New York ISO
Independent System Operator

Summer 2020 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 <u>baseline peak weather conditions:</u>**
  - +1,721 MW of capacity margin surplus, a decrease of 506 MW over the baseline 2019 forecast. This is the projected capacity margin above the baseline peak load plus 2,620 MW of operating reserves.
- **At <u>extreme weather conditions:</u> (90th percentile forecast):**
  - -193 MW of capacity margin surplus, a decrease of 616 MW compared to the 2019 extreme weather forecast. This is the projected capacity margin below the 90th percentile load plus 2,620 MW of operating reserves. This does not account for Emergency Operating Procedures which may provide up to 3,080 MW of relief.

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2019 & 2020 Summer Capacity Assessment & Comparison

Line	Item	2019 Baseline Forecast	2019 90th Percentile Forecast	2020 Baseline Forecast	2020 90th Percentile Forecast
1a	Summer Generation Capacity[1]	39,295	39,295	38,475	38,475
1b	SCR - ICAP Values	1,309	1,309	1,282	1,282
1c	Net Purchases & Sales	1,452	1,452	1,562	1,562
1	**Total Capacity Resources**	**42,056**	**42,056**	**41,319**	**41,319**
2	Assumed Unavailable Capacity (Gen + SCR)[2]	-4,827	-4,827	-4,682	-4,682
3 = 1 + 2	**Net Capacity Resources**	**37,229**	**37,229**	**36,637**	**36,637**
4	Peak Load Forecast	32,382	34,186	32,296	34,210
5	Operating Reserve Requirement	2,620	2,620	2,620	2,620
6 = 4+5	**Total Capacity Requirement**	**35,002**	**36,806**	**34,916**	**36,830**
7 = 3 - 6	**Capacity Margin[3]**	**2,227**	**423**	**1,721**	**-193**

1. Reflects the 2020 Gold Book existing capacity plus projected additions and deactivations during the summer of 2020 as well as known forced outages
2. Derates: 1,438 MW for wind, 501 MW for Hydro, 2,277 MW for thermal units, 57 MW for other renewables and 409 MW for SCRs
3. It is expected that there may be up to an additional 3,080 MW available under Emergency Operating Procedures

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Southeastern New York[1]: Summer Transmission Security - Base Case

Line	Item	2020 Baseline Forecast	2020 90th Percentile Forecast
1a	Available Generation Capacity Resources[2]	15,041	15,041
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**	**18,586**	**18,586**
2	**Projected Capacity Outages**	**0**	**0**
3 = (1-2)	**Total Capability**	**18,586**	**18,586**
4	**Load Forecast in Zones G to J**	15,639	16,313
5 = (3-4)	**Capacity Margin w/o SCR**	**2,947**	**2,273**
6	**SCR GHIJ**	**604**	**604**
7 = (5+6)	**Capacity Margin w/ SCR**	**3,551**	**2,877**

1 - Southeast Region (SENY) includes Zones G to J
2 - All generation capability less known forced outages
3 - Historically, thermal generator derates in SENY have totaled 1,131 MW

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Zone J, NYC: Summer Transmission Security - Base Case

Line	Item	2020 Baseline Forecast	2020 90th Percentile Forecast
1a	Available Generation Capacity Resources[1]	9,242	9,242
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	0	0
1	**Total Capability**	**12,657**	**12,657**
2	**Projected Capacity Outages**	**0**	**0**
3 = (1-2)	**Total Capability**	**12,657**	**12,657**
4	**Load Forecast in Zone J**	11,316	11,720
5 = (3-4)	**Capacity Margin w/o SCR**	**1,341**	**937**
6	**SCR J**	**479**	**479**
7 = (5+6)	**Capacity Margin w/ SCR**	**1,820**	**1,416**

1 - All generation capability less known forced outages
2 - Historically, thermal generator derates in Zone J have totaled 711 MW

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2020 Emergency Operating Procedures		
Procedure	**Effect**	**2019 MW Value**
Emergency Demand Response Programs	Load Impact	1
Voltage Reductions	Load Impact	482
Voluntary Industrial Curtailment	Load Impact	207
General Public Appeals	Load Impact	80
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		**3,080**

*Note: The Emergency Operating Procedures above do not reflect an exhaustive list of operator actions available to avoid load shed.

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Generation Deactivations

Station Name	Nameplate MW
Hudson Ave 4 (RETIRED)	16.3
Steuben County LF (RETIRED)	3.2
Monroe Livingston (RETIRED)	2.4
Auburn - State St. (RETIRED)	7.4
Albany LFGE	5.6
Cayuga 1 (MOTHBALL)	155.3
Hudson Ave 3 (IIFO)	16.3
Greenidge 4 (BTM:NG)	112.5
Somerset	655.1
Indian Point 2	1299
TOTAL	**2,273**

Generation Additions

Station Name	Nameplate MW
Cricket Valley	1,177

Transmission Operations

Equipment	Voltage (kV)	Status
Hudson-Farragut B3402	345	Out-of-Service
Marion-Farragut C3403	345	Out-of-Service
St. Lawrence-Moses L33 PAR	230	Out-of-Service
Warren-Falconer 171	115	Operated Normally Open
Sprain Brook/Dunwoodie Series Reactors	345	In-Service
Marcy South Series Capacitors	345	In-Service
New Watercure Transformer #2	345/230	In-Service
Moses-Adirondack MA-1 or MA-2	230	Out-of-Service for rebuild with ability to recall

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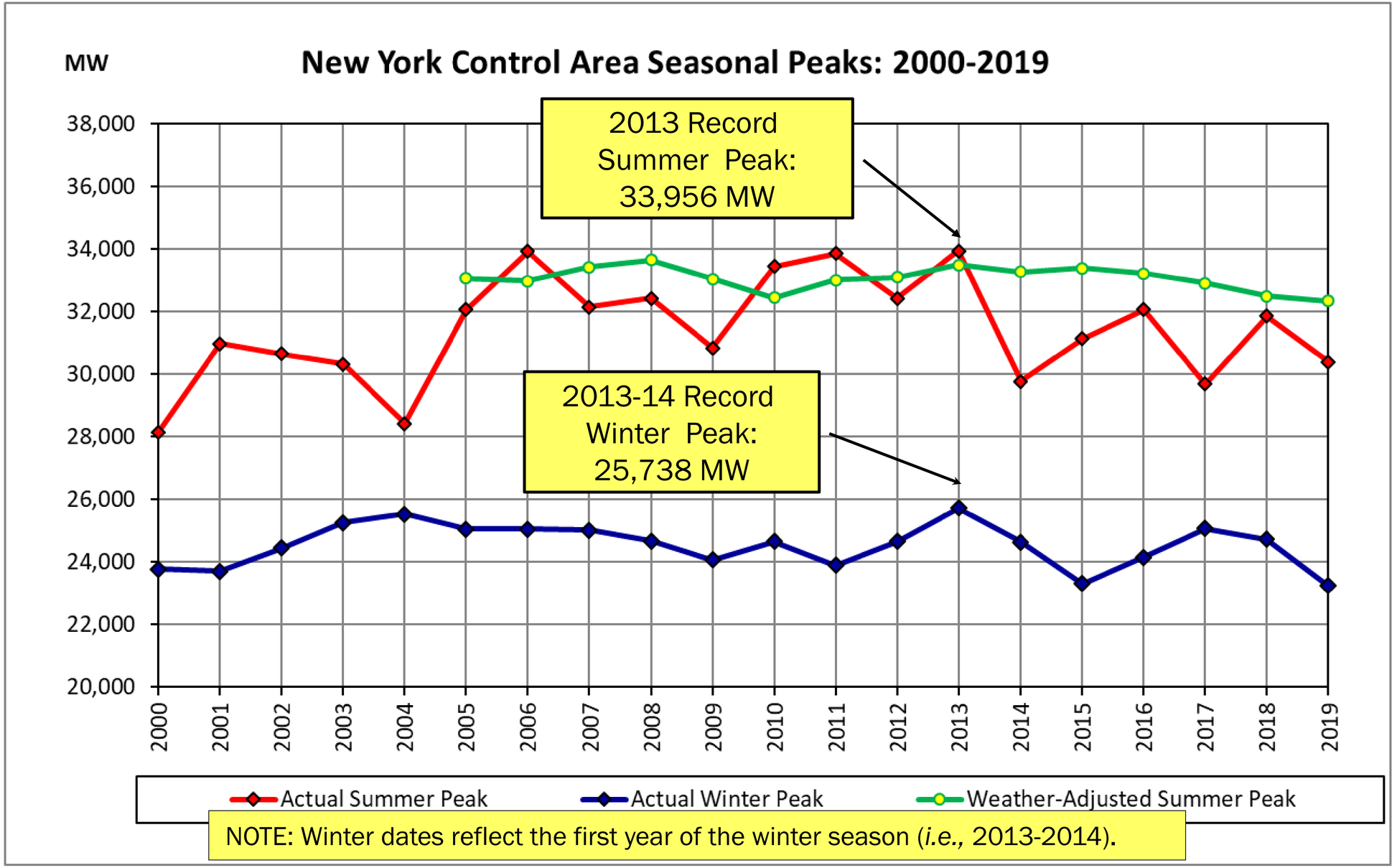

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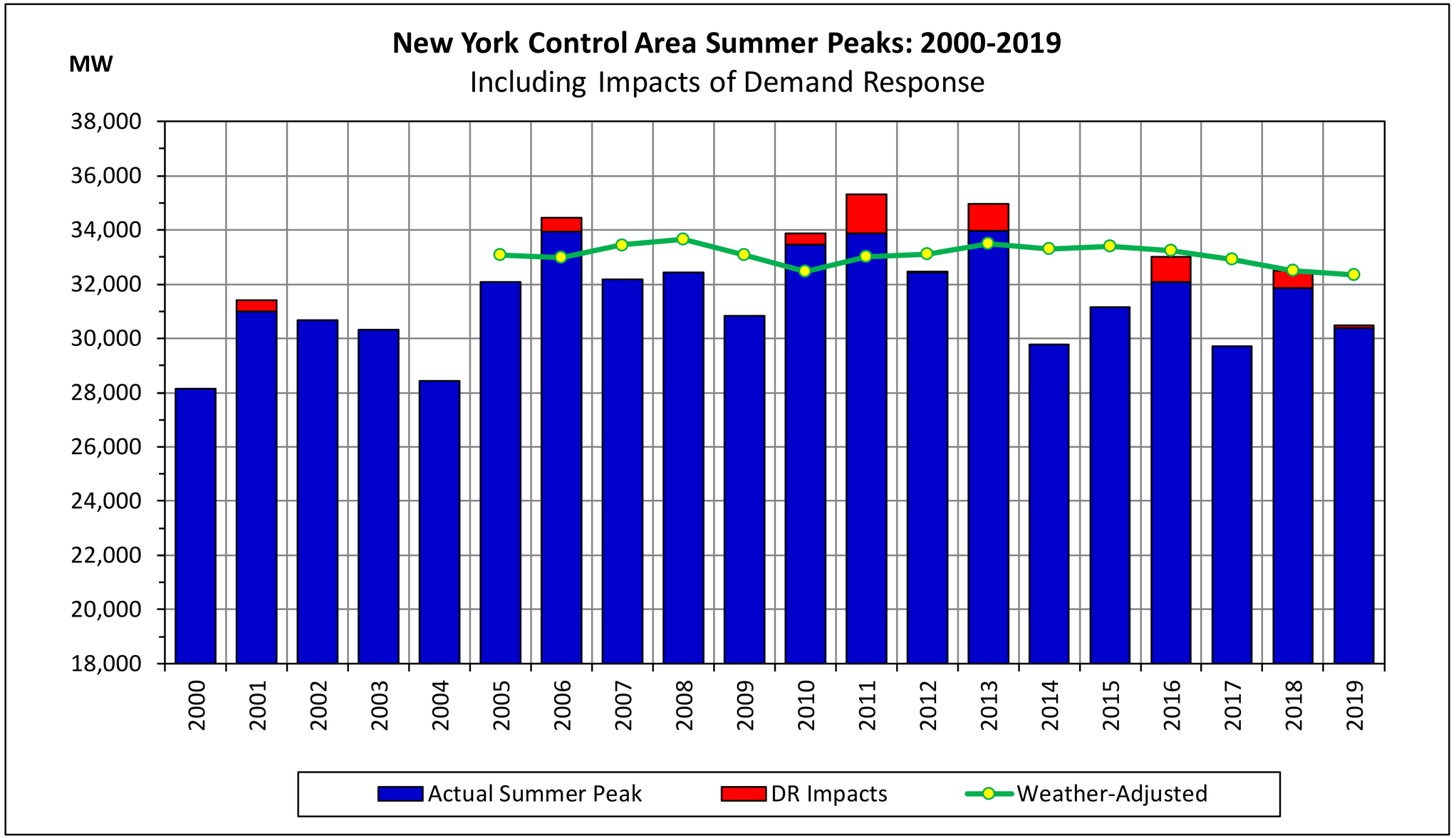

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The Mission of the New York Independent System Operator is to:

- **Serve the public interest and**
- **Provide benefit to stakeholders 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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