2015 Summer Capacity Assessment

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DRAFT – FOR DISCUSSION PURPOSES ONLY

Highlights

- **This summer capacity assessment utilizes a "deterministic approach" for the purposes of forecasting excess capacity margins for baseline and extreme weather conditions peak load and reserve requirements**
  - ***NERC Standard TOP-002-2.1b — Normal Operations Planning, Requirement 7: Each Balancing Authority shall plan and secure sufficient day ahead capacity to secure for the single largest contingency***
  - ***The assessment utilizes a set of projected derates based on five-year EForD averages***
- **At <u>baseline peak weather</u> conditions:**
  - ***+ 1,657 MW of capacity margin, an increase of 778 MW over 2014 forecast projections***
- **At <u>extreme weather</u> (90th percentile forecast):**
  - ***638 MW of capacity margin shortfall to meet load plus 1,965 MW operating reserves, an improvement of 793 MW over 2014 extreme weather forecast projections***

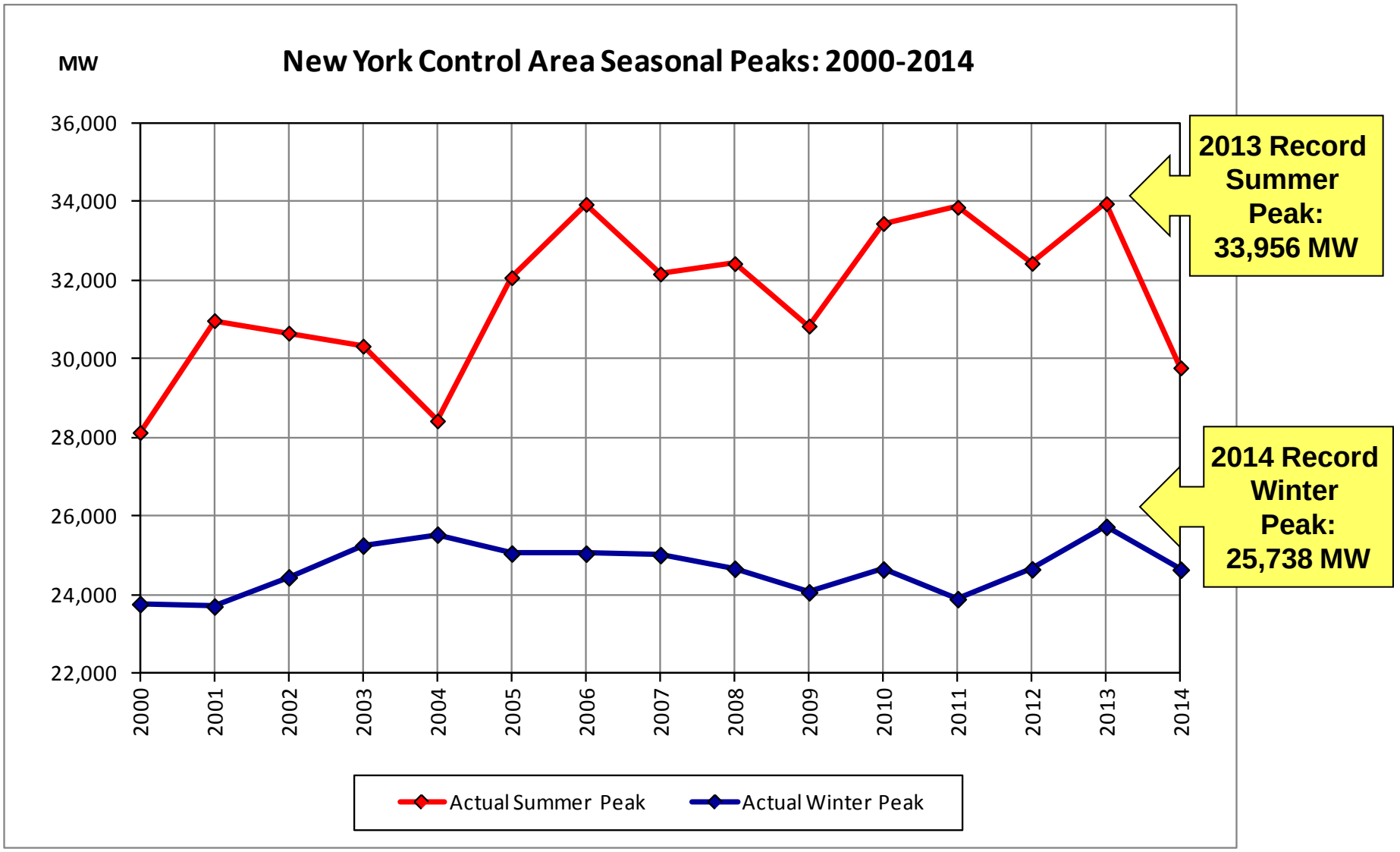
2014 & 2015 Summer Capacity Assessment & Comparison

Line	Item	2014		2015	
		2014 Baseline Forecast	2014 90th Percentile Forecast	2015 Baseline Forecast	2015 90th Percentile Forecast
1a	Summer Generation Capability[1]	37,797	37,797	39,039	39,039
1b	SCR - ICAP Values[2]	1,189	1,189	1,124	1,124
1c	Net Purchases & Sales	2,130	2,130	1,987	1,987
1	**Total Capacity Resources**	**41,116**	**41,116**	**42,150**	**42,150**
2	Assumed Unavailable Capacity (Gen + SCR)[3]	-4,606	-4,606	-4,961	-4,961
3 = 1 + 2	**Net Capacity Resources**	**36,510**	**36,510**	**37,189**	**37,189**
4	Peak Load Forecast	33,666	35,976	33,567	35,862
5	Operating Reserve Requirement	1,965	1,965	1,965	1,965
6 = 4+5	**Total Capacity Requirement**	**35,631**	**37,941**	**35,532**	**37,827**
7 = 3 - 6	**Capacity Margin[4]**	**879**	**-1,431**	**1,657**	**-638**

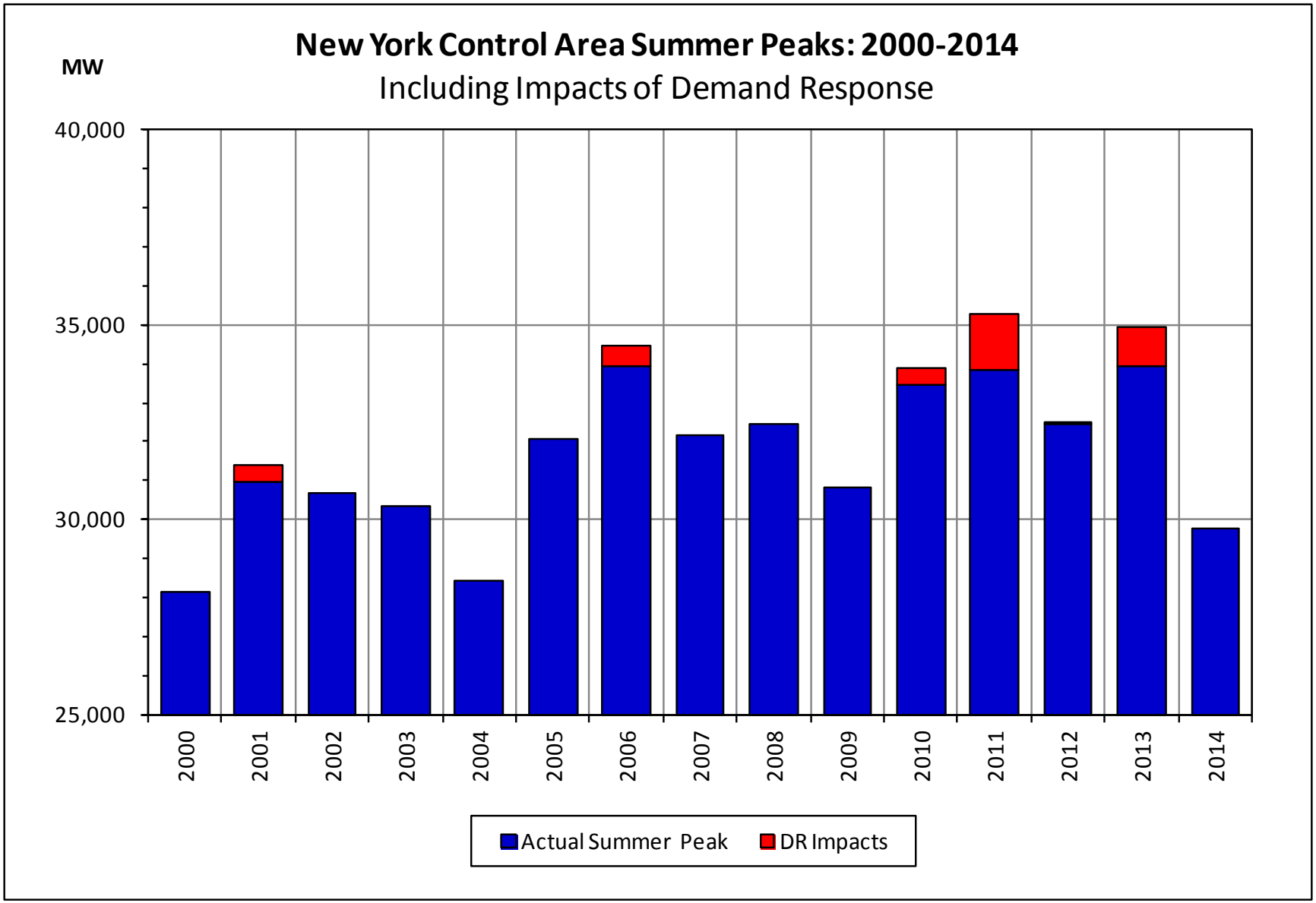
1. Reflects the 2015 Gold Book plus expected uprates (374 MW) as of May 7, 2015.
2. DR enrollments could drop depending on the recent court order on the EPA's 100 hour exemption.
3. Derates: 1,243 MW for wind, 615 MW for Hydro, 2,666 MW for thermal units, 48 MW for other renewables, and 389 MW for SCRs.
4. While the assessment shows a 638 MW deficiency for the 90th percentile load forecast, no involuntary load curtailment is forecast to occur because it is expected that there may be up to 1,890 MW available under Emergency Operating Procedures.

2015 Emergency Operating Procedures

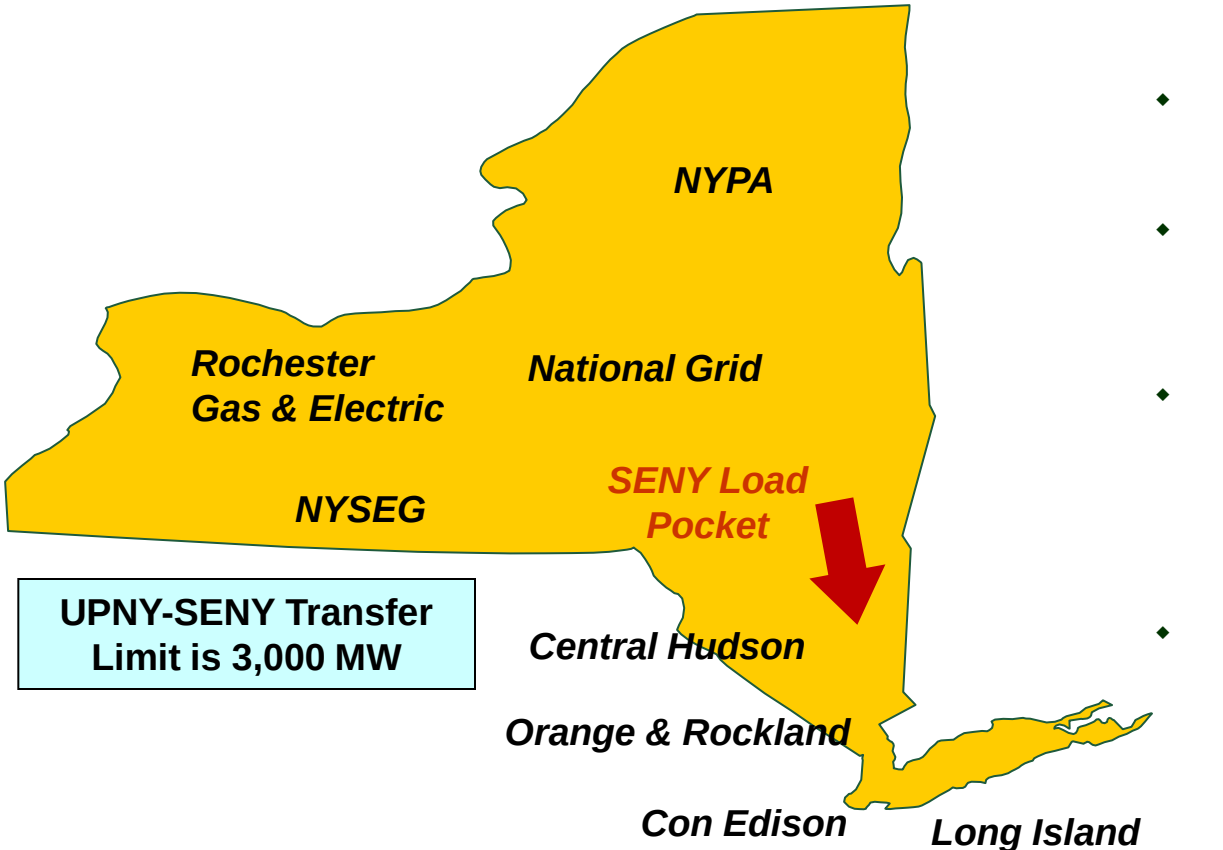
Emergency Operating Procedures		
Procedure	**Effect**	**2015 MW Value**
Emergency Demand Response Programs	Load Impact	14
Voltage Reductions	Load Impact	517
Voluntary Industrial Curtailment	Load Impact	116
General Public Appeals	Load Impact	88
Emergency Purchases (Estimate)	No Load Impact	500
Thirty Minute Reserves to Zero	Allow Operating Reserve to decrease to largest Contingency	655
Total Emergency Operating Procedures		**1,890**



NOTE: *Winter dates reflect the first year of the winter season (i.e., 2013-2014).*



Southeast NY (SENY) Load Pocket Summer 2015

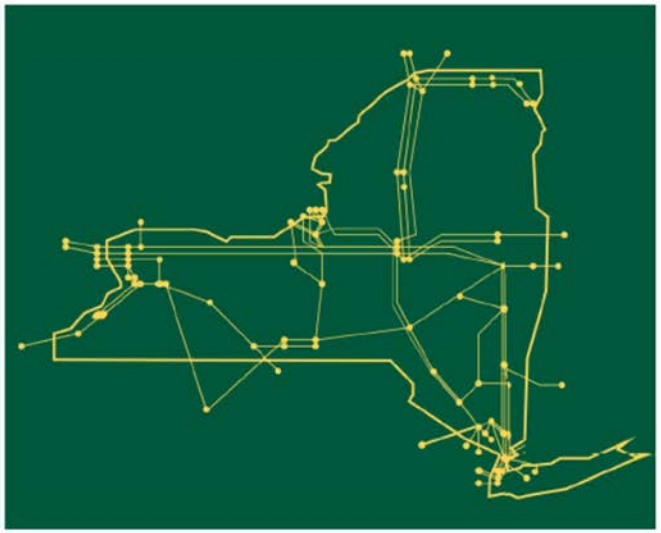


- *~64% of the state's load is in Southeast New York*
- *There is insufficient local SENY generation and external ICAP to meet peak demand needs so upstate generation is needed to meet load*
- *For normal weather – 9.2% of SENY load is met from upstate generation (1,538 MW)**
- *For extreme weather – 14.7% of SENY load would need to be met from upstate generation (2,568 MW)**
- *Under normal peak conditions Demand Response resources would be required if 1,462 MW of SENY generation becomes unavailable in order to secure UPNY-SENY transmission.*
- *Under extreme peak conditions Demand Response resources would be required if 423 MW of SENY generation becomes unavailable in order to secure UPNY-SENY transmission.*

- *SENY load growth forecast is 70 to 175 MW/year*

**Assumes all external ICAP (UDRs) at elected 2015 levels*

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.



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