ORANGE & ROCKLAND UTILITIES/ ROCKLAND ELECTRIC COMPANY (ORU/RECO)

Local Planning Assumptions

Sub-Regional RTEP January 5, 2017

PRESENTATION OUTLINE



COMPANY BACKGROUND



ASSUMPTIONS, TOOLS & METHODOLOGIES



DEVELOPMENT OF LOCAL TRANSMISSSION PLAN



REPORTING

COMPANY BACKGROUND (Service Territory)



Company Profile:

TO & LSE under NYISO/PJM. Subsidiary of Con Edison, Inc.

Existing Circuit Miles:

Transmission (69 kV to 345 kV): 554 miles
Distribution (4 kV to 34.5 kV): 3,764 miles
UG Distribution (13.2 kV): 1,696 miles

Customer Data:

Electric: 300,700 (NY, NJ, PA) Gas: 130,000 (NY, PA)

All time Peak Demand for electricity:

1617 MW (8/2/06)

Number of employees ~ 1100 **Service Territory** ~ 1350 sq. miles



COMPANY BACKGROUND (Transmission Design Standards)

THERMAL

- Normal Operating Conditions:
 - Below Normal Rating of Equipment
- N-1 Operating Conditions:
 - Below Long-Term Emergency (LTE) Rating of Equipment.

VOLTAGE

- Normal and N-1 Operating Conditions:
 - 0.95 < Nominal Bus voltage < 1.05



LOCAL PLANNING ASSUMPTIONS

- FERC 715 Cases (New York & New Jersey)
- Latest Capital Budget
- Load Forecast:
 - -2017
 - -2021
 - -2026

- Factors Affecting Local Plans:
 - Reliability Requirements
 - Changes in LoadForecast
 - DSM
 - REV Screening (NY)
 - Federal and StatePrograms
 - New Generation

TOOLS & METHODOLOGIES

- Thermal
- Voltage
- Short Circuit
- Equipment Replacements Due to Condition

DEVELOPMENT OF LOCAL PLANS

- Load Flow Studies
- System Violations Identification
- System Solution Proposal and Evaluations
- Preparation of the Long Range Transmission Plan (10-year period)

DEVELOPMENT OF LOCAL PLANS

DESIGN CRITERIA REQUIREMENTS

- Thermal Overloads and Voltage Violations
- Short Circuit Violations
- Equipment Condition

METHODS OF DEFICIT RESOLUTION

- Load Transfers
- Equipment Upgrades
- New or Reconfiguration of Transmission Lines
- New Switching Stations with new or reconfigured Transmission Lines
- Transmission Station Reconfiguration or Upgrade
- Reactive Power Compensation (Capacitors or Reactors)
- Short Circuit Remediation/Breaker Upgrade
- REV Screening (NY)
- DSM

LOCAL PLAN REPORTING

• New York:

- NYISO Transmission Planning Advisory Subcommittee (TPAS)
 - Orange and Rockland reports its Local Transmission Plan (LTP) to New York Stakeholders (18-month cycle).

New Jersey:

- PJM's Sub-Regional RTEP
 - Rockland Electric Company (RECO) reports its Supplemental Projects (if any).