



Orange & Rockland
a conEdison, inc. company

LOCAL TRANSMISSION PLANS (LTP)

**ESPWG MEETING
November 19, 2021**

Rollie Mangonon

AGENDA



COMPANY BANKGROUND



LTP ASSUMPTIONS, TOOLS & METHODOLOGIES



DEVELOPMENT OF LTP



**PROPOSED LTP
(UPDATES FROM 2019 LTP)**



QUESTIONS

COMPANY BACKGROUND (Service Territory)



Company Profile:

TO, TOP & TP under NYISO.

TO under 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

Customers Served:

Electric: 304,000 (NY, NJ)

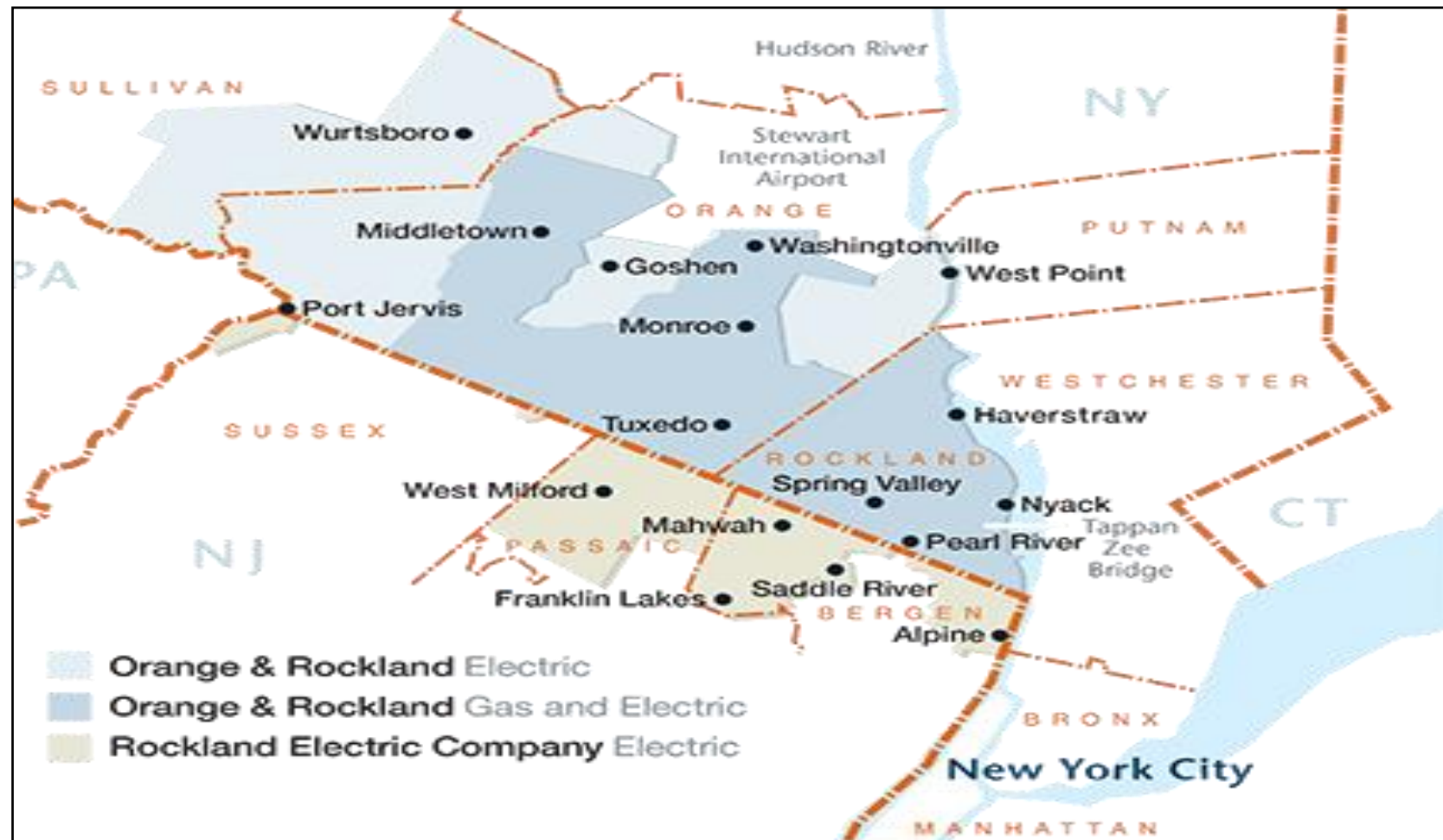
Gas: 135,000 (NY)

All time Peak Demand for electricity: 1617

MW (8/2/06)

Number of employees ~ 1200

Service Territory ~ 1350 sq. miles



TRANSMISSION DESIGN STANDARDS

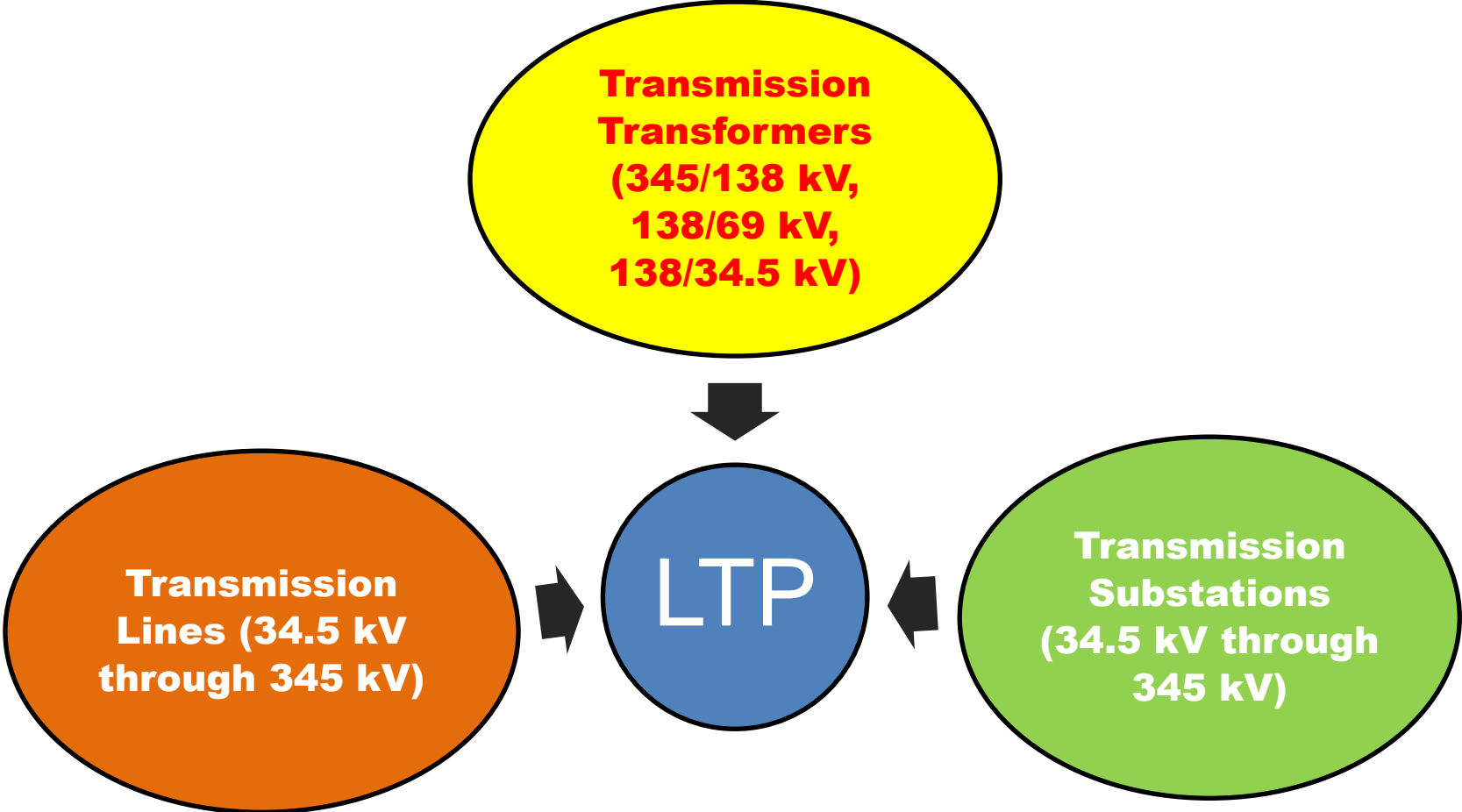
- **THERMAL**

- Normal Operating Conditions:
 - Below Normal Rating of Equipment
- N-1 Operating Conditions:
 - Below Normal Rating of Equipment.

- **VOLTAGE**

- Normal and N-1 Operating Conditions:
 - $0.95 < \text{Nominal Bus voltage} < 1.05$

FACILITIES COVERED BY LTP



LTP ASSUMPTIONS

- **Projects based on the 2021-2025 Capital Budget.**

- **Load Forecast:**

- 2021 (1600 MW)
- 2025 (1609 MW)
- 2030 (1626 MW)

- **Factors Affecting LTP:**

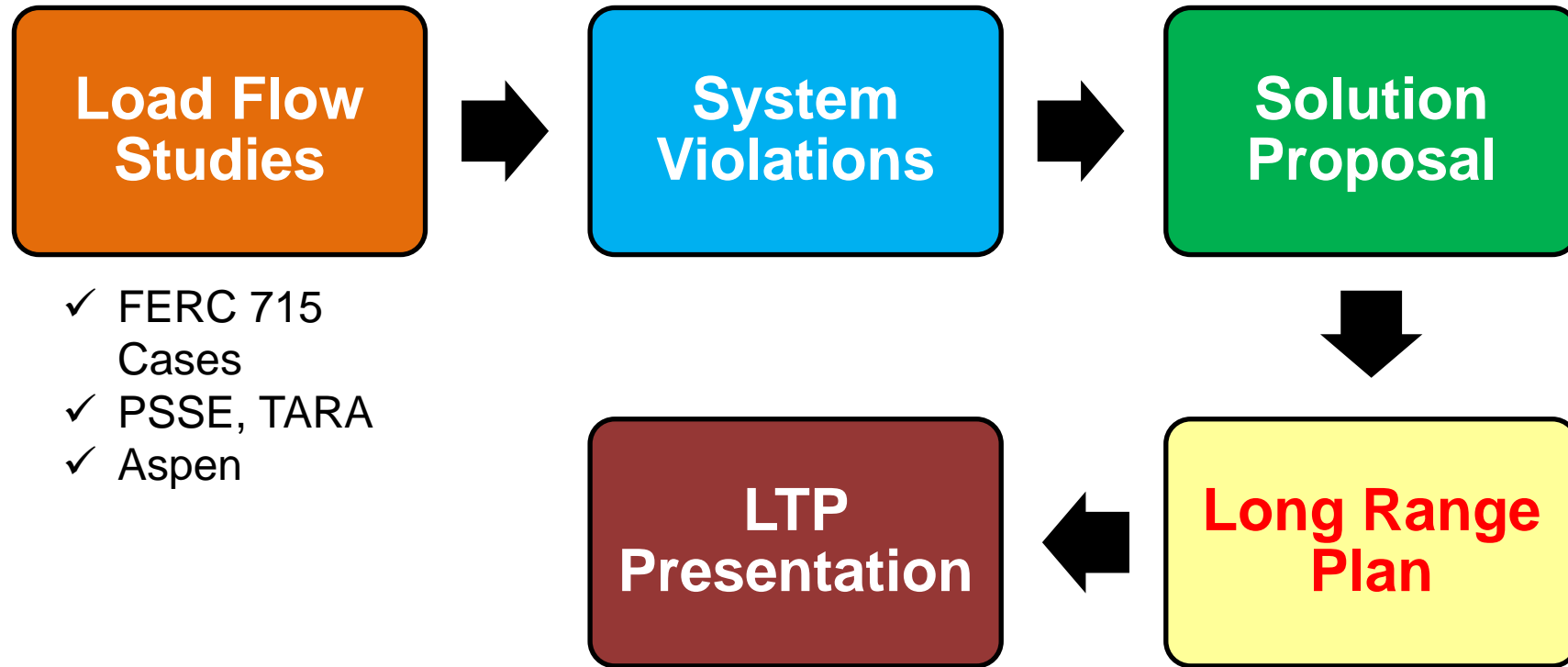
- Reliability Requirements
- Changes in Load Forecast
- DSM/EE
- REV Screening
- Federal and State Programs
- New Generation (i.e. PV, Wind, Energy Storage, Gas Turbines)

LTP TOOLS & METHODOLOGIES

- **Thermal (PSS/E, TARA)**
- **Voltage (PSS/E, TARA)**
- **Short Circuit (ASPEN)**
- **Equipment Replacements Due to Condition (FIELD INSPECTIONS AND TEST REPORTS)**
- **Equipment Thermal Ratings**

Conductors		Transformer Banks	Substation Terminal Equipment
OH	UG	EPRI'S PT LOAD	- NYTO Tie Line Report - Legacy Documents
South Wire	Manufacturer		

DEVELOPMENT OF LTP



DEVELOPMENT OF LTP

- **POSSIBLE MITIGATION FOR CRITERIA VIOLATIONS**

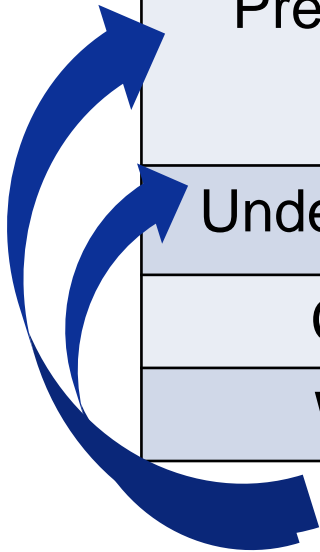
- ❖ Load Transfers
- ❖ Equipment Upgrades
- ❖ New or Reconfiguration of Transmission Lines
- ❖ New Switching Stations with new or reconfigured Transmission Lines
- ❖ Transmission Station Reconfiguration or Upgrade
- ❖ Reactive Power Compensation (Capacitors or Reactors)
- ❖ Short Circuit Remediation/Breaker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

“FIRM” PROJECTS

- Projects are considered “**FIRM**” if they satisfy the following conditions:
 - ✓ Included in the 2021-2025 O&R Five Year Budget
 - Funds approved by Upper Management
 - ✓ Completed System Impact Study (SIS) and approved Article VII and/or necessary permits approved (if applicable).
 - ✓ Major equipment ordered and/or awaiting delivery.

PROJECT STATUS

PROJECT STATUS	DESCRIPTION
Design	Project approved and budgeted, engineering design/permits underway and, if necessary, SIS and Article VII approval on-going.
Pre-Construction	Major equipment procured and/or awaiting delivery, necessary outages planned, company resources/manpower assigned and if necessary, SIS and Article VII approved and permits secured.
Under Construction	Major equipment delivered and construction underway.
Completed	Project in service.
Withdrawn	Project no longer needed.



“FIRM” Project

PROPOSED LTP

EASTERN DIVISION LOCAL PLANS

GEOGRAPHIC COVERAGE : Rockland County (NY),
Portions of Bergen County (NJ)
DESIGN STANDARD: First Contingency (N-1)

PROJECT DESCRIPTION	IN-SERVICE DATE		Firm	SIS	Article VII	Project Status
	2019 Plan	2021 Plan				
Lovett 345 kV Station (formerly North Rockland 345 kV Station) ¹	May 2022	May 2024	Y	Y	N/A	Pre-Const.
Line 705 New UG ¹ (138 kV)	Dec 2022	Dec 2023	N	N/A	N/A	Design
Line 47/Closter Re-configuration ¹ (69 kV – New Jersey)	May 2020	-	-	-	-	Completed
Ramapo Bank 2300 Upgrade ²	June 2020	-	-	-	-	Completed
Line 51 ¹ (138 kV)	Dec 2022	Dec 2023	N	N	N/A	Design

PROPOSED LTP

EASTERN DIVISION LOCAL PLANS

PROPOSED TRANSMISSION CAPACITOR BANK INSTALLATIONS (32 MVARs)

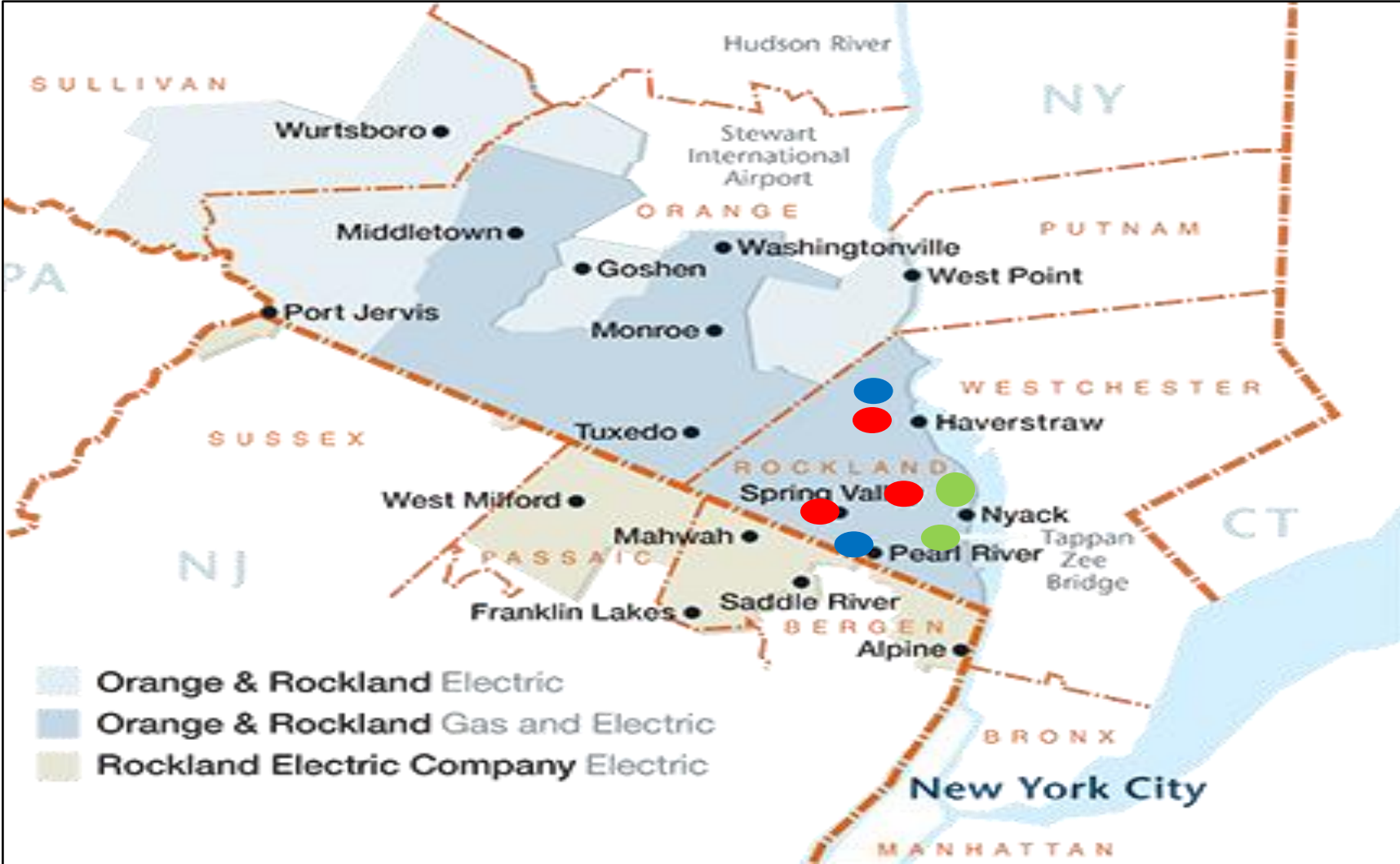
STATION	IN-SERVICE DATE		Firm	SIS	Article VII	Status
	2019 Plan	2021 Plan				
Little Tor	Dec 2022	Dec 2023	N	N/A	N/A	Design
West Nyack (16 MVARs)	June 2020	June 2022	Y	N/A	N/A	Under Construction

PROPOSED LTP

EASTERN DIVISION LOCAL PLANS

PROPOSED EQUIPMENT REPLACEMENTS DUE TO CONDITION (138 KV BREAKERS)						
STATION	IN-SERVICE DATE		Firm	SIS	Article VII	Status
	2019 Plan	2021 Plan				
Burns	Dec 2022	Dec 2022	Y	N/A	N/A	Under Construction
West Haverstraw	Dec 2022	Dec 2022	Y	N/A	N/A	Under Construction

PROPOSED LTP (Eastern Division)



- Transmission projects
- Capacitor Banks
- Breaker Upgrades

PROPOSED LTP

CENTRAL DIVISION LOCAL PLANS

GEOGRAPHIC COVERAGE : Portions of Orange County (NY)
 Portions of Passaic County (NJ)
DESIGN STANDARD: First Contingency (N-1)

PROJECT DESCRIPTION	IN-SERVICE DATE		Firm	SIS	Article VII	Status
	2019 Plan	2021 Plan				
Line 26 T/L Upgrade (138 kV)	June 2026	June 2027	N	Y	Y	Design
Line 27/271 Upgrade (138 kV)	June 2026	-	-	-	-	Withdrawn
Line 841/851 Conversion	-	June 2025	N	N/A	Y	Design

PROPOSED LTP

CENTRAL DIVISION LOCAL PLANS

PROPOSED TRANSMISSION CAPACITOR BANK INSTALLATIONS (32 MVARs)

STATION	IN-SERVICE DATE		Firm	SIS	Article VII	Status
	2019 Plan	2021 Plan				
West Warwick	Dec 2025	Dec 2025	N	N/A	N/A	Design
Woodbury	Dec 2024	Dec 2024	N	N/A	N/A	Design

PROPOSED EQUIPMENT REPLACEMENTS DUE TO CONDITION (BREAKERS)

	IN-SERVICE DATE	
	2021 Plan	
	None	

PROPOSED LTP (Central Division)



- Transmission projects
- Capacitor Banks
- Breaker Upgrades

PROPOSED LTP

WESTERN DIVISION LOCAL PLANS

GEOGRAPHIC COVERAGE : Portions of Orange County (NY),
Portions of Sullivan County (NY)
DESIGN STANDARD: First Contingency (N-1)

PROJECT DESCRIPTION	IN-SERVICE DATE		Firm	SIS	Article VII	Status
	2019 Plan	2021 Plan				
Western Division 34.5 kV Upgrade to 69 kV	Various Stages starting in December 2022	Various Stages Starting in December 2026	N	N/A	N/A	Design

PROPOSED LTP

WESTERN DIVISION LOCAL PLANS

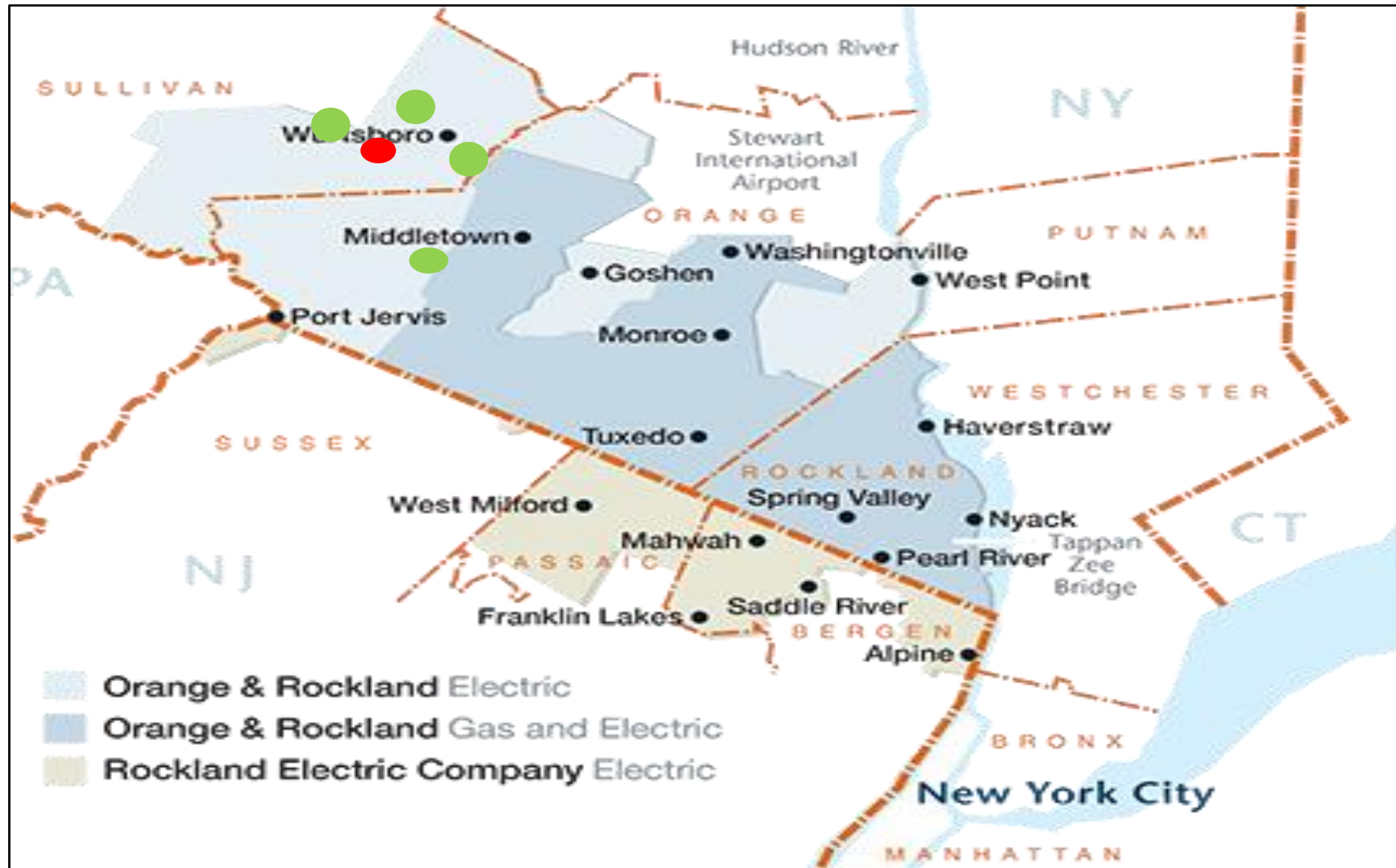
PROPOSED TRANSMISSION CAPACITOR BANK INSTALLATIONS (16 MVARs or 32 MVARs)

STATION	IN-SERVICE DATE		Firm	SIS	AVII	Status
	20219Plan	2021 Plan				
Pocatello (New - 32)	2025	June 2026	N	N/A	N/A	Design
Fair Oaks (New -16)	2026	-	-	-	-	Withdrawn
Bullville (New – 16)	2027	June 2027	N	N/A	N/A	Design
Wurtsboro (New-16)	-	June 2023	N	N/A	N/A	Design

PROPOSED EQUIPMENT REPLACEMENTS DUE TO CONDITION BREAKERS - NONE

STATION	IN-SERVICE DATE	
	20219 Plan	2021 Plan
	None	None

PROPOSED LTP (Western Division)



- Transmission projects
- Capacitor Banks
- Breaker Upgrades

O & R LTP LINK AND CONTACTS

1. LTP LINK

<https://www.oru.com/en/business-partners/transmission-planning>

2. CONTACTS (Transmission Planning)

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