ORANGE & ROCKLAND UTILITIES LOCAL TRANSMISSION PLAN (LTP) 2015 - 2024

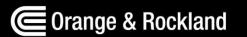
NYISO KCC November 10, 2015

Rollie Mangonon Rajee Mustafa



PRESENTATION OUTLINE





COMPANY BACKGROUND (Service Territory)



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

LTP ASSUMPTIONS

- 2015-2019 Capital Budget
- Load Forecast:
 - 2015 (1645 MW)
 - 2019 (1705 MW)
 - 2024 (1795 MW)

- Factors Affecting LTP:
 - Reliability Requirements
 - Changes in Load
 Forecast
 - -DSM
 - REV Screening
 - Federal and State
 Programs
 - New Generation

Etc...



LTP TOOLS & METHODOLOGIES

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



DEVELOPMENT OF LTP

- Load Flow Studies
- System Violations Identification
- System Solution Proposal and Evaluations
- Preparation of the Long Range Transmission Plan
- LTP Presentations

DEVELOPMENT OF LTP

• **DESIGN CRITERIA REQUIREMENTS**

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



DEVELOPMENT OF LTP

METHODS FOR DEFICIT RESOLUTIONS

- 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

- DSM

• EASTERN DIVISION LOCAL PLANS

GEOGRAPHIC COVERAGE : Rockland County (NY), Portions of Bergen County (NJ) DESIGN STANDARD: First Contingency		
PROJECT DESCRIPTION	IN-SERVICE DATE	
	2013 Plan	2015 Plan
North Rockland 345 kV Station	June 2018	June 2018
Line 702 Upgrade	June 2014	June 2017
Line 47/Line 751 3- Way Switch	June 2015	December 2016



• EASTERN DIVISION LOCAL PLANS

PROPOSED TRANSMISSION CAPACITOR BANK INSTALLATIONS (32 MVARS)		
STATION	IN-SERVICE DATE	
	2013 Plan	2015 Plan
Little Tor	2014	2017
Montvale (NJ)	2018	2022
Tappan	2015	2023
Pomona	2017	2022

• EASTERN DIVISION LOCAL PLANS

PROPOSED EQUIPMENT REPLACEMENTS DUE TO CONDITION (138 KV BREAKERS)		
STATION	IN-SERVICE DATE	
	2013 Plan	2015 Plan
Ramapo	2016	2016
Burns	2019	2019
West Haverstraw	2020	2020

• CENTRAL DIVISION LOCAL PLANS

GEOGRAPHIC COVERAGE : Portions of Orange County (NY) Portions of Passaic County (NJ) DESIGN STANDARD: First Contingency		
PROJECT DESCRIPTION	IN-SERVICE DATE	
	2013 Plan	2015 Plan
Sterling Forest New 69 KV Source	May 2015	June 2016
Line 27/271, Line 24 & 25 Corridor Upgrade	-	June 2023

• CENTRAL DIVISION LOCAL PLANS

PROPOSED TRANSMISSION CAPACITOR BANK INSTALLATIONS (32 MVARS)		
STATION	IN-SERVI	CE DATE
	2013 Plan	2015 Plan
West Warwick	2015	2019
Woodbury	2019	2022

PROPOSED EQUIPMENT REPLACEMENTS DUE TO CONDITION (138 KV BREAKERS) - NONE		
STATION	IN-SERVICE DATE	
	2013 Plan	2015 Plan



• WESTERN DIVISION LOCAL PLANS

GEOGRAPHIC COVERAGE : Portions of Orange County (NY), Portions of Sullivan County (NY) Portions of Pike County (PA)DESIGN STANDARD:First Contingency		
PROJECT DESCRIPTION	IN-SERVICE DATE	
	2013 Plan	2015 Plan
Line 6 Upgrade to 69 kV	Various Stages starting on December 2017	Various Stages starting on December 2019



• WESTERN DIVISION LOCAL PLANS

PROPOSED TRANSMISSION CAPACITOR BANK INSTALLATIONS (16 MVARS or 32 MVARS)

STATION	IN-SERVICE DATE	
	2013 Plan	2015 Plan
Pocatello (New - 32)	2017	2021
Fair Oaks (New -16)	2018	2023
Bullville (New – 16)	-	2021

PROPOSED EQUIPMENT REPLACEMENTS DUE TO CONDITION (69/34.5 KV Bank)		
STATION	IN-SERVICE DATE	
	2013 Plan	2015 Plan
Rio	2020	2025

O & R LTP LINK AND CONTACTS

1 LTP LINK

http://www.oru.com/aboutoru/tariffsandregulatorydocuments/federal/order890.html

2. CONTACTS

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