

Updates on NYISO's Comprehensive System Planning Process

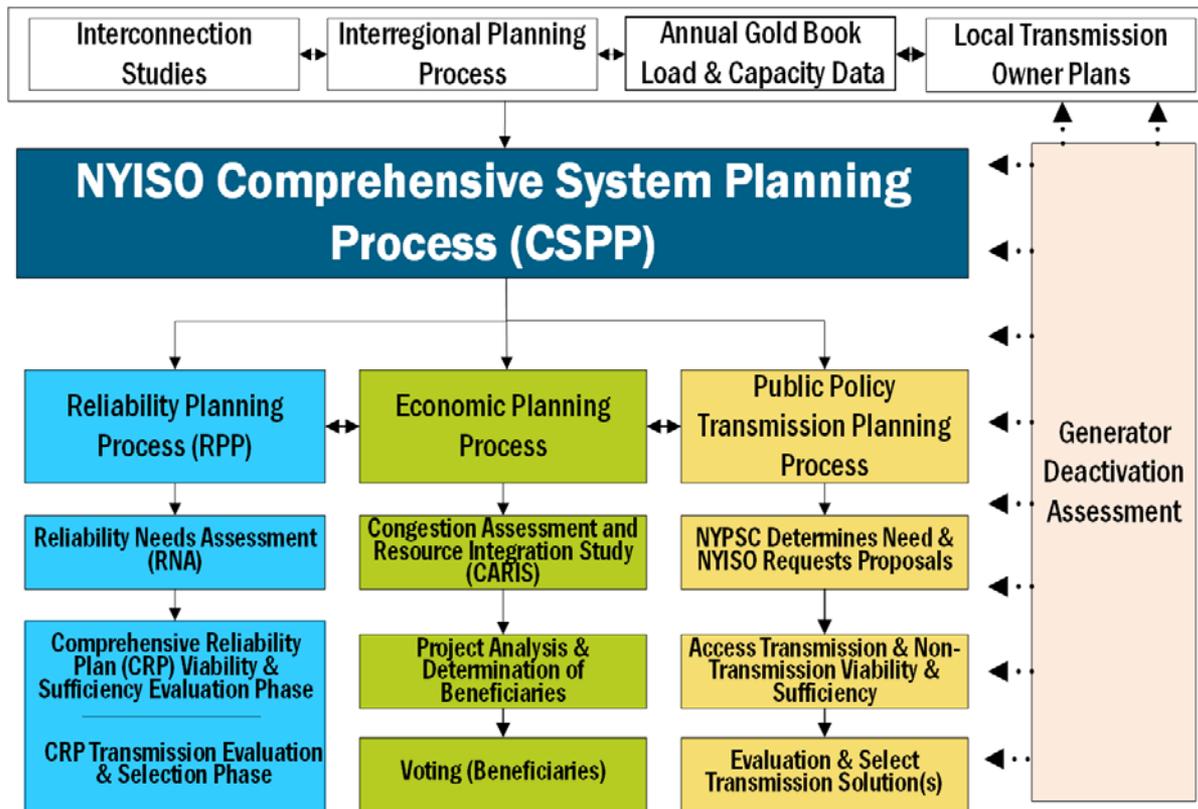
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Interregional Planning Stakeholder Advisory Committee (IPSAC) Meeting

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Reliability Planning Process

- **Two-year process starting in even years**
- **Reliability Needs Assessment (RNA)**
 - Evaluates the adequacy and security of the Bulk Power Transmission Facilities over a ten-year Study Period, and identifies Reliability Needs
 - Reliability Needs are defined as violations of Reliability Criteria (i.e. NERC, NPCC and NYSRC)
- **Comprehensive Reliability Plan (CRP)**
 - Develops a plan to satisfy the Reliability Needs identified in RNA, if any

Status of Reliability Planning Process

- **The NYISO Board approved the 2018 RNA report in October 2018.**

- Under the base case conditions studied in the 2018 RNA, the New York State Bulk Power Transmission Facilities meet all applicable Reliability Criteria over the 2019-2028 Study Period.
- The NYISO will continue to track the progress of planned projects and monitor system conditions that could give rise to a reliability need before the next RNA.

<https://www.nyiso.com/documents/20142/2248793/2018-Reliability-Needs-Assessment.pdf>

- **The NYISO Board approved the CRP report in July 2019.**

- Re-iterated the conclusion that there are no Reliability Needs for the base case condition.
- A scenario, for information purpose, was performed jointly by NYISO, Con Edison, and PSEG Long Island to assess potential reliability impacts from the draft DEC NOx emissions rule affecting simple cycle combustion turbines (the “peaker rule”). The scenario results show that both transmission security and resource adequacy needs would arise from the deactivation of the peakers.

<https://www.nyiso.com/documents/20142/2248481/2019-2028CRP-FinalReportJuly-2019.pdf>

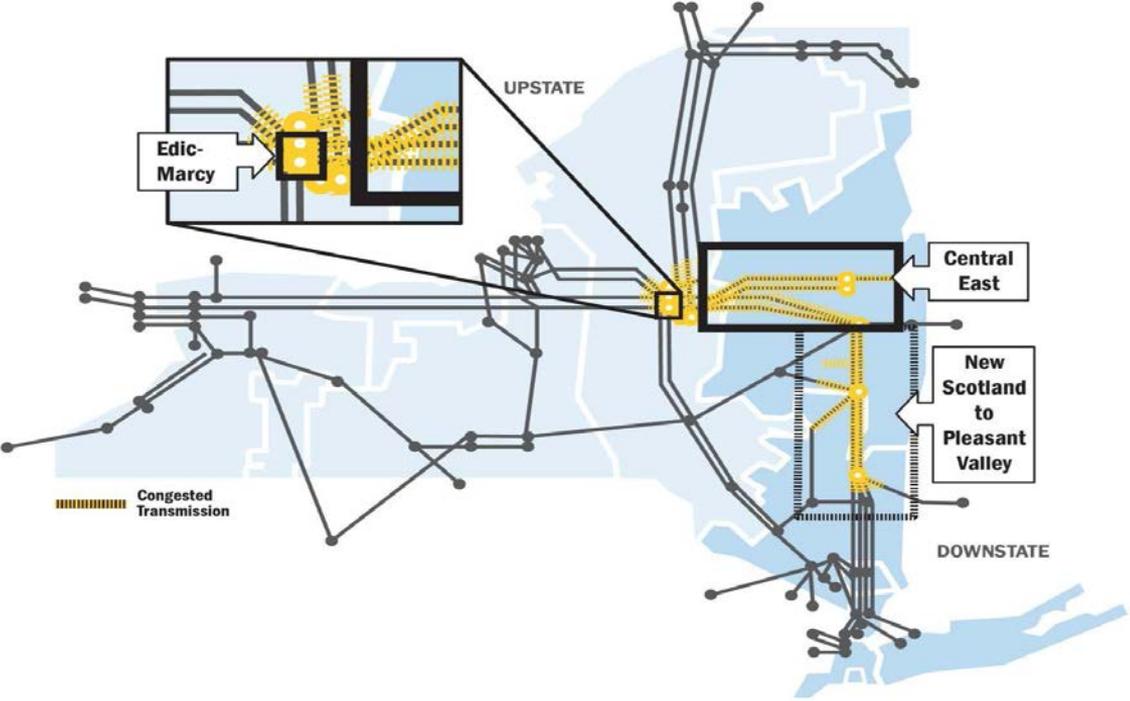
- **The NYISO will start a new RNA/CRP cycle in 2020.**



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 three top congested locations in New York Control Area (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, benefit/cost ratio over 1.0, load payment saving over cost, 80% beneficiary vote
 - **Additional CARIS Studies**
 - Assumptions and scenarios customizable
 - Confidential except for basic information

2017 CARIS Phase 1: Congestion Groupings



Status of CARIS

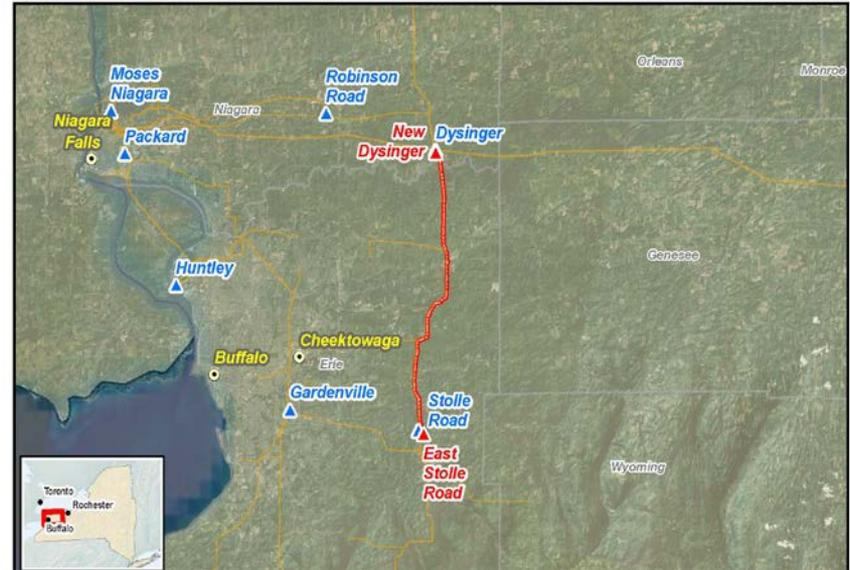
- **The 2017 CARIS Phase 1 Report**
 - Presented at the March 28, 2018 Management Committee (MC)
https://www.nyiso.com/documents/20142/1402648/05_CARIS2017_Report.pdf
 - Approved by the NYISO Board on April 17, 2018
- **The NYISO finalized the 2018 CARIS 2 base case which was presented at the September 12, 2018 Business Issues Committee (BIC)**
https://www.nyiso.com/documents/20142/2382415/2018_CARIS_2_Base_Case_BIC_09_12_2018_Final.pdf
- **No specific 2018 CARIS 2 project proposals have been submitted.**
- **The NYISO is currently working on the 2019 CARIS Phase 1. A scenario is currently under development to study 70% of the NY energy consumption from renewables by 2030 (70x30).**

Public Policy Transmission Planning Process (PPTPP)

- **Two-year process performed in parallel with RNA/CRP**
- **Phase I: Identify Needs and Assess Solutions**
 - NYISO solicits transmission needs driven by Public Policy Requirements
 - PSC identifies transmission needs and defines additional evaluation criteria
 - NYISO holds Technical Conference and solicits solutions (transmission, generation, or EE/DR)
 - NYISO performs Viability and Sufficiency Assessment (VSA)
- **Phase II: Transmission Evaluation and Selection**
 - NYISO staff evaluates viable and sufficient transmission solutions and recommends the more efficient or cost-effective solution
 - Stakeholder review and advisory votes at BIC and MC
 - NYISO Board may select a transmission solution for purposes of cost allocation and recovery under the NYISO Tariff

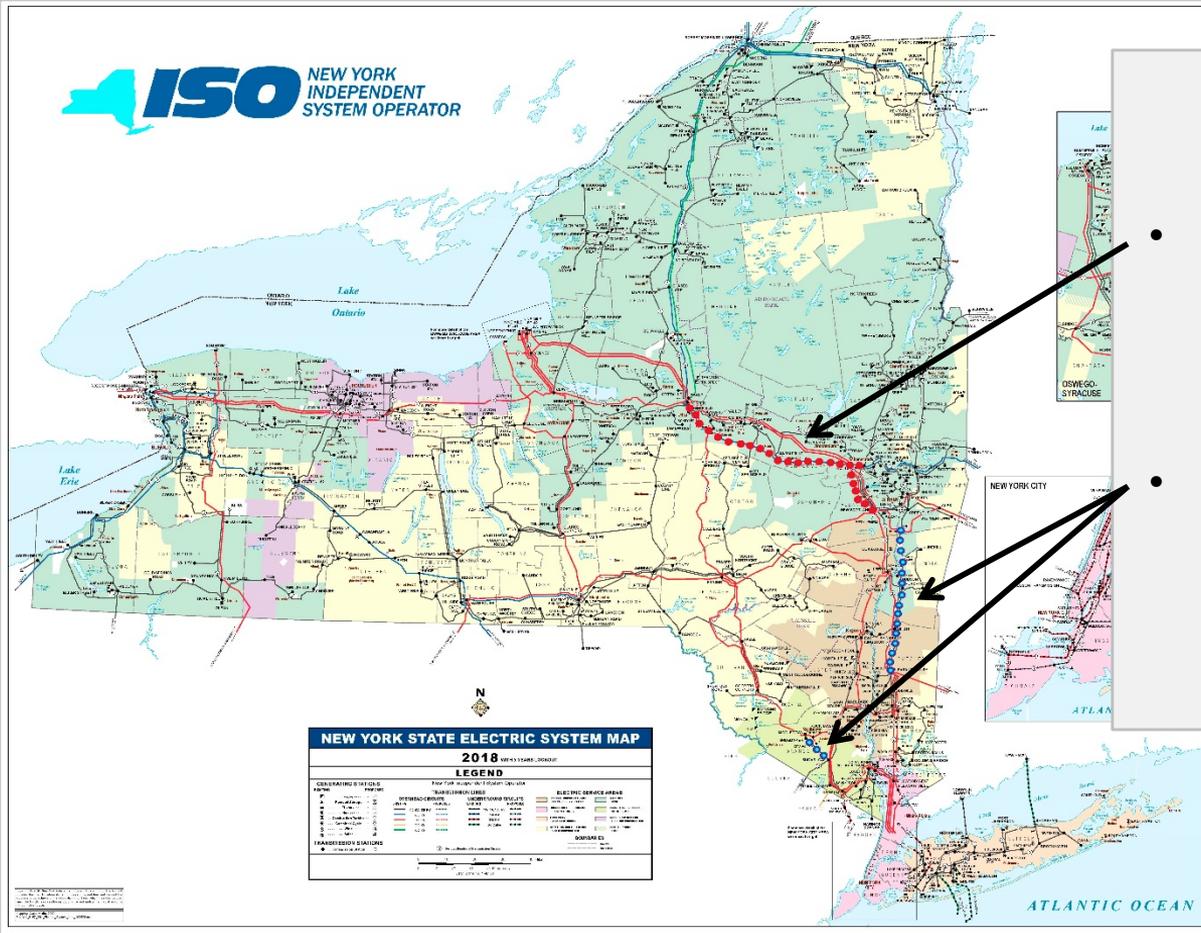
Western NY Project Selection

- NYISO staff recommended Empire State Line Proposal 1 (T014), proposed by NextEra Energy Transmission New York, as the more efficient and cost effective solution.
- In October 2017, the NYISO Board of Directors selected the NextEra project.
- Final Western NY report is posted at:
<https://www.nyiso.com/documents/20142/1396391/Western%20New%20York%20Public%20Policy%20Transmission%20Planning%20Report.pdf>



AC Transmission Project Selection

- In April 2019, the NYISO Board of Directors selected the Segment A Double-Circuit (T027) project, proposed jointly by North American Transmission (“NAT”) and the New York Power Authority (“NYPA”), as the more efficient or cost effective solution for Segment A. The Board also concluded that for Segment B, the more efficient or cost effective solution is the New York Energy Solution (NYES) Segment B (T019) project, which was jointly proposed by the Niagara Mohawk Power Corporation d/b/a National Grid (“National Grid”) and the New York Transco, LLC (“Transco”).
- Final AC Transmission report is posted at:
<https://www.nyiso.com/documents/20142/5990681/AC-Transmission-Public-Policy-Transmission-Plan-2019-04-08.pdf>



AC TRANSMISSION PROJECT SELECTION

- Segment A: T027 (Central East)
 - New double-circuit Edic to New Scotland 345 kV line
 - Decommission Porter to Rotterdam 230 kV lines
 - 115/230/345 kV connection to Rotterdam
- Segment B: T019 (UPNY/SENY)
 - New Knickerbocker to Pleasant Valley 345 kV line
 - Rock Tavern substation terminal upgrades
 - Shoemaker – Sugarloaf 138 kV line

Interregional Coordination

- **Through the NYISO's Transmission Interconnection Procedures, the NYISO also coordinates with neighboring regions to identify the impact, if any, of the Public Policy Transmission Projects on the neighboring regions.**
 - System Impact Studies have been completed for the selected Western NY and AC Transmission projects.
 - Facilities Study has been completed for the selected Western NY project.
 - Facilities Studies are being performed for the selected AC Transmission projects to finalize the Network Upgrade Facilities.

Future Public Policy Transmission Needs

- ◆ The NYISO initiated the 2018-2019 PPTPP cycle in August 2018 by issuing a solicitation for proposed transmission needs driven by Public Policy Requirements.
- ◆ 15 entities proposed transmission needs (posted at link below). The NYISO filed the proposals with the NYPSC and forwarded to LIPA for its consideration those proposals that would involve construction of transmission on Long Island.
<https://www.nyiso.com/cspp>
- ◆ If the NYPSC determines that there is a need for transmission, the NYISO will solicit projects from developers to satisfy that need.

Stakeholder Material

- **The NYISO Comprehensive System Planning Process is regularly discussed at the Electric System Planning Working Group (ESPWG) and Transmission Planning Advisory Subcommittee (TPAS).**
 - <https://www.nyiso.com/espwg>
 - <https://www.nyiso.com/tpas>
- **Study documentation is available at:**
 - <https://www.nyiso.com/cspp>

Our mission, in collaboration with our 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 policymakers, stakeholders and investors in the power system

