Submission of Indicated New York Transmission Owners
For Authority to Construct and Operate Electric Transmission Facilities in Multiple Counties in New York

Case 13-M-0457

Edic to New Scotland 345 kV Transmission Line
and
New Scotland to Leeds 345 kV Transmission Line Reconductoring
and
Leeds to Pleasant Valley 345 kV Transmission Line Project
(ED-NS/NS-LD(R)/LD-PV)

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EDIC TO NEW SCOTLAND 345 KV TRANSMISSION LINE AND NEW SCOTLAND TO LEEDS 345 KV TRANSMISSION LINE RECONDUCTORING AND LEEDS TO PLEASANT VALLEY 345 KV TRANSMISSION LINE PROJECT (ED-NS/NS-LD(R)/LD-PV)

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APPLICATION

Pursuant to Article VII of the Public Service Law ("PSL"), the Public Service Commission's ("Commission") regulations thereunder and the Commission's Orders (including the December 16, 2014 Order Establishing Modified Procedures For Comparative Evaluation (the "December 2014 Order")) in the above-referenced proceeding and in Cases 12-T-0502 and 13-E-0488, *inter alia*, Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid") and NY Transco LLC ("NY Transco" and collectively with National Grid, the "Applicant") submit this application for a Certificate of Environmental Compatibility and Public Need ("Certificate") authorizing: (i) the construction of a new 345 kV overhead electric transmission line from the Edic Substation in the Town of Marcy, Oneida County, New York to the New Scotland Substation in the Town of New Scotland, Albany County, New York over a distance of approximately 91.5 miles ("ED-NS"); and (ii) the reconductoring of two existing 345 kV overhead electric transmission lines from the New Scotland Substation in the Town of New Scotland, Albany County, New York to the Leeds Switching Station in the Town of Athens, Greene County, New York over a distance of approximately 25.9 miles ("NS-LD(R)"), and (iii) the construction of a new 345 kV overhead electric transmission line from the Leeds Switching Station in the Town of Athens, Greene County, New York to the Pleasant Valley Substation in the Town of Pleasant Valley, Dutchess County, New York over a distance of approximately 39.3 miles ("LD-PV", and collectively with NS-LD(R), "NS-LD(R)/LD-PV Component," or "NS-LD(R)/LD-PV" and collectively with ED-NS, the "Edic to New Scotland 345 kV Transmission Line and New Scotland to Leeds 345 kV Transmission Line Reconductor and Leeds to Pleasant Valley 345 kV Transmission Line Project," or "ED-NS/NS-LD(R)/LD-PV Project," or "ED-NS/NS-LD(R)/LD-PV" or the "Project").

As required by Section 122 of the PSL, Section 85-2.8 of the Commission's Regulations, and the above-referenced Commission Orders, this Article VII Application contains the following information:

(a) Description of the Project;

(b) Project Location;

(c) Need for the Project;

(d) Other relevant information; and

(e) Conclusion.

A. Description of the Project

Edic to New Scotland 345 kV Transmission Line

The Edic to New Scotland 345 kV Transmission Line portion of the Project will run a total distance of approximately 91.4 miles, as follows: from Edic Substation in Oneida County, New York over a distance of approximately 86.4 miles to the New Scotland Substation in the Town of New Scotland, Albany County, New York; and from the Princetown Junction in the Town of Princetown, Schenectady County, New York over a distance of approximately 5.0 miles to the Rotterdam Substation in the Town of Rotterdam, Schenectady County, New York. This new transmission line will be designed to operate at a nominal system voltage of 345 kV. The proposed conductor type for the line is twin bundled 954 kcmil 54/7 ACSS "Cardinal."

The construction of the Edic to New Scotland 345 kV Transmission Line portion of the Project will include the rebuild and expansion of one substation: Rotterdam Substation in the Town of Rotterdam.

In addition, the approximately 71.8 miles of the two existing Porter-Rotterdam 230 kV lines that will not be rebuilt from the Porter Substation to the Princetown Junction, will be retired.

New Scotland to Leeds 345 kV Transmission Line Reconductoring

The New Scotland to Leeds 345 kV Transmission Line Reconductoring portion of the Project will run from New Scotland Substation in the Town of New Scotland, Albany County, New York over a distance of approximately 25.9 miles to the Leeds Switching Station in the Town of Athens, Greene County, New York. The reconductored parallel transmission lines will continue to operate at a nominal system voltage of 345 kV. The proposed conductor type for these lines is twin bundled 795 kcmil 26/7 ACSS "Drake".

Leeds to Pleasant Valley 345 kV Transmission Line

The Leeds to Pleasant Valley 345 kV Transmission Line portion of the Project will run from the existing Leeds Switching Station in the Town of Athens, Greene County, New York over a distance of approximately 41.2 miles to Con Edison's Pleasant Valley Substation in the Town of Pleasant Valley, Dutchess County, New York. This new transmission line will be designed to operate at a nominal system voltage of 345 kV. The proposed conductor type for the line is twin bundled 954 kcmil 54/7 ACSS "Cardinal."

The construction of the Leeds to Pleasant 345 kV Transmission Line portion of the Project will include the construction of a new switching station: Churchtown Switching Station in the Town of Claverack.

The ED-NS/NS-LD(R)/LD-PV Project is a "composite" alternative, which combines an UPNY/SENY solution with a Central East component (Edic to New Scotland). Increasing the transfer capability for the Central East interface will allow the upgrade on the UPNY/SENY interface to be more fully utilized and increase the benefits of reduced congestion across the State. Adding the Central East component provides a more robust overall system solution, and creates benefits such as adding multiple 345 kV paths on the bulk power systems, thereby increasing system operational flexibility. This composite Project also provides a more complete upgrade to relieve constraints from the Mohawk Valley down to the Hudson Valley. Further, and particularly with the addition of the Central East component, significantly more aging transmission facilities are replaced with new designs, allowing for greater resiliency. Although the cost of this Project is relatively high when compared to UPNY/SENY component projects, it provides the following additional benefits which address all of the goals and objectives set forth in the Commission's December 2014 Order and the Energy Highway Blueprint:

- Expected to significantly increase the UPNY/SENY N-1-1 thermal interface capacity by approximately 1,400 to 1,600 MW.
- Expected to increase the Central East N-1 voltage interface capacity by 350 to 450 MW, which will further decrease congestion costs throughout the state of New York.
- Constructs a total of approximately 132.7 miles of new 345 kV transmission lines without requiring the expansion of any of the existing transmission line corridor rights-of-way ("ROW").
- Improves system "Expandability" of the bulk transmission system by providing one additional 345 kV station hub.
- Improves system "Operability" by providing new 345 kV parallel lines along both the Edic/Marcy to New Scotland Central East interface and the Leeds to Pleasant Valley UPNY/SENY interface corridors.
- Improves "Resiliency" by replacing approximately 73.5 miles of aging 115 kV infrastructure and approximately 118.4 miles of aging 230 kV infrastructure.

B. Project Location

Edic to New Scotland 345 kV Transmission Line

The Edic to New Scotland 345 kV Transmission Line portion of the Project will share existing electric transmission ROW corridors that are occupied by other National Grid lines and in some locations lines

owned and operated by the New York Power Authority. No new ROW acquisition will be required. The existing National Grid electric transmission ROW corridors that comprise the primary route for the Edic to New Scotland 345 kV Transmission Line traverse (from west to east) the counties of Oneida, Herkimer, Montgomery, Schenectady and Albany.

New Scotland to Leeds 345 kV Transmission Line Reconductoring

The New Scotland to Leeds 345 kV Transmission Line Reconductoring portion of the Project will remain within existing electric transmission ROW corridors. No new ROW acquisition will be required. The existing National Grid electric transmission ROW corridors that comprise the primary route for the New Scotland to Leeds 345 kV Transmission Line Reconductoring traverse (from north to south) the counties of Albany and Greene.

Leeds to Pleasant Valley 345 kV Transmission Line

The new Leeds to Pleasant Valley 345 kV Transmission Line portion of the Project will share existing electric transmission ROW corridors that are occupied by other National Grid transmission lines. No new ROW acquisition will be required. The existing National Grid electric transmission ROW corridors that comprise the primary route for the Leeds to Pleasant Valley 345 kV Transmission Line traverse (from north to south) the counties of Greene, Columbia and Dutchess.

Detailed maps, drawings and explanations showing the proposed route of the Project are set forth in various exhibits, including Exhibit 2, to this Article VII Application.

C. Need for the Project

The Commission instituted this proceeding in 2012 "to examine possible solutions to the problem of persistent congestion on portions of the New York Transmission System."[1] The congestion problem has been well documented in the 2011 and 2013 New York Independent System Operator ("NYISO") Congestion Assessment and Resource Integration Studies ("CARIS"), the 2012 New York State Transmission Assessment and Reliability ("STARS") report, and the U.S. Department of Energy Draft "National Electric Transmission Congestion Study". Resource adequacy and transmission reliability issues have also been described in the 2014 NYISO Reliability Needs Assessment ("RNA").

In addition to congestion, reliability and resource adequacy, the transmission system in New York faces the following challenges:

[1] Case 12-T-0502 – Proceeding on Motion of the Commission to Examine Alternating Current Transmission Upgrades

- Aging infrastructure, which reduces resiliency to extreme weather events
- Limited capacity to address changes to the state generation portfolio
- Need to create a new NYISO capacity zone encompassing Load Zones G, H, I, and J ("New G-J Local Capacity Zone"), which can be avoided by increasing the UPNY/SENY transmission capacity
- Limited capacity to integrate renewable energy resources in the western part of the state
- Limited access to generation sources that would lower emissions
- Limited ability to expand the bulk transmission system
- Limited system robustness to respond to system operational needs.

The need for the Project is explained in greater detail in Exhibit E-4 of this Article VII Application, entitled Engineering Justification.

D. Other Relevant Information

Exhibit 1 provides the name, address, email and phone number of the principal officer of each of National Grid and NY Transco; and the status of each as organized under the New York Transportation Corporations Law.

E. Conclusion

The Applicant respectfully requests that the Commission issue an order pursuant to Article VII of the Public Service Law:

1) Certifying the Project, including its construction, operation and maintenance, pursuant to Article VII of the Public Service Law; and

2) Granting such other and further authorizations, consents, permissions, approvals, waivers and permits, as necessary, for the construction, operation and maintenance of the Project, including but not limited to, the issuance of a Water Quality Certification pursuant to Section 401 of the Federal Water Pollution Control Act, 33 USCA Section 1341.

Dated: January 20, 2015

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