

# **ORANGE & ROCKLAND UTILITIES LOCAL TRANSMISSION PLAN (LTP) 2013-2022**

**TPAS/ESPWG Meeting  
NYISO KCC  
October 24, 2012**

# PRESENTATION OUTLINE

-  **COMPANY BACKGROUND**
-  **LTP ASSUMPTIONS, TOOLS & METHODOLOGIES**
-  **DEVELOPMENT OF LTP**
-  **PROPOSED LTP  
(UPDATES FROM 2011 LTP)**
-  **QUESTIONS**

# 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:

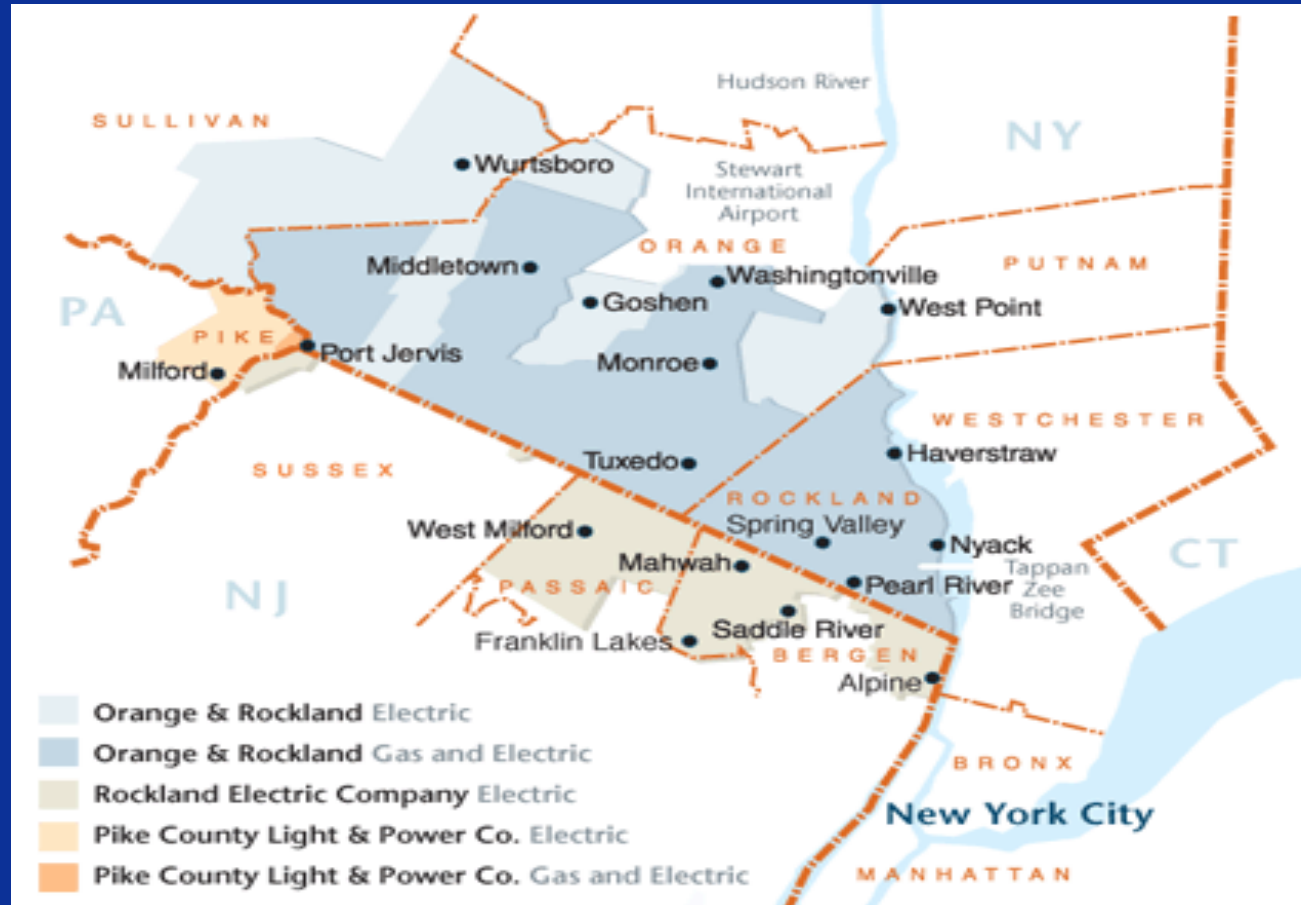
Electric: 300,700 (NY, NJ, PA)  
Gas: 130,000 (NY, PA)

## All time Peak Demand for electricity:

1617 MW (8/2/06)

Number of employees ~ 1100

Service Territory ~ 1350 sq. miles



# COMPANY BACKGROUND (Transmission Planning Criteria)

- **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:

- $0.95 < \text{Nominal Bus voltage} < 1.05$

# LTP ASSUMPTIONS

- 2013-2017 Approved Capital Budget
- Load Forecast:
  - 2013 (1660 MW)
  - 2017 (1770 MW)
  - 2022 (1910 MW)
- Factors Affecting LTP:
  - Reliability Requirements
  - Changes in Load Forecast
  - DSM
  - Federal and State Programs
  - New Generation
  - Etc...

# LTP TOOLS AND 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 Conditions



# 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)
- Short Circuit Remediation/Breaker Upgrade
- DSM

# PROPOSED LTP

- EASTERN DIVISION LOCAL PLANS

GEOGRAPHIC COVERAGE : Rockland County (NY), Portions of Bergen County (NJ)		
DESIGN CRITERIA: First Contingency		
PROJECT DESCRIPTION	IN-SERVICE DATE	
	2011 Plan	<b>2013 Plan</b>
North Rockland 345 kV Station	June 2016	June 2016
Line 55 Conversion* to 138 kV	December 2018	-
Line 751 Upgrade	In Service	-
<b>Ramapo New Protection System</b>	-	<b>June 2013</b>

\*Project no longer needed

# RAMAPO NEW PROTECTION SYSTEM

- Additional protection system to be located in the 345 kV yard.
- New protection re-classifies the Ramapo Bank 1300 & 2300 as non-Bulk Power Transmission Facilities.
  - Study confirmed by NYISO and reviewed by NPCC.
- No longer a system deficiency for O & R as identified in the RNA.

# PROPOSED LTP

- EASTERN DIVISION LOCAL PLANS

PROPOSED TRANSMISSION CAPACITOR BANK INSTALLATIONS (32 MVARs)		
STATION	IN-SERVICE DATE	
	2011 Plan	2013 Plan
Snake Hill	<b>In service</b>	-
Little Tor	2013	<b>2015</b>
New Hempstead	2014	2014
Tappan	2013	-
Montvale	2013	<b>2020</b>
Pomona	2016	2016
Summit	2017	<b>2014</b>
West Nyack	2018	<b>2019</b>
Central Rockland	2020	-

# PROPOSED LTP

- EASTERN DIVISION LOCAL PLANS

PROPOSED EQUIPMENT REPLACEMENTS DUE TO CONDITION (138 KV BREAKERS)		
STATION	IN-SERVICE DATE	
	2011 Plan	<b>2013 Plan</b>
Ramapo	2016	2016
West Haverstraw	2018	2018
Burns	2018	2018

# PROPOSED LTP

- CENTRAL DIVISION LOCAL PLANS

GEOGRAPHIC COVERAGE : Portions of Orange County (NY) Portions of Passaic County		
DESIGN CRITERIA: First Contingency		
PROJECT DESCRIPTION	IN-SERVICE DATE	
	2011 Plan	2013 Plan
Line 28	December 2011	June 2014
Sterling Forest New 69 KV Source	May 2014	June 2015
Line 24 & 25 138KV Conversion	December 2017	December 2019

# PROPOSED LTP

- CENTRAL DIVISION LOCAL PLANS

PROPOSED TRANSMISSION CAPACITOR BANK INSTALLATIONS (32 MVARs)		
STATION	IN-SERVICE DATE	
	2011 Plan	2013 Plan
Hartley	2012	2014
West Warwick	2015	2017
Woodbury	2017	2019
Harriman (DOE -16)	2012	2012

PROPOSED EQUIPMENT REPLACEMENTS DUE TO CONDITION (138 KV BREAKERS)		
STATION	IN-SERVICE DATE	
	2011 Plan	2013 Plan
Sugarloaf	2011	2013

# PROPOSED LTP

- WESTERN DIVISION LOCAL PLANS

GEOGRAPHIC COVERAGE : Portions of Orange County (NY), Portions of Sullivan County (NY) Portions of Pike County (PA)		
DESIGN CRITERIA: First Contingency		
PROJECT DESCRIPTION	IN-SERVICE DATE	
	2011 Plan	2013 Plan
2 <sup>nd</sup> Middletown Tap (Northern Division 345 kV Station)	June 2020	-
<b>Sugarloaf 345 kV Station</b>	-	<b>June 2016</b>



# PROPOSED LTP

- WESTERN DIVISION LOCAL PLANS

PROPOSED TRANSMISSION CAPACITOR BANK INSTALLATIONS (16 MVARs or 32 MVARs)		
STATION	IN-SERVICE DATE	
	2011 Plan	2013 Plan
Pocatello (New - 32)	2016	2018
Fair Oaks (New -16)	2017	2018
Milford (New – 16)	2020	-
Bullville (New – 16)	2019	2019
East Wallkill (DOE - 16)	2013	2015

PROPOSED EQUIPMENT REPLACEMENTS DUE TO CONDITION (69/34.5 KV Bank)		
STATION	IN-SERVICE DATE	
	2011 Plan	2013 Plan
Rio	2020	-

# O & R LTP LINK AND CONTACTS

## 1. LTP LINK

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

## 2. CONTACTS

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