

# **Need for Long Duration Energy Storage in New York State**

**Department of Energy  
Long-Duration Energy Storage Workshop**

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**King Look**  
Director of R&D  
Consolidated Edison Co. of NY

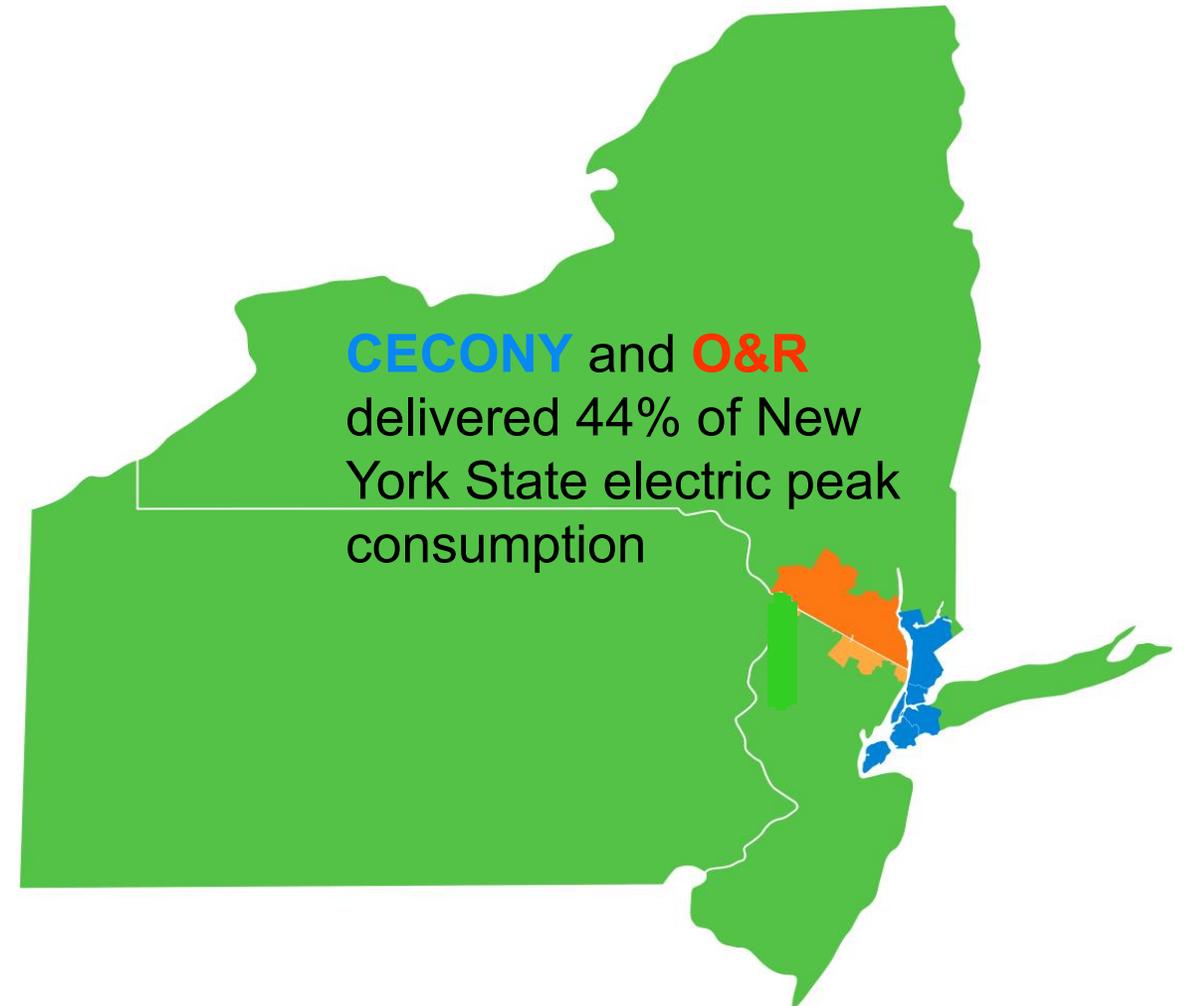
# Regulated Utilities are the Core of Con Edison, Inc.

## Con Edison of New York (CECONY)

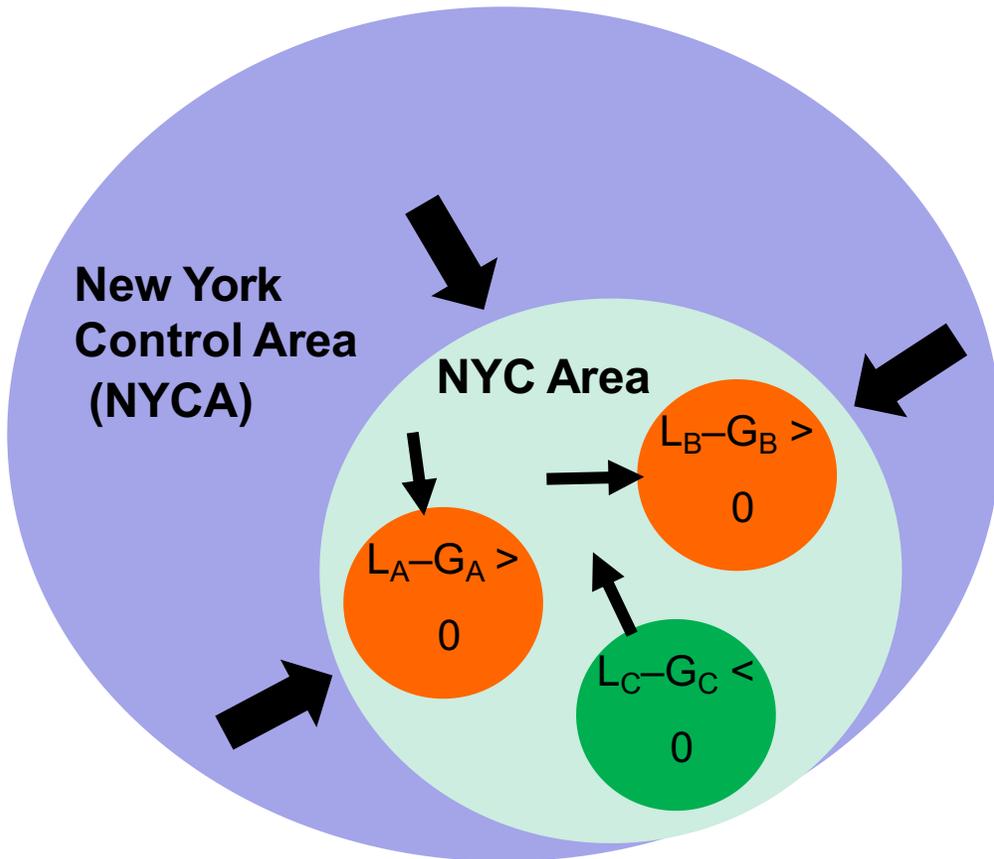
- 3.5 million electric customers
- 1.1 million gas customers
- 1,600 steam customers
- 700 MW of regulated generation
- Delivered 41% of New York State electric peak consumption

## Orange and Rockland (O&R)

- 0.3 million electric customers
- 0.1 million gas customers
- Delivered 3% of New York State electric peak consumption

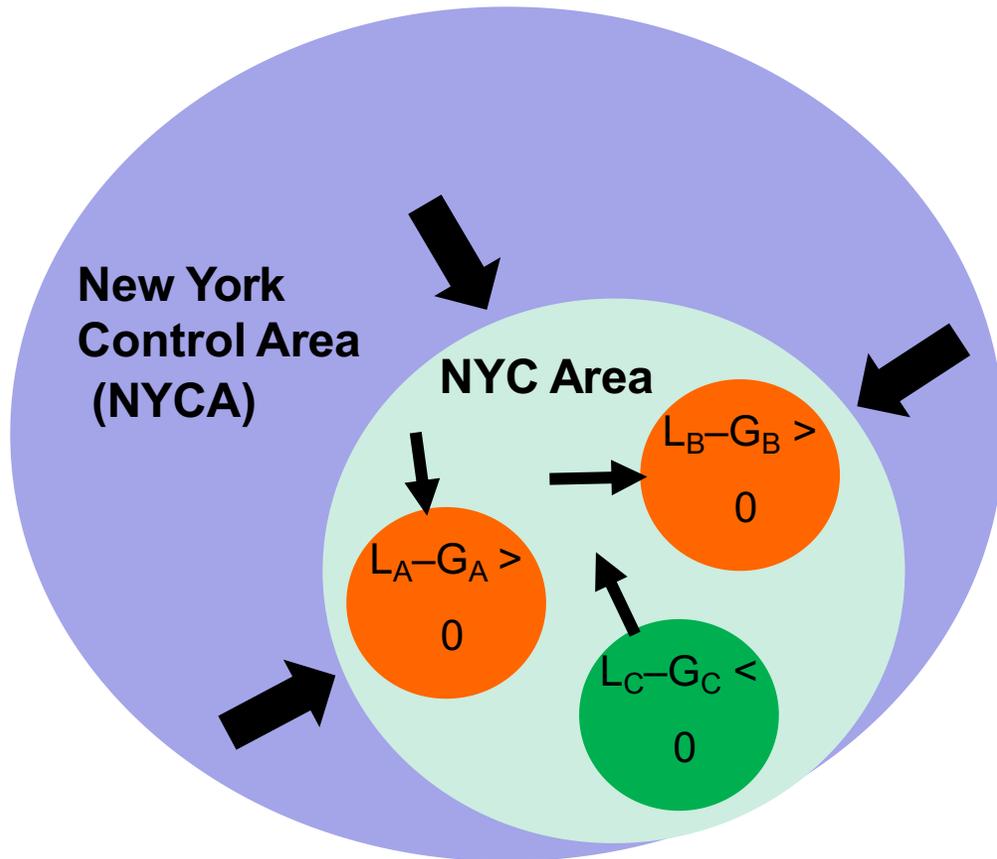


# Transmission Load Areas and Flows



- Minimum Transmission *minus* Contingency = Absolute Value of (Peak Load *minus* Generation Capacity)
  - Load pocket when load > generation
  - Generation pocket when load < generation
- Downstate New York, primarily in New York City, is filled with load pockets
- Potential for generation pocket with future offshore wind

# Transmission Load Areas and Flows



- Per the NYISO’s 2020 Reliability Needs Assessment (RNA), the New York “Peaker Rule” would result in:
  - 1,400 MW peaking summer capacity unavailable by summer 2025, mostly located in two Transmission Load Areas (load pockets)
  - Deficiencies in two load pockets, one ranging from 110 MW in 2023 to 180 MW by 2030, and the other from 360 MW in 2025 to 370 MW by 2030, each lasting 10 or more hours on peak day
- Other Considerations for Need for Long Duration Energy Storage
  - Quick start capability to allow time for larger units to start up and be brought online
  - Potential curtailment from 9,000 MW of offshore wind installed by 2035
  - Electrification of heating

# Physical Comparison



**Energy Storage**

~ 500 – 5,000  
ft<sup>2</sup>/MW  
(4 hours)



**Simple Cycle Gas Turbine**

300 - 400  
ft<sup>2</sup>/MW

## Contact Info

King Look  
[lookk@coned.com](mailto:lookk@coned.com)  
(212) 460-4801