

# ORANGE & ROCKLAND UTILITIES LOCAL TRANSMISSION PLANS (LTP) 2011-2020

**TPAS/ESPWG Meeting  
NYISO KCC  
October 7, 2011**

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# PRESENTATION OUTLINE



**COMPANY BACKGROUND**



**LTP ASSUMPTIONS, TOOLS &  
METHODOLOGIES**



**DEVELOPMENT OF LTP**



**PROPOSED LTP  
(UPDATES FROM 2009 LTP)**



**QUESTIONS**

# COMPANY BACKGROUND (Service Territory)



# COMPANY BACKGROUND (Company and System Data)

| COMPANY AND CUSTOMER DATA |                    |               |
|---------------------------|--------------------|---------------|
| Number of Employees       | 1070               |               |
|                           | Electric Customers | Gas Customers |
| New York                  | 223,661            | 128,407       |
| New Jersey                | 72,431             | -             |
| Pennsylvania              | 4,649              | 1,188         |
| TOTAL                     | 300,741            | 129,595       |

| ELECTRIC SYSTEM DATA          |                       |
|-------------------------------|-----------------------|
| Transmission Lines (Miles)    | 554                   |
| OH Distribution Lines (Miles) | 3764                  |
| UG Distribution Lines (Miles) | 1696                  |
| All Time Peak Demand (MW)     | 1617 (August 2, 2006) |

# 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

- 2011-2020 Approved Capital Budget
- Load Forecast:
  - 2011 (1625 MW)
  - 2015 (1740 MW)
  - 2020 (1875 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**

| <b>GEOGRAPHIC COVERAGE : Rockland County (NY), Portions of Bergen County (NJ)</b> |                 |                      |
|---|-----------------|----------------------|
| <b>DESIGN CRITERIA: First Contingency</b>   |                 |                      |
| PROJECT DESCRIPTION   | IN-SERVICE DATE |                      |
|   | 2009 Plan       | <b>2011 Plan</b>     |
| North Rockland 345 kV Station   | December 2013   | <b>December 2017</b> |
| Line 55 Conversion to 138 kV  | December 2015   | <b>December 2018</b> |
| <b>Line 751 Upgrade</b>   | -               | <b>December 2011</b> |

# PROPOSED LTP

- EASTERN DIVISION LOCAL PLANS**

| PROPOSED TRANSMISSION CAPACITOR BANK INSTALLATIONS<br>(32 MVARs) |                 |                  |
|--|-----------------|------------------|
| STATION  | IN-SERVICE DATE |                  |
|  | 2009 Plan       | <b>2011 Plan</b> |
| Snake Hill (New)   | 2010            | <b>2012</b>      |
| Little Tor (New)   | 2010            | <b>2013</b>      |
| New Hempstead  | 2012            | <b>2014</b>      |
| Tappan (New)   | 2013            | 2013             |
| Montvale   | 2013            | 2013             |
| Pomona (New)   | 2015            | <b>2016</b>      |
| <b>Summit (New)</b>  | -               | <b>2017</b>      |
| West Nyack   | 2015            | <b>2018</b>      |
| Central Rockland (New)   | 2017            | <b>2020</b>      |

# PROPOSED LTP

- **EASTERN DIVISION LOCAL PLANS**

## PROPOSED EQUIPMENT REPLACEMENTS DUE TO CONDITION (138 KV BREAKERS)

| STATION         | IN-SERVICE DATE |                  |
|-----------------|-----------------|------------------|
|                 | 2009 Plan       | <b>2011 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 |                      |
|--|-----------------|----------------------|
|  | 2009 Plan       | <b>2011 Plan</b>     |
| Line 28                                  | June 2010       | <b>December 2011</b> |
| Sterling Forest New 69 KV Source         | May 2015        | <b>May 2014</b>      |
| <b>Line 24 &amp; 25 138KV Conversion</b> | -               | <b>December 2017</b> |

# PROPOSED LTP

- CENTRAL DIVISION LOCAL PLANS**

| PROPOSED TRANSMISSION CAPACITOR BANK INSTALLATIONS<br>(32 MVARs) |                 |           |
|--|-----------------|-----------|
| STATION  | IN-SERVICE DATE |           |
|  | 2009 Plan       | 2011 Plan |
| Hartley(New)   | 2011            | 2012      |
| West Warwick (New)   | 2012            | 2015      |
| Woodbury   | 2016            | 2017      |

| PROPOSED EQUIPMENT REPLACEMENTS DUE TO CONDITION<br>(138 KV BREAKERS) |                 |           |
|---|-----------------|-----------|
| STATION   | IN-SERVICE DATE |           |
|   | 2009 Plan       | 2011 Plan |
| Sugarloaf   | 2011            | 2012      |

# 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 |                  |
|---|-----------------|------------------|
|   | 2009 Plan       | <b>2011 Plan</b> |
| 2 <sup>nd</sup> Middletown Tap<br>(Northern Division<br>345 kV Station) | December 2016   | <b>June 2020</b> |



# PROPOSED LTP

- WESTERN DIVISION LOCAL PLANS**

| PROPOSED TRANSMISSION CAPACITOR BANK INSTALLATIONS<br>(16 MVARs or 32 MVARs) |                 |           |
|--|-----------------|-----------|
| STATION  | IN-SERVICE DATE |           |
|  | 2009 Plan       | 2011 Plan |
| Pocatello (New - 32)   | 2014            | 2016      |
| Fair Oaks (New -16)  | 2015            | 2017      |
| Milford (New – 16)   | 2016            | 2020      |
| Bullville (New – 16)   | 2017            | 2019      |

| PROPOSED EQUIPMENT REPLACEMENTS DUE TO CONDITION<br>(69/34.5 KV Bank) |                 |           |
|---|-----------------|-----------|
| STATION   | IN-SERVICE DATE |           |
|   | 2009 Plan       | 2011 Plan |
| Rio   | 2020            | 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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