existing authorization for a term of five (5) years. On February 17, 2023, DOE published notice of the application in the Federal Register (88 Fed. Reg. 10311). DOE asked for any interested parties to submit comments on the application by March 20, 2023.

C. Public Comments

No public 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), *renewed*, OE Order No. EA-314-B, at 2 (Feb. 28, 2017), *renewed*, OE Order No. EA-314-C, at 4 (Dec. 20, 2021).

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-C, at 4.

A. Rainbow’s Requested Authorization Will Not Impair the Sufficiency of Electric Supply in the United States

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 barriers¹ 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 (RTOs) or independent system operators (ISOs). FERC oversees these interstate wholesale electricity markets across

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).

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 oversight is 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 electric reliability organization and develop procedures for establishing, approving, and enforcing mandatory electric reliability standards. 16 U.S.C. § 824o. FERC certified the North American Electric Reliability Corporation (NERC) in 2006 to develop 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). FERC approves these standards, at which point they become mandatory and enforceable. 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 six 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 states that “[e]ach Reliability Coordinator shall

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.

⁵ The six entities are the 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.

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

DOE’s sufficiency of supply findings are further supported by the fact that power marketers, such as Rainbow, 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 utility¹⁰ 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.

⁷ *Id.* ¶ B.R1.

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

⁹ *Id.* ¶ B.R1.

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).

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. 54900 (Nov. 2, 1994). As stated above, power marketers 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 the possibility that Rainbow’s exports would jeopardize domestic sufficiency of supply. Therefore, an export by Rainbow would not trigger the first exception criterion of FPA § 202(e) regarding the sufficiency of electric supply within the United States.

B. Rainbow’s Requested Authorization Will Not Adversely Affect Either the Reliability or the Security of the United States 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

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”), 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 export will not cause an operational reliability problem. Therefore, Rainbow’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 United States 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>.

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

DOE also relies on the System Impact Studies submitted in conjunction with an application for a DOE-issued Presidential permit¹² 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, Rainbow committed to complying with all reliability limits on border facilities. *See* App. at 4. 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. Rainbow 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 United States electric power supply system. DOE has determined that the export of electric energy to Canada by Rainbow, 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. Rainbow Qualifies for a NEPA Categorical Exclusion for Exports of Electric Energy

Rainbow'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

¹² DOE issues Presidential permits pursuant to Executive Order 10485, as amended by Executive Order 12038. *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).

the B4.2 categorical exclusion. *See* National Environmental Policy Act Implementing Procedures, 76 Fed. Reg. 214, 217 (Jan. 3, 2011); National Environmental Policy Act Implementing Procedures, 76 Fed. Reg. 9981, 9982 (Feb. 23, 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 Rainbow’s Application does not present such a circumstance, nor has it been segmented for purposes of this exclusion. Rainbow seeks to deliver electricity over existing international electric transmission facilities, 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), 1021.410; 40 C.F.R. § 1501.4(a).

C. Conclusion

DOE grants Rainbow’s request for a five (5) year term. Rainbow 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 Grid Deployment Office via email at electricity.exports@hq.doe.gov. 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 Rainbow 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 Rainbow's compliance with these terms and conditions, including the requirement in paragraph G of this Order that Rainbow create and preserve full and complete records and file reports with EIA as discussed above.

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

VI. OPEN ACCESS POLICY

An export authorization issued under FPA § 202(e) does not impose a requirement on transmitting utilities to provide service. However, DOE expects transmitting utilities that own border facilities to provide open access transmission service 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, including 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 Rainbow is authorized to export electric energy to Canada under the following terms and conditions:

(A) The electric energy exported by the Applicant 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

<u>Owner</u>	<u>Location</u>	<u>Voltage</u>	<u>Permit No.</u> ¹⁵
Bangor Hydro-Electric Company	Baileyville, ME	345-kV	PP-89
Basin Electric Power Cooperative	Tioga, ND	230-kV	PP-64
Bonneville Power Administration (BPA)	Blaine, WA	2-500-kV	PP-10
	Nelway, WA	230-kV	PP-36
	Nelway, WA	230-kV	PP-46
CHPE, LLC	Champlain, NY	±230-kV DC	PP-481
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
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	2x 69-kV	PP-29

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.

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 into operation.

Minnesota Power, Inc.	International Falls, MN	115-kV	PP-78
Minnesota Power, Inc.	Roseau County, MN	500-kV	PP-398
Minnkota Power Cooperative	Roseau County, MN	230-kV	PP-61
Montana Alberta Tie Ltd.	Cut Bank, MT	230-kV	PP-399
NECEC Transmission LLC	Beattie Township, ME	±320-kV	PP-438 ¹⁷
New York Power Authority (NYPA)	Massena, NY	765-kV	PP-56
	Massena, NY	2x 230-kV	PP-25
	Niagara Falls, NY	2x 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
TDI New England	Alburgh, VT	±320-kV DC	PP-400 ¹⁹
Vermont Electric Power Co.	Derby Line, VT	120-kV	PP-66
Vermont Electric Transmission Co.	Norton, VT	±450-kV DC	PP-76
Vermont Transco LLC	Highgate, VT	120-kV	PP-82

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

- (A) Exports by Rainbow 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 Rainbow may export over the PP-64 facilities shall not exceed 900,000 megawatt-hours (MWH) during any consecutive 12-month period.

¹⁷ These transmission facilities have been authorized but not yet constructed or placed into operation.

¹⁸ These transmission facilities have been authorized but not yet constructed or placed into operation.

¹⁹ These transmission facilities have been authorized but not yet constructed or placed into operation.

- (B) Exports by Rainbow 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 Rainbow may export over the PP-32 facilities shall not exceed 7,500 MWH annually.
- (C) Exports by Rainbow made pursuant to this Order shall not cause the total exports on a combination of the facilities authorized by Presidential Permit PP-481-2 (issued to CHPE LLC) to exceed an instantaneous transmission rate of 1,250 MW.
- (D) Exports by Rainbow 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).
- (E) Exports by Rainbow made pursuant to this Order shall not cause the total exports on a combination of the facilities authorized by Presidential Permit PP-412 (issued to ITC Lake Erie Connector) to exceed an instantaneous transmission rate of 1,000 MW.
- (F) Exports by Rainbow 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-89-2 (issued to Bangor Hydro-Electric) to exceed 550 MW.
- (G) Exports by Rainbow 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 Rainbow 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 Rainbow 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 Rainbow cause the total exports on the PP-78-1 facilities to exceed 150 MW.

- (I) Exports by Rainbow made 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 Rainbow 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 1,050 MW on a non-firm basis.
- (K) Exports by Rainbow 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 Rainbow may export over the PP-66 facilities shall not exceed 50,000 MWH annually.
- (L) Exports by Rainbow 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 1,000 MW.
- (M) Exports by Rainbow 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 1,650 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 Rainbow may export over the PP-24 facilities shall not exceed 300,000 MWH annually.
- (N) Exports by Rainbow 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 Rainbow 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-76-1, as amended (issued to the Vermont Electric Transmission Company):

NEPOOL		
Exports Through	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 Rainbow made pursuant to this Order over the international transmission facilities authorized by Presidential Permit PP-399 (issued to Montana Alberta Tie Ltd.) shall not exceed an instantaneous transmission rate of 300 MW.
- (Q) Exports by Rainbow made pursuant to this Order over the international transmission facilities authorized by Presidential Permit PP-438 (issued to NECEC Transmission LLC) shall not exceed an instantaneous transmission rate of 1,200 MW.
- (R) Exports by Rainbow 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.
- (S) Exports by Rainbow made pursuant to this Order shall not cause the total exports on a combination of the facilities authorized by Presidential Permit PP-400 (issued to TDI-New England) to exceed an instantaneous transmission rate of 1,000 MW.
- (T) Exports by Rainbow made pursuant to this Order shall neither cause the total exports on the facilities authorized by Presidential Permit PP-82-6 (issued to the Vermont Transco LLC) to exceed an instantaneous transmission rate of 250 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 Rainbow.

(C) Rainbow 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) Rainbow shall make and preserve full and complete records with respect to the electric energy transactions between the United States and Canada. Rainbow 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) Rainbow 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 2, 2023** and shall 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 Rainbow's authority to export electricity.

Signed in Washington, DC, on **May 2, 2023**.

**Maria D.
Robinson** Digitally signed by
Maria D. Robinson
Date: 2023.05.02
13:15:46 -04'00'

Maria D. Robinson
Director
Grid Deployment Office