

# Internal Controllable Lines: Proposed Capacity Market Design

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# Agenda

- **Capacity Market Proposal Overview**
- **IRM/LCR Modeling**
- **Capacity Market Participation**
- **Next Steps**
- **Appendix: Previous Project Presentations**

# Capacity Market Proposal Overview

# Aligning the Capacity Market Design with the Proposed Energy Market Design

- Consistent with the proposed Energy Market design for an Internal Controllable Line, the proposed Capacity Market Design will not tie supply to specific generators
- For purposes of the Capacity Market, an Internal Controllable line will be referred to as an "Internal UDR"

# Capacity Market Proposal Overview

- **Internal Scheduled Lines will participate in the Capacity market via an updated and revised Internal UDR construct**
- **Internal UDR**
  - The Internal UDR will transmit capacity across the DC line
    - For example, an Internal UDR will purchase UCAP in NYCA and sell UCAP into Zone J
  - NYISO Tariff and Manual language will need to be revised to clarify the capacity market participation rules and obligations for an Internal UDR

# Internal UDR Elections

- **Consistent with external UDRs, Internal UDRs must complete the annual election process**
  - By August 1st of each year, Internal UDRs must indicate to the NYISO how much of their capability they would like to elect for capacity market participation
    - Annual election is capped at the CRIS value of the Internal UDR
    - The amount of elected capacity will set the ICAP value of the line for that Capability Year

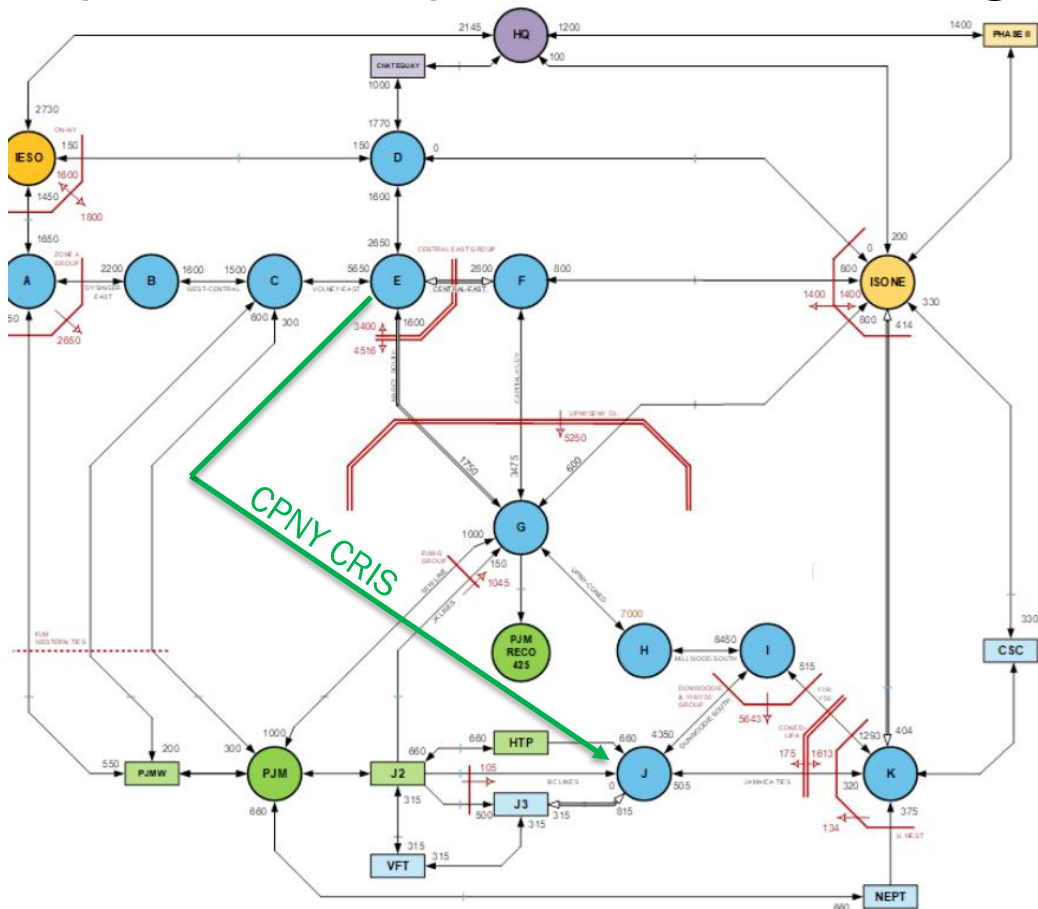
# IRM/LCR Modeling

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- **Consistent with other controllable lines, the NYISO expects that an Internal UDR transmission facility would be modeled in the IRM/LCR model as a separate interface between the source and sink zones**
  - i.e., not included in the existing interfaces between zones
- **An illustrative example, using the 2022 IRM/LCR Topology and the proposed Clean Path New York project, is included in the following slide**
- **The NYISO will need to discuss with NYSRC and/or ICS regarding how an Internal UDR should be modeled in the IRM process**



# NYISO Perspective on Conceptual Internal UDR Modeling in the IRM/LCR Topology



## Notes

1. PJM to NY emergency assistance (EA) assumption for calculating the PJM-NY Western ties, PJM-G Group, and ABC Line Group flow distribution limit: 1900MW
2. NYCA EA simultaneous import limit: 3,500 MW
3. External areas representation based upon information received from the NPCC CP-S WG

## Legend

- ↔ Interface
  - ↔ Unidirectional Interface
  - ↔ Interface w/ Dynamic Ratings
  - Interface Group
  - Interface Group w/ Dynamic Ratings
  - Monitoring Interface Group
  - - - NYCA EA Interface Group Marker
  - XX "Dummy Bubble" i.e. no load
- NOTE: An interface is considered to not have a MW limitation if no number is specified

Diagram Source: NYSRC IRM Study Appendices, Figure A.10 Final Final 2022 IRM Study technical Report Appendices 12\_10\_21 Clean 12\_13\_21.pdf (nysrc.org).

# IRM/LCR Calculations

- **For purposes of calculating the IRM and LCRs, Internal UDRs will be counted as supply resources up to the level they elect to be considered ICAP**
  - The amount of MW counted as supply from an Internal UDR will not be modeled as LCR reduction
    - Any remaining MW not counted as supply will be modeled as LCR reduction

# Capacity Market Participation

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- **Internal UDRs that have elected to maintain some amount of capacity will have UCAP available at the sink location and a corresponding procurement obligation at the source location**
  - The amount of capacity an Internal UDR will be eligible to sell in NYISO auctions will be calculated based on its availability, as discussed in subsequent slides
  - The amount of capacity an Internal UDR will be obligated to procure will be based on the amount of UCAP sold
- **Internal UDRs will be included in the ICAP to UCAP translation factor for their sink location**
  - Benefits of this approach:
    - Captures the impact of increased NYC supply from Internal UDRs on capacity requirements
    - Captures the impact of Internal UDRs on NYC capacity market clearing prices

# Capacity Market Participation (cont'd)

- **Internal UDR UCAP supply available in Locality=**
  - Elected ICAP \* (1 - Internal UDR unavailability)
- **Internal UDR UCAP procurement obligation in ROS =**
  - UCAP supply sales + (UCAP supply sales \* Losses %<sup>1</sup>)
- **The NYISO is evaluating how marginal capacity accreditation should apply to Internal UDRs**

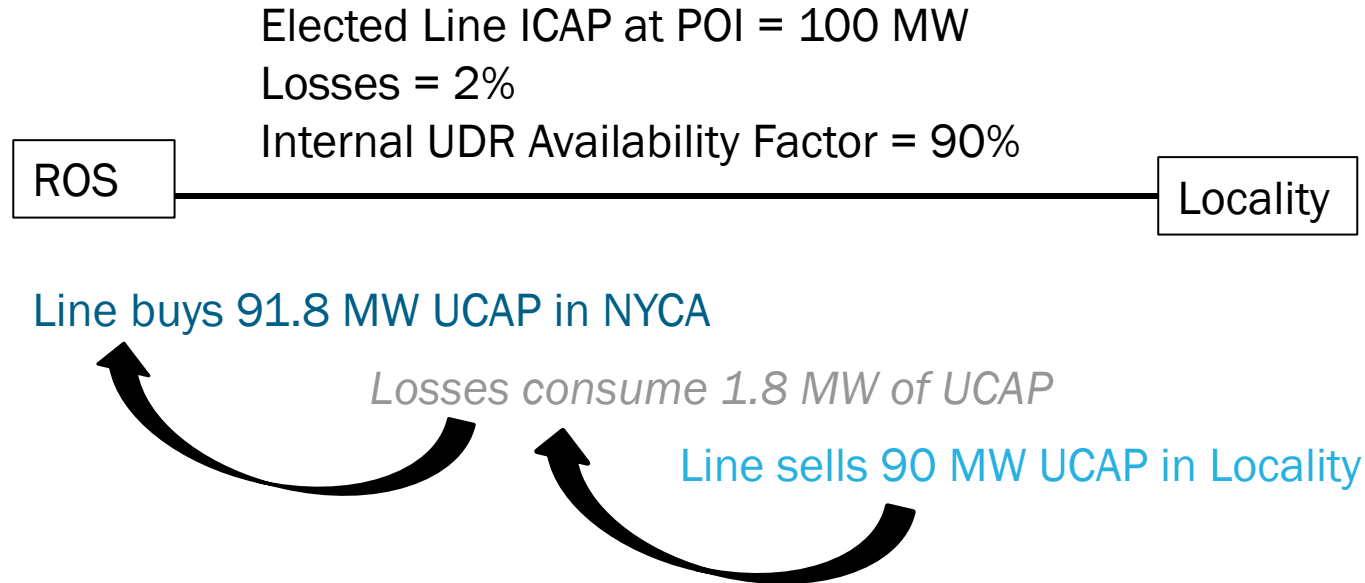
<sup>1</sup> For purposes of discussion in this presentation, losses are assumed to be a static percentage.

# Bid/Schedule/Notify Obligations

- **Bid/Schedule/Notify rules and penalties will apply to Internal UDRs**

- Consistent with all capacity suppliers, Internal UDRs will be required to:
  - Bid into the Day-Ahead Market the ICAP Equivalent (ICE) of UCAP sold
    - $ICE = UCAP \text{ supply sales} / (1 - \text{Internal UDR unavailability})$
  - Schedule planned outages with the NYISO
  - Notify the NYISO of unplanned outages

# Illustrative Capacity Market Mechanics



# ICAP Mitigation Measures

- **Provided an Internal UDR meets the qualifications under the FERC-approved Comprehensive Mitigation Review rules, it will be exempt from Buyer's Side Mitigation evaluations**
- **The NYISO and stakeholders will need to assess what Tariff and procedure changes will be necessary to incorporate Internal UDRs into supply-side mitigation measures**



# Next Steps

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- **June:**
  - Continued Capacity Market discussions as needed (ICAPWG/MIWG)
  - Continued Energy Market discussions as needed (ICAPWG/MIWG)
- **June, July:**
  - Discuss any open items (ICAPWG/MIWG)
  - Begin Consumer Impact Analysis discussions (ICAPWG/MIWG)
- **July, August:**
  - Continued Consumer Impact Analysis discussions (ICAPWG/MIWG)
- **End of Q4:**
  - Market Design Concept Proposed (ICAPWG/MIWG)

# Appendix

# Previous Project Presentations

- **2/3/22: Kick-Off presentation discussing project scope and timeline**
  - [2/3/22 MIWG Presentation](#)
- **3/16/22: Energy Market Design Real-Time Scheduling and Settlement Examples**
  - [3/16/22 MIWG Presentation](#)
- **4/19/22: Energy Market Two-Settlement Examples**
  - [4/19/22 MIWG Presentation](#)

# Our Mission & Vision



## Mission

Ensure power system reliability and competitive markets for New York in a clean energy future



## Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation