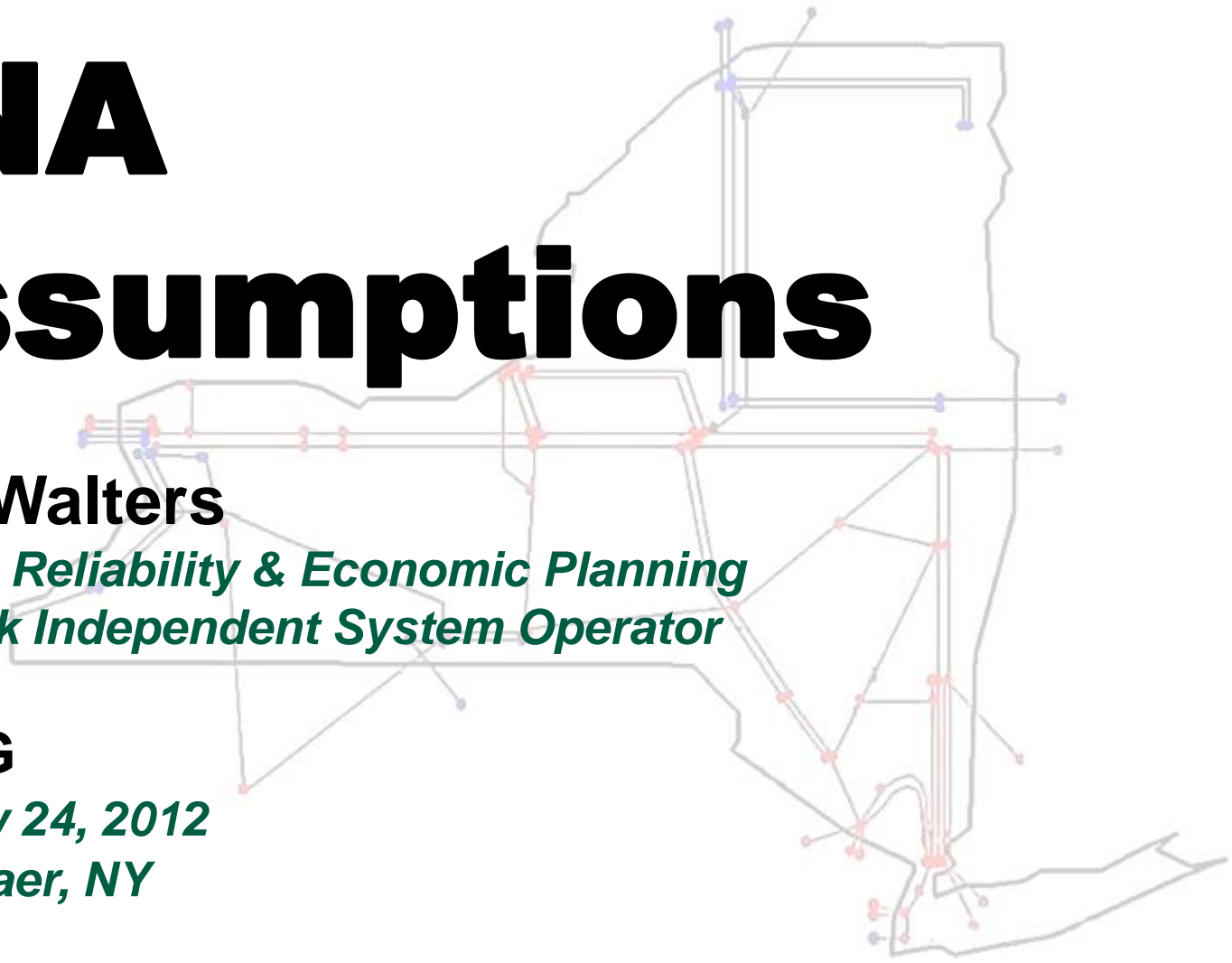


RNA

Assumptions

A faint, light-colored map of New York State is overlaid with a complex network of lines and nodes representing the power transmission system. The nodes are small circles in various colors (red, blue, purple, green) and are connected by thin lines, forming a dense web across the state's outline.

Dana Walters

*Director, Reliability & Economic Planning
New York Independent System Operator*

ESPWG

*February 24, 2012
Rensselaer, NY*

Base Case Modeling Assumptions

Parameter	2012-2013 IRM Study Modeling Assumptions	Model Change for 2012 RNA
Peak Load	Oct 1, 2011 Forecast: 33,335 MW for NYCA, 11,607 MW for zone J, and 5521 for zone K	Update per 2012 Gold Book
Load Shape Model	2002 Load Shape	Same, stay with 2002 Load Shape
Load Uncertainty Model	Zonal model updated to reflect current data.	Same
Solar Resource Modeling	Forecast of 38.5 MW of total solar capacity. <i>See Attachment B-2.</i>	Same, 2012 Gold Book
Wind Resource Modeling	(1,648 MW) Derived from hourly wind data resulting in an average Summer Peak Hour availability of approximately 11%. <i>See Attachment B-1.</i>	Same, 2012 Gold Book
Wind Shape Model	2002 Wind Generation Profile	Update to Wind Study and 2012 Gold Book
Existing Generating Unit Capacities	Updated DMNC test values. Use the minimum of DMNC or CRIS values.	Same, 2012 Gold Book
Proposed New Units	Those listed on <i>Attachment B.</i>	2012 Gold Book
Retirements	578.1 MW of retirements and mothballing as listed in <i>Attachment B-3</i>	2012 Gold Book
Forced & Partial Outage Rates	5-year (2006-10) GADS data. (Those units with less than five years data could use available representative data.)	Same, update one year
Planned Outages	Based on schedules received by NYISO & adjusted for history.	Same, 2012 Gold Book

Base Case Modeling Assumptions

Parameter	2012-2013 IRM Study Modeling Assumptions	Model Change for 2012 RNA
Summer Maintenance	Use nominal value of 50 MW after reviewing last year's data.	Same
Combustion Turbines Ambient Derate	Derate based on provided temperature correction curves.	Same
Environmental Impacts	No impacts for base case.	2012 Gold Book
Non-NYPA Hydro Capacity Modeling	45% derating.	Same, 2012 Gold Book
Special Case Resources	2192 MW (Jul 12) based on registrations and NYISO growth rate forecast. Monthly variation based on historical experience.	Same, 2012 Gold Book Forecast is flat for ten year period
EDRP Resources	148 MW registered; modeled as 95 MW in July and Aug and proportional to monthly peak load in other months. Limit to 5 calls per month.	Same, 2012 Gold Book Forecast is flat for ten year period
External Capacity - Purchases	Grandfathered amounts of 50 MW from NE, 1080 MW from PJM and 1,090 MW from Quebec. All contracts modeled as equivalent contracts.	2012 Gold Book
Capacity - Sales	Long term firm sales of 303 MW (nominal value).	2012 Gold Book
Capacity Wheels-through	None modeled. A sensitivity case will be run.	None modeled
EOPs (other than SCR and EDRP)	735 MW of non-SCR/EDRP MWs.	Same, 2012 Gold Book
Interface Limits	All changes viewed and commented on by TPAS.	Also Based on RNA specific Transmission Adequacy Analysis
New Transmission Capability	None Identified.	2012 Gold Book
Transmission Cable Forced Outage Rate	All existing Cable EFORs updated on LI and NYC to reflect 5 year history.	Same

Base Case Modeling Assumptions

Parameter	2012-2013 IRM Study Modeling Assumptions	Model Change for 2012 RNA
Unforced Capacity Deliverability Rights (UDR)	No new projected UDRs	Modeled as in previous RNA, Add HTP at firm withdrawal rights
Model Version	Version 3.12	Most recent approved
Outside World Area Models	Single Area representations for and . Four zones modeled for PJM. Thirteen zones modeled for .	Same as sensitivity
Reserve Sharing between Areas	All NPCC Control Areas have indicated that they will share reserves equally among all.	Same
Other		

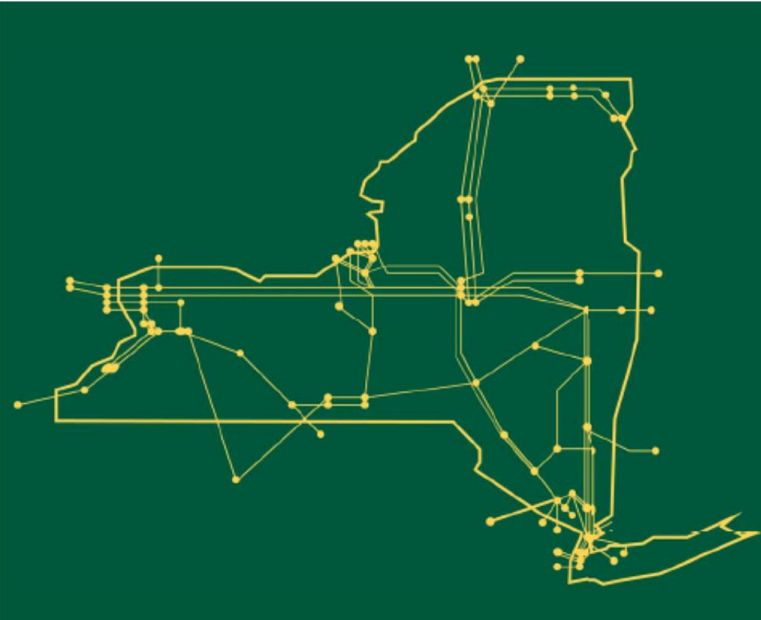
Transmission Security / Fault Current

Parameter	Modeling Assumptions	Basis for Recommended 2012 Assumptions	Source	Comments
Peak Load	NYCA baseline coincident summer peak forecast		2012 Goldbook	
Load model	ConEd: voltage varying Rest of NYCA: constant power		2012 FERC 715 filing	
System representation	Per updates received through Databank process	RAD Manual	2012 FERC 715 filing	Subject to RNA basecase inclusion rules
Inter-area interchange schedules	Consistent with ERAG MMWG interchange schedule		2012 FERC 715 filing, MMWG	
Inter-area controllable tie schedules	Consistent with applicable tariffs and known firm contracts or rights		2012 FERC 715 filing	
In-city series and shunt reactors	Consistent with ConEdison operating protocol		2012 FERC 715 filing, ConEd protocol	All series reactors in-service for summer
SVCs, FACTS	Set at zero pre-contingency; allowed to adjust post-contingency		NYISO T&D Manual	
Transformer & PAR taps	Taps allowed to adjust pre-contingency; fixed post-contingency			
Switched shunts	Allowed to adjust pre-contingency; fixed post-contingency			
Fault current analysis settings	Per Fault Current Assessment Guideline		NYISO Fault Current Assessment Guideline	

Treatment of Retired/Mothballed/Protectively Laid up units

- ♦ *Any generating units that have provided notice of Retirement, Mothball, protective layup, etc., by the study lock-down date, will be assumed to not be available for the period of the RNA study.*
- ♦ *If a reliability need is identified, then a noticed generating unit can be offered as a solution in the CRP process.*

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



www.nyiso.com