



Orange & Rockland
Rockland Electric Company

ORU/RECO CRITERIA ASSUMPTIONS

SRRTEP Assumptions Meeting
December 16, 2020

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PRESENTATION OUTLINE



PLANNING ASSUMPTIONS



BASELINE PROJECTS



**ATTACHMENT M-3 PROJECT
DRIVERS**



**END-OF-LIFE (EOL)
ASSUMPTIONS**



**RETIREMENT OF EXISTING
FACILITIES**

PLANNING ASSUMPTIONS- SERVICE TERRITORY



- ❖ 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
- RECO performs 5-year and 10-year assessments.
- RECO's planning criteria based on NERC TPL 001-4 Standard and updated accordingly.

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.

ATTACHMENT M-3 PROJECT DRIVERS

DRIVERS	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.
Operational Flexibility and Efficiency	Optimizing system configuration, asset availability, equipment duty cycles and restoration capability, minimize outages and system expandability.
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.
Customer Service/Load Interconnection	Interconnect new customer load, address load additions to existing customers, address normal load growth, customer outage exposure and equipment loading.
Other	Meet objectives not included in the above driver definitions.

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

- **EOL Need Definition:** A need to replace a transmission line 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 examples related to ***Equipment Material Condition, Performance and Risk driver*** 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

- Extensive assessment of the affected transmission lines must be done through a combination of analytical methods and field visits.
- Assessments can include evaluation of the asset's history, manufacturer's recommendations, design, performance, maintenance records, physical condition, etc.
- Some examples of factors that may aid in determining an EOL Transmission Line need:

✓ **Tower**

- Age
- Condition:
 - Corrosion (steel)
 - Decay (wood)
 - Loss of structural integrity
- Foundation

✓ **Conductor**

- Wire condition
- Insulator condition
- Hardware condition

✓ **Shield Wire**

- Wire condition
- Hardware condition

✓ **UG Cables**

- Age/Condition
- Cable and splice dielectric strength

✓ **Pipe**

- Age/Condition
- Type/vintage
- Cathodic testing

ATTACHMENT M-3 EOL CRITERIA – Transformers

- Extensive assessment of the affected transformers must be done through a combination of analytical methods and field visits.
- Assessments can include evaluation of the asset's history, design, manufacturer's recommendations, performance, maintenance records, physical condition, etc.
- Some examples of factors that may aid in determining an EOL Transformer need:
 - ✓ Age/Condition
 - ✓ Oil Dielectric Strength
 - ✓ Moisture Content
 - ✓ Acetylene Build-up
 - ✓ Condition of insulators
 - ✓ Cooling performance
 - ✓ History of maintenance
 - ✓ Availability of spare parts
 - ✓ Feasibility and length of repair
 - ✓ Location/flooding history

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.

QUESTIONS?