New York ISO
Independent System Operator

Summer 2024 Capacity Assessment

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Operating Committee:

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Agenda

- Key Observations
- Summer Capacity Assessment
- Summer Preparedness
- Infrastructure Updates

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Key Observations

- **Projected capacity margins for normal and extreme weather conditions without emergency operating actions**
    - 752 MW - capacity margin for baseline peak forecast conditions
    - -1,419 MW - capacity margin for 90-10 peak forecast conditions
    - -3,093 MW - capacity margin for 99-1 peak forecast conditions

- **Projected capacity margins for normal and extreme weather conditions with up to 3,275 MW of emergency operating actions**
    - 4,027 MW - capacity margin for baseline peak forecast conditions
    - 1,856 MW - capacity margin for 90-10 peak forecast conditions
    - 182 MW - capacity margin for 99-1 peak forecast conditions

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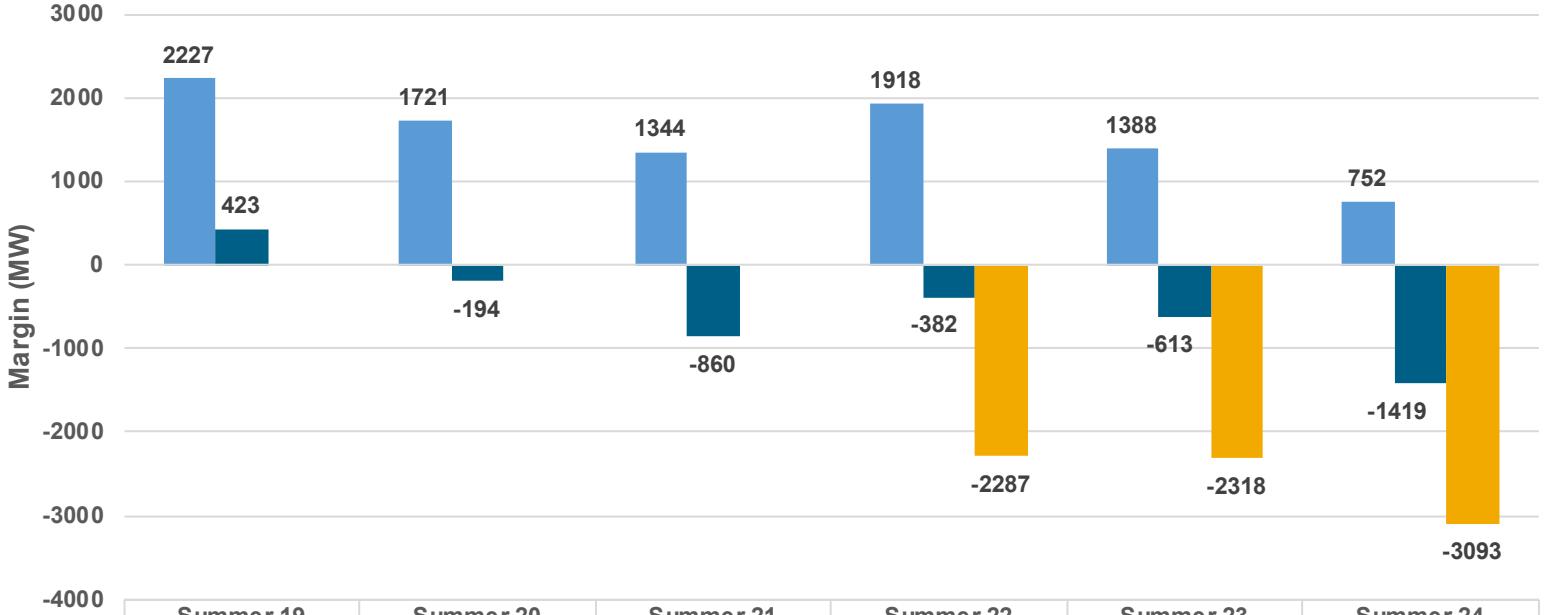
Capacity Margins: Summer 2019 through 2024



	Summer 19	Summer 20	Summer 21	Summer 22	Summer 23	Summer 24
Baseline	2227	1721	1344	1918	1388	752
90/10	423	-194	-860	-382	-613	-1419
99/1				-2287	-2318	-3093

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2023 & 2024 Summer Capacity Assessment & Comparison

Line	Item	2023	2024		
		Baseline Forecast	Baseline Forecast	90th Percentile Forecast	99th Percentile Forecast
1a	Summer Generation Capacity[1]	36,990	37,867	37,867	37,867
1b	SCR - ICAP Values	1,226	1,281	1,281	1,281
1c	Net Purchases & Sales	2,932	1,585	1,585	1,585
1	**Total Capacity Resources**	**41,148**	**40,733**	**40,733**	**40,733**
2	Assumed Unavailable Capacity (Gen + SCR)[2,3]	-5,092	-5,819	-6,230	-6,416
3 = 1 + 2	**Net Capacity Resources**	**36,056**	**34,913**	**34,502**	**34,317**
4	Peak Load Forecast	32,048	31,541	33,301	34,790
5	Operating Reserve Requirement	2,620	2,620	2,620	2,620
6 = 4+5	**Total Capacity Requirement**	**34,668**	**34,161**	**35,921**	**37,410**
7 = 3 - 6	**Capacity Margin[4]**	**1,388**	**752**	**-1,419**	**-3,093**

1. Reflects the 2024 Gold Book existing capacity plus projected changes during the summer of 2024, as well as known outages.
2. Derates: 2250 MW for wind, 642 MW Hydro, 2146 MW thermal units, 318 MW FTM solar, 20 MW Energy Storage, and 384 MW SCRs.
3. 90th / 99th Percentile Capacity include an additional 411 MW / 596 MW of derates for thermal units operating in extreme temperatures.
4. It is expected that there may be up to an additional 3275 MW available under Emergency Operating Procedures.

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

Line	Item	2024 Baseline Forecast	2024 90th Percentile Forecast	2024 99th Percentile Forecast
1a	Available Generation Capacity Resources	13,230	13,230	13,230
1b	Net ICAP External Imports	315	315	315
1c	Transmission Capability from UPNY to SENY (N-1-1)	4,350	4,350	4,350
1d	Transmission Capability, Long Island to SENY	0	0	0
1	**Total Capability**	**17,895**	**17,895**	**17,895**
2	**Assumed Unavailable Capacity (Gen.)[2,3]**	**-1,060**	**-1,214**	**-1,301**
3 = (1+2)	**Total Capability**	**16,835**	**16,681**	**16,594**
4	**Load Forecast in Zones G to J[4]**	15,319	15,924	16,548
5 = (3-4)	**Capacity Margin w/o SCR**	**1,516**	**757**	**45**
6	**Effective SCR GHIJ[5]**	**288**	**288**	**288**
7 = (5+6)	**Capacity Margin w/ SCR**	**1,804**	**1,044**	**333**

1. Southeast Region (SENY) includes Zones G to J.
2. Derates: 50 MW for Hydro, 1000 MW for thermal units.
3. 90th / 99th Percentile Capacity includes an additional 154 MW / 241 MW of derates for thermal units operating in extreme temperatures.
4. Load forecasts include addition of PJM RECO load.
5. SCR Derates: 239 MW.

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Zone J, NYC: Summer Transmission Security - Base Case

Line	Item	2024 Baseline Forecast	2024 90th Percentile Forecast	2024 99th Percentile Forecast
1a	Available Generation Capacity Resources	8,432	8,432	8,432
1b	Net ICAP External Imports	315	315	315
1c	Transmission Capability from Sprainbrook to Dunwoodie (N-1-1)	2,875	2,875	2,875
1d	Transmission Capability, Long Island to NYC	300	300	300
1e	Transmission Capability, A/B/C	0	0	0
1	**Total Capability**	**11,922**	**11,922**	**11,922**
2	Assumed Unavailable Capacity (Gen.)[1,2]	**-652**	**-762**	**-831**
3 = (1+2)	**Total Capability**	**11,270**	**11,159**	**11,090**
4	Load Forecast in Zone J	10,922	11,285	11,736
5 = (3-4)	**Capacity Margin w/o SCR**	**348**	**-126**	**-646**
6	Effective SCR J[3]	**233**	**233**	**233**
7 = (5+6)	**Capacity Margin w/ SCR**	**580**	**107**	**-413**

1. Derates: 652 MW for thermal units.
2. 90th / 99th Percentile Capacity includes an additional 110 MW / 179 MW of derates for thermal units operating in extreme temperatures.
3. SCR Derates: 210 MW.

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2024 Zone K, Long Island: Summer Transmission Security - Base Case

Line	Item	Baseline Forecast	90th Percentile Forecast	99th Percentile Forecast
1a	Available Generation Capacity Resources	6,223	6,223	6,223
1b	Transmission Capability on Y49/Y50/901/903 (N-1-1)	275	275	275
1c	Transmission Capability, Neptune[1]	660	660	660
1d	Transmission Capability, Cross Sound Cable[1]	0	0	0
1	**Total Capability**	**7,158**	**7,158**	**7,158**
2	Assumed Unavailable Capacity (Gen.)[2,3]	-585	-696	-743
3 = (1+2)	**Total Capability**	**6,573**	**6,462**	**6,416**
4	Load Forecast in Zone K	4,963	5,358	5,671
5 = (3-4)	**Capacity Margin w/o SCR**	**1,610**	**1,104**	**745**
6	Effective SCR K[4]	19	19	19
7 = (5+6)	**Capacity Margin w/ SCR**	**1,629**	**1,122**	**763**

1. Derates: 367 MW for thermal units.
2. 90th / 99th Percentile Capacity includes an additional 111 MW / 158 MW of derates for thermal units operating in extreme temperatures.
3. SCR Derates: 16 MW.

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2024 Emergency Operating Procedures

Procedure	Effect	2024 MW Value
Emergency Demand Response Programs	Load Impact	**13**
Voltage Reductions	Load Impact	**611**
Voluntary Industrial Curtailment	Load Impact	**267**
General Public Appeals	Load Impact	**74**
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		**3,275**

Note: The procedures listed above are not an exhaustive list of operator actions available to avoid load shed.

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Summer 2024 Operational Preparedness

- Weekly fuel surveys indicate oil and dual fuel capability generation have sufficient start-of-summer oil inventories.
- ISO Operations coordination of transmission and generation maintenance outages helps mitigate the reliability impact of such outages during hot weather periods.

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Generation Additions

Station Name	Nameplate MW
South Fork Wind	96
South Fork Wind II	40
East Point Solar	50
High River Solar	90
Riverhead Expansion (Solar)	36
Clear View Solar	20
Dolan Solar	20
CS Hawthorn	20
Hills Solar	20
KCE NY 6	20
Darby Solar	20
Stillwater Solar	20
Total Additions	**452**

*Includes new capacity since Summer 2023 and nameplate capacity of resources expected in before July 1.

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Generation Deactivations*

Station Name	Nameplate MW
South Cairo	- 22
Ravenswood 01	-19
Western NY Wind Power	- 7
Arthur Kill Cogen	-11
Total Deactivations	**- 59**

*Generation deactivations include capacity changes since Summer 2023

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Transmission Operations

Equipment	Voltage (kV)	Status
Hudson-Farragut B3402	345	Out-of-Service
Marion-Farragut C3403	345	Out-of-Service
Sprainbrook/Dunwoodie Series Reactors	345	In-Service
Marcy South Series Capacitors	345	In-Service
Knickerbocker Series Capacitors	345	Out-of-Service
Lovett Station (new)	345	In-Service
Chases Lake-Porter 11	230	Out-of-Service with recall
Willis-Ryan WRY-2	230	Out-of-Service with recall
Ryan-Plattsburgh RYP-2	230	Out-of-Service with recall
Moses-Willis MW2	230	Out-of-Service with recall

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Our Mission & Vision

Mission

Ensure power system reliability and competitive markets for New York in a clean energy future

Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation

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