

Summer 2017 Capacity Assessment

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Highlights

- This summer capacity assessment utilizes a “deterministic approach” for 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 baseline peak weather conditions:**
 - +386 MW of capacity margin surplus, a decline of 746 MW over the baseline 2016 forecast. This is the projected capacity margin above the baseline peak load plus 2,620 MW of operating reserves.
- **At extreme weather conditions: (90th percentile forecast):**
 - -1,924 MW of capacity margin shortfall, a decline of 733 MW compared to the 2016 extreme weather forecast. This is the projected shortfall for the 90th percentile load plus 2,620 MW of operating reserves.

2016 & 2017 Summer Capacity Assessment & Comparison

Line	Item	2016		2017	
		2016 Baseline Forecast	2016 90th Percentile Forecast	2017 Baseline Forecast	2017 90th Percentile Forecast
1a	Summer Generation Capacity ¹	38,534	38,534	37,609	37,609
1b	SCR - ICAP Values	1,248	1,248	1,191	1,191
1c	Net Purchases & Sales	2,092	2,092	2,213	2,213
1	Total Capacity Resources	41,874	41,874	41,013	41,013
2	Assumed Unavailable Capacity (Gen + SCR) ²	-4,762	-4,762	-4,829	-4,829
3 = 1 + 2	Net Capacity Resources	37,112	37,112	36,184	36,184
4	Peak Load Forecast	33,360	35,683	33,178	35,488
5	Operating Reserve Requirement	2,620	2,620	2,620	2,620
6 = 4+5	Total Capacity Requirement	35,980	38,303	35,798	38,108
7 = 3 - 6	Capacity Margin³	1,132	-1,191	386	-1,924

1. Reflects the 2017 Gold Book existing capacity less projected deactivations during the summer of 2017 and known forced outages
2. Derates: 1,418 MW for wind, 561 MW for Hydro, 2,444 MW for thermal units, 56 MW for other renewables and 350 MW for SCRs
3. While the assessment shows a deficiency of 1,924 MW for the 90th percentile load forecast, no involuntary load curtailment is forecast to occur because it is expected that there may be up to 3,083 MW available under Emergency Operating Procedures.

Southeastern New York¹: Summer Transmission Security - Base Case

Line	Item	2017 Baseline Forecast	2017 90th Percentile Forecast
1a	Available Generation Capacity Resources ²	13,236	13,236
1b	Net ICAP External Imports	315	315
1c	Transmission Capability from UPNY to SENY (N-1-1)	3,180	3,180
1d	Transmission Capability, Long Island to SENY	50	50
1	Total Capability	16,781	16,781
2	Projected Capacity Outages	0	0
3 = (1-2)	Total Capability	16,781	16,781
4	Load Forecast in Zones G to J	16,055	16,991
5 = (3-4)	Capacity Margin w/o SCR	726	-210
6	SCR GHIJ	458	458
7 = (5+6)	Capacity Margin w/ SCR	1,184	248

1 - Southeast Region includes Zones G to J

2 - All generation capability less known forced outages

Zone J, NYC: Summer Transmission Security - Base Case

Line	Item	2017 Baseline Forecast	2017 90th Percentile Forecast
1a	Available Generation Capacity Resources ¹	8,140	8,140
1b	Net ICAP External Imports	315	315
1c	Transmission Capability from Sprainbrook to Dunwoodie (N-1-1)	2,800	2,800
1d	Transmission Capability, Long Island to NYC	300	300
1e	Transmission Capability, A/B/C	400	400
1	Total Capability	11,955	11,955
2	Projected Capacity Outages	0	0
3 = (1-2)	Total Capability	11,955	11,955
4	Load Forecast in Zone J	11,575	12,064
5 = (3-4)	Capacity Margin w/o SCR	380	-109
6	SCR J	372	372
7 = (5+6)	Capacity Margin w/ SCR	752	263

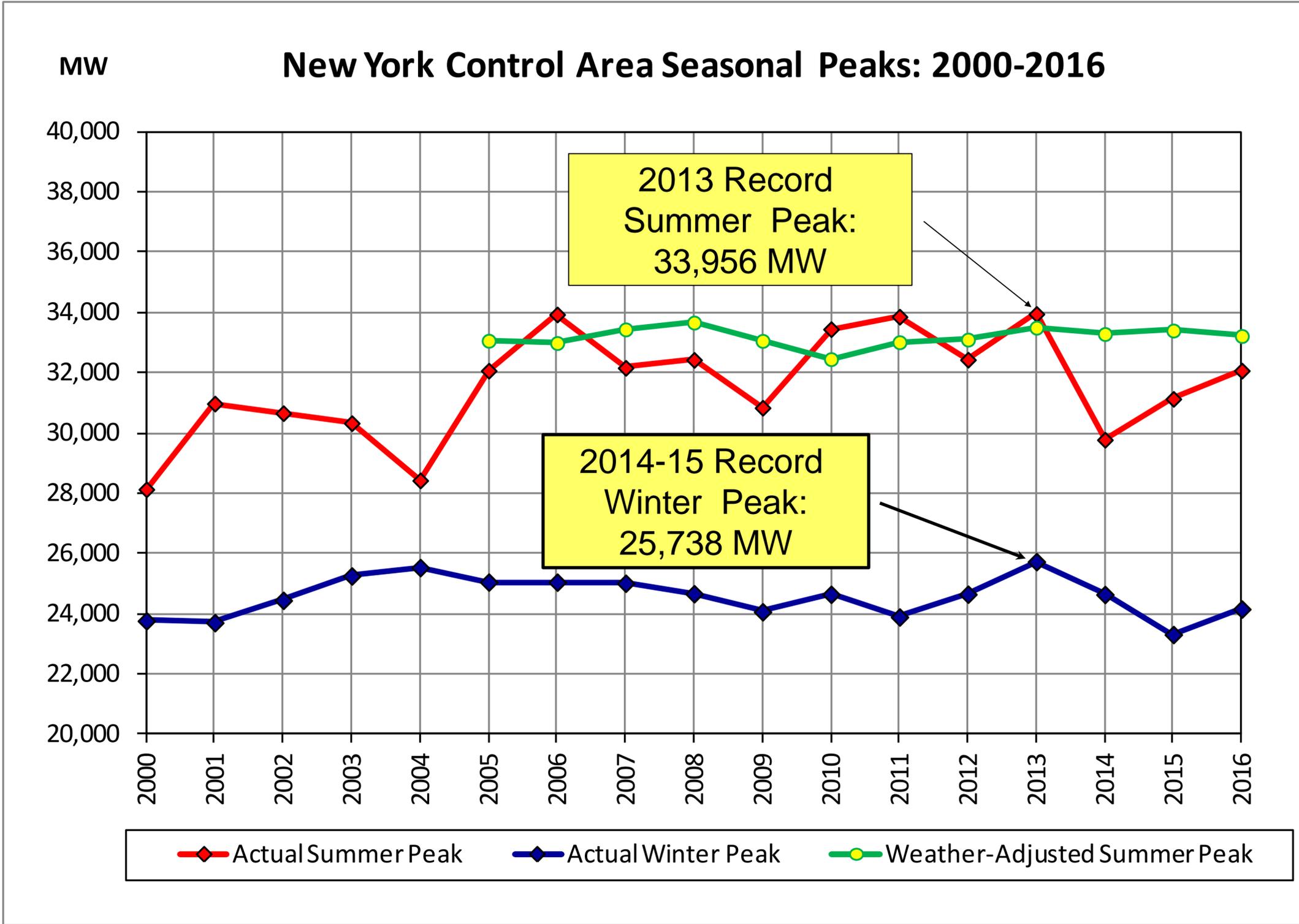
1 - All generation capability less known forced outages

2017 Emergency Operating Procedures

Procedure	Effect	2017 MW Value
Emergency Demand Response Programs	Load Impact	13
Voltage Reductions	Load Impact	547
Voluntary Industrial Curtailment	Load Impact	125
General Public Appeals	Load Impact	88
Emergency Purchases	Additional Resources	1,000
Thirty Minute Reserves to Zero	Allow Operating Reserve to Decrease to Largest Single Contingency	1,310
Total Emergency Operating Procedures		3,083

NYISO Summer Preparedness

- **Review summer operating conditions with NY Transmission Owners**
 - Transmission maintenance is scheduled and coordinated during this spring time period
 - NYISO has worked with the NY utilities to understand the terms, conditions, and projected responses of the utility demand response programs.
- **Review summer operating conditions with the adjacent operating areas**
 - Adjacent operating areas are projecting ability to serve load throughout summer and heat wave conditions assuming expected performance of generation and transmission infrastructure
- **NYISO Market Mitigation & Analysis Department has completed many generation site visits to review preventative maintenance work, fuel capability, and summer operating preparedness.**
 - 26 Stations including 77 units & 13,000 MWs

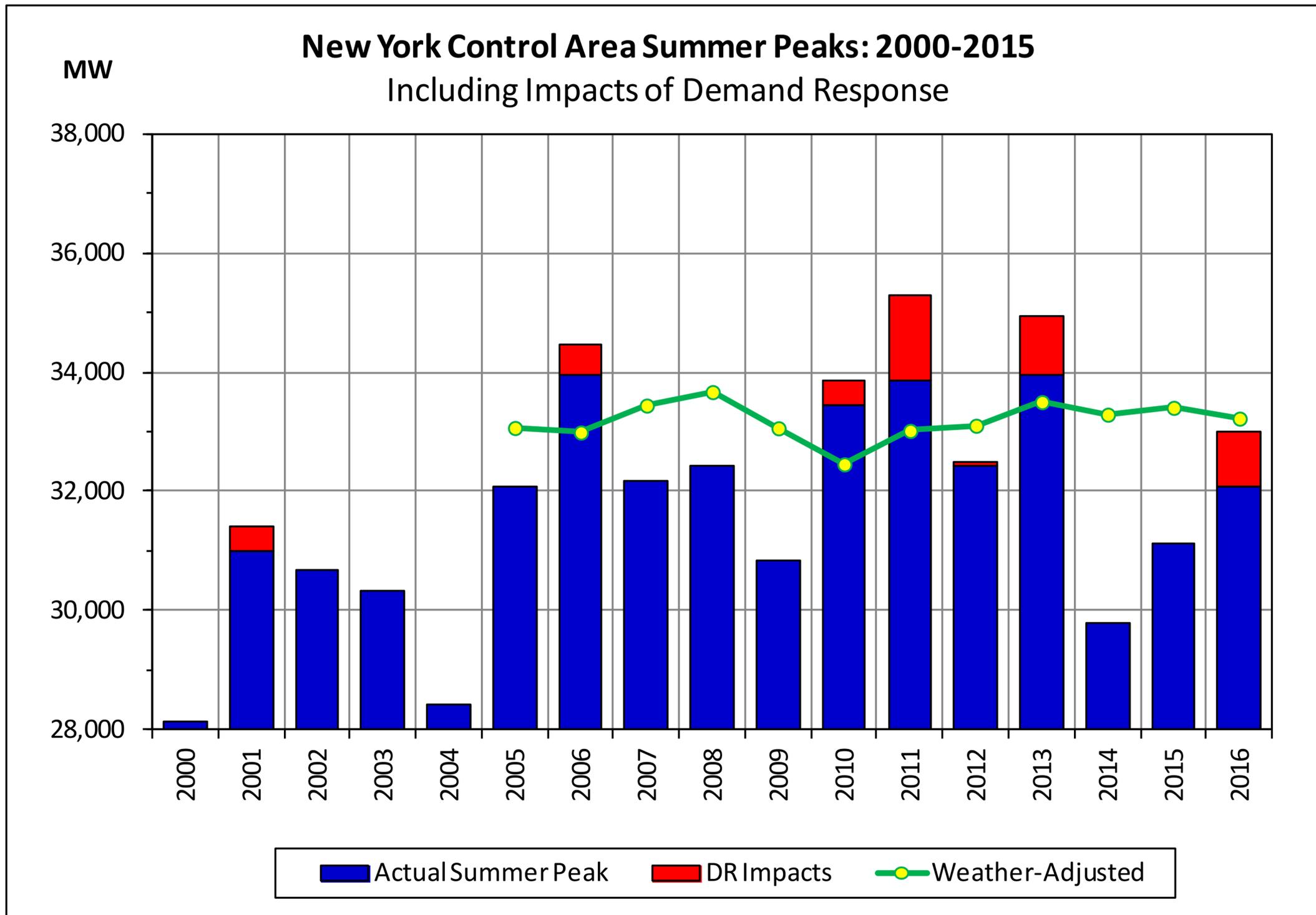


NOTE: Winter dates reflect the first year of the winter season (i.e., 2013-2014).



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 - 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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