



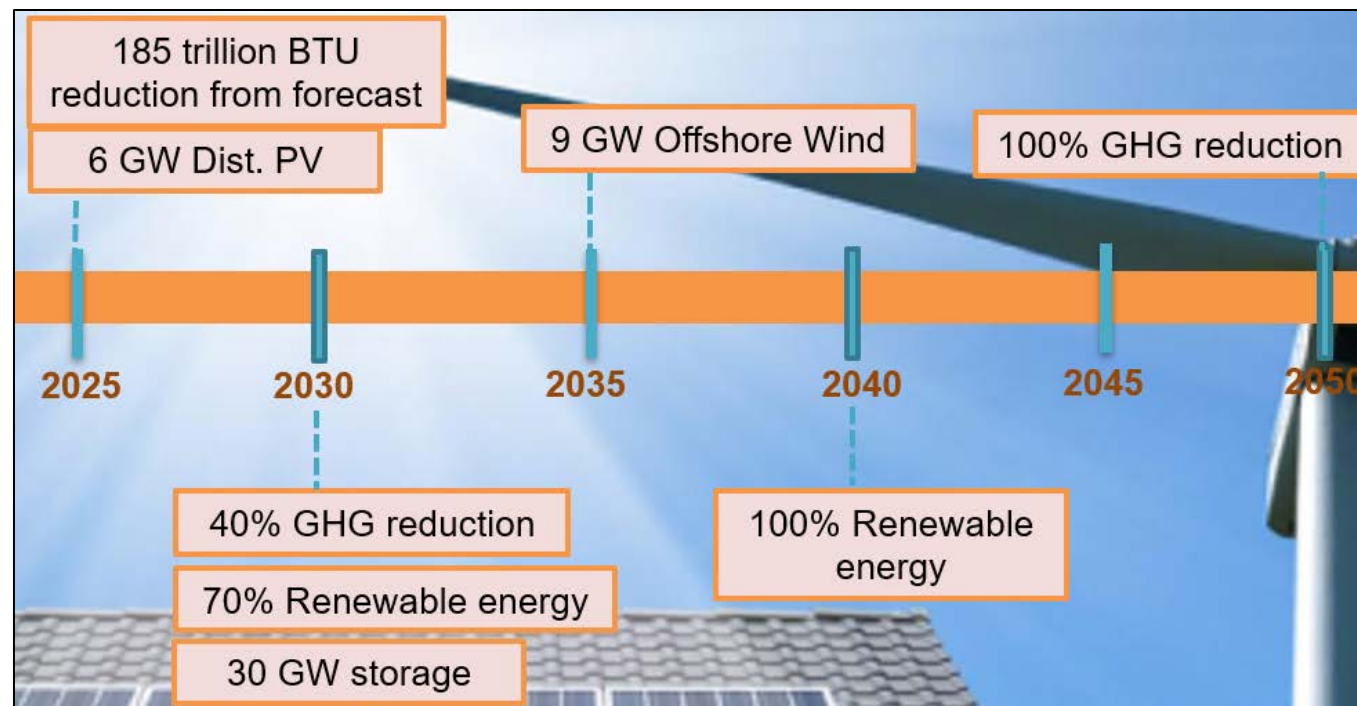
Con Edison: Role of the Distribution System Operator in New York

January 27, 2022



Key Drivers in New York

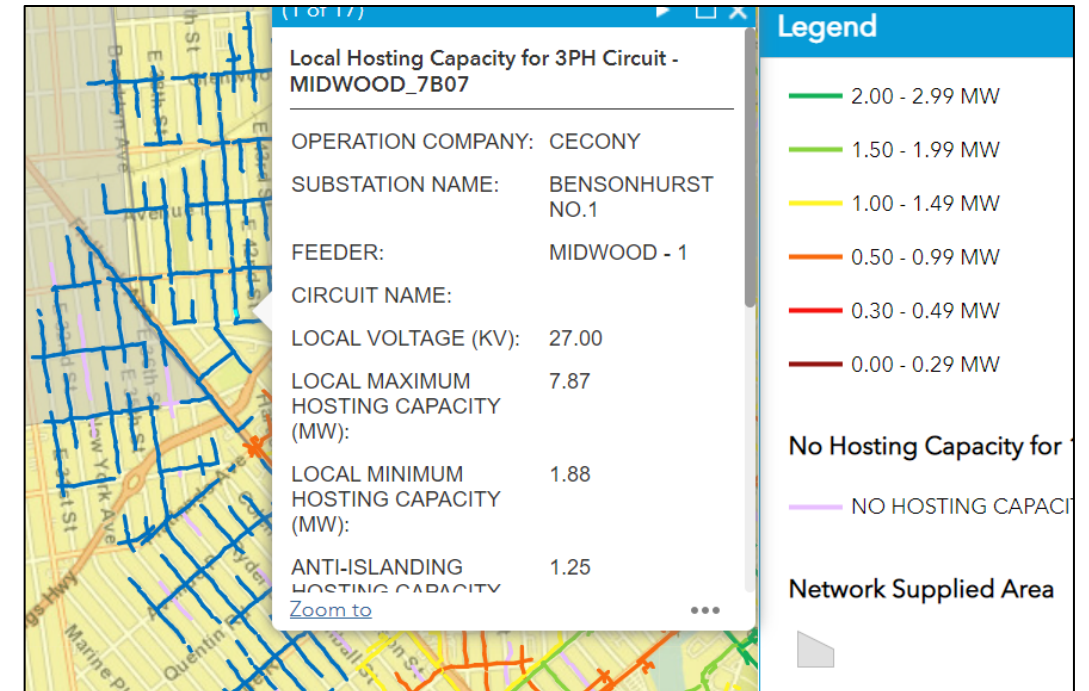
- New York's "Reforming the Energy Vision" (REV)
- The Climate Leadership and Community Protection Act (CLCPA)
- New York City Climate Goals
 - 200,000 EV chargers by 2030 for ZEV targets
 - 500 MW of storage in NYC by 2025
 - 1 GW of distributed solar in NYC by 2030
- NYISO's DER Roadmap
 - Energy Storage Model
 - Dual Participation
- FERC Order 2222
- Increasing DER penetration



New York CLCPA Goals

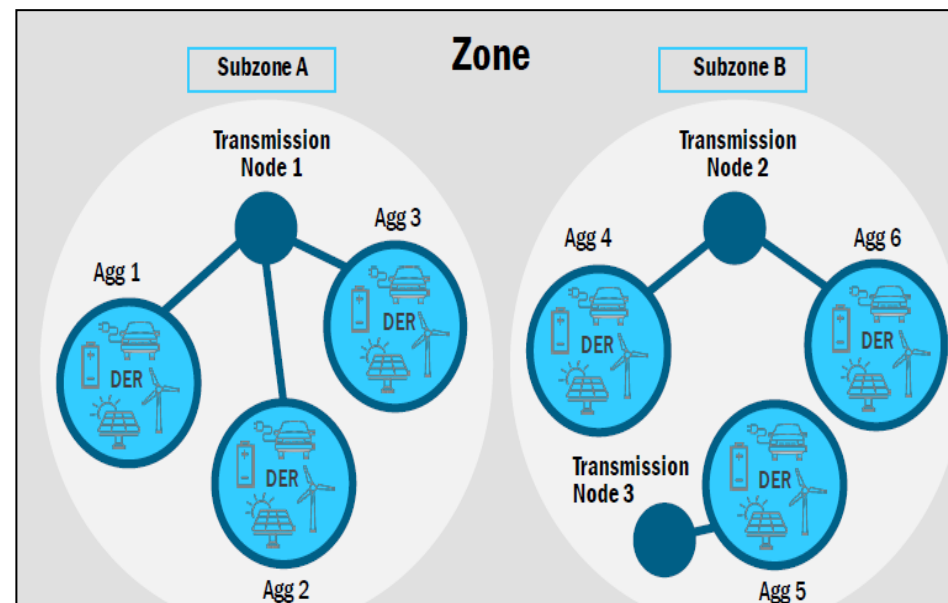
Current State

- Robust stakeholder engagement process for Hosting Capacity maps with a multi-year enhancement plan
- Completed Hudson Yards Microgrid project in 2019 with 12MW of Cogen
- Interconnected 76 MW of customer owned DER in 2021
- Enrolled over 400MW in utility Demand Response programs in 2021
- Launched an Innovative Pricing Pilot (“the IPP”) in 2019 to test seven new demand-based rates for mass market customers
- \$250M PowerReady electric vehicle infrastructure incentive program through 2025
- Bi-annual Distribution System Implementation Plan (DSIP)



Challenges

- Clean Energy targets translate to a 175% increase in PV and a 1450% increase in Storage capacity by 2030
- Ability to forecast DER output and predict system impact
- Coordination between Transmission and Distribution priorities
- Increasing communications among NYISO, Utilities, Aggregators, and DER Owners
- Hosting Capacity limitations
- Ability to operate both utility assets and customer owned DER's seamlessly to alleviate system constraints
- Misalignment between market rules and existing retail programs
- Adoption of flexible, low-cost telemetry solutions



Distribution System Operator Responsibilities

- **Bridge the gap between Transmission and Distribution Operations**
 - Balance Distribution and Transmission reliability while facilitating market participation
 - Prioritize operational conflicts between the T&D system
- **Facilitate new communication requirements**
 - Build relationships with DER Owners and Aggregators
 - Minimize additional burden on existing Control Centers
 - Help DER navigate dual participation obligations
- **DER dispatching**
 - Utilize new DERMS functionality
 - Provide DER availability and curtailment when necessary



Technology Roadmap

- **Multi-phase DERMS deployment**
 - Prioritize foundational investments and build functionality over time
 - New customer facing portals to manage increasing communications
- **Grid Edge telemetry improvements**
 - Enhance existing Distribution SCADA
 - Proposal for telemetry laboratory to test new technologies
- **Load Flow modeling improvement**
 - More granular hosting capacity analysis
 - Improve system planning functions
 - Incorporate AML data into real time and planning processes

