Summer 2016 Capacity Assessment

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Highlights

- **This summer capacity assessment utilizes a "deterministic approach" for the approximating capacity margins and operating reserves for baseline and extreme weather conditions.**
  - ***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 conditions:</u>**
  - ***+ 1,132 MW of capacity margin surplus, a decrease of 525 MW over the baseline 2015 forecast. This is the margin above the baseline load plus 2,620 MW of operating reserves.***
- **At <u>extreme weather conditions:</u> (90th percentile forecast):**
  - ***-1,191 MW of capacity margin shortfall; 553 MW less margin than the Summer 2015 Capacity Assessment fro 90th percentile load conditions.***

2015 & 2016 Summer Capacity Assessment & Comparison

Line	Item	2015		2016	
		2015 Baseline Forecast	2015 90th Percentile Forecast	2016 Baseline Forecast	2016 90th Percentile Forecast
1a	Summer Generation Capability[1]	39,039	39,039	38,534	38,534
1b	SCR - ICAP Values	1,124	1,124	1,248	1,248
1c	Net Purchases & Sales	1,987	1,987	2,092	2,092
1	**Total Capacity Resources**	**42,150**	**42,150**	**41,874**	**41,874**
2	Assumed Unavailable Capacity (Gen + SCR)[2]	-4,961	-4,961	-4,762	-4,762
3 = 1 + 2	**Net Capacity Resources**	**37,189**	**37,189**	**37,112**	**37,112**
4	Peak Load Forecast	33,567	35,862	33,360	35,683
5	Operating Reserve Requirement	1,965	1,965	2,620	2,620
6 = 4+5	**Total Capacity Requirement**	**35,532**	**37,827**	**35,980**	**38,303**
7 = 3 - 6	**Capacity Margin[3]**	**1,657**	**-638**	**1,132**	**-1,191**

1. Reflects the 2016 Gold Book existing capability less 41 MW of deactivations during the summer of 2016.
2. Derates: 1,012 MW for wind, 545 MW for Hydro, 2,710 MW for thermal units, 63 MW for other renewables, and 432 MW for SCRs.
3. No involuntary load curtailment is projected for 90th percentile conditions because up to 3,045 MW can be achieved from EOP's (slide 5).
4. The Peak Load Forecasts are reflective of behind-meter solar installations

Southeastern New York: Summer Transmission Security - Base Case

Line	Item	2016 Baseline Forecast	2016 90th Percentile Forecast
1a	Available Generation Capacity Resources	14,091	14,091
1b	Net ICAP External Imports	375	375
1c	Transmission Capability from UPNY to SENY (N-1-1)	3,180	3,180
1d	Transmission Capability, Long Island to NYC	233	179
1	**Total Capability**	**17,879**	**17,825**
2	**Projected Capacity Outages**	**0**	**0**
3 = (1-2)	**Total Capability**	**17,879**	**17,825**
4	**Load Forecast in Zones G to J**	16,277	17,229
6 = (3-4-5)	**Capacity Margin**	**1,602**	**596**

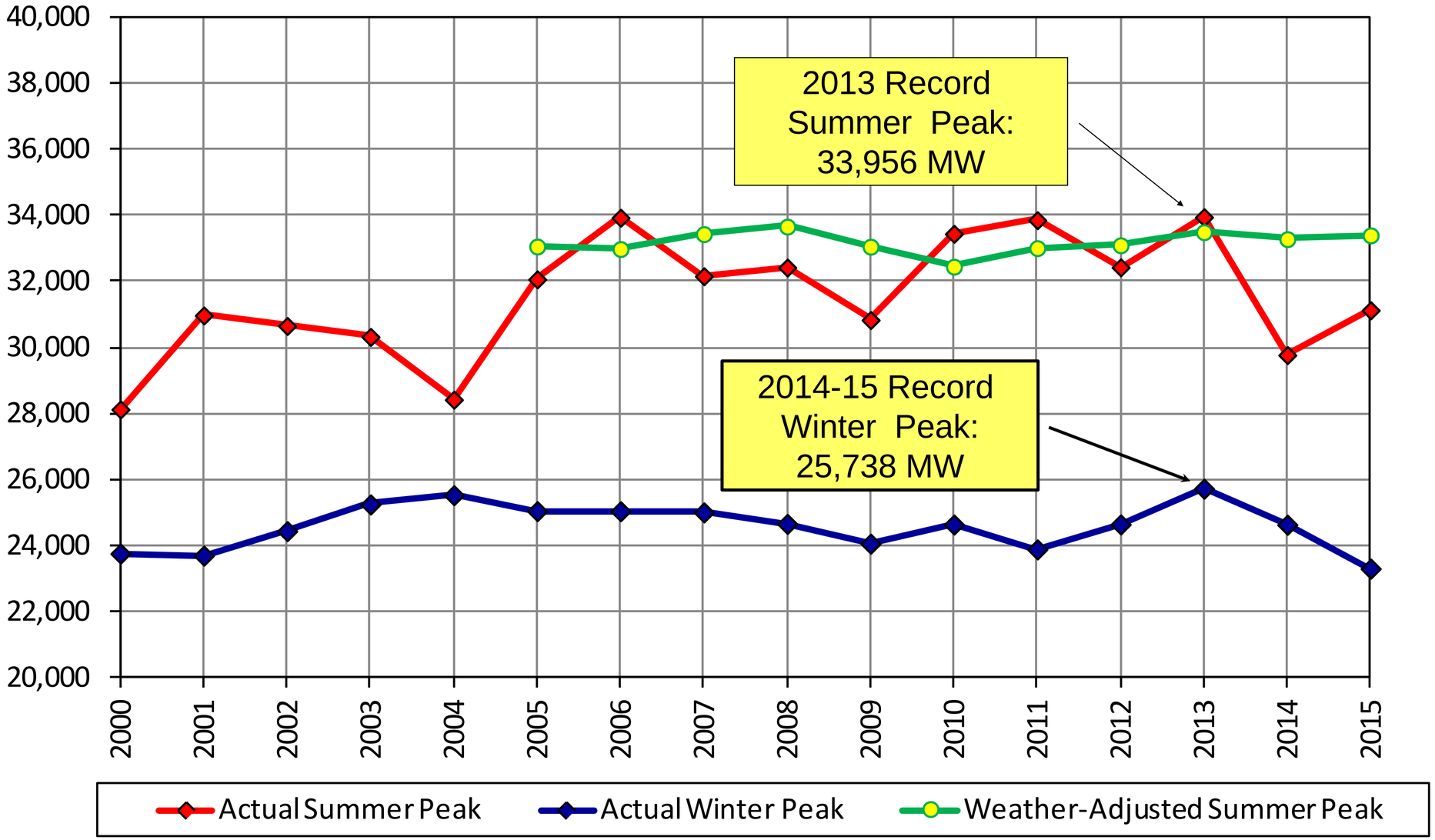
Southeast Region inlcudes Zones G to J

Note: The Southeastern NY Transmission Security Assessment does not include the SENY reserve requirement because for the requirement is the equivalent of the UPNY-SENY (N-1-1) transmission capability

2016 Emergency Operating Procedures

Procedure	Effect	2016 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	No Load Impact	1,000
Thirty Minute Reserves to Zero	Allow Operating Reserve to decrease to largest Contingency	1,310
Total Emergency Operating Procedures		**3,045**

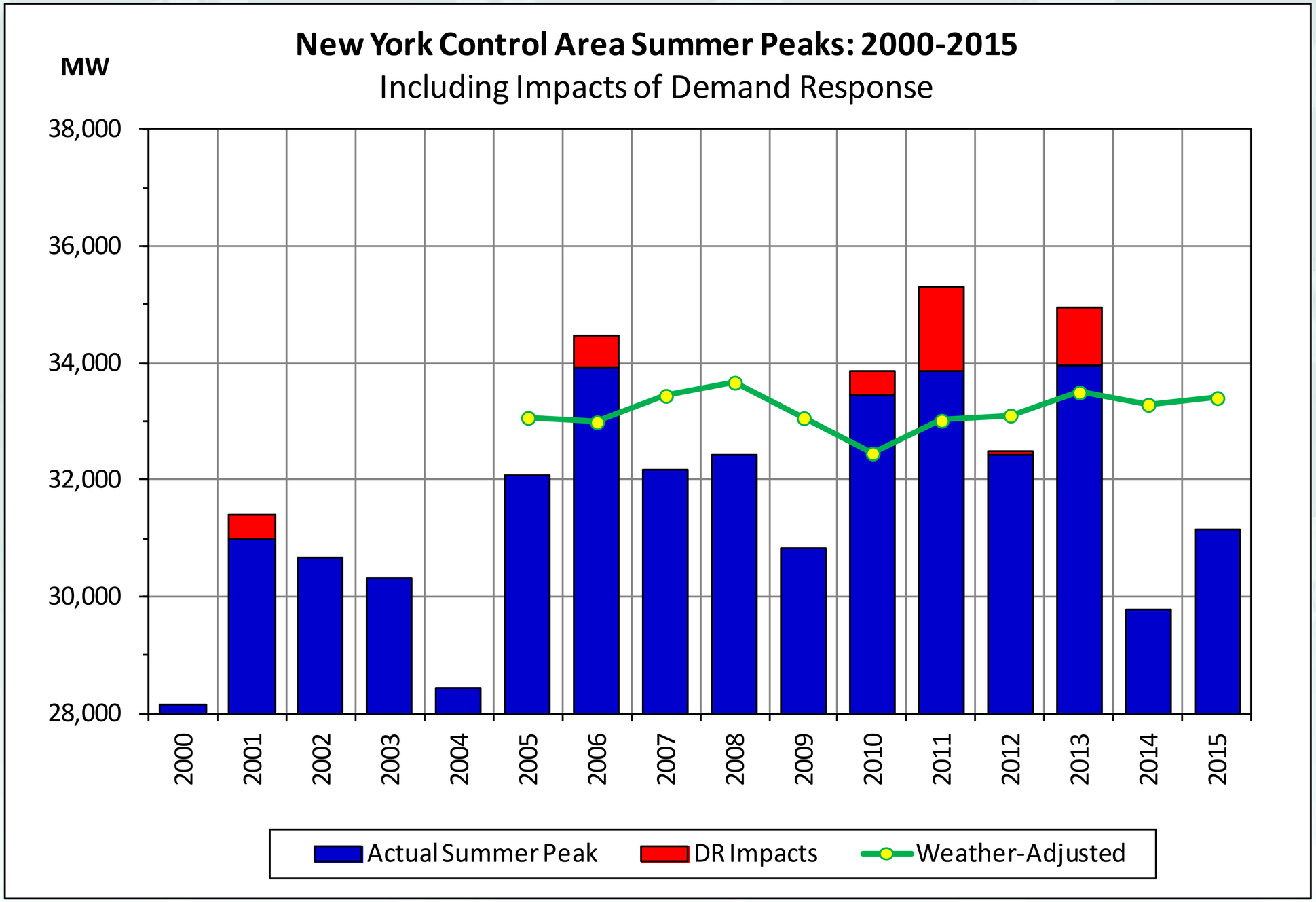
New York Control Area Seasonal Peaks: 2000-2015



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

New York Control Area Summer Peaks: 2000-2015

Including Impacts of Demand Response



The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefit to consumers by:

- ***Maintaining and enhancing regional reliability***
- ***Operating open, fair and competitive wholesale electricity markets***
- ***Planning the power system for the future***
- ***Providing factual information to policy makers, stakeholders and investors in the power system***

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