Rockland Electric Company

2023 ROCKLAND ELECTRIC COMPANY (RECO) PLANNING CRITERIA ASSUMPTIONS

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Transmission Planning

AGENDA

- **Service Territory**
- **Planning Assumptions**
- **Baseline Projects**
- **Project Drivers**
- **End-of-Life (EOL) Assumptions**
- **Retirement of Existing Facility Statement**

SERVICE TERRITORY

Integrated planning for New York and New Jersey service territories.

- **Transmission:** 34.5 kV to 345 kV.
- **Orange and Rockland Utilities, Inc./Rockland Electric Company (ORU/RECO) subsidiary of Consolidated Edison of New York (CECONY).**
- **Service territory divided into three (3) divisions: Eastern, Central and Western.**
- **Integrated planning for NY and NJ service territories.**

PLANNING ASSUMPTIONS

- **RECO uses PJM's RTEP power flow cases and models for assessments.**
- **Local station loads are modified using PJM power flow cases to reflect the following:**
  - **Proposed new block loads**
  - **Proposed DERs**
  - **Large load additions**
- **Performs 5-year and 10-year transmission assessments**
- **Planning Criteria (Thermal: N-1, Voltage: ± 5% nominal)**

BASELINE PROJECTS

- **PJM performs baseline analyses to identify system needs as per the following criteria:**
  - NERC Reliability Standards
  - PJM Transmission Planning Criteria as specified in Manual 14B

- **RECO performs analyses by applying its Transmission Planning Criteria on its BES and non-BES system.**

- **RECO coordinates with PJM planning to validate power flow cases and study results including baseline violations.**

- **Baseline violation projects (including non-BES) are submitted to PJM and included in the RTEP process.**

ATTACHMENT M-3 SUPPLEMENTAL PROJECT DRIVERS

PROJECT DRIVERS	DEFINITIONS	POSSIBLE PROJECT EXAMPLES
Equipment Material Condition, Performance and Risk	Degraded equipment performance, asset condition and/or health, maintainability/serviceability, obsolescence, equipment failure, spare parts unavailability, employee and public safety and environmental impact or hazard.	- Upgrade of substation equipment due to test results and/or operational maintenance history. - Upgrade of transmission lines due condition and frequency of outages
Operational Flexibility and Efficiency	Optimizing system configuration, asset availability, equipment duty cycles and restoration capability, minimize outages and system expandability.	- Addition of reactive devices and sectionalizing schemes
Infrastructure Resilience	Improve system ability to anticipate, absorb, adapt to, and/or rapidly recover from a potentially disruptive event including severe weather, geo-magnetic disturbances, physical and cyber security challenges.	- Storm hardening projects as well GMD related system enhancements.
Customer Service/Load Interconnection	Interconnect new customer load, address load additions to existing customers, address normal load growth, customer outage exposure and equipment loading.	- Station upgrade and/or addition of station to serve customer's block loads. - Reconfigurations of existing transmission lines.
Other	Meet objectives not included in the above driver definitions.	- DER related project upgrades.

ATTACHMENT M-3 END-OF-LIFE (EOL) CRITERIA

- **EOL Need Definition:** A need to replace a transmission asset (transmission lines, transformers) between breakers operating at or above 100 kV or a transformer, the high side of which operates at or above 100 kV and the low side of which is not connected to distribution facilities, which the Transmission Owner has determined to be near the end of its useful life, the replacement of which would be an Attachment M-3 Project.
- **EOL Need Identification:** An EOL Need is likely to arise from one or more drivers related to equipment material condition, performance and risk such as degraded equipment performance, asset condition and/or health, maintainability/serviceability, obsolescence, equipment failure, spare parts unavailability, employee and public safety and environmental impact or hazard.

ATTACHMENT M-3 EOL CRITERIA – Transmission Lines

- **In order to determine an EOL Need, an assessment of these factors must be done through a combination of desktop analysis and field assessments. Assessments can include evaluation of the asset's history, design, performance, maintenance records, physical condition, etc. The following are some examples of factors that may aid in determining a transmission line EOL Need:**

- **Wood Structures**
  - **Decay/Rot**
  - **Checking/Splitting**
  - **Woodpecker damage**
  - **Ineffective treatment**
- **Poor Lightning Performance**
- **Degraded/Ineffective Grounding**
- **Degraded Anchor Rods/Guys**

- **Steel Structures**
  - **Corrosion/Section Loss/Structural integrity**
  - **Corten Lattice**
  - **Degraded coatings/foundations**
- **Conductor**
  - **Damage/Corrosion**
  - **Failing splices/connectors/fittings**

ATTACHMENT M-3 EOL CRITERIA – Transformers

- **Like transmission lines, assessments can include evaluation of the asset's history, design, performance, maintenance records, physical condition, etc. The following are some examples of factors that may aid in determining a transformer EOL Need:**

  - **Manufacturer/Vintage**
  - **Transformer Design**
  - **Oil Dielectric**
  - **Moisture Content**
  - **Bushing Power Factor**
  - **Exposure to Faults**
  - **Radiator/Cooling Equipment Design**
  - **Maintenance history**
  - **Technological Advancements**
  - **Dissolved Gas Analysis**

RETIREMENT OF EXISTING FACILITIES - Statement

The purpose of transmission planning is to ensure that the capacity of the existing transmission system is maintained or expanded as needed to ensure the reliability, efficiency, safety, resilience and security of the transmission system for the benefit of customers. There are no national, regional or local standards or criteria driving the retirement of existing facilities. Although in specific situations, facilities may be removed or not replaced as dictated by system and/or customer needs, and the design and construction of new or replacement transmission projects, decisions to not replace individual facilities may have the cumulative effect of negatively impacting the reliability, efficiency, safety, resilience and security of the transmission system. That cumulative negative impact could also drive the need for additional facilities to be constructed to compensate for those removed, including greenfield installations. Accordingly, existing facilities are maintained in service or retired based on Good Utility Practice.

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