United States
Department of Energy

Office of Electricity
OE Docket No. PP-420

Nogales Transmission, L.L.C.

Presidential Permit
No. PP-420

October 10, 2018

Presidential Permit

Nogales Transmission, L.L.C.
Order No. PP-420

I. BACKGROUND

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

Nogales Transmission, L.L.C. (Nogales Transmission) applied to DOE on April 8, 2016, for a Presidential permit to construct, operate, maintain, and connect the proposed Nogales Interconnection Project (the Project) across the U.S.-Mexico border. Nogales Transmission subsequently amended its application on January 9, 2017 and May 31, 2017.

The proposed Project would be constructed on a 150-foot-wide right-of-way (ROW) and would consist of the following components: A new, approximately 3-mile-long, overhead 138-kilovolt (kV) alternating current (AC) transmission line between the existing UNS Electric Inc. (UNSE) Valencia Substation and a new Gateway Substation; a new, approximately 11-acre Gateway Substation, with capacity for direct current (DC) interconnection of up to 300 megawatts (MW) constructed on land currently owned by Tucson Electric Power (TEP); a new, approximately 2-mile-long, overhead 230-kV AC transmission line extending south from the new Gateway Substation to the proposed international border crossing; and associated access roads.

The Gateway Substation would consist of a bi-directional back-to-back DC interconnection of up to 300 MW. This bi-directional back-to-back high-voltage direct current (HVDC) converter (*i.e.*, DC tie) would allow for an asynchronous interconnection between the electric grids in southern Arizona and Sonora, Mexico. The DC tie Phase 1 would initially be capable of 150 MW of capacity of bi-directional flow between the U.S. and Mexico.

The second phase of the proposed Project would involve expanding the DC tie from the initial 150 MW to its full 300-MW capacity within the proposed Gateway Substation.

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[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 by Redelegation Order No. 00-006.05, issued on November 17, 2014.

The Project facilities would cross the U.S.-Mexico border in Nogales, Arizona at 31° 19' 57.846" N, 110° 58' 35.620" W.

DOE published notices of the application in the *Federal Register* in 2016 and 2017, when the initial application and the amendments were filed. *See* 81 FR 31,622 (May 19, 2016) and 82 FR 37,444 (August 20, 2017). DOE received three comments, discussed below.

II. DISCUSSION

In determining whether issuance of a Presidential permit is in the public interest, DOE assesses the potential impact of the proposed Project on electric reliability, the potential environmental impacts of the proposed Project, and any other factors that DOE considers relevant to the public interest.

A. Reliability Analysis

DOE evaluated the System Impact Study (SIS) conducted for Nogales Transmission by an independent engineering firm, TransCo Energy LLC (TRANSCO), to determine impacts to the utilities affected by the proposed Project's operation. TRANSCO examined the proposed Project in two phases, as proposed by Nogales Transmission: Phase 1 would allow for the bi-directional transfer of up to 150 MW on the proposed Project facilities and Phase 2 would allow a total of up to 300 MW of bi-directional transfer on the facilities.

DOE has determined that the SIS used approved transmission planning base cases from the Western Electricity Coordinating Council (WECC). Furthermore, the studies were conducted in accordance with North American Electric Reliability Corporation (NERC) Transmission Planning (TPL) reliability standards, WECC, UNSE and TEP System Performance Criteria. The SIS studied the use of two different types of HVDC technology that could be used for the Project: line commutated converter (LCC) and voltage source converter (VSC). The SIS identified upgrades that would be required to the UNSE and TEP systems depending on the type of technology utilized for the Project.

According to the SIS, several upgrades must be made to the UNSE and TEP systems prior to operation of Phase 1, regardless of the type of HVDC technology used. These include: upgrading seven 138-kV line sections of approximately 60 miles in length, converting the existing breaker configuration at two substations to breaker and a half configuration, and installing, two 20 megawatts of reactive power (MVAR), capacitor banks at Kantor substation. If Nogales intends to use the LCC option, a 0-90 MVAR synchronous condenser at the point of interconnection and a total of four 29 MVAR capacitor banks would also be required at the Gateway Substation. With the VSC option, an 80 MVAR capacitor bank provided with the VSC vendor model is sufficient and no additional capacitor banks are required at the Gateway site. These

system upgrades are required prior to the in-service date of Q2 of 2019 for Phase 1 of the Project.

Prior to the in-service date of Q4 2022 of Phase 2 of the Project, the SIS identified the following required upgrades: one new 138-kV line and four 138-kV line sections. If Nogales intends to use the LCC option, then a synchronous condenser of 0-100 MVAR range and two additional 100 MVAR capacitors at Gateway North 138kV would be required. With the VSC option, an additional 20 MVAR capacitor at the point of interconnection would be necessary.

DOE has determined that with the necessary upgrades and implementation of Local Protection Scheme as identified in the SIS, system reliability of the UNSE, TEP, and WECC systems will not be adversely affected.

B. Environmental Analysis

DOE determined that the appropriate level of National Environmental Policy Act (NEPA) review for this project was an environmental assessment (EA). The Nogales Interconnection Project EA was prepared by DOE pursuant to NEPA and its implementing regulations. The International Boundary and Water Commission, U.S. Section; U.S. Forest Service; and Staff of the Arizona Corporation Commission were cooperating agencies in preparing the EA. Although not a cooperating agency, coordination also took place with U.S. Customs and Border Protection.

DOE invited interested Members of Congress, state and local governments, other federal agencies, American Indian tribal governments, and members of the public to provide comments on the Draft EA, which were accepted from July 5 – August 3, 2017. The Draft EA was available to the general public at the Nogales-Rochlin Public Library in Nogales, Arizona and on the Project website at www.nogalesinterconnectionea.com. All comments received were considered during preparation of the Final EA.

The Final EA was distributed to DOE's mailing list on January 10, 2018, including all individuals and parties that submitted substantive comments on the Draft EA (*see* Appendix E of the EA). DOE received no comments on the Final EA. The Final EA is available via the Project website at www.nogalesinterconnectionea.com, as well as the DOE NEPA website at http://www.energy.gov/nepa/.

DOE has determined that issuance of a Presidential permit to the Applicant to construct, connect, operate, and maintain a new electric transmission line across the U.S.-Mexico border in Nogales, Arizona would not have a significant effect on the human environment. The preparation of an environmental impact statement, therefore, is not required, and DOE issued a Finding of No Significant Impact (FONSI) on September 26, 2018.

C. Favorable Recommendations

On September 29, 2017, the Department of Defense raised no objections to the issuance of a Presidential permit to Nogales Transmission. On November 13, 2017, DOE received a favorable recommendation from the Department of State to issue the Presidential permit to Nogales Transmission.

D. Public Comments

As noted above, when DOE issued its original notice of application in the *Federal Register* in 2016, it received three comments. A comment from Jean Public, dated May 23, 2016, expressed opposition to the Project. This comment failed to adequately address the public interest determination made by the Department. Another comment from the Fresh Produce Association of America, dated June 20, 2016, concerned how the Project would be paid for. This comment is beyond the scope of DOE's jurisdiction because it concerns ratemaking determinations. A third comment from the Nogales-Santa Cruz County Chamber of Commerce Visitor & Tourism Center, also dated June 20, 2016, expressed support for the Project.

III. FINDINGS AND DECISION

Based on its review of Nogales Transmission's application, as well as the reliability studies conducted, DOE finds that the proposed Project would not have negative effects on the reliability of the U.S. grid if operated consistent with NERC policies and standards, terms and conditions of the Presidential permit, and other regulatory and statutory requirements.

Based on DOE's reliability determination, the results of the environmental analysis, recommendations of the Departments of State and Defense, and the public comment process, DOE determines that the issuance of a Presidential permit to Nogales Transmission is consistent with the public interest.

IV. DATA COLLECTION AND REPORTING

The responsibility for data collection and reporting under (1) Presidential permits authorizing electric transmission facilities at the U.S. international border and (2) orders authorizing electricity exports to a foreign country has been transferred from the Office of Electricity to DOE's Energy Information Administration (EIA). Nogales Transmission is required to submit Form EIA-111 ("Quarterly Electricity Imports and Exports Report") or any successor forms, as specified by the EIA. Nogales Transmission is instructed to follow EIA instructions in utilizing the Data xChange Community Portal. Questions regarding the data collection and reporting requirements can be directed to the EIA by email at EIA4USA@eia.gov or by phone at 1-855-342-4872.

V. OPEN ACCESS POLICY

DOE expects owners and operators of border facilities to provide access across the border in accordance with the principles of comparable open access and non-discrimination contained in the Federal Power Act (FPA) and articulated in the Federal Energy Regulatory Commission's (FERC) Order No. 888, *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities*, as amended.[2] 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.

The holder of this Presidential permit is required 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.

VI. ORDER

Pursuant to the provisions of E.O. 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 Nogales Transmission, L.L.C. to construct, own, maintain, and connect electric transmission facilities at the international border of the United States and Mexico 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 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 150-foot ROW occupied by such facilities:

A new, approximately 3-mile-long, overhead 138- kV AC transmission line between the existing UNSE Valencia Substation and a new Gateway Substation; a new, approximately 11-acre Gateway Substation, with capacity for direct DC interconnection

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[2] 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 Grp. 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).

of up to 300 MW constructed on land currently owned by TEP; a new, approximately 2-mile-long, overhead 230-kV AC transmission line extending south from the new Gateway Substation to the proposed international border crossing; and associated access roads.. The facilities would cross the U.S.-Mexico border at 31° 19' 57.846" N, 110° 58' 35.620" W.

Article 3. The facilities described in Article 2 above shall be designed and operated in accordance with WECC, UNSE, and TEP System Performance Criteria and all policies and standards of FERC, NERC, NERC-delegated Regional Entities, Reliability Coordinators, and Regional Transmission Organization/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. The facilities shall also be operated consistent with other regulatory and statutory requirements.

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 150 MW for Phase 1 and 300 MW, in total, after Phase 2. Nogales Transmission will notify DOE before beginning construction of the second phase, the timing of which has not yet been determined and would be based on market demand. Nogales Transmission shall notify DOE, show that all upgrades have been made, and provide DOE with a copy of the Local Protection Scheme in accordance with the TRANSCO study.

Article 4. Nogales Transmission shall implement the applicant proposed measures contained in the Final Environmental Assessment for the Nogales Interconnection Project (DOE/EA-2042); all requirements set forth in the (Endangered Species Act) Section 7 consultation concurrence letter issued by the U.S. Fish and Wildlife Service and (National Historic Preservation Act) Section 106 consultation concurrence letter issued by the Arizona State Historic Preservation Office; and all requirements set forth in other federal, state, and local permits, approvals, and consultations.

Article 5. 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 6. Nogales Transmission 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 7. 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. Nogales Transmission 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 8. Nogales Transmission shall investigate any complaints from nearby residents of radio or television interference identifiably caused by the operation of the facilities covered by this Permit. Nogales Transmission 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. Nogales Transmission shall maintain written records of all complaints received and of the corrective actions taken.

Article 9. 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. Nogales Transmission shall hold the United States harmless from any and all such claims.

Article 10. Nogales Transmission 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 Mexico over the facilities authorized herein. Nogales Transmission shall make and preserve full and complete records with respect to the electric energy transactions between the United States and Mexico. Nogales Transmission shall collect and submit the data to EIA as required by and in accordance with the procedures of Form EIA-111 and all successor forms.

Article 11. 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 12. Upon the termination, revocation, or surrender of this Permit, the permitted facilities owned, operated, maintained, and connected by Nogales Transmission 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 Nogales Transmission. If Nogales Transmission 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 Nogales Transmission. Nogales Transmission 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 13. Nogales Transmission 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.

Signed in Washington, D.C., on October 10, 2018.

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