

Western New York Public Policy Transmission Need Viability & Sufficiency Assessment

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Public Policy Process

- ◆ **Section 31.4 of Attachment Y of the NYISO Open Access Transmission Tariff (OATT) describes the planning process that the NYISO, and all interested parties, shall follow to consider Public Policy Requirements that drive the need for expansions or upgrades to Bulk Power Transmission Facilities (BPTFs).**
- ◆ **A Public Policy Requirement is a federal or New York State statute or regulation, including a New York State Public Service Commission (PSC) order adopting a rule or regulation subject to and in accordance with the State Administrative Procedure Act, any successor statute, or any duly enacted law or regulation passed by a local governmental entity in New York State, that may relate to transmission planning on the BPTFs.**

Public Policy Process

◆ Phase I: Identify Needs and Assess Solutions

- *PSC identifies transmission needs driven by public policy and defines public policy sufficiency criteria*
- *NYISO solicits solutions (transmission, generation, or EE/DR)*
- *NYISO evaluates viability and sufficiency of all solutions*

◆ Phase II: Transmission Evaluation and Selection

- *PSC reviews solutions and confirms continued transmission need*
- *NYISO evaluates proposed competing transmission solutions to identify the more efficient or cost-effective solution*
- *NYISO Board may select a transmission solution for purposes of cost allocation under the NYISO Tariff*

Identification of the Need

- ◆ **August 1, 2014 – NYISO issued a letter inviting stakeholders and interested parties to submit proposed transmission needs driven by Public Policy Requirements**
- ◆ **October 3, 2014 – NYISO submitted the proposed needs to the PSC**
- ◆ **July 20, 2015 – PSC issued an order addressing Public Policy Requirements for transmission planning purposes, including identification of a Public Policy Transmission Need (PPTN) for Western New York**

Western NY PPTN

- ◆ **PSC Order: NYISO should consider projects that increase Western NY transmission capability sufficient to:**
 - *Obtain the full output from Niagara (2,700 MW including Lewiston Pumped Storage)*
 - *Maintain certain levels of simultaneous imports from Ontario across the Niagara tie lines (i.e., maximize Ontario imports under normal operating conditions and at least 1,000 MW under emergency operating conditions)*
 - *Maximize transfers out of Zone A to the rest of the state*
 - *Prevent transmission security violations (thermal, voltage or stability) that would result under normal and emergency operating conditions*
 - *Maintain reliability of the transmission system with fossil-fueled generation in Western NY out-of-service, as well as in-service*

Background

- ◆ **Fall 2015 – NYISO presented sufficiency criteria and baseline results to ESPWG and TPAS (8/27, 10/6, 10/29)**
- ◆ **November 1, 2015 – NYISO issued a solicitation for solutions to the Western New York PPTN**
- ◆ **December 31, 2015 – 8 Developers submitted 15 project proposals**
 - ◆ *Three projects were subsequently removed from consideration for failure to submit a complete response within the timeframe provided by the tariff.*

Sufficiency Base Case

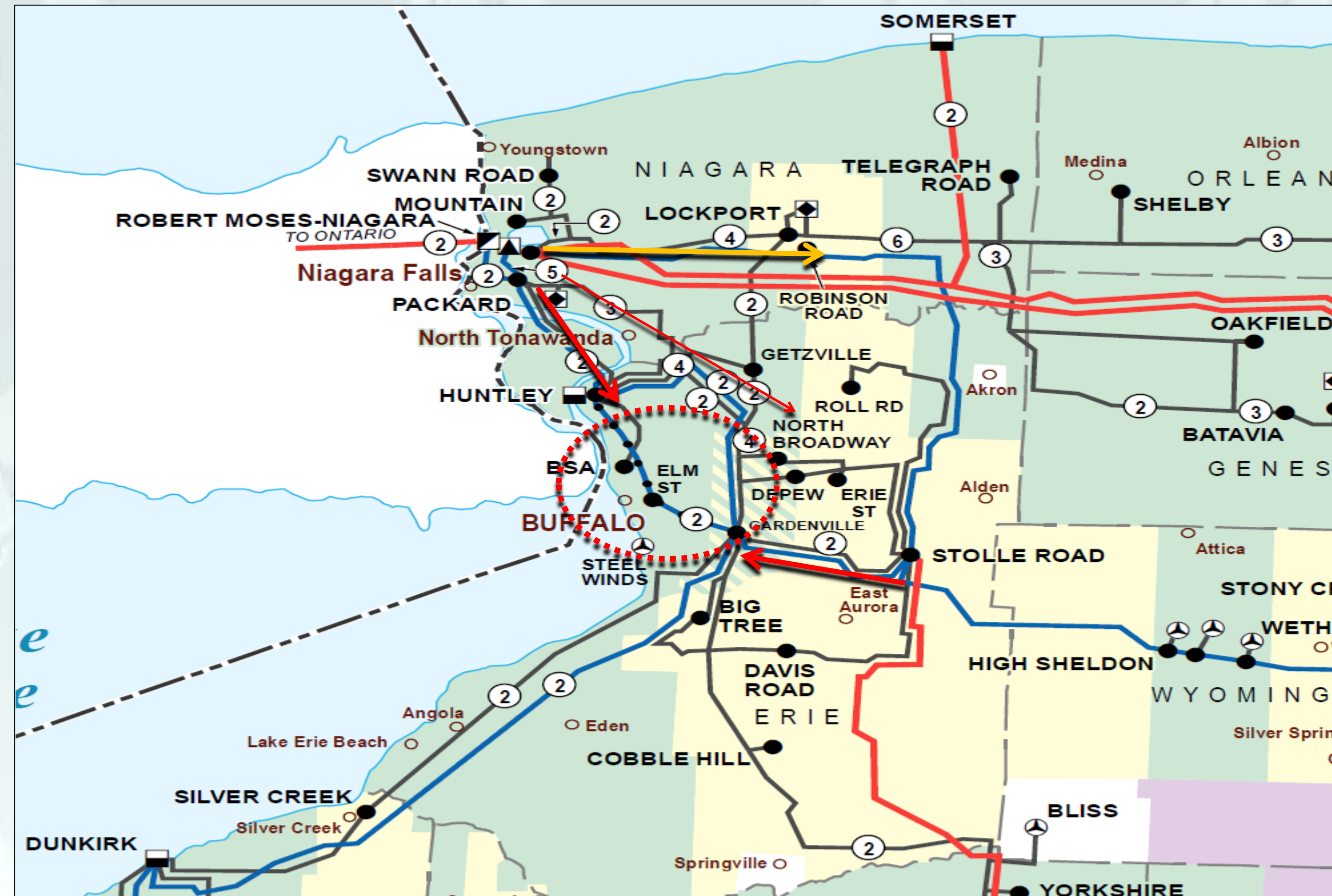
- 2014 Comprehensive Reliability Plan base case representation for 2024
- Niagara & Lewiston output of 2,700 MW
 1. *Niagara 230 kV units at full output*
 2. *Niagara 115 kV units at full output*
- 1,000 MW Ontario Import to Zone A
 - *Allowed to reduce in cases other than N-1 emergency transfers*
- Combination of major fossil-fueled generators in Zone A resulting in worst reliability violations
 - *Dunkirk out-of-service*
 - *Huntley out-of-service*
 - *Lockport in-service*
 - *Somerset in-service*
- National Grid series reactors and capacitor banks included
 - *Developers may elect to have the series reactors bypassed as part of the project proposal.*

Sufficiency Criteria

- Ontario Import and Dysinger East transfer limits (N-1)
 - *Project must achieve 2,700 MW output from Niagara plus:*
 - at least 1,000 MW Ontario Import under NYSRC Emergency Transfer Criteria
 - Ontario Import limit greater than zero under NYSRC Normal Transfer Criteria and local Transmission Owner planning criteria
- Transmission Security (N-1-1)
 - *Project must maintain transmission security with 2,700 MW output from Niagara*

Overview of Baseline Limits

- ◆ 230 kV and 115 kV overloads between Niagara and Gardenville
 - *Primarily for loss of one, two, or three 230 kV lines*
- ◆ Additional and aggravated overloads for increased Ontario Imports
- ◆ Voltage collapse or low voltage in the Buffalo area
 - *Primarily for loss of two or three 230 kV lines between Niagara and Gardenville*



Proposed Projects

| Developer | Project Name | Category | Queue Position | Type | Location County/State | Size (MW) |
|--------------------------------------|-------------------------------------|----------|----------------|------|---------------------------|-----------|
| NRG Dunkirk Power | Dunkirk Gas Addition | OPPP | 523, 524 | ST | Chautauqua, NY | 435 |
| North America Transmission | Proposal 1 | PPTP | N/A | AC | Niagara-Erie, Wyoming, NY | N/A |
| North America Transmission | Proposal 2 | PPTP | N/A | AC | Niagara-Erie, Wyoming, NY | N/A |
| North America Transmission | Proposal 3 | PPTP | N/A | AC | Niagara-Erie, Wyoming, NY | N/A |
| North America Transmission | Proposal 4 | PPTP | N/A | AC | Niagara-Erie, Wyoming, NY | N/A |
| ITC New York Development | 15NYPP1-1 Western NY AC | PPTP | N/A | AC | Niagara-Erie, NY | N/A |
| National Grid | Moderate Power Transfer Solution | PPTP | 528 | AC | Niagara-Erie, NY | N/A |
| National Grid | High Power Transfer Solution | PPTP | 529 | AC | Niagara-Erie, NY | N/A |
| NYPA/NYSEG | Western NY Energy Link | PPTP | 432, 525 | AC | Niagara-Erie, Wyoming, NY | N/A |
| NextEra Energy Transmission New York | Empire State Line Proposal 1 | PPTP | 530 | AC | Niagara-Erie, NY | N/A |
| NextEra Energy Transmission New York | Empire State Line Proposal 2 | PPTP | 530 | AC | Niagara-Erie, NY | N/A |
| Exelon Transmission Company | Niagara Area Transmission Expansion | PPTP | N/A | AC | Niagara-Erie, NY | N/A |

OPPP: Other Public Policy Project

PPTP: Public Policy Transmission Project

ST: Steam Turbine

AC: Alternating Current Transmission

Project Findings

| Developer | Project Name | BPTF Issues Resolved? | Non-BPTF Issues Resolved? | Sufficient? |
|--------------------------------------|-------------------------------------|-----------------------|---------------------------|-------------|
| NRG Dunkirk Power | Dunkirk Gas Addition | No | No | No |
| North America Transmission | Proposal 1 | No | No | No |
| North America Transmission | Proposal 2 | No | No | No |
| North America Transmission | Proposal 3 | Yes | No | Yes |
| North America Transmission | Proposal 4 | Yes | No | Yes |
| ITC New York Development | 15NYPP1-1 Western NY AC | No | No | No |
| National Grid | Moderate Power Transfer Solution | No | No | No |
| National Grid | High Power Transfer Solution | Yes | No | Yes |
| NYPA/NYSEG | Western NY Energy Link | Yes | No | Yes |
| NextEra Energy Transmission New York | Empire State Line Proposal 1 | Yes | No | Yes |
| NextEra Energy Transmission New York | Empire State Line Proposal 2 | Yes | No | Yes |
| Exelon Transmission Company | Niagara Area Transmission Expansion | Yes | No | Yes |

Remaining Non-BPTF Overloads

- The non-BPTF transmission security issues that remain are common among many, if not all, of the sufficient proposed projects.
- The full capability of each project to unbottle Niagara generation and Ontario imports may not be realized if these non-BPTF issues are left unaddressed.

| Monitored Facility | Line ID | Dispatch 1 (230 kV) | | | | Dispatch 2 (115 kV) | | | |
|---|---------|---------------------|-------|-----|-------|---------------------|-------|------|-------|
| | | ETC | | NTC | | ETC | | NTC | |
| | | N-1 | N-1-1 | N-1 | N-1-1 | N-1 | N-1-1 | N-1 | N-1-1 |
| 130795 DEPEW115 115 130799 ERIE 115 115 1 | 921 | | 108% | | 108% | | 108% | | 108% |
| 135327 AM.S-54 115 135450 GRDNVL1 115 1 | 54 | | 101% | | 104% | | | | 101% |
| 135460 PACK(N)E 115 147850 NIAG115E 115 2 | 192 | | | | | | | 106% | |
| 135461 PACK(S)W 115 147851 NIAG115W 115 1 | 193 | | 102% | | 102% | | 122% | | 122% |
| 135461 PACK(S)W 115 147851 NIAG115W 115 2 | 194 | | 102% | | 102% | | 122% | | 122% |

Conclusions and Recommendations

- **7 projects are viable and sufficient**
 - *North America Transmission – Proposal #3*
 - *North America Transmission – Proposal #4*
 - *National Grid – High Power Transfer Solution*
 - *NYPA/NYSEG – Western NY Energy Link*
 - *NextEra Energy Transmission New York – Empire State Line #1*
 - *NextEra Energy Transmission New York – Empire State Line #2*
 - *Exelon Transmission Company – Niagara Area Transmission Expansion*
- **The NYISO recommends upgrades to the extent necessary to address remaining non-BPTF issues for the specific project ultimately selected**
 - *Reconductoring of the Niagara – Packard 115 kV #192, #193, and #194 lines*
 - *Replacement of limiting terminal equipment for lines #54 and #921 at the Gardenville and Erie St. 115 kV stations*

Comments

- ◆ **May 12, 2016 – Due date for comments to the NYISO on the Viability & Sufficiency Assessment**
 - ◆ *Submit comments with subject line “Western NY VSA comments” to: PublicPolicyPlanningMailbox@nyiso.com*
- ◆ **By end of May, 2016 – NYISO will publish and submit to the PSC the final Viability & Sufficiency Assessment**

Developer Next Steps

- ◆ **June 4, 2016 – The Developer of a viable and sufficient Public Policy Transmission Project must provide the NYISO:**
 - ◆ *Notification of whether it intends for its project to proceed to the evaluation and selection phase of the process*
 - ◆ *Consent to the NYISO's disclosure of the details of its proposed Public Policy Transmission Project in the Western New York Public Policy Transmission Planning Report.*
- ◆ **The NYISO will provide a form for each Developer to provide the notification and consent.**

Next Steps

- ◆ **PSC reviews the Viability & Sufficiency Assessment**
- ◆ **PSC will issue an order, in accordance with the State Administrative Procedure Act, explaining whether there continues to be a transmission need driven by a Public Policy Requirement.**
- ◆ **If the PSC finds a continued need for transmission, the NYISO will continue to evaluate transmission solutions to the Western New York Public Policy Transmission Need.**

The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefit to consumers by:

- *Maintaining and enhancing regional reliability*
- *Operating open, fair and competitive wholesale electricity markets*
- *Planning the power system for the future*
- *Providing factual information to policy makers, stakeholders and investors in the power system*

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