



**Department  
of Public Service**

# **Transmission Planning for CLCPA Goals**

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## Elizabeth Grisaru

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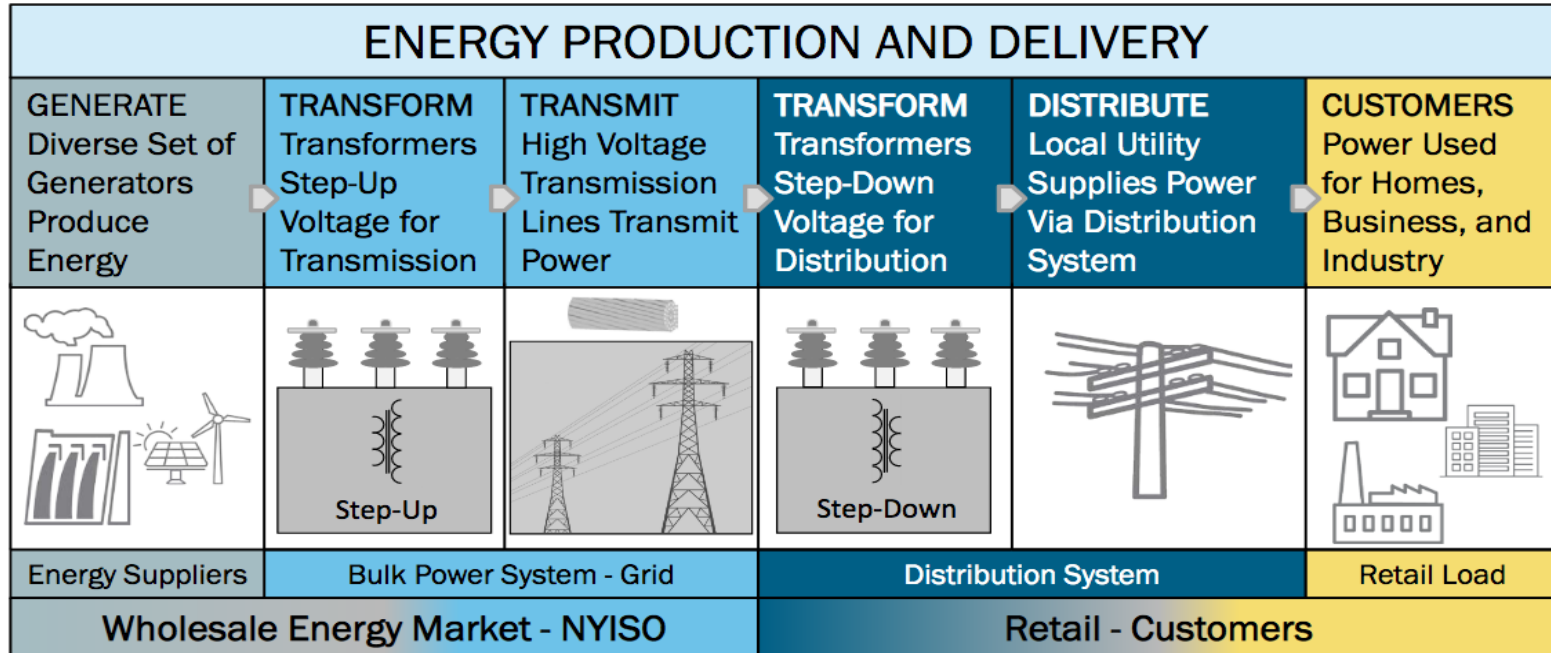
**New York State Department of  
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# New York's Climate Targets

- 70% renewable generation by 2030
- Zero-emission electricity by 2040
- 85% reduction in greenhouse gas emissions from 1990 levels by 2050
- Specific electric supply targets:
  - 6,000 MW of distributed solar resources by 2025
  - 3,000 MW of energy storage by 2030
  - 9,000 MW of offshore wind (OSW) generation by 2035

# Bulk Power vs. Distribution vs. Retail Load



# Identifying System Needs

- PSC and NYSERDA performed the Power Grid Study, 2020-21
- Goal: preliminarily identify electric system upgrades that are needed to meet CLCPA targets
  - 2030, 2040 horizons
- Three components:
  - Utility study (distribution and local transmission)
  - Zero emissions (100 x 40) study
  - Offshore wind integration study

# Initial PGS Findings

- Grid investment will be needed throughout the State as the supply portfolio changes
- System is well placed to meet CLCPA **2030** goals
- Recent high voltage transmission projects have put the State on track
- The 9 GW offshore wind target is achievable
- A program of distribution and local transmission upgrades may be sufficient to meet 2030 targets
- More study will be needed to identify emerging transmission needs as the supply portfolio approaches 2040 targets



# Types of Local Upgrades

- PGS identified two types of local upgrades that will be needed, in all regions of the State
- “Phase 1” projects: typical utility projects that are already being planned to meet reliability, asset condition, and resilience standards
- “Phase 2” projects: upgrades specifically driven by CLCPA requirements
  - Work the utilities would not do **but for** the CLCPA
- Phase 1 projects have significant potential to achieve most of the 2030 goals
- Phase 2 projects will likely be needed as more renewables come on-line 2030-2040

# Bulk System Investments

- Key PGS findings:
  - These facilities connect different regions of the statewide system, typically at higher voltages
  - No major bulk transmission investments are needed before 2030
    - Exception: Long Island to mainland tie
  - After 2035, integration of offshore wind supplies and shift to renewables elsewhere across the State will drive bulk system investments

# Offshore Wind Transmission Needs

- PGS suggests interconnecting 3 GW of offshore wind to Long Island and 6 GW to New York City may be an efficient approach to the 9 GW target
- A new tie is needed to flow up to 3 GW from Long Island to the mainland grid
- Cost-effective interconnection points capable of managing up to 6 GW are needed in New York City
  - Cable routing options should be studied

# Questions so Far?

- Summarized PGS findings
- Next, discuss what the PSC is doing to address PGS recommendations

## Accelerated Renewable Energy Growth and Community Benefit Act

- Statute enacted in 2020, 1 year after CLCPA
- Recognizes need to rebuild the grid in order to integrate and support new renewable generation
- Requires utilities to develop and publish plans for distribution and transmission upgrades needed to meet targets
- Requires Public Service Commission (PSC) to establish **new transmission planning processes**

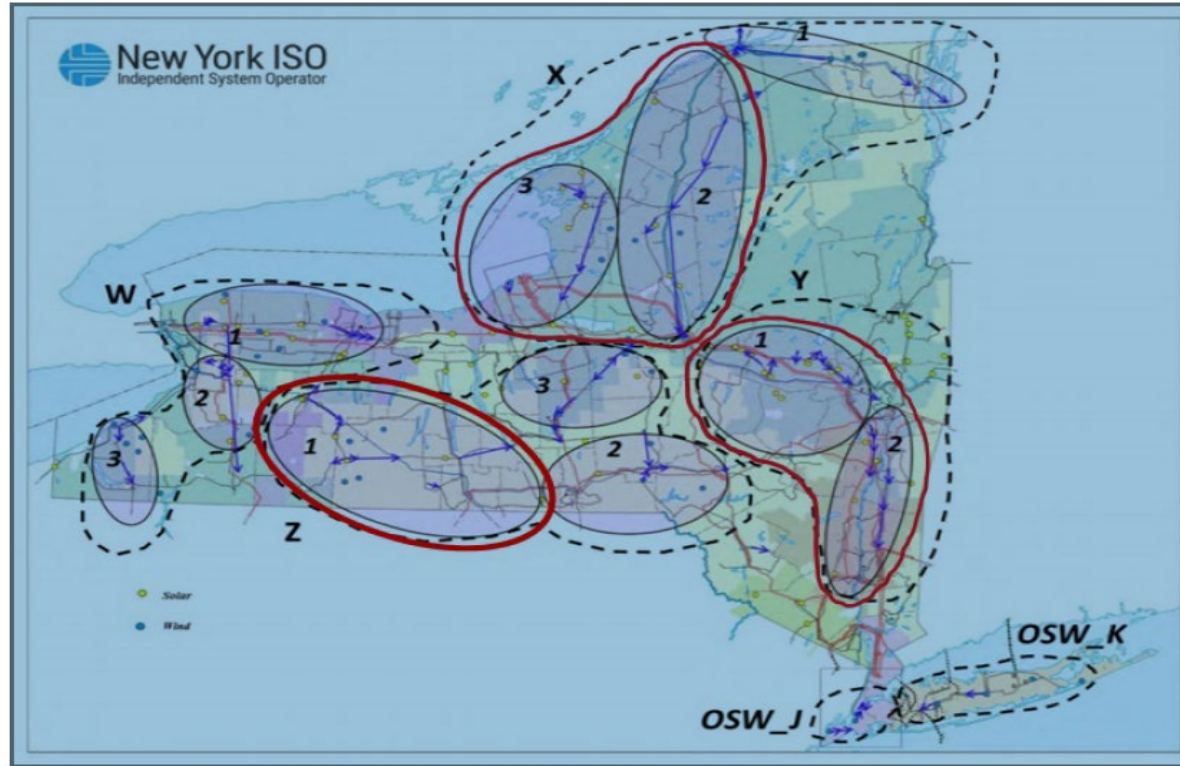
# Laying the Foundations

- Since publishing the Power Grid Study, the PSC has been implementing its recommendations in accordance with the Accelerated Renewable Energy Act
- Long term planning: proceeding underway to develop coordinated planning processes focused on CLCPA needs
- Phase 1 investments: PSC issued Phase 1 Order in February 2021, directing utilities to identify these projects in their investment plans
  - In response, Avangrid and National Grid have petitioned for approval of Phase 1 projects in their territories
- Offshore wind: PSC initiated solicitation for proposals for the Long Island tie
  - Several proposals are now under review

# Further Ongoing Initiatives

- Phase 2 projects: PSC directed Avangrid, National Grid, and Central Hudson to propose solutions to problems in three areas of the State – where existing system cannot support installed and expected renewable generation
  - These proposals are now under review
- PSC also directed the utilities to develop a coordinated portfolio of Phase 2 projects – to be filed in January 2023

# Areas of Concern





# Offshore Wind Interconnection

- Con Ed has proposed a renewable energy interconnection hub in Brooklyn, NY – sized up to 4.5 GW
  - This proposal is under review
  - Cable routing options are being studied

# The Planning Process

- The long term planning process: PSC, utilities, NYISO, NYSEERDA, renewable energy developers, and other stakeholders are refining proposals submitted by the utilities in December 2021
- Utilities to file a revised planning process later this year
  - Public comment opportunities
- Coordinated planning will give the PSC and the public a comprehensive view of transmission needs – the basis for future investment – the blueprint for the zero carbon grid

# More Questions?



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