NYISO Planning Update

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IPSAC
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NYISO Comprehensive System Planning Process (CSPP)

Public Policy Transmission Planning Process
- NYS PSC Determine Need & NYISO Requests Proposals
- Assess Transmission & Non-Transmission Viability & Sufficiency
- Evaluate & Select Transmission Solution(s)

Reliability Planning Process (RPP)
- Reliability Needs Assessment (RNA)
- Comprehensive Reliability Plan (CRP) Viability & Sufficiency Evaluation Phase
  - Comprehensive Reliability Plan Evaluation & Selection Phase

Economic Planning Process
- Congestion Assessment and Resource Integration Study (CARIS)
- Project Analysis & Determination of Beneficiaries
- Voting (Beneficiaries)
Reliability Planning Process

- Two-year process
- Reliability Needs Assessment (RNA) evaluates the adequacy and security of the bulk power system over a ten-year study period, and identifies Reliability Needs
- Comprehensive Reliability Plan (CRP) develops a comprehensive plan to satisfy the reliability needs identified in RNA
2016 RNA

- Study period: 2017-2026
- Final results
  - The LOLE criterion met for all ten years
  - Two transmission security Reliability Needs identified beginning in 2017
    - NYSEG’s Oakdale 345/115 kV transformer
    - LIPA’s East Garden City to Valley Stream 138 kV circuit
  - Scenarios performed to assess the impact of possible key assumption changes
2016 RNA

- Approved by NYISO board on October 18, 2016

- At November 7, 2016 ESPWG/TPAS:
  - **NYSEG LTP**: the 3rd Oakdale transformer and bus reconfiguration in 2021
  - **The return of Greenidge (Q431)** before summer 2017
  - **LIPA**: will allow load shedding under N-1-1

- Reliability Needs through 2026 have been resolved, so NYISO will not solicit solutions

- CRP Report will be issued in 2017
Economic Planning Process

- Two-year process: Congestion Assessment and Resource Integration Study (CARIS)
  - Phase I: Study Phase
    - Performed in alternate years to the RNA
    - Determine top congested locations in NYCA
    - Develop generic solutions – transmission, generation, demand response, and energy efficiency
    - Provide information to developers and marketplace
  - Phase II:
    - Specific Projects
      - Transmission projects seeking regulated cost recovery under NYISO Tariff
      - Eligibility threshold: Cost over 25m, B/C ratio over 1.0, 80% beneficiary vote
    - Additional CARIS Studies
      - Assumptions and scenarios customizable
      - Confidential except for basic information
2015 CARIS Phase 1

KEY CONGESTION CORRIDORS
2015 Congestion Assessment and Resource Integration Study (CARIS)

Legend
- 765 kV
- 500 kV
- 345 kV
- 230 kV

Western 230 kV System
Central East
New Scotland to Pleasant Valley
2016 CARIS Phase 2

- The 2016 CARIS Phase 2 Base Case is complete.
- No Specific Projects submitted as of November 22, 2016
- Additional CARIS Studies
  - PPL requested to assess the economic impact of new transmission between Lackawanna, PA and Ramapo, NY
Public Policy Planning

- Two-year process performed in parallel with RNA/CRP

- Phase I: Identify Needs and Assess Solutions
  - PSC identifies transmission needs driven by Public Policy Requirements and defines sufficiency criteria
  - NYISO solicits solutions (transmission, generation, or EE/DR)
  - NYISO evaluates viability and sufficiency of all solutions
  - PSC reviews Viability and Sufficiency Assessment (VSA) and confirms continued transmission need

- Phase II: Transmission Evaluation and Selection
  - NYISO evaluates viable and sufficient transmission solutions to identify the more efficient or cost-effective solution
  - NYISO Board may select a transmission solution for purposes of cost allocation and recovery under the NYISO Tariff
Western NY Public Policy Transmission Need (PPTN)

- July 20, 2015 PSC Order: NYISO to 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; and
  - Maintain reliability of the transmission system with fossil-fueled generation in Western NY out-of-service, as well as in-service.
Western NY PPTN - Timeline

- November 1, 2015 – NYISO issued a solicitation for Public Policy Transmission Projects and Other Public Policy Projects
- December 31, 2015 – Eight developers submitted 15 project proposals
- April 29, 2016 – NYISO issued the draft VSA
- May 30, 2016 – NYISO finalized the VSA and identified 10 viable and sufficient projects
- October 13, 2016 – PSC issued an order confirming the WNY PPTN
- Next steps – NYISO is currently working on the evaluation and selection of transmission solutions
AC TRANSMISSION PPTN

- Segment A (Central East)
  - New Edic/Marcy to New Scotland 345 kV line
  - Decommission Porter to Rotterdam 230 kV lines
  - 230/345 kV connection to Rotterdam

- Segment B (UPNY/SENY)
  - New Knickerbocker to Pleasant Valley 345 kV line
  - Rock Tavern substation terminal upgrades
  - Shoemaker – Sugarloaf 138 kV line

- See PSC Order for full description
December 17, 2015 – PSC issued an Order finding the need for new AC transmission facilities to reduce congestion from upstate to downstate NY

February 29, 2016 – NYISO issued a solicitation for Public Policy Transmission Projects and Other Public Policy Projects

April 29, 2016 – Six Developers submitted 16 project proposals

September 21, 2016 – NYISO issued the draft VSA

October 27, 2016 – NYISO finalized the VSA and identified 13 viable and sufficient projects

Next steps – PSC reviews the VSA. If PSC confirms need for transmission, the NYISO will proceed with evaluation and selection of transmission solutions
2016-2017 Public Policy Planning Cycle

- August 1, 2016 – NYISO initiated the 2016-2017 Public Policy Transmission Planning Process (PPTPP) cycle by issuing a solicitation for proposed transmission needs driven by Public Policy Requirements

- September 30, 2016 – 12 entities proposed transmission needs

- October 3, 2016 – NYISO filed the proposals with PSC for its consideration

- Next steps – If PSC determines that there is a need for transmission, NYISO will solicit proposals for specific projects.
Stakeholder Material

- The NYISO Comprehensive System Planning Process is regularly discussed at the Electric System Planning Working Group:

- Study documentation is available at:
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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