



**Public Service
Commission**

Transmission Planning in Support of the State's Renewable Energy Goals

August 13, 2020

Agenda

- ✓ Background on Accelerated Renewable Energy Growth and Community Benefit Act
- ✓ Power Grid Study & Investment Plan
- ✓ Progress Report on Ongoing Projects
- ✓ Fast-Track Transmission Needs

Transmission Upgrades Needed to Meet Requirements of the Climate Leadership and Community Protection Act



Includes Aggressive Clean Energy Targets


- **Renewable Energy Targets:** Produce 70% of electricity from renewable sources by 2030 & ensure statewide electrical demand system will be zero emissions by 2040.
- **Technology Targets:** Procure the deployment of 6 GW of photovoltaic solar generation by 2025, 3 GW of energy storage resources by 2030, and at least 9 GW of offshore wind by 2035.
- **Implementing Targets:** White Paper on Clean Energy Standard Procurements to Implement the CLCPA (June 18, 2020)

April 3, 2020 - As Part of the 2020-2021 Enacted State Budget, New York State Announced Passage of the:

Accelerated Renewable Energy Growth and Community Benefit Act (Act)

The Act will:

- Advance renewable energy, drive statewide economic growth, and create jobs.
- Streamline the process for environmentally responsible and cost-effective siting of large-scale renewable energy projects across the State.
- Establish tools for achieving the State mandate to obtain 70 percent of the State's electricity from renewable sources by 2030 and other nation-leading goals of the CLCPA.



70%
renewable
energy by
2030

Legal Background: Section 7 of the Act Adopts a Comprehensive Transmission Planning Process to Address CLCPA Goals

- **Power Grid Study:** DPS, in consultation with the NYSERDA, NYPA, LIPA, the NYISO, and the utilities “shall undertake a comprehensive study for the purpose of identifying distribution upgrades, local transmission upgrades and bulk transmission investments that are necessary or appropriate to facilitate the timely achievement of the CLCPA targets.”
 - ⇒ *Initiating Order in Case 20-E-0197 (May 14, 2020)*
 - ❖ **Local System:** Utilities directed to undertake a study for the purpose of identifying the distribution and local transmission upgrades that may be “necessary or appropriate” to the timely achievement of CLCPA objectives.
 - ❖ **Bulk System:** “[W]e will initiate a second proceeding in the near future to establish decisional criteria for the bulk transmission planning and investments necessary to meet CLCPA mandates.”

Legal Background (continued)

- **Process to Identify Bulk Transmission Projects:** The Commission is to utilize 2 transmission planning processes by which to select bulk transmission projects:
 - ❖ *NYISO Public Policy Transmission Process:* A process by which the Commission identifies transmission needs driven by a public policy, followed by the NYISO issuing a solicitation and ultimately selecting specific projects to address the identified transmission need.
 - Transmission needs driven by public policy are solicited by the NYISO on a biennial cycle (most recent solicitation issued on Aug. 3, 2020). However, the PSC may also act out-of-cycle to address transmission needs.
 - ❖ *NYPA Priority Projects:* The Act specifies that NYPA shall be selected to develop those projects for which the Commission determines there is a need to proceed *expeditiously* to promote the state's public policy goals.

NYISO Public Policy Transmission Process

- **Phase I: Identify Needs and Assess Solutions**
 - NYISO solicits transmission needs driven by Public Policy Requirements.
 - PSC by Order identifies public policy transmission needs.
 - NYISO holds Technical Conference and then solicits solutions to the identified transmission need.
 - NYISO performs Viability and Sufficiency Assessment with respect to proposed solutions.
- **Phase II: Transmission Evaluation and Selection**
 - NYISO staff evaluates viable and sufficient transmission solutions and recommends the more efficient or cost-effective solution
 - After stakeholder review and advisory votes through NYISO committees, the NYISO Board then selects a transmission solution for purposes of cost allocation and recovery through FERC.

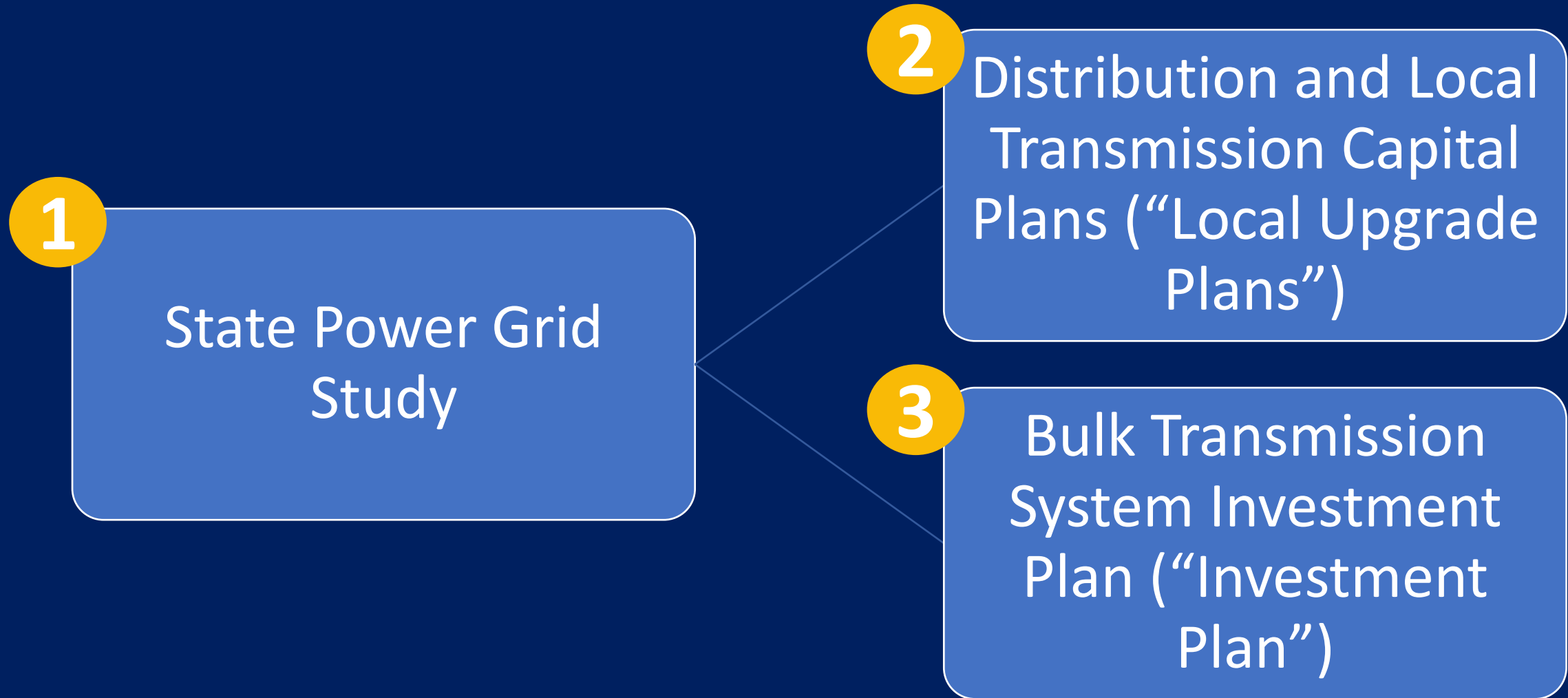
NYPA Priority Projects

- **The Act identifies NYPA as the entity best-suited, and in the public interest, to lead priority transmission projects**
 - Leverages NYPA's key strengths, including technical expertise, financial stability and access to capital
- **Process:** The PSC identifies a priority project following a petition filed by NYPA and/or DPS Staff.
 - NYPA's Board of Trustees reserves the right to determine if it would undertake project given priority status by the Commission.
 - Co-Participants: NYPA may undertake a priority project on its own or with co-participants, except for projects that are "not substantially within the power authority's existing rights of way," where NYPA shall "select private sector participants through a competitive bidding process."

Agenda

- ✓ Background on Accelerated Renewable Energy Growth and Community Benefit Act
- ✓ Power Grid Study & Investment Plan
- ✓ Progress Report on Ongoing Projects
- ✓ Fast-Track Transmission Needs

Power Grid Study & Investment Plan has three components



State Power Grid Study Overview

- **Goal:** Make the necessary transmission investments to help the State meet CLCPA goals.
- **The State Power Grid Study will:**
 - Study will provide input to the plans for distribution and local transmission upgrades.
 - Identify bulk transmission projects that can be built through the NYISO Order 1000 process.
 - Identify projects that must proceed on an expediated basis.
- **DPS to prepare initial report of the findings and recommendations within 270 days**
 - May issue findings and recommendations at reasonable intervals before and after that date
- **PSC is required to issue, after notice and public comment, a comprehensive review of actions taken under Sec. 7 of the Act, including impacts on grid congestion and achievement of CLCPA targets, by Jan. 1, 2023 and every four years thereafter**
 - PSC may institute new proceedings to address any deficiencies

Distribution and Local Transmission Capital Plans

- Within 60 days of receipt of the Study, the Act requires the Commission to commence a proceeding to establish local transmission & distribution capital plans for each utility that the Study identified for upgrades.
 - Each utility plan must include a prioritized schedule for local upgrades.
 - The PSC will address each utility's local upgrade plans either through rate cases or through separate process authorizing recovery through rate case.
 - LIPA also required to establish a capital program for its local system.
- In its Initiating Order in Case 20-E-0197 (May 14, 2020), the PSC began the process of identifying and prioritizing local transmission and distribution investments.
 - Order directed the utilities to file proposals to establish decisional criteria and cost recovery methods for investments by October 5; Study results are expected by November 1, 2020.
 - Public comments will then be sought on the grid study results and utility proposals.

August 3 Local Upgrades Update

- On August 3, 2020, pursuant to the May 14 Commission Order on local transmission and distribution planning, the NYS investor owned utilities along with LIPA submitted a progress report to Staff on the work streams of the Utility T&D Investment working group.
- The working group is divided into three parts:
 - Technical Analysis
 - Transmission Policy
 - Advanced Technologies.

August 3 Update (Technical Analysis)

- **Technical Analysis**

- ❖ **Goal:** Identify local transmission grid expansion projects
 - Existing headroom, bottlenecks
 - Synergies with existing capital plans
 - Least cost upgrades, new projects or emerging technologies
- ❖ **Progress:**
 - Analyses have advanced to varying degrees
 - Some are able to identify specific transmission
 - Analysis ongoing for others
- ❖ **Next Steps:**
 - November 1 final report

August 3 Update (Transmission Policy)

- **Transmission Policy**

- **❖ Goals:**

- Identify criteria for prioritizing transmission projects
- Establish a framework for comparing a potential CLCPA project's costs to its benefits
- Recommend regulatory pathways to allocate and recover the costs of such projects
- Evaluate options for stakeholder engagement
- Recommend improvements to the Article VII process

- **❖ Next Steps:**

- Specific policy proposals will be filed by October 5

August 3 Update (Advanced Technologies)

- **Advanced Technologies**

- ❖ **Purpose:** Investigate whether existing, emerging or, through research and development, new technologies can be invested in and deployed to enhance grid efficiency to achieve the State's climate policy goals.

- ❖ **Progress:**

- Prioritized key issues to achieving CLCPA goals (e.g., eliminating bottlenecks)
- Developed a list of potential technology solutions (e.g., storage, high voltage DC, dynamic line rating)

- ❖ **Next Steps:**

- Develop use cases of potential technology solutions
- Establish process to vet new technologies
- Develop cost and benefit analysis of potential technology solutions
- Develop implementation plans

Bulk Transmission System Investment Plan

- Within 60 days of receipt of the Study, the PSC is required to establish a Bulk Transmission System Investment Program, per the State's siting authority over such assets.
 - PSC will seek comment on the proposed bulk transmission study.
- PSC will submit the Bulk Transmission System Investment Plan to the NYISO for use in their planning process
 - Within 8 months of the NYISO's commencement of the Public Policy Transmission Planning process, the PSC must identify projects or policy from the Investment Plan for inclusion in that process.
- PSC will also identify "priority projects" from the Investment Plan that would be built by NYPA rather than selected through NYISO's Public Policy Transmission Planning process.
 - ⇒ *NOTE: Depending on size, projects may also need to go through an Article VII permitting process.*

Agenda

- ✓ Background on Accelerated Renewable Energy Growth and Community Benefit Act
- ✓ Power Grid Study & Investment Plan
- ✓ Progress Report on Ongoing Projects
- ✓ Fast-Track Transmission Needs

Progress on Transmission

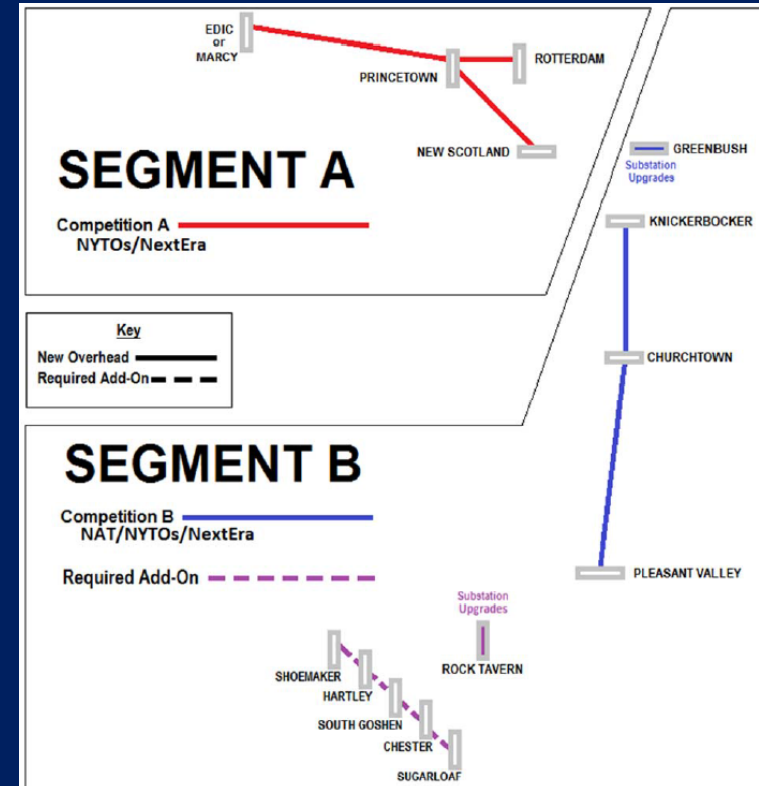
Western NY PPTN:

- Obtain full output from Niagara (2700 MW including Lewiston PS)
- Maximize Ontario imports under normal operating conditions, and minimum 1000 MW under emergency operating conditions
- Maximize transfers out of Zone A to rest of state
- The NYISO has selected NextEra to construct its Empire State Line for the WNY PPTN.
- The project received its CECPN from the siting board in June 2020.
- Planned in-service date is Q2 2022.



AC Transmission PPTN:

- Segment A (Central East): increase transfer limit by 350 MW
- Segment B (UPNY/SENY): increase transfer limit by 900 MW
- Address persistent system congestion while addressing aging infrastructure and numerous public policies.
- The NYISO has selected LS Power and NYPA to construct Segment A and NY Transco to construct Segment B.
- Both projects are currently in the permitting process.
- Planned in-service dates for both projects is December 2023.



Agenda

- ✓ Background on Accelerated Renewable Energy Growth and Community Benefit Act
- ✓ Power Grid Study & Investment Plan
- ✓ Progress Report on Ongoing Projects
- ✓ **Fast-Track Transmission Needs**

Petitions Filed Through New Section 7 Process (Case 20-E-0197)

- Petition filed on July 2, 2020: *Two-part petition.*
 - *DPS Staff's Proposed Criteria for NYPA Priority Projects:* Including (i) the ability of NYPA to expedite development based, in part, on proximity of its existing assets, (ii) whether an early in-service date for the transmission investment would increase the likelihood that the State would meet the CLCPA targets, and several other factors related to the need for a more expedited process.
 - *Northern NY:* NYPA proposed a project that would unbottle energy from existing renewable generators and facilitate the deliverability of renewable generation that is currently in the interconnection process.
- NYPA Petition filed on July 13, 2020: NYPA proposed to develop the Western New York Energy Link Project or to direct the existing Transmission Owners (National Grid & NYSEG) to undertake the upgrades. NYPA notes that the project would also unbottle renewables generation in upstate New York.

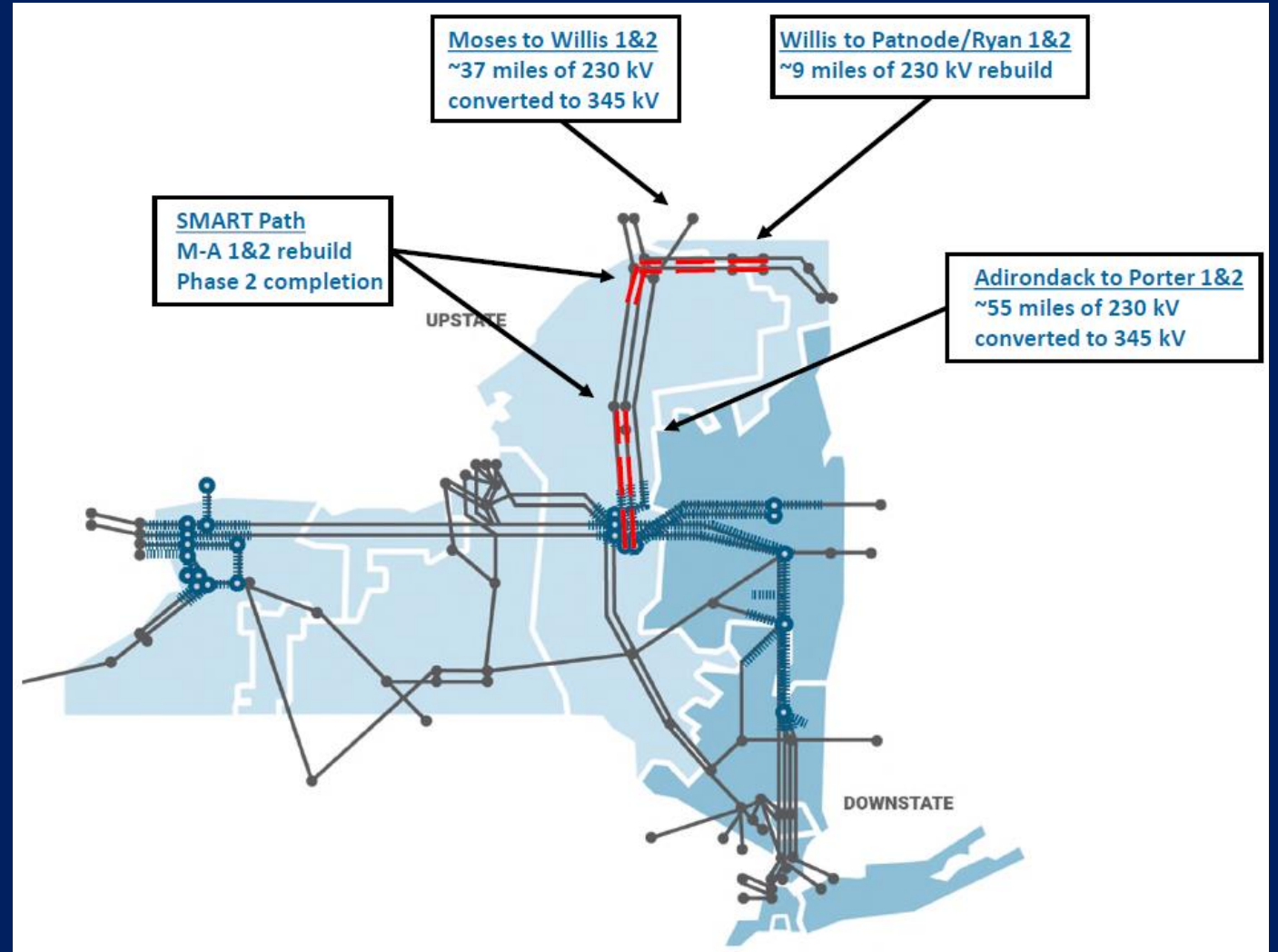
NYPA Priority Projects: NNY Petition

Expands on NYPA's Smart Path rebuild of Moses-Adirondack and the AC Transmission PPTP upgrades.

Establishes a continuous 345 kV path in Northern NY expanding the deliverability of approximately 1,000 MW of renewable generation.

Project Components:

- Phase 2 completion of NYPA Smart Path – upgrading segment and stations to 345kV
- Rebuild National Grid Adirondack-Porter to 345 KV
- Rebuild NYPA Moses-Willis to 345 kV
- Rebuild NYPA Willis-Pantode at 230 KV
- Additional station and ancillary system/network improvements



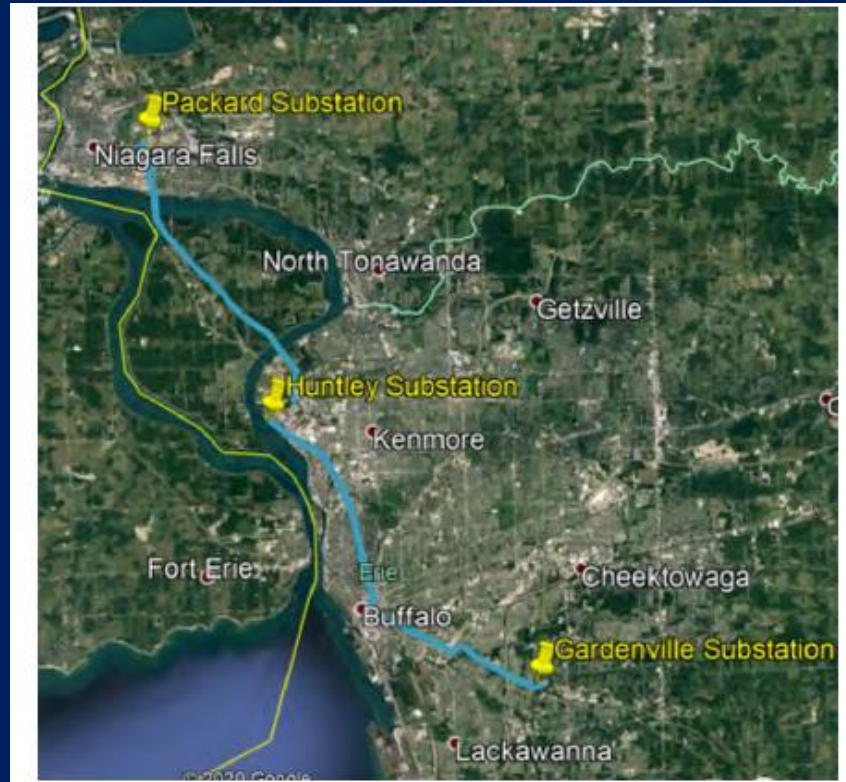
NYPA Priority Project: WNYEL Petition

Accommodates transfer of an additional approximately 600 MW of renewable generation across the Western Region to load centers.

Upgrades to assets owned by National Grid, NYSEG and NYPA.

Project Components:

- Rebuild Packard-Huntley-Gardenville Lines (42 miles - 230 kV)
- 61&64 Line Separation
- 62&76 Line Separation
- South Ripley PAR
- Ancillary System/Network Improvements



- Rebuild Packard-Huntley-Gardenville



- 61&64 Line Separation
- 62&76 Line Separation

LIPA Order 1000 Referral

- **NYISO tariff mechanism for Long Island projects:** The NYISO tariff allows LIPA to initiate a transmission solutions process by referring a transmission need to the PSC.
- On July 30, LIPA submitted a referral to the PSC seeking
 - ❖ *The Commission's determination that the 2018 Offshore Wind Standard is a public policy driving the need for transmission; and*
 - ❖ *A finding of a need for additional export capability on the LIPA/Con Ed interface and upgrades to the existing local transmission system on Long Island to support the 2018 offshore wind procurement target of 2400 MW.*