



NYISO Planning Update

Zach Smith

*Director, Transmission Planning
New York Independent System Operator*

IPSAC

December 12, 2014

FERC Order 1000

Impact on NYISO Planning

◆ Reliability

- *NYISO process, approved by FERC in 2004, continues with modifications*

◆ Public Policy

- *New requirement – New process – Public Policy Transmission Planning – underway*

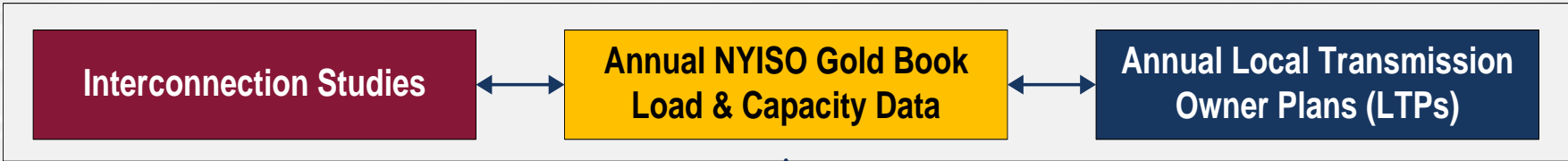
◆ Economic Planning

- *NYISO process, approved by FERC in 2008, continues with modifications*

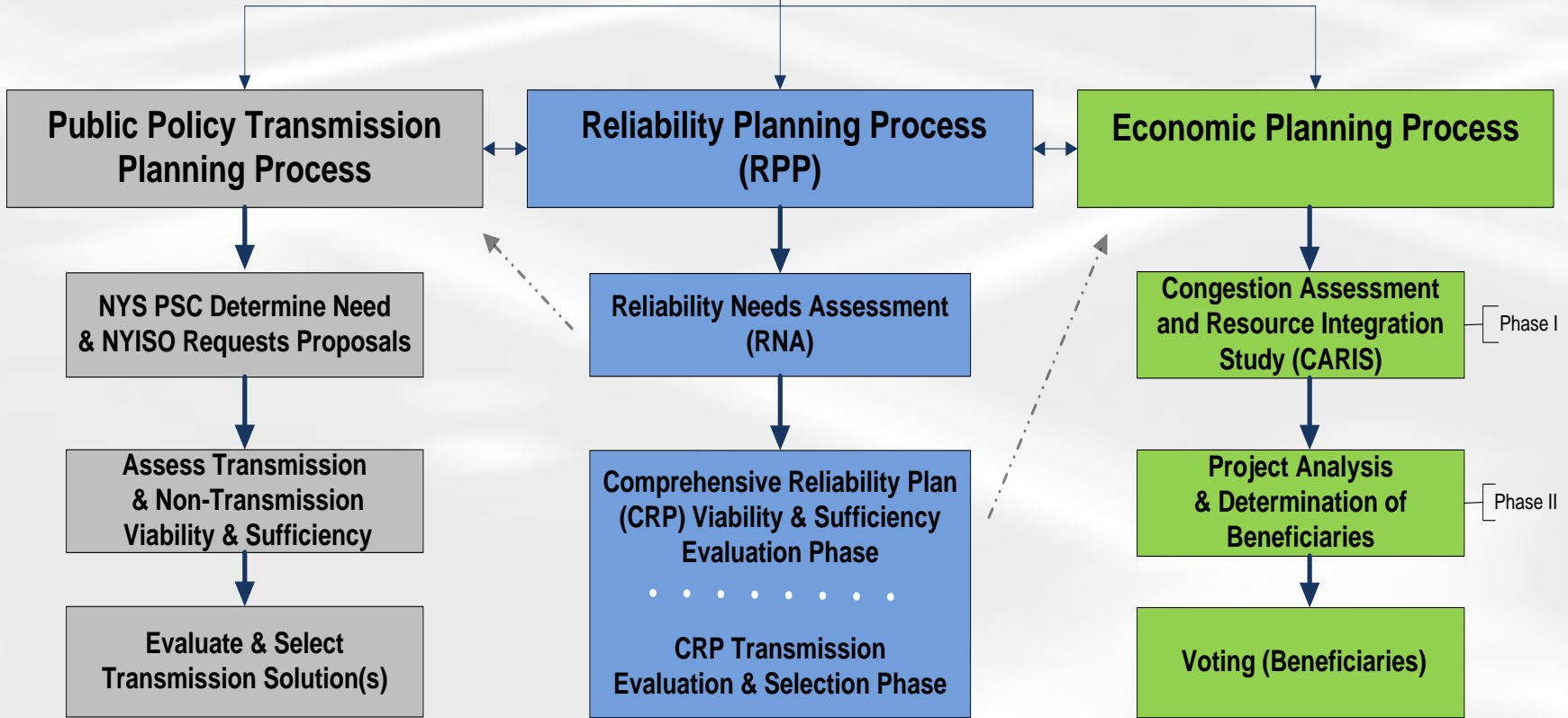
◆ Interregional Planning

- *NYISO will work with other regions, evaluate interregional proposals as required (consensus required to include interregional transmission projects in regional plan for cost allocation)*





NYISO Comprehensive System Planning Process (CSPP)



Public Policy Process

- ◆ **Public Policy Transmission Planning Process**
 - ***Public policy requirements***
 - Federal, state or local law or regulations
 - New York PSC determines needs to meet public policy requirements after public notice and comment
 - ***Based upon completed Reliability Needs Assessment***
 - Reliability Needs assessed first to prevent overlapping/duplicate transmission projects
 - ***NYISO evaluates proposed solutions to transmission needs driven by public policy requirements***

Public Policy Process

- ◆ **Phase I: Identify Needs and Solicit Solutions**
 - *Suggest needs to meet Public Policy Requirements*
 - *PSC/DPS identifies transmission needs*
 - *NYISO solicits transmission solutions*
- ◆ **Phase II: Assess Solutions**
 - ◆ *NYISO assesses all proposed solutions for viability and sufficiency*
 - ◆ *NYISO evaluates for more efficient or cost-effective Transmission solutions*
 - ◆ *NYISO Board may select a transmission solution for purposes of cost allocation under the NYISO Tariff*

FERC Order 1000

Major Changes

- ◆ **Creation of process to solicit, evaluate, and select more efficient or cost effective transmission solutions for reliability needs**
- ◆ **Creation of **Public Policy Transmission Planning Process** with NYISO selection of transmission project(s) for cost allocation and recovery**

Regional Planning Update

◆ Economic Planning

- *FERC found NYISO tariff largely in compliance, but NYISO made some minor changes to coordinate with changes to other sections*
- *Next cycle of economic planning begins in January 2015*

◆ Public Policy

- *NYISO has initiated Phase I and is awaiting an order from the NYPSC to identify needs*

◆ Reliability

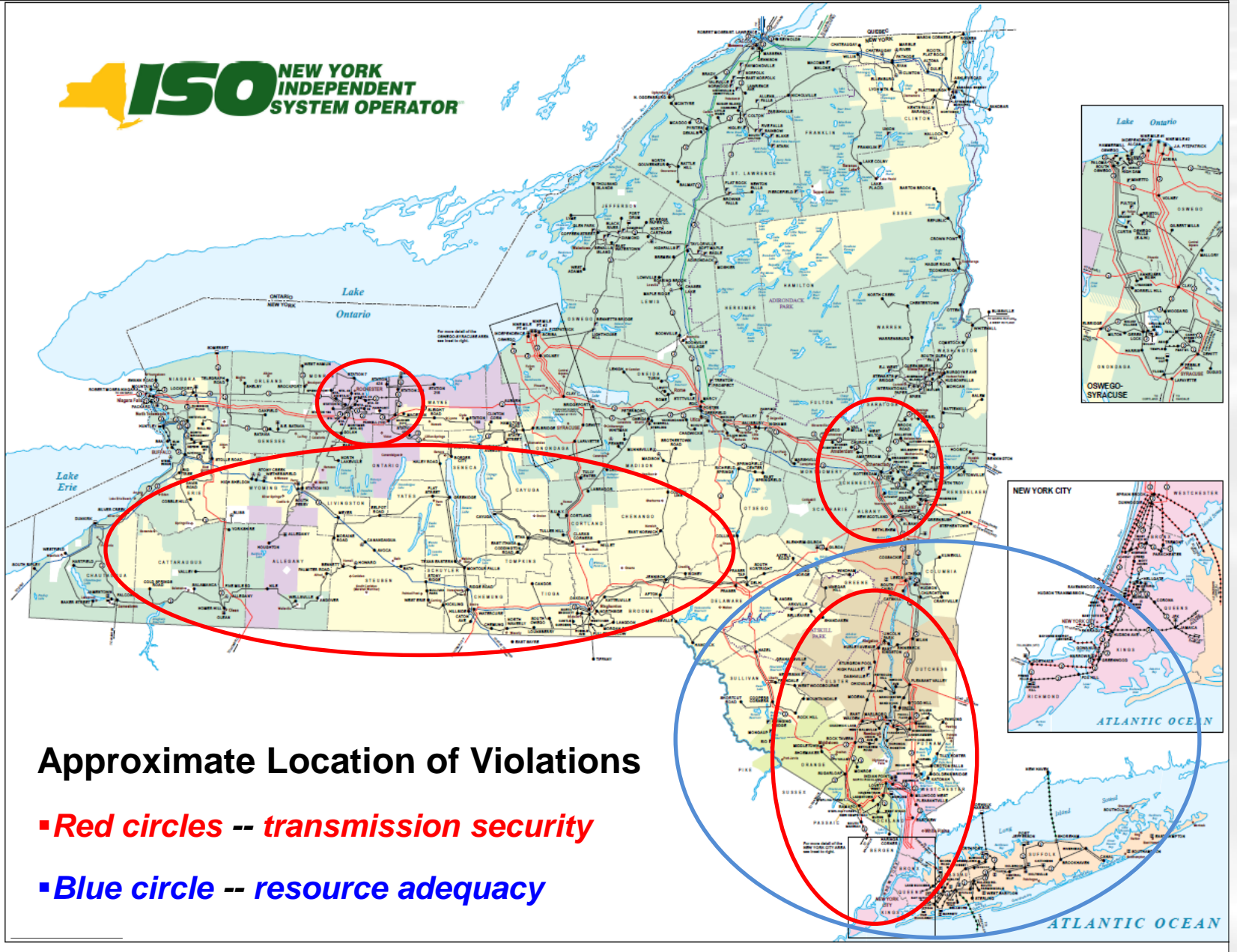
- *NYISO completed its Reliability Needs Assessment in September 2014*
- *Summary and status will be discussed next*

2014 RNA Major Findings

(April 2014)

- ◆ **Transmission security needs in portions of the bulk power transmission system identified in 2015**
- ◆ **NYCA LOLE violation due to inadequate resource capacity available in Southeast New York (SENY) identified in 2019**
- ◆ **Major drivers:**
 - *Recent and proposed generator retirements or mothballing combined with load growth*
 - *Capacity margin (capacity less the load forecast) decreases throughout the study period*





Approximate Location of Violations

- **Red circles** -- *transmission security*
- **Blue circle** -- *resource adequacy*

Summary of Scenarios

- ◆ **Transmission Security with 90/10 forecast**
 - *Approximately 2,400 MW higher forecast would result in the earlier occurrence of the reliability needs identified in the base case*
 - *Based on 90/10 transmission security study assumptions, beginning in 2017 there would be insufficient resources to meet the minimum 10-minute operating reserve requirement of 1,310 MW. Starting in 2020, there would be insufficient resources to meet the projected 90/10 peak load*
- ◆ **Stressed Winter Scenario**
 - *Winter 2013-2014 experienced five major cold snaps*
 - *Resources may become energy-limited due to fuel constraints*
 - *Assuming no assistance from neighboring areas, a capacity loss of 7,250 MW statewide would cause NYCA LOLE violation in 2015*
- ◆ **New limitations on generation energy production due to further environmental regulations (*EPA MATS and Carbon Rules*)**

Summary of Scenarios

- ◆ **If Indian Point Energy Center retired by the end of 2015, significant violations of transmission security and resource adequacy criteria would occur in 2016**
- ◆ **Zones at Risk shows the level of capacity removal at which a NYCA LOLE violation would occur for the year 2015**
 - *Upstate (A-F) at 2500 MW*
 - *Lower Hudson Valley (G-I) at 650 MW*
 - *New York City (J) at 650 MW*
 - *Long Island (K) at 550 MW*
- ◆ **“High Load forecast” advances year of need to 2017**

Capacity Resources Updates Since April 2014

Generating plant or unit		
Plant or unit	MW*	Note
Selkirk	348	Notice of Intent to mothball withdrawn
Dunkirk	435	Intent to return to service
Danskammer	495	Intent to return to service
Astoria 20	185	Intent to return to service
Ravenswood 3-3	-33	Notice of intent to mothball filed
Ravenswood 3-4	13	Returned to service
Bowline 2**	557	Intent to return to full capacity
Binghamton BOP	41	Intent to return to service
DR/EE/CHP program		
ConEd	125	Case 12-E-0503, NYPSC order effective Nov. 4, 2013
Total Incremental MW	1986***	

*Rounded values representing the lesser of DMNC and CRIS for generators, and the program total for the DR/EE/CHP program

** currently 180 MW, incremental MW of 377 MW

*** Number reflects the incremental MW only, not the sum of full capacity MW for all resources

Updated Determinations from 2014 RNA

- ◆ **With 1,986 MW of generation returning to service from mothballing and rerates, and additional EE/DR, all needs have been mitigated:**
 - *NYISO has enough resources to maintain LOLE thru 2024*
 - *Transmission security needs are mitigated by returning generation*
 - *Remaining transmission security violations are expected to be addressed by the TO transmission projects with operating protocols in the near term*

Risk Factors

- ◆ **Delays in the implementation of the announced Local Transmission Plans**
- ◆ **Aging fleet and infrastructure – *Both generation and transmission***
- ◆ **New limitations on generator energy production due to further environmental regulations (e.g., *EPA MATS and Carbon Rules*)**
- ◆ **Load forecast uncertainty due to:**
 - *NYS PSC “Reforming Energy Vision” (REV) Proceeding*
 - *Energy Efficiency, Solar, and Combined Heat & Power development*
- ◆ **NYISO will continue to monitor system and projects**
 - *Can call for a Gap Solution if necessary*
 - *Next RNA is 2016*

Questions?





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