



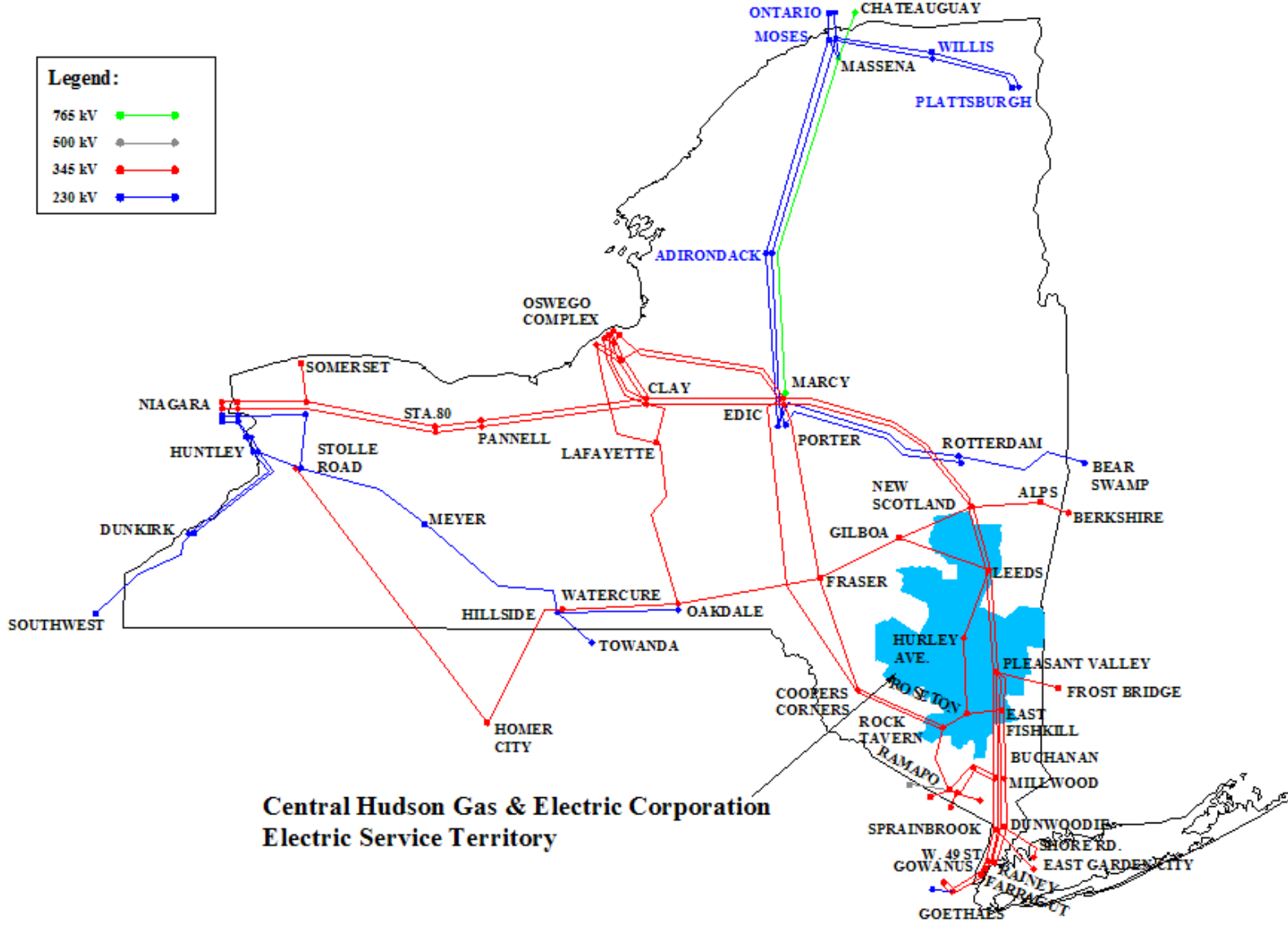
# Local Transmission Plan

Presented

October 14, 2009

NYISO Offices – Krey Boulevard

# Central Hudson System



# Central Hudson System

- Zone G: Majority of load
- Zone E: One small distribution substation
- Interconnections with Consolidated Edison, Orange & Rockland, NYSE&G, National Grid, Northeast Utilities, First Energy, NYPA
- Own & Operate approximately 622 miles of 69 kV, 115 kV & 345 kV transmission lines; three 345 kV stations.

# Historic Peak Load

Summer Peak Loads				Winter Peak Loads			
Year	NYCA	Zone G	CHG&E*	Year	NYCA	Zone G	CHG&E*
2004	28433	2041	1051	2004-05	25541	1766	988
2005	32075	2236	1204	2005-06	24947	1663	960
2006	33939	2436	1295	2006-07	25057	1638	934
2007	32169	2316	1185	2007-08	25021	1727	960
2008	32432	2277	1187	2008-09	24673	1634	911
2009			1107				

\* CHG&E Loads not coincident with other NYCA loads

# Forecast Peak Load

Summer Peak Loads				Winter Peak Loads			
Year	NYCA*	Zone G*	CHG&E+	Year	NYCA*	Zone G*	CHG&E
2009	33542	2249	1196	2009-10	24998	1656	No Winter forecast
2010	33441	2242	1205	2010-11	24971	1651	
2011	33693	2257	1214	2011-12	25020	1662	
2012	33906	2273	1223	2012-13	25094	1674	
2013	34080	2283	1233	2013-14	25285	1681	
2014	34309	2297	1242	2014-15	25414	1691	
2015	34483	2312	1252	2015-16	25517	1702	
2016	34809	2340	1261	2016-17	25687	1723	
2017	35103	2368	1271	2017-18	25859	1744	
2018	35450	2399	1280	2018-19	26038	1766	
2019	35792	2431	1290	2019-20	26232	1790	

\* From 2009 Gold Book Table I-2a

+ CHG&E Forecast (includes impact of energy efficiency)

# Transmission Facilities Covered by Central Hudson's Local Transmission Plan

- Central Hudson's Local Transmission Plan is intended to provide safe & reliable service to the load within our franchise area
- This plan does not address state-wide issues such as intra-state and inter-state transfer limits.

# Transmission Facilities Covered by Central Hudson's Local Transmission Plan

- Transmission lines: 69 kV and 115 kV
- Transmission system transformers:
  - 345/115 kV
  - 115/69 kV
- Substation facilities (transmission level)

# Planning Horizon

- 10 Years
  - Annual planning process
    - 5-year corporate capital forecast – “firm” projects
    - Additional 5 years – “potential” projects

# Data & Models

- Load Flow cases produced by NYISO Staff
  - NYISO Staff solicits input from all Transmission Owners
- Individual historic substation loads coincident with Central Hudson's peak hour
- Facility inspection reports

# Issues Addressed

- Central Hudson's System Load Serving Capability
  - Including various levels of generation
  - Consideration of through-flows
  - Consideration of proposed interconnections
- Central Hudson Local Areas' Load Serving Capabilities
  - Northwest 69 kV
  - Southwest 69 kV
  - Southern Dutchess 115 kV
  - Mid-Dutchess 115 kV
  - Ellenville 69 kV
  - Newburgh Area
  - Eastern Dutchess 69 kV
  - Kingston - Rhinebeck
- Central Hudson Transmission System Infrastructure condition assessment

# Issues Addressed

- Load Serving Capabilities determined for
  - More Probable Contingencies\*
    - Appropriate facility rating for specific contingency
- Maintain sufficient reactive support for local needs
  - Typical distribution circuit designed for  $\text{pf} = 1.0$
  - Peak system pf monitored to determine aggregate status of distribution system
  - Transmission capacitors installed for voltage support

\* CHG&E Transmission Planning Guidelines, pg. 5

# Potential Solutions Under Consideration

## System Load Serving Capability

The following reinforcements are to address system load serving capability:

<b>Potential Solutions Under Consideration</b>	<b>Proposed In Service</b>
Standby Operation of East Fishkill 345/115 kV Tr. 2	Under Construction 2010
115 kV Danskammer Bus Reinforcement	2014

# Potential Solutions Under Consideration

## Local Areas' Load Serving Capabilities

The following reinforcements are to address local areas' load serving capabilities:

<b>Local Area</b>	<b>Potential Solutions Under Consideration</b>	<b>Proposed In Service</b>
Southwest 69 kV	69 kV Rock Tavern – East Walden Rebuild	Under Construction 2012
Northwest 69 kV	Additional 115 kV Area Input: Hurley Ave – North Catskill	2020

# Potential Solutions Under Consideration

## Infrastructure Condition Issues

- Test have shown a loss of tensile strength for older ACSR conductors
- Rebuild or reconductor of the following facilities:

<b>ACSR Conductor Replacement Program</b>	
69 kV Rock Tavern – East Walden * <small>*Also a reinforcement for Local Area Load Serving Capability</small>	Planned In Service: 2012
69 kV Honk Falls – West Woodbourne	Planned In Service: 2014
115 kV Pleasant Valley – Todd Hill	Planned In Service: 2015
115 kV Todd Hill – Fishkill Plains	Planned In Service: 2015
<b>Other Infrastructure Issues</b>	
Rebuild existing 69 kV Hurley Ave – North Catskill for 115 kV	Planned In Service: 2018

# Comments

Interested parties should forward any comments to:

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