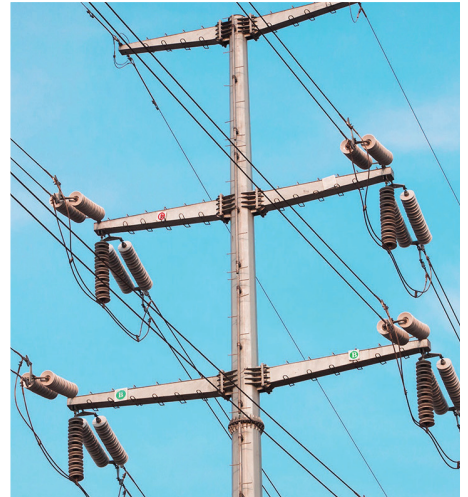




2019 Load & Capacity Data



A report by
The New York
Independent System
Operator, Inc.

Gold Book



2019 Load & Capacity Data Report

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NEW YORK INDEPENDENT SYSTEM OPERATOR

**2019
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OVERVIEW

This report presents the New York Independent System Operator, Inc. (NYISO) load and capacity data for the years 2019-2029. Energy and peak forecasts are provided through 2039 on a Zonal basis, and through 2049 on a system basis. The information reported in this document is current as of March 15, 2019 unless otherwise noted. The seven sections of this *Load and Capacity Data* report (*Gold Book*) address the following topics:

- Historical and forecast seasonal peak demand and energy usage, and energy efficiency and other load-modifying impacts;
- Existing and proposed generation and other capacity resources; and
- Existing and proposed transmission facilities.

Historical and Forecast Energy Usage and Seasonal Peak Demand

Section I of this report presents the baseline forecast, topline forecast (formerly referred to as econometric), and historical data on annual energy and seasonal peak demand in the New York Control Area (NYCA).¹ The baseline forecasts, which report the expected NYCA load, include the impacts of energy efficiency programs, building codes and standards, distributed energy resources, behind-the-meter energy storage, and behind-the-meter solar photovoltaic power (solar PV). The topline forecast shows what the expected NYCA load would be if not for these impacts, with the impacts listed added back onto the baseline forecast. Both the baseline and the topline forecasts include the expected impacts of electric vehicle usage. All Zonal forecasts are shown through 2039, and system-level forecasts have been extended through 2049 for studies that use the longer period.

Over a 20-year horizon, the NYCA baseline energy forecast growth rate has increased compared to last year, while the NYCA baseline summer peak demand forecast

¹ Capitalized terms not otherwise defined herein have the meaning set forth in the NYISO's Tariffs – NYISO's Market Administration and Control Area Services Tariff (Services Tariff) and NYISO's Open Access Transmission Tariff (OATT).

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growth rate has remained relatively the same as last year, as observed in the following table:

	Average Annual Growth Rates				
	2018 Gold Book Forecast	2019 Gold Book Forecast			
	Cumulative 2018-38	Cumulative 2019-39	2019-29	2029-39	2039-2049
Baseline Peak Demand	0.03%	0.05%	-0.39%	0.51%	0.81%
Baseline Energy Usage	-0.01%	0.18%	-0.27%	0.64%	0.90%

The energy growth rate over the first twenty years in the 2019 forecast is higher than the rate published in the 2018 *Gold Book*. The higher forecasted growth in energy usage can be attributed in part to the increasing impact of electric vehicle usage, especially in the later years. Significant load-reducing impacts occur due to energy efficiency initiatives and the growth of distributed behind-the-meter energy resources, such as solar PV. Much of these impacts are due to New York State’s energy policies and programs, including the Clean Energy Standard (CES), the Clean Energy Fund (CEF), the NY-SUN initiative, the energy storage initiative, and other programs developed as part of the Reforming the Energy Vision (REV) proceedings.

The NYISO employs a multi-stage process to develop load forecasts for each of the eleven zones within the NYCA. In the first stage, baseline energy and peak models are built based on projections of end-use intensities and economic variables. End-use intensities modeled include those for lighting, refrigeration, cooking, heating, cooling, and other plug loads. Appliance end-use intensities are generally defined as the product of saturation levels (average number of units per household or commercial square foot) and efficiency levels (energy usage per unit or a similar measure). End-use intensities specific to New York are estimated from appliance saturation and efficiency levels in both the residential and commercial sectors. These intensities include the projected impacts of energy efficiency programs and improved codes & standards. Economic variables considered

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include GDP, households, population, and commercial and industrial employment. In the second stage, the incremental impacts of behind-the-meter solar PV and distributed generation are deducted from the forecast, and the incremental impacts of electric vehicle usage are added to the forecast. The impacts of net electricity consumption of energy storage units are added to the energy forecasts, while the peak-reducing impacts of energy storage units are deducted from the peak forecasts. In the final stage, the NYISO aggregates load forecasts by Load Zone (referenced in the rest of this document as “Zone”).

These forecasts are based on information obtained from the New York State Department of Public Service (DPS), the New York State Energy Research and Development Authority (NYSERDA), state power authorities, Transmission Owners, the U.S. Census Bureau, and the U.S. Energy Information Administration. The baseline and topline forecasts reflect a combination of information provided by Transmission Owners for their respective territories and forecasts prepared by the NYISO.

Generation and Other Capacity Resources

Since the publication of the 2018 *Gold Book* in April 2018, there has been a reduction of 373 megawatts (MW) of summer capability that have been deactivated. Over the same time period, there has been an increase of 744 MW of summer capability due to new additions and uprates, and a decrease of 143 MW of summer capability due to ratings changes. As a result, net summer capability as of March 15, 2019 is 39,294 MW, an increase of 228 MW. These changes are summarized in Section II.

These changes are based on information received from certain generation owners that provided status changes since the 2018 *Gold Book*. These changes may include new generators, generators returning to service, generator outages and deactivations, the withdrawal of a notice of intent to deactivate, generator uprates, and restoration to full capacity operation.

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The Total Resource Capability in the NYCA for the Summer of 2019 is 42,056 MW, which is a decrease of 201 MW compared to the information provided for Summer 2018 in the 2018 *Gold Book*. This decrease is due to changes in existing NYCA generating capability, changes in Special Case Resources (SCR), and changes in net purchases of capacity from other control areas. The total resource capability for 2019 includes:

- NYCA generating capability (39,295 MW);
- SCR (1,309 MW);
- Net long-term purchases and sales with neighboring control areas (1,452 MW).

The NYCA generating capability for Summer 2019 is projected to be 228 MW greater than the capability reported for Summer 2018 in the 2018 Gold Book.

The existing NYCA generating capability includes renewable resources totaling 6,351 MW. This total includes wind generation (1,739 MW), hydro (4,253 MW), large-scale solar PV (32 MW), and other renewable resources (327 MW).

Table III-2 reports the Summer and Winter Dependable Maximum Net Capability (DMNC)² for each generator, along with the nameplate rating, Capacity Resource Interconnection Service (CRIS) rating, and annual energy generated in the year 2018. Section III contains additional information on the generation resources by zone, fuel type and generation type.

Beyond 2019, the resource capability in the NYCA will be affected by additions of new generation, re-rates of currently operating units, and the deactivation of existing generators.

Table IV-1 shows the proposed facilities that have completed, are enrolled in, or are candidates to enter a Class Year Interconnection Facilities Study, or have met other

² The NYISO does not specify the fuel to be used in DMNC testing.

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comparable milestones. Of the total reported, the proposed summer capability of these resources is:

- 5,894 MW of natural gas or dual-fuel projects;
- 4,746 MW of wind turbine projects;
- 734 MW of non-wind renewable energy projects; and
- 385 MW of energy storage.

Table IV-1 also identifies Class Year 2017 CRIS-only requests (not already reflected in Table III-2) totaling 132 MW.

Tables IV-2 through IV-4 report on units that have planned uprates in capability and units that are no longer in operation. Table IV-5 lists existing generators with 2,054 MW of summer capability that have provided deactivation notices with proposed deactivation dates by 2021.

Section V provides a summary of NYCA load and capacity from 2018 through 2029. Information for Tables V-2a and V-2b is obtained from Tables I-1, III-2, IV-1 through IV-5, and V-1.

Transmission Facilities

Section VI lists existing transmission facilities (constructed for 115 kV and larger) in the NYCA, including several new transmission facilities that came into service since the publication of the 2018 *Gold Book*. Section VII reports proposed transmission facilities that include merchant projects as well as firm and non-firm projects submitted by each Transmission Owner.

In 2017, the NYISO Board of Directors selected the *NextEra Energy Transmission New York - Empire State Line Proposal 1* as the more efficient or cost effective transmission

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solution to satisfy the Western New York Public Policy Transmission Need with an expected in-service date of June 2022.

As part of the NYISO's Public Policy Transmission Planning Process, the New York State Public Service Commission (PSC) identified the need to expand the state's AC transmission capability to deliver additional power from generating facilities located in upstate New York, including important renewable resources, to the population centers located downstate. To provide additional capability to move power from upstate to downstate, the PSC identified the AC Transmission Public Policy Transmission Needs to increase transfer capability from central to eastern New York by at least 350 MW ("Segment A") and from the Albany region through the Hudson Valley region by at least 900 MW ("Segment B"). On April 8, 2019, the NYISO Board of Directors selected the Double-Circuit project (T027) proposed jointly by North America Transmission and the New York Power Authority as the more efficient or cost-effective transmission solution to address Segment A. The Board also selected the New York Energy Solution project (T019) proposed jointly by Niagara Mohawk Power Corporation d/b/a National Grid and the New York Transco, LLC as the more efficient or cost-effective transmission solution to address Segment B. The anticipated in-service date for Projects T027 and T019 is December 2023. These projects are not included in Section VII, which contains the list of transmission projects as of March 15, 2019, but will be included in future Gold Books.

SECTION I

Annual Energy & Peak Demand – Historical & Forecast



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Section I

This section reports historical and forecast energy and seasonal peak demand for the NYCA and by Zone. Zonal forecasts are reported over a 20-year horizon, and system-level summary forecasts are provided for 30 years. Historical load values reflect the actual weather conditions experienced, while forecasted load values assume either normal or extreme weather conditions. The baseline forecasts show the expected NYCA and Zonal loads under normal weather conditions, and account for the load-reducing impacts of energy efficiency programs, building codes, and appliance efficiency standards (Table I-8); solar PV (Table I-9); and non-solar distributed energy generation (Table I-10). Both the baseline and the topline forecasts include the expected impacts of electric vehicle usage (Table I-11). The impacts of net electricity consumption of all energy storage units are added to the baseline energy forecast, while the peak-reducing impacts of behind-the-meter energy storage units are deducted from the baseline peak forecasts (Table I-12).

Table I-1a reports the NYCA baseline energy and peak demand forecasts. New system-level summary tables for annual energy, summer peak, and winter peak are shown in Tables I-1b, I-1c, and I-1d respectively. These tables show the progression of the forecast from the modelled end-use consumption forecast to the baseline and topline forecasts. The impacts due to electric vehicles, behind-the-meter solar PV, behind-the-meter distributed generation, energy storage units, and energy efficiency and codes & standards are listed in this progression.

Historical and forecast data for actual annual energy and seasonal peak demand are reported in Tables I-2 through I-5. Tables I-6 and I-7 show the 90th and 10th percentile baseline energy and coincident peak demand forecasts due to weather variation.

The energy efficiency and codes & standards figures listed in Table I-8 are separated into estimated historical impacts, and forecasted impacts from programs and activities expected to occur from 2019 onwards. Tables I-9 and I-10 report the impacts of existing

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installations of solar PV and distributed energy generation, together with the impacts of expected installations.

The actual impact of solar PV varies considerably by hour of day. The hour of the actual NYCA peak varies yearly. The forecast of solar PV-related reductions in summer peak reported in Table I-9 assumes that the NYCA peak occurs from 4 p.m. to 5 p.m. EDT in late July. The forecast of solar PV-related reductions to the winter peak is zero because the sun sets before the assumed peak hour of 6 p.m. EST.

Table I-12 shows the forecast of nameplate capacity of energy storage units (Table I-12a), net annual electricity consumption of energy storage units (Table I-12b), and the peak-reducing impacts of behind-the-meter energy storage (Table I-12c). Energy storage units are split between transmission system, distribution system, and customer-sited storage. Customer-sited units are considered behind-the-meter, while transmission system and distribution system units are assumed to participate in the wholesale market. Both wholesale and behind-the-meter energy storage units will have relatively small positive net annual electricity consumption due to battery charging and discharging cycles. Only behind-the-meter energy storage units will reduce peak loads when injecting into the grid, and only a portion of installed units are expected to be injecting during the NYCA summer and winter peak hours. Wholesale market energy storage does not reduce peak load because it is assumed to be dispatched as generation.

The topline forecasts (Table I-13) add to the baseline forecasts the impacts listed in Tables I-8 (energy efficiency and codes & standards), I-9 (solar PV), I-10 (non-solar distributed generation), and I-12c (energy storage for peak impacts only), to show what the load would be if not for these impacts.

Table I-14 shows the projected Special Case Resources (SCR) and Emergency Demand Response Program (EDRP) enrollment. Table I-15 reports the date and hour of the NYCA system peak for the Summer and Winter Capability Periods from 1997 forward.

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Table I-1a: NYCA Baseline Energy and Demand Forecasts

Reflects Impacts of Energy Saving Programs & Behind-the-Meter Generation

2019 Long Term Forecast ¹ - 2019 to 2049												
Energy - GWh				Summer Peak Demand - MW				Winter Peak Demand - MW				
Year	Low ³	Baseline ⁴	High ³	Year	Low ³	Baseline ^{4, 5}	High ³	Year	Low ³	Baseline ⁴	High ³	
2018		158,445		2018		32,512		2018-19		24,114		
2019	155,545	157,459	159,373	2019	29,772	32,382	34,186	2019-20	22,718	24,123	25,724	
2020	154,151	156,044	157,937	2020	29,607	32,202	33,990	2020-21	22,362	23,745	25,321	
2021	152,725	154,600	156,475	2021	29,483	32,063	33,839	2021-22	22,092	23,457	25,011	
2022	152,285	154,155	156,025	2022	29,398	31,971	33,740	2022-23	22,053	23,415	24,967	
2023	151,709	153,572	155,435	2023	29,150	31,700	33,456	2023-24	22,024	23,381	24,931	
2024	151,524	153,386	155,248	2024	28,985	31,522	33,263	2024-25	21,984	23,340	24,886	
2025	150,784	152,639	154,494	2025	28,863	31,387	33,117	2025-26	21,944	23,297	24,839	
2026	150,528	152,380	154,232	2026	28,734	31,246	32,964	2026-27	21,928	23,281	24,819	
2027	150,519	152,371	154,223	2027	28,619	31,121	32,832	2027-28	21,955	23,307	24,848	
2028	151,151	153,012	154,873	2028	28,570	31,068	32,778	2028-29	22,079	23,436	24,985	
2029	151,382	153,247	155,112	2029	28,612	31,115	32,827	2029-30	22,188	23,550	25,105	
2030	151,580	153,449	155,318	2030	28,566	31,066	32,776	2030-31	22,221	23,586	25,141	
2031	151,982	153,857	155,732	2031	28,557	31,058	32,767	2031-32	22,284	23,652	25,211	
2032	153,009	154,899	156,789	2032	28,643	31,152	32,865	2032-33	22,388	23,762	25,327	
2033	153,405	155,302	157,199	2033	28,763	31,281	33,002	2033-34	22,503	23,884	25,456	
2034	154,383	156,293	158,203	2034	28,903	31,436	33,163	2034-35	22,654	24,043	25,627	
2035	155,558	157,486	159,414	2035	29,116	31,666	33,403	2035-36	22,840	24,240	25,834	
2036	157,242	159,194	161,146	2036	29,325	31,896	33,642	2036-37	23,061	24,471	26,079	
2037	158,238	160,203	162,168	2037	29,573	32,165	33,924	2037-38	23,304	24,728	26,353	
2038	159,740	161,726	163,712	2038	29,830	32,445	34,217	2038-39	23,577	25,018	26,660	
2039	161,023	163,026	165,029	2039	30,063	32,699	34,486	2039-40	23,876	25,335	26,996	
2040	163,135	165,164	167,193	2040	30,345	33,006	34,810	2040-41	24,170	25,647	27,328	
2041	164,168	166,210	168,252	2041	30,610	33,294	35,114	2041-42	24,450	25,944	27,644	
2042	165,481	167,539	169,597	2042	30,855	33,561	35,396	2042-43	24,695	26,204	27,921	
2043	166,788	168,862	170,936	2043	31,096	33,823	35,672	2043-44	24,941	26,465	28,199	
2044	168,419	170,513	172,607	2044	31,339	34,087	35,950	2044-45	25,193	26,732	28,483	
2045	169,452	171,559	173,666	2045	31,577	34,346	36,223	2045-46	25,459	27,014	28,783	
2046	170,795	172,919	175,043	2046	31,818	34,608	36,499	2046-47	25,733	27,305	29,093	
2047	172,130	174,271	176,412	2047	32,046	34,856	36,761	2047-48	26,013	27,602	29,409	
2048	173,786	175,948	178,110	2048	32,273	35,103	37,021	2048-49	26,300	27,907	29,734	
2049	175,466	177,649	179,832	2049	32,498	35,348	37,279	2049-50	26,595	28,220	30,067	

Average Annual Growth - Percent												
Period	Low	Baseline	High	Period	Low	Baseline	High	Period	Low	Baseline	High	
2019-24	-0.52%	-0.52%	-0.52%	2019-24	-0.53%	-0.53%	-0.54%	2019-24	-0.65%	-0.65%	-0.65%	
2024-29	-0.02%	-0.02%	-0.02%	2024-29	-0.26%	-0.26%	-0.26%	2024-29	0.19%	0.18%	0.18%	
2029-34	0.40%	0.40%	0.40%	2029-34	0.20%	0.21%	0.20%	2029-34	0.42%	0.42%	0.42%	
2034-39	0.86%	0.86%	0.86%	2034-39	0.80%	0.80%	0.80%	2034-39	1.08%	1.07%	1.07%	
2019-29	-0.27%	-0.27%	-0.27%	2019-29	-0.39%	-0.39%	-0.40%	2019-29	-0.23%	-0.24%	-0.24%	
2029-39	0.64%	0.64%	0.64%	2029-39	0.51%	0.51%	0.51%	2029-39	0.76%	0.76%	0.75%	
2039-49	0.90%	0.90%	0.90%	2039-49	0.81%	0.81%	0.81%	2039-49	1.14%	1.14%	1.14%	
2019-39	0.18%	0.18%	0.18%	2019-39	0.05%	0.05%	0.04%	2019-39	0.25%	0.25%	0.25%	
2019-49	0.43%	0.43%	0.43%	2019-49	0.31%	0.31%	0.30%	2019-49	0.57%	0.57%	0.56%	

Notes

1. All results in the Section I tables include transmission & distribution losses.
2. Summer Capability period is from May 1 to October 31. Winter Capability period is from November 1 of the current year to April 30 of the next year.
3. The low and high forecasts are at the 10th and 90th percentiles for extreme weather conditions, respectively.
4. Energy and Peak figures for 2018 are weather-normalized. The values for the actual annual energy, summer peak, and winter peak are reported in Table I-4a.
5. The 2019 NYCA summer peak forecast is the same as the 2019 ICAP forecast.

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Table I-1b: Summary of NYCA Annual Energy Forecasts – GWh

Year	(a) End-Use Consumption	(b) EV Energy	(c) Storage Annual Net Electricity Consumption	(d) = a + b + c Baseline Forecast	(e) EE and C&S	(f) Solar PV, BTM	(g) Non-Solar DG, BTM	(h) = d + e + f + g Topline Forecast
2019	157,246	210	3	157,459	1,274	2,208	1,215	162,156
2020	155,658	371	15	156,044	2,724	2,647	1,490	162,905
2021	154,042	530	28	154,600	4,086	3,077	1,884	163,647
2022	153,382	730	43	154,155	5,404	3,479	1,994	165,032
2023	152,543	966	63	153,572	6,883	3,838	2,078	166,371
2024	152,063	1,243	80	153,386	8,173	4,149	2,180	167,888
2025	150,948	1,588	103	152,639	9,846	4,412	2,254	169,151
2026	150,231	2,028	121	152,380	11,534	4,632	2,331	170,877
2027	149,697	2,533	141	152,371	12,952	4,816	2,426	172,565
2028	149,765	3,086	161	153,012	14,083	4,975	2,500	174,570
2029	149,416	3,653	178	153,247	15,202	5,108	2,569	176,126
2030	149,023	4,226	200	153,449	16,263	5,223	2,652	177,587
2031	148,798	4,840	219	153,857	17,298	5,337	2,709	179,201
2032	149,094	5,565	240	154,899	18,258	5,426	2,771	181,354
2033	148,725	6,316	261	155,302	19,188	5,508	2,844	182,842
2034	148,857	7,156	280	156,293	20,026	5,579	2,899	184,797
2035	149,159	8,031	296	157,486	20,760	5,644	2,955	186,845
2036	149,901	8,981	312	159,194	21,434	5,705	3,025	189,358
2037	149,896	9,983	324	160,203	22,045	5,768	3,072	191,088
2038	150,337	11,057	332	161,726	22,674	5,828	3,120	193,348
2039	150,568	12,119	339	163,026	23,271	5,878	3,162	195,337
2040	151,644	13,174	346	165,164	23,836	5,928	3,204	198,132
2041	151,813	14,044	353	166,210	24,371	5,975	3,246	199,802
2042	152,126	15,053	360	167,539	24,890	6,022	3,288	201,739
2043	152,398	16,097	367	168,862	25,380	6,069	3,330	203,641
2044	152,968	17,171	374	170,513	25,843	6,116	3,372	205,844
2045	152,898	18,280	381	171,559	26,284	6,163	3,414	207,420
2046	153,108	19,423	388	172,919	26,699	6,210	3,456	209,284
2047	153,279	20,597	395	174,271	27,098	6,257	3,498	211,124
2048	153,739	21,807	402	175,948	27,477	6,304	3,540	213,269
2049	154,192	23,048	409	177,649	27,856	6,351	3,582	215,438

(a) - End-Use Energy Consumption - Reflects impacts of energy saving programs & behind-the-meter generation

(b) - Table I-11a: Electric Vehicle Energy Usage Forecast

(c) - Table I-12b: Storage Annual Net Electricity Consumption

(d) - Table I-2: Baseline Annual Energy Forecast

(e) - Table I-8a: Energy Efficiency and Codes & Standards Energy Impacts, Relative to 2018

(f) - Table I-9b: Solar PV Impacts, Behind-the-Meter - Total Reductions in Annual Energy

(g) - Table I-10b: Non-Solar Distributed Generation Impacts, Behind-the-Meter - Total Reductions in Annual Energy

(h) - Table I-13a: Topline Forecast of Annual Energy

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Table I-1c: Summary of NYCA Summer Coincident Peak Demand Forecasts - MW

Year	(a) End-Use Peak Demand	(b) EV Peak Usage	(c) = a + b Baseline Forecast	(d) BTM Storage Peak Reductions	(e) EE and C&S	(f) Solar PV, BTM	(g) Non-Solar DG, BTM	(h) = c + d + e + f + g Topline Forecast
2019	32,358	24	32,382	7	228	542	224	33,383
2020	32,162	40	32,202	27	495	645	258	33,627
2021	32,012	51	32,063	50	751	745	315	33,924
2022	31,903	68	31,971	81	1,003	836	333	34,224
2023	31,610	90	31,700	117	1,293	918	348	34,376
2024	31,409	113	31,522	156	1,546	988	367	34,579
2025	31,243	144	31,387	192	1,871	1,044	381	34,875
2026	31,060	186	31,246	229	2,198	1,090	395	35,158
2027	30,885	236	31,121	269	2,474	1,127	412	35,403
2028	30,778	290	31,068	307	2,692	1,157	426	35,650
2029	30,768	347	31,115	342	2,895	1,184	438	35,974
2030	30,656	410	31,066	380	3,090	1,204	454	36,194
2031	30,584	474	31,058	417	3,280	1,224	466	36,445
2032	30,595	557	31,152	456	3,455	1,238	476	36,777
2033	30,638	643	31,281	493	3,629	1,249	491	37,143
2034	30,694	742	31,436	530	3,792	1,260	501	37,519
2035	30,814	852	31,666	560	3,932	1,269	511	37,938
2036	30,920	976	31,896	590	4,054	1,276	524	38,340
2037	31,054	1,111	32,165	611	4,166	1,285	534	38,761
2038	31,184	1,261	32,445	629	4,281	1,292	542	39,189
2039	31,269	1,430	32,699	641	4,390	1,296	549	39,575
2040	31,377	1,629	33,006	653	4,493	1,300	556	40,008
2041	31,558	1,736	33,294	664	4,592	1,304	563	40,417
2042	31,698	1,863	33,561	672	4,686	1,308	570	40,797
2043	31,831	1,992	33,823	681	4,776	1,312	577	41,169
2044	31,966	2,121	34,087	686	4,861	1,316	584	41,534
2045	32,085	2,261	34,346	694	4,941	1,320	591	41,892
2046	32,207	2,401	34,608	700	5,016	1,324	598	42,246
2047	32,312	2,544	34,856	705	5,088	1,328	605	42,582
2048	32,405	2,698	35,103	711	5,156	1,332	612	42,914
2049	32,498	2,850	35,348	717	5,224	1,336	619	43,244

(a) - End-Use Summer Peak Demand - Reflects impacts of energy saving programs & behind-the-meter generation

(b) - Table I-11b: Electric Vehicle Summer Coincident Peak Usage

(c) - Table I-3a: Baseline Summer Coincident Peak Demand

(d) - Table I-12c: Storage Impacts, Behind-the-Meter, Total Reductions in Summer Coincident Peak Demand

(e) - Table I-8b: Energy Efficiency and Codes & Standards Summer Coincident Peak Demand Reductions, Relative to 2018

(f) - Table I-9b: Solar PV Impacts, Behind-the-Meter, Total Reductions in Summer Coincident Peak Demand

(g) - Table I-10b: Non-Solar Distributed Generation Impacts, Behind-the-Meter, Total Reductions in Coincident Peak Demand

(h) - Table I-13b: Topline Forecast of Summer Coincident Peak Demand

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Table I-1d: Summary of NYCA Winter Coincident Peak Demand Forecasts - MW

Year	(a) End-Use Peak Demand	(b) EV Peak Usage	(c) = a + b Baseline Forecast	(d) BTM Storage Peak Reductions	(e) EE and C&S	(f) Solar PV, BTM	(g) Non-Solar DG, BTM	(h) = c + d + e + f + g Topline Forecast
2019-20	24,081	42	24,123	4	186	0	224	24,537
2020-21	23,677	68	23,745	16	386	0	258	24,405
2021-22	23,372	85	23,457	33	576	0	315	24,381
2022-23	23,302	113	23,415	53	770	0	333	24,571
2023-24	23,236	145	23,381	78	975	0	348	24,782
2024-25	23,156	184	23,340	103	1,173	0	367	24,983
2025-26	23,064	233	23,297	128	1,416	0	381	25,222
2026-27	22,981	300	23,281	154	1,653	0	395	25,483
2027-28	22,929	378	23,307	179	1,846	0	412	25,744
2028-29	22,970	466	23,436	202	2,002	0	426	26,066
2029-30	22,994	556	23,550	227	2,163	0	438	26,378
2030-31	22,936	650	23,586	256	2,312	0	454	26,608
2031-32	22,901	751	23,652	280	2,459	0	466	26,857
2032-33	22,887	875	23,762	305	2,594	0	476	27,137
2033-34	22,877	1,007	23,884	329	2,725	0	491	27,429
2034-35	22,886	1,157	24,043	354	2,839	0	501	27,737
2035-36	22,915	1,325	24,240	375	2,942	0	511	28,068
2036-37	22,960	1,511	24,471	395	3,038	0	524	28,428
2037-38	23,016	1,712	24,728	410	3,126	0	534	28,798
2038-39	23,080	1,938	25,018	421	3,209	0	542	29,190
2039-40	23,148	2,187	25,335	430	3,288	0	549	29,602
2040-41	23,239	2,407	25,647	438	3,363	0	556	30,004
2041-42	23,316	2,628	25,944	446	3,436	0	563	30,389
2042-43	23,388	2,816	26,204	450	3,507	0	570	30,731
2043-44	23,454	3,011	26,465	455	3,572	0	577	31,069
2044-45	23,520	3,212	26,732	460	3,633	0	584	31,409
2045-46	23,595	3,419	27,014	465	3,696	0	591	31,766
2046-47	23,671	3,634	27,305	468	3,753	0	598	32,124
2047-48	23,748	3,854	27,602	471	3,809	0	605	32,487
2048-49	23,827	4,080	27,907	476	3,862	0	612	32,857
2049-50	23,906	4,314	28,220	481	3,915	0	619	33,235

(a) - End-Use Winter Peak Demand - Reflects impacts of energy saving programs & behind-the-meter generation

(b) - Table I-11c: Electric Vehicle Winter Coincident Peak Usage

(c) - Table I-3b: Baseline Winter Coincident Peak Demand

(d) - Table I-12c: Storage Impacts, Behind-the-Meter, Total Reductions in Winter Coincident Peak Demand

(e) - Table I-8b: Energy Efficiency and Codes & Standards Winter Coincident Peak Demand Reductions, Relative to 2018-19

(f) - The winter coincident peak behind-the-meter solar PV impact is zero because the sun has set before the assumed peak hour of 6 PM EST.

(g) - Table I-10b: Non-Solar Distributed Generation Impacts, Behind-the-Meter, Total Reductions in Coincident Peak Demand

(h) - Table I-13b: Topline Forecast of Winter Coincident Peak Demand

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Table I-2: Baseline Annual Energy, Historical and Forecast
Reflects Impacts of Energy Saving Programs & Behind-the-Meter Generation

Annual Energy by Zone - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2009	15,149	9,860	15,949	5,140	7,893	10,991	10,189	2,917	5,700	53,100	21,892	158,780
2010	15,903	10,128	16,209	4,312	7,906	11,394	10,384	2,969	6,264	55,114	22,922	163,505
2011	16,017	10,040	16,167	5,903	7,752	11,435	10,066	2,978	6,208	54,059	22,704	163,329
2012	15,595	10,009	16,117	6,574	7,943	11,846	9,938	2,930	6,099	53,487	22,302	162,840
2013	15,790	9,981	16,368	6,448	8,312	12,030	9,965	2,986	6,204	53,316	22,114	163,514
2014	15,890	9,902	16,347	4,835	8,158	12,010	9,834	2,886	6,088	52,541	21,568	160,059
2015	15,761	9,906	16,299	4,441	8,141	12,422	10,065	2,847	6,299	53,485	21,906	161,572
2016	15,803	9,995	16,205	4,389	7,894	12,298	9,975	2,856	6,139	53,653	21,591	160,798
2017	15,261	9,775	15,819	4,322	7,761	11,823	9,669	2,883	5,976	52,266	20,815	156,370
2018	15,894	10,090	16,561	4,670	7,995	12,375	9,965	2,807	6,071	53,360	21,326	161,114
2019	15,550	9,975	16,213	4,845	7,815	12,117	9,793	2,739	5,895	51,874	20,643	157,459
2020	15,327	9,850	15,983	5,397	7,650	11,847	9,657	2,725	5,840	51,391	20,377	156,044
2021	15,172	9,781	15,830	5,386	7,536	11,705	9,568	2,719	5,805	51,080	20,018	154,600
2022	15,078	9,760	15,747	5,382	7,457	11,629	9,540	2,720	5,803	51,067	19,972	154,155
2023	14,955	9,724	15,649	5,373	7,368	11,540	9,509	2,728	5,807	51,102	19,817	153,572
2024	14,879	9,724	15,602	5,367	7,306	11,489	9,515	2,733	5,823	51,245	19,703	153,386
2025	14,738	9,676	15,485	5,355	7,214	11,390	9,475	2,742	5,824	51,248	19,492	152,639
2026	14,656	9,668	15,428	5,348	7,158	11,341	9,476	2,757	5,834	51,336	19,378	152,380
2027	14,596	9,666	15,385	5,341	7,112	11,304	9,492	2,782	5,852	51,494	19,347	152,371
2028	14,590	9,695	15,394	5,337	7,095	11,312	9,544	2,807	5,881	51,749	19,608	153,012
2029	14,535	9,689	15,348	5,328	7,059	11,278	9,563	2,828	5,902	51,934	19,783	153,247
2030	14,485	9,684	15,306	5,321	7,023	11,246	9,575	2,848	5,911	52,013	20,037	153,449
2031	14,451	9,688	15,275	5,316	6,995	11,227	9,598	2,877	5,927	52,156	20,347	153,857
2032	14,480	9,732	15,312	5,316	7,004	11,267	9,668	2,910	5,970	52,532	20,708	154,899
2033	14,444	9,733	15,281	5,313	6,979	11,255	9,693	2,942	5,987	52,687	20,988	155,302
2034	14,457	9,770	15,298	5,314	6,980	11,286	9,755	2,983	6,027	53,035	21,388	156,293
2035	14,480	9,809	15,325	5,315	6,988	11,324	9,824	3,030	6,074	53,448	21,869	157,486
2036	14,546	9,880	15,400	5,319	7,018	11,399	9,924	3,078	6,141	54,043	22,446	159,194
2037	14,542	9,904	15,399	5,319	7,012	11,423	9,980	3,125	6,182	54,398	22,919	160,203
2038	14,578	9,957	15,443	5,321	7,027	11,480	10,064	3,178	6,239	54,906	23,533	161,726
2039	14,622	10,016	15,494	5,325	7,049	11,546	10,153	3,238	6,299	55,435	23,849	163,026

Note: Historical values reflect actual experienced weather conditions. Forecasted values assume normal weather conditions.

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Table I-3a: Baseline Summer Coincident Peak Demand, Historical and Forecast
Reflects Impacts of Energy Saving Programs & Behind-the-Meter Generation

Coincident Summer Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2009	2,595	1,939	2,780	536	1,351	2,181	2,159	596	1,279	10,366	5,063	30,845
2010	2,663	1,985	2,846	552	1,437	2,339	2,399	700	1,487	11,213	5,832	33,453
2011	2,556	2,019	2,872	776	1,447	2,233	2,415	730	1,510	11,374	5,935	33,867
2012	2,743	2,107	2,888	774	1,420	2,388	2,242	653	1,393	10,722	5,109	32,439
2013	2,549	2,030	2,921	819	1,540	2,392	2,358	721	1,517	11,456	5,653	33,956
2014	2,227	1,617	2,574	527	1,267	2,033	2,036	584	1,333	10,567	5,017	29,782
2015	2,632	1,926	2,705	557	1,376	2,294	2,151	617	1,345	10,410	5,126	31,139
2016	2,672	2,008	2,812	561	1,384	2,328	2,123	636	1,392	10,990	5,169	32,075
2017	2,439	1,800	2,557	502	1,152	2,032	2,063	607	1,334	10,241	4,972	29,699
2018	2,391	1,947	2,747	600	1,300	2,378	2,190	631	1,393	10,890	5,394	31,861
2019	2,586	1,917	2,744	538	1,295	2,358	2,216	630	1,388	11,496	5,214	32,382
2020	2,547	1,894	2,700	629	1,265	2,301	2,199	627	1,393	11,539	5,108	32,202
2021	2,529	1,888	2,679	627	1,247	2,277	2,177	627	1,398	11,583	5,031	32,063
2022	2,511	1,888	2,660	627	1,230	2,253	2,174	627	1,399	11,592	5,010	31,971
2023	2,485	1,882	2,636	626	1,211	2,227	2,180	625	1,388	11,496	4,944	31,700
2024	2,463	1,879	2,616	625	1,194	2,201	2,176	624	1,387	11,487	4,870	31,522
2025	2,444	1,875	2,598	622	1,178	2,180	2,173	625	1,389	11,504	4,799	31,387
2026	2,428	1,873	2,581	621	1,163	2,163	2,164	626	1,389	11,504	4,734	31,246
2027	2,412	1,873	2,570	618	1,153	2,147	2,152	626	1,387	11,487	4,696	31,121
2028	2,402	1,873	2,557	618	1,143	2,136	2,142	627	1,386	11,478	4,706	31,068
2029	2,395	1,876	2,551	616	1,135	2,130	2,138	629	1,385	11,469	4,791	31,115
2030	2,385	1,876	2,538	615	1,128	2,114	2,127	629	1,384	11,461	4,809	31,066
2031	2,379	1,877	2,528	615	1,120	2,102	2,119	631	1,385	11,469	4,833	31,058
2032	2,376	1,880	2,524	614	1,117	2,094	2,118	635	1,394	11,548	4,852	31,152
2033	2,374	1,884	2,520	614	1,115	2,087	2,129	639	1,405	11,636	4,878	31,281
2034	2,375	1,890	2,516	614	1,113	2,083	2,131	644	1,418	11,749	4,903	31,436
2035	2,378	1,897	2,519	614	1,113	2,082	2,137	651	1,436	11,898	4,941	31,666
2036	2,384	1,907	2,521	614	1,116	2,085	2,143	657	1,453	12,038	4,978	31,896
2037	2,391	1,915	2,527	616	1,119	2,089	2,150	665	1,472	12,195	5,026	32,165
2038	2,401	1,927	2,537	616	1,124	2,097	2,156	673	1,491	12,352	5,071	32,445
2039	2,413	1,939	2,546	617	1,132	2,108	2,174	680	1,504	12,460	5,126	32,699

Note: Historical values reflect actual experienced weather conditions. Forecasted values assume normal weather conditions.

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Table I-3b: Baseline Winter Coincident Peak Demand, Historical and Forecast

Reflects Impacts of Energy Saving Programs & Behind-the-Meter Generation

Coincident Winter Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2009-10	2,330	1,555	2,558	648	1,289	1,788	1,527	561	813	7,562	3,443	24,074
2010-11	2,413	1,606	2,657	645	1,296	1,825	1,586	526	927	7,661	3,512	24,654
2011-12	2,220	1,535	2,532	904	1,243	1,765	1,618	490	893	7,323	3,378	23,901
2012-13	2,343	1,568	2,672	954	1,348	1,923	1,539	510	947	7,456	3,399	24,659
2013-14	2,358	1,645	2,781	848	1,415	1,989	1,700	625	974	7,810	3,594	25,739
2014-15	2,419	1,617	2,689	725	1,339	1,925	1,556	537	954	7,481	3,406	24,648
2015-16	2,253	1,486	2,469	667	1,307	1,861	1,496	453	889	7,274	3,164	23,319
2016-17	2,295	1,600	2,573	671	1,395	1,867	1,549	530	917	7,482	3,285	24,164
2017-18	2,313	1,533	2,766	735	1,398	2,012	1,638	506	933	7,822	3,425	25,081
2018-19	2,107	1,566	2,668	747	1,416	2,066	1,618	534	941	7,674	3,390	24,727
2019-20	2,292	1,563	2,483	767	1,307	1,938	1,521	480	890	7,536	3,346	24,123
2020-21	2,255	1,535	2,441	764	1,282	1,891	1,490	474	881	7,431	3,301	23,745
2021-22	2,225	1,515	2,407	761	1,264	1,860	1,469	469	871	7,324	3,292	23,457
2022-23	2,220	1,512	2,399	760	1,259	1,849	1,465	471	876	7,346	3,258	23,415
2023-24	2,215	1,510	2,390	760	1,255	1,839	1,461	472	882	7,386	3,211	23,381
2024-25	2,208	1,507	2,382	759	1,251	1,828	1,460	474	887	7,412	3,172	23,340
2025-26	2,201	1,506	2,372	759	1,244	1,818	1,457	477	893	7,434	3,136	23,297
2026-27	2,195	1,506	2,363	758	1,239	1,812	1,457	479	899	7,461	3,112	23,281
2027-28	2,190	1,506	2,357	758	1,236	1,807	1,458	483	906	7,493	3,113	23,307
2028-29	2,189	1,508	2,354	757	1,234	1,807	1,463	489	916	7,544	3,175	23,436
2029-30	2,190	1,515	2,354	758	1,232	1,811	1,469	494	926	7,608	3,193	23,550
2030-31	2,186	1,516	2,349	757	1,229	1,806	1,470	498	932	7,634	3,209	23,586
2031-32	2,186	1,518	2,347	757	1,227	1,802	1,474	502	939	7,675	3,225	23,652
2032-33	2,187	1,525	2,346	757	1,228	1,806	1,482	509	948	7,731	3,243	23,762
2033-34	2,191	1,531	2,349	758	1,229	1,807	1,490	517	959	7,792	3,261	23,884
2034-35	2,197	1,540	2,354	758	1,232	1,815	1,502	523	969	7,872	3,281	24,043
2035-36	2,206	1,549	2,362	760	1,237	1,823	1,516	533	984	7,965	3,305	24,240
2036-37	2,218	1,562	2,372	761	1,244	1,836	1,532	543	998	8,071	3,334	24,471
2037-38	2,230	1,574	2,385	763	1,253	1,851	1,549	554	1,013	8,192	3,364	24,728
2038-39	2,247	1,590	2,401	765	1,262	1,869	1,570	565	1,030	8,323	3,396	25,018
2039-40	2,266	1,607	2,421	767	1,276	1,891	1,591	577	1,047	8,466	3,426	25,335

Note: Historical values reflect actual experienced weather conditions. Forecasted values assume normal weather conditions.

2019 Load & Capacity Data Report

Table I-4a: Baseline Summer Non-Coincident Peak Demand, Historical and Forecast

Reflects Impacts of Energy Saving Programs & Behind-the-Meter Generation

Non-Coincident Summer Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K
2009	2,608	1,939	2,780	721	1,420	2,188	2,178	600	1,323	10,661	5,194
2010	2,768	2,075	2,932	566	1,469	2,379	2,407	700	1,492	11,213	5,832
2011	2,921	2,199	3,042	811	1,519	2,425	2,415	730	1,512	11,424	5,935
2012	2,746	2,113	2,889	809	1,433	2,388	2,273	681	1,414	11,112	5,516
2013	2,821	2,103	2,998	822	1,559	2,423	2,367	721	1,517	11,456	5,747
2014	2,620	1,898	2,832	552	1,410	2,300	2,052	590	1,348	10,572	5,035
2015	2,728	1,954	2,815	595	1,403	2,306	2,204	632	1,398	10,586	5,236
2016	2,800	2,023	2,830	704	1,397	2,342	2,198	652	1,392	10,990	5,394
2017	2,494	1,828	2,649	736	1,362	2,192	2,125	633	1,395	10,671	5,121
2018	2,769	2,073	3,021	620	1,409	2,424	2,251	642	1,399	11,070	5,394
2019	2,732	1,983	2,847	569	1,351	2,425	2,249	640	1,407	11,608	5,240
2020	2,691	1,959	2,801	666	1,320	2,367	2,232	637	1,412	11,651	5,134
2021	2,672	1,953	2,779	663	1,301	2,342	2,210	637	1,417	11,695	5,056
2022	2,653	1,953	2,759	663	1,284	2,317	2,207	637	1,418	11,704	5,035
2023	2,625	1,947	2,735	662	1,264	2,291	2,213	635	1,407	11,608	4,969
2024	2,602	1,944	2,714	661	1,246	2,264	2,209	634	1,406	11,598	4,894
2025	2,582	1,940	2,695	658	1,229	2,242	2,206	635	1,408	11,616	4,823
2026	2,565	1,937	2,678	657	1,214	2,225	2,196	636	1,408	11,616	4,758
2027	2,548	1,937	2,666	654	1,203	2,208	2,184	636	1,406	11,598	4,719
2028	2,537	1,937	2,653	654	1,193	2,197	2,174	637	1,405	11,589	4,730
2029	2,530	1,941	2,646	652	1,184	2,191	2,170	639	1,404	11,580	4,815
2030	2,520	1,941	2,633	651	1,177	2,174	2,159	639	1,403	11,572	4,833
2031	2,513	1,942	2,623	651	1,169	2,162	2,151	641	1,404	11,580	4,857
2032	2,510	1,945	2,618	650	1,166	2,154	2,150	645	1,413	11,660	4,876
2033	2,508	1,949	2,614	650	1,164	2,147	2,161	649	1,424	11,749	4,902
2034	2,509	1,955	2,610	650	1,161	2,143	2,163	654	1,437	11,863	4,928
2035	2,512	1,962	2,613	650	1,161	2,142	2,169	661	1,456	12,013	4,966
2036	2,518	1,973	2,615	650	1,165	2,145	2,175	667	1,473	12,155	5,003
2037	2,526	1,981	2,622	652	1,168	2,149	2,182	676	1,492	12,313	5,051
2038	2,536	1,993	2,632	652	1,173	2,157	2,188	684	1,511	12,472	5,096
2039	2,549	2,006	2,641	653	1,181	2,168	2,207	691	1,524	12,581	5,152

Note: Historical values reflect actual experienced weather conditions. Forecasted values assume normal weather conditions.

2019 Load & Capacity Data Report

Table I-4b: Baseline Winter Non-Coincident Peak Demand, Historical and Forecast

Reflects Impacts of Energy Saving Programs & Behind-the-Meter Generation

Non-Coincident Winter Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K
2009-10	2,363	1,584	2,558	657	1,377	1,804	1,599	578	954	7,612	3,528
2010-11	2,425	1,608	2,657	701	1,359	1,899	1,586	580	975	7,661	3,555
2011-12	2,241	1,542	2,532	906	1,309	1,792	1,618	542	893	7,532	3,412
2012-13	2,381	1,594	2,672	965	1,356	1,923	1,539	525	965	7,535	3,399
2013-14	2,430	1,654	2,781	899	1,424	1,998	1,700	625	978	7,896	3,594
2014-15	2,419	1,629	2,689	725	1,423	1,949	1,583	537	954	7,632	3,406
2015-16	2,285	1,530	2,540	704	1,314	1,895	1,546	514	907	7,362	3,189
2016-17	2,295	1,600	2,573	688	1,395	1,867	1,553	554	921	7,506	3,320
2017-18	2,333	1,579	2,766	736	1,411	2,025	1,645	550	952	7,822	3,441
2018-19	2,193	1,603	2,712	775	1,419	2,066	1,618	534	941	7,756	3,390
2019-20	2,320	1,584	2,488	787	1,339	1,954	1,532	504	903	7,606	3,365
2020-21	2,283	1,556	2,446	784	1,313	1,907	1,501	497	894	7,500	3,320
2021-22	2,252	1,535	2,412	781	1,295	1,875	1,480	492	884	7,392	3,311
2022-23	2,247	1,532	2,404	780	1,289	1,864	1,476	494	889	7,414	3,277
2023-24	2,242	1,530	2,395	780	1,285	1,854	1,472	495	895	7,455	3,229
2024-25	2,235	1,527	2,387	779	1,281	1,843	1,471	497	900	7,481	3,190
2025-26	2,228	1,526	2,377	779	1,274	1,833	1,467	500	906	7,503	3,154
2026-27	2,222	1,526	2,368	778	1,269	1,827	1,467	502	912	7,530	3,130
2027-28	2,217	1,526	2,362	778	1,266	1,822	1,468	507	920	7,563	3,131
2028-29	2,216	1,528	2,359	777	1,264	1,822	1,474	513	930	7,614	3,193
2029-30	2,217	1,535	2,359	778	1,262	1,826	1,480	518	940	7,679	3,211
2030-31	2,213	1,536	2,354	777	1,259	1,821	1,481	522	946	7,705	3,227
2031-32	2,213	1,538	2,352	777	1,257	1,817	1,485	527	953	7,746	3,243
2032-33	2,214	1,545	2,351	777	1,258	1,821	1,493	534	962	7,803	3,261
2033-34	2,218	1,552	2,354	778	1,259	1,822	1,501	542	973	7,864	3,280
2034-35	2,224	1,561	2,359	778	1,262	1,830	1,513	549	984	7,945	3,300
2035-36	2,233	1,570	2,367	780	1,267	1,838	1,527	559	999	8,039	3,324
2036-37	2,245	1,583	2,377	781	1,274	1,851	1,543	570	1,013	8,146	3,353
2037-38	2,257	1,595	2,390	783	1,283	1,866	1,560	581	1,028	8,268	3,383
2038-39	2,275	1,611	2,406	785	1,293	1,884	1,581	593	1,045	8,400	3,415
2039-40	2,294	1,629	2,426	787	1,307	1,907	1,602	605	1,063	8,545	3,446

Note: Historical values reflect actual experienced weather conditions. Forecasted values assume normal weather conditions.

2019 Load & Capacity Data Report

Table I-5: Baseline Peak Demand in G-to-J Locality, Historical and Forecast

Reflects Impacts of Energy Saving Programs & Behind-the-Meter Generation

G-to-J Locality Summer Peak Demand by Zone - MW

Year	G	H	I	J	G-J
2009	2,117	566	1,313	10,661	14,657
2010	2,399	700	1,487	11,213	15,799
2011	2,415	730	1,510	11,374	16,029
2012	2,273	657	1,414	11,098	15,442
2013	2,358	721	1,517	11,456	16,052
2014	2,046	585	1,348	10,572	14,551
2015	2,168	629	1,398	10,583	14,778
2016	2,123	636	1,392	10,990	15,141
2017	2,125	611	1,367	10,671	14,774
2018	2,130	642	1,379	10,980	15,130
2019	2,237	636	1,402	11,608	15,883
2020	2,220	633	1,407	11,651	15,911
2021	2,197	633	1,412	11,695	15,937
2022	2,194	633	1,413	11,704	15,944
2023	2,200	631	1,402	11,608	15,841
2024	2,196	630	1,401	11,598	15,825
2025	2,193	631	1,403	11,616	15,843
2026	2,184	632	1,403	11,616	15,835
2027	2,172	632	1,401	11,598	15,803
2028	2,162	633	1,400	11,589	15,784
2029	2,158	635	1,399	11,580	15,772
2030	2,147	635	1,398	11,572	15,752
2031	2,139	637	1,399	11,580	15,755
2032	2,138	641	1,408	11,660	15,847
2033	2,149	645	1,419	11,749	15,962
2034	2,151	650	1,433	11,863	16,097
2035	2,157	657	1,451	12,013	16,278
2036	2,163	663	1,468	12,155	16,449
2037	2,170	671	1,487	12,313	16,641
2038	2,176	679	1,506	12,472	16,833
2039	2,194	686	1,519	12,581	16,980

G-to-J Locality Winter Peak Demand by Zone - MW

Year	G	H	I	J	G-J
2009-10	1,555	518	879	7,612	10,564
2010-11	1,586	526	927	7,661	10,700
2011-12	1,527	527	878	7,417	10,349
2012-13	1,539	510	947	7,456	10,452
2013-14	1,683	601	965	7,896	11,145
2014-15	1,500	515	941	7,632	10,588
2015-16	1,524	442	896	7,297	10,159
2016-17	1,549	530	917	7,483	10,479
2017-18	1,638	506	933	7,822	10,899
2018-19	1,593	521	941	7,728	10,782
2019-20	1,519	469	890	7,586	10,464
2020-21	1,488	463	881	7,481	10,313
2021-22	1,467	458	871	7,373	10,169
2022-23	1,463	460	876	7,395	10,194
2023-24	1,459	461	882	7,435	10,237
2024-25	1,458	463	887	7,462	10,270
2025-26	1,455	466	893	7,484	10,298
2026-27	1,455	468	899	7,511	10,333
2027-28	1,456	472	906	7,543	10,377
2028-29	1,461	478	916	7,595	10,450
2029-30	1,467	483	926	7,659	10,535
2030-31	1,468	487	932	7,685	10,572
2031-32	1,472	491	939	7,726	10,628
2032-33	1,480	498	948	7,783	10,709
2033-34	1,488	505	959	7,844	10,796
2034-35	1,500	511	969	7,925	10,905
2035-36	1,514	521	984	8,018	11,037
2036-37	1,530	531	998	8,125	11,184
2037-38	1,547	542	1,013	8,247	11,349
2038-39	1,568	552	1,030	8,379	11,529
2039-40	1,589	564	1,047	8,523	11,723

Note: Historical values reflect actual experienced weather conditions. Forecasted values assume normal weather conditions.

2019 Load & Capacity Data Report

Table I-6: 90th & 10th Percentile Forecasts of Baseline Energy
Reflects Impacts of Energy Saving Programs & Behind-the-Meter Generation

90th Percentile of Annual Energy due to Weather - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	15,693	10,094	16,361	4,866	7,889	12,253	9,927	2,787	5,976	52,574	20,953	159,373
2020	15,468	9,967	16,128	5,420	7,723	11,980	9,789	2,773	5,921	52,085	20,683	157,937
2021	15,312	9,897	15,974	5,409	7,608	11,836	9,699	2,767	5,885	51,770	20,318	156,475
2022	15,217	9,876	15,890	5,405	7,528	11,759	9,671	2,768	5,883	51,756	20,272	156,025
2023	15,093	9,840	15,791	5,396	7,438	11,669	9,639	2,776	5,887	51,792	20,114	155,435
2024	15,016	9,840	15,744	5,390	7,375	11,618	9,645	2,781	5,903	51,937	19,999	155,248
2025	14,874	9,791	15,626	5,378	7,283	11,518	9,605	2,791	5,904	51,940	19,784	154,494
2026	14,791	9,783	15,568	5,371	7,226	11,468	9,606	2,806	5,915	52,029	19,669	154,232
2027	14,730	9,781	15,525	5,364	7,180	11,431	9,622	2,831	5,933	52,189	19,637	154,223
2028	14,724	9,810	15,534	5,360	7,162	11,439	9,675	2,857	5,962	52,448	19,902	154,873
2029	14,669	9,804	15,488	5,351	7,126	11,404	9,694	2,878	5,983	52,635	20,080	155,112
2030	14,618	9,799	15,445	5,344	7,090	11,372	9,706	2,898	5,993	52,715	20,338	155,318
2031	14,584	9,803	15,414	5,339	7,061	11,353	9,729	2,928	6,009	52,860	20,652	155,732
2032	14,613	9,848	15,451	5,339	7,071	11,393	9,800	2,962	6,052	53,241	21,019	156,789
2033	14,577	9,849	15,420	5,336	7,045	11,381	9,826	2,994	6,070	53,398	21,303	157,199
2034	14,590	9,886	15,437	5,337	7,046	11,412	9,889	3,036	6,110	53,751	21,709	158,203
2035	14,613	9,926	15,464	5,338	7,054	11,451	9,959	3,084	6,158	54,170	22,197	159,414
2036	14,680	9,998	15,540	5,342	7,085	11,527	10,060	3,132	6,226	54,773	22,783	161,146
2037	14,676	10,022	15,539	5,342	7,079	11,551	10,117	3,180	6,267	55,132	23,263	162,168
2038	14,712	10,075	15,584	5,344	7,094	11,609	10,202	3,234	6,325	55,647	23,886	163,712
2039	14,757	10,135	15,635	5,348	7,116	11,675	10,292	3,295	6,386	56,183	24,207	165,029

Note: 90th percentile energy forecast is representative of weather conditions above normal in summer and below normal in winter.

10th Percentile of Annual Energy due to Weather - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	15,407	9,856	16,065	4,824	7,741	11,981	9,659	2,691	5,814	51,174	20,333	155,545
2020	15,186	9,733	15,838	5,374	7,577	11,714	9,525	2,677	5,759	50,697	20,071	154,151
2021	15,032	9,665	15,686	5,363	7,464	11,574	9,437	2,671	5,725	50,390	19,718	152,725
2022	14,939	9,644	15,604	5,359	7,386	11,499	9,409	2,672	5,723	50,378	19,672	152,285
2023	14,817	9,608	15,507	5,350	7,298	11,411	9,379	2,680	5,727	50,412	19,520	151,709
2024	14,742	9,608	15,460	5,344	7,237	11,360	9,385	2,685	5,743	50,553	19,407	151,524
2025	14,602	9,561	15,344	5,332	7,145	11,262	9,345	2,693	5,744	50,556	19,200	150,784
2026	14,521	9,553	15,288	5,325	7,090	11,214	9,346	2,708	5,753	50,643	19,087	150,528
2027	14,462	9,551	15,245	5,318	7,044	11,177	9,362	2,733	5,771	50,799	19,057	150,519
2028	14,456	9,580	15,254	5,314	7,028	11,185	9,413	2,757	5,800	51,050	19,314	151,151
2029	14,401	9,574	15,208	5,305	6,992	11,152	9,432	2,778	5,821	51,233	19,486	151,382
2030	14,352	9,569	15,167	5,298	6,956	11,120	9,444	2,798	5,829	51,311	19,736	151,580
2031	14,318	9,573	15,136	5,293	6,929	11,101	9,467	2,826	5,845	51,452	20,042	151,982
2032	14,347	9,616	15,173	5,293	6,937	11,141	9,536	2,858	5,888	51,823	20,397	153,009
2033	14,311	9,617	15,142	5,290	6,913	11,129	9,560	2,890	5,904	51,976	20,673	153,405
2034	14,324	9,654	15,159	5,291	6,914	11,160	9,621	2,930	5,944	52,319	21,067	154,383
2035	14,347	9,692	15,186	5,292	6,922	11,197	9,689	2,976	5,990	52,726	21,541	155,558
2036	14,412	9,762	15,260	5,296	6,951	11,271	9,788	3,024	6,056	53,313	22,109	157,242
2037	14,408	9,786	15,259	5,296	6,945	11,295	9,843	3,070	6,097	53,664	22,575	158,238
2038	14,444	9,839	15,302	5,298	6,960	11,351	9,926	3,122	6,153	54,165	23,180	159,740
2039	14,487	9,897	15,353	5,302	6,982	11,417	10,014	3,181	6,212	54,687	23,491	161,023

Note: 10th percentile energy forecast is representative of weather conditions below normal in summer and above normal in winter.

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Table I-7a: 90th & 10th Percentile Forecasts of Baseline Summer Coincident Peak Demand

Reflects Impacts of Energy Saving Programs & Behind-the-Meter Generation

90th Percentile of Summer Coincident Peak Demand due to Weather - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	2,750	2,039	2,918	572	1,377	2,524	2,372	655	1,444	11,860	5,675	34,186
2020	2,709	2,014	2,871	669	1,345	2,463	2,354	652	1,449	11,904	5,560	33,990
2021	2,690	2,008	2,849	667	1,326	2,437	2,330	652	1,454	11,950	5,476	33,839
2022	2,670	2,008	2,829	667	1,308	2,412	2,327	652	1,455	11,959	5,453	33,740
2023	2,643	2,002	2,803	666	1,288	2,384	2,334	650	1,444	11,860	5,382	33,456
2024	2,619	1,998	2,782	665	1,270	2,356	2,329	649	1,443	11,851	5,301	33,263
2025	2,599	1,994	2,763	661	1,253	2,334	2,326	650	1,445	11,868	5,224	33,117
2026	2,582	1,992	2,745	660	1,237	2,315	2,316	651	1,445	11,868	5,153	32,964
2027	2,565	1,992	2,733	657	1,226	2,298	2,304	651	1,443	11,851	5,112	32,832
2028	2,555	1,992	2,719	657	1,216	2,287	2,293	652	1,442	11,842	5,123	32,778
2029	2,547	1,995	2,713	655	1,207	2,280	2,289	654	1,440	11,832	5,215	32,827
2030	2,536	1,995	2,699	654	1,200	2,263	2,277	654	1,439	11,824	5,235	32,776
2031	2,530	1,996	2,689	654	1,191	2,250	2,268	656	1,440	11,832	5,261	32,767
2032	2,527	1,999	2,684	653	1,188	2,242	2,267	660	1,450	11,914	5,281	32,865
2033	2,525	2,004	2,680	653	1,186	2,234	2,279	665	1,461	12,005	5,310	33,002
2034	2,526	2,010	2,676	653	1,184	2,230	2,281	670	1,475	12,121	5,337	33,163
2035	2,529	2,017	2,679	653	1,184	2,229	2,288	677	1,494	12,275	5,378	33,403
2036	2,535	2,028	2,681	653	1,187	2,232	2,294	683	1,511	12,419	5,419	33,642
2037	2,543	2,037	2,687	655	1,190	2,236	2,301	692	1,531	12,581	5,471	33,924
2038	2,553	2,049	2,698	655	1,195	2,245	2,308	700	1,551	12,743	5,520	34,217
2039	2,566	2,062	2,708	656	1,204	2,257	2,327	707	1,564	12,855	5,580	34,486

Note: 90th percentile summer peak demand forecast is representative of above normal weather conditions.

10th Percentile of Summer Coincident Peak Demand due to Weather - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	2,411	1,787	2,558	502	1,207	2,152	2,022	572	1,260	10,619	4,682	29,772
2020	2,375	1,766	2,517	586	1,179	2,100	2,006	569	1,264	10,658	4,587	29,607
2021	2,358	1,760	2,498	585	1,163	2,078	1,986	569	1,269	10,699	4,518	29,483
2022	2,341	1,760	2,480	585	1,147	2,056	1,984	569	1,270	10,707	4,499	29,398
2023	2,317	1,755	2,458	584	1,129	2,032	1,989	567	1,260	10,619	4,440	29,150
2024	2,296	1,752	2,439	583	1,113	2,008	1,986	566	1,259	10,610	4,373	28,985
2025	2,279	1,748	2,422	580	1,098	1,989	1,983	567	1,261	10,626	4,310	28,863
2026	2,264	1,746	2,406	579	1,084	1,974	1,975	568	1,261	10,626	4,251	28,734
2027	2,249	1,746	2,396	576	1,075	1,959	1,964	568	1,259	10,610	4,217	28,619
2028	2,240	1,746	2,384	576	1,066	1,949	1,954	569	1,258	10,602	4,226	28,570
2029	2,233	1,749	2,378	574	1,058	1,944	1,951	571	1,257	10,594	4,303	28,612
2030	2,224	1,749	2,366	573	1,052	1,929	1,941	571	1,256	10,586	4,319	28,566
2031	2,218	1,750	2,357	573	1,044	1,918	1,933	573	1,257	10,594	4,340	28,557
2032	2,215	1,753	2,353	572	1,041	1,911	1,933	576	1,265	10,667	4,357	28,643
2033	2,213	1,757	2,350	572	1,040	1,904	1,943	580	1,275	10,748	4,381	28,763
2034	2,214	1,762	2,346	572	1,038	1,901	1,944	584	1,287	10,852	4,403	28,903
2035	2,217	1,769	2,349	572	1,038	1,900	1,950	591	1,303	10,990	4,437	29,116
2036	2,223	1,778	2,350	572	1,041	1,902	1,955	596	1,319	11,119	4,470	29,325
2037	2,229	1,785	2,356	574	1,043	1,906	1,962	604	1,336	11,264	4,514	29,573
2038	2,239	1,797	2,365	574	1,048	1,913	1,967	611	1,353	11,409	4,554	29,830
2039	2,250	1,808	2,374	575	1,055	1,923	1,984	617	1,365	11,509	4,603	30,063

Note: 10th percentile summer peak demand forecast is representative of below normal weather conditions.

2019 Load & Capacity Data Report

Table I-7b: 90th & 10th Percentile Forecasts of Baseline Winter Coincident Peak Demand

Reflects Impacts of Energy Saving Programs & Behind-the-Meter Generation

90th Percentile of Winter Coincident Peak Demand due to Weather - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019-20	2,474	1,687	2,680	828	1,411	2,090	1,640	505	935	7,921	3,553	25,724
2020-21	2,434	1,657	2,635	825	1,384	2,039	1,607	498	926	7,811	3,505	25,321
2021-22	2,401	1,635	2,598	821	1,364	2,006	1,584	493	915	7,698	3,496	25,011
2022-23	2,396	1,632	2,589	820	1,359	1,994	1,580	495	921	7,721	3,460	24,967
2023-24	2,391	1,630	2,580	820	1,355	1,983	1,576	496	927	7,763	3,410	24,931
2024-25	2,383	1,627	2,571	819	1,350	1,972	1,575	498	932	7,791	3,368	24,886
2025-26	2,376	1,625	2,560	819	1,343	1,961	1,571	501	939	7,814	3,330	24,839
2026-27	2,369	1,625	2,550	818	1,337	1,954	1,571	503	945	7,842	3,305	24,819
2027-28	2,364	1,625	2,544	818	1,334	1,949	1,572	508	952	7,876	3,306	24,848
2028-29	2,363	1,628	2,541	817	1,332	1,949	1,578	514	963	7,929	3,371	24,985
2029-30	2,364	1,635	2,541	818	1,330	1,953	1,584	519	973	7,997	3,391	25,105
2030-31	2,359	1,636	2,535	817	1,326	1,948	1,585	523	980	8,024	3,408	25,141
2031-32	2,359	1,638	2,533	817	1,324	1,943	1,590	528	987	8,067	3,425	25,211
2032-33	2,360	1,646	2,532	817	1,325	1,948	1,598	535	996	8,126	3,444	25,327
2033-34	2,365	1,652	2,535	818	1,326	1,949	1,607	543	1,008	8,190	3,463	25,456
2034-35	2,371	1,662	2,541	818	1,330	1,958	1,620	550	1,019	8,274	3,484	25,627
2035-36	2,381	1,672	2,549	820	1,335	1,966	1,635	560	1,034	8,372	3,510	25,834
2036-37	2,394	1,686	2,560	821	1,343	1,980	1,652	571	1,049	8,483	3,540	26,079
2037-38	2,407	1,699	2,574	824	1,352	1,996	1,671	582	1,065	8,611	3,572	26,353
2038-39	2,425	1,716	2,591	826	1,362	2,016	1,693	594	1,083	8,748	3,606	26,660
2039-40	2,446	1,734	2,613	828	1,377	2,039	1,716	606	1,100	8,899	3,638	26,996

Note: 90th percentile winter peak demand forecast is representative of below normal weather conditions.

10th Percentile of Winter Coincident Peak Demand due to Weather - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019-20	2,131	1,453	2,309	713	1,215	1,805	1,417	458	850	7,194	3,173	22,718
2020-21	2,097	1,427	2,270	710	1,192	1,761	1,388	452	841	7,094	3,130	22,362
2021-22	2,069	1,409	2,238	708	1,175	1,732	1,368	448	831	6,992	3,122	22,092
2022-23	2,064	1,406	2,231	707	1,171	1,722	1,364	450	836	7,013	3,089	22,053
2023-24	2,060	1,404	2,223	707	1,167	1,713	1,361	451	842	7,051	3,045	22,024
2024-25	2,053	1,401	2,215	706	1,163	1,703	1,360	452	847	7,076	3,008	21,984
2025-26	2,047	1,400	2,206	706	1,157	1,693	1,357	455	852	7,097	2,974	21,944
2026-27	2,041	1,400	2,197	705	1,152	1,688	1,357	457	858	7,122	2,951	21,928
2027-28	2,037	1,400	2,192	705	1,149	1,683	1,358	461	865	7,153	2,952	21,955
2028-29	2,036	1,402	2,189	704	1,148	1,683	1,363	467	874	7,202	3,011	22,079
2029-30	2,037	1,409	2,189	705	1,146	1,687	1,368	472	884	7,263	3,028	22,188
2030-31	2,033	1,410	2,184	704	1,143	1,682	1,369	475	890	7,288	3,043	22,221
2031-32	2,033	1,412	2,183	704	1,141	1,678	1,373	479	896	7,327	3,058	22,284
2032-33	2,034	1,418	2,182	704	1,142	1,682	1,380	486	905	7,380	3,075	22,388
2033-34	2,037	1,424	2,184	705	1,143	1,683	1,388	494	915	7,438	3,092	22,503
2034-35	2,043	1,432	2,189	705	1,146	1,690	1,399	499	925	7,515	3,111	22,654
2035-36	2,051	1,440	2,196	707	1,150	1,698	1,412	509	939	7,604	3,134	22,840
2036-37	2,063	1,453	2,206	708	1,157	1,710	1,427	518	953	7,705	3,161	23,061
2037-38	2,074	1,464	2,218	710	1,165	1,724	1,443	529	967	7,820	3,190	23,304
2038-39	2,090	1,479	2,233	711	1,174	1,741	1,462	539	983	7,945	3,220	23,577
2039-40	2,107	1,494	2,251	713	1,187	1,761	1,482	551	999	8,082	3,249	23,876

Note: 10th percentile winter peak demand forecast is representative of above normal weather conditions.

2019 Load & Capacity Data Report

Table I-8a: Energy Efficiency and Codes & Standards Energy Impacts

Reflects Cumulative Impacts

Estimated Historical Cumulative Reductions in Annual Energy by Zone - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2003	118	57	116	11	54	87	24	15	21	187	10	700
2004	228	114	224	21	105	168	46	29	42	371	21	1,369
2005	320	163	316	29	148	237	68	42	63	555	36	1,977
2006	451	236	447	41	210	334	100	61	92	804	57	2,833
2007	540	287	537	49	253	401	131	76	118	1,039	81	3,512
2008	588	347	587	53	275	441	153	82	130	1,125	255	4,036
2009	703	423	698	63	331	535	228	99	157	1,371	429	5,037
2010	873	507	838	75	411	672	297	120	207	1,840	639	6,479
2011	1,124	651	1,049	94	525	865	439	152	273	2,433	880	8,485
2012	1,279	758	1,192	107	602	988	534	172	311	2,768	1,173	9,884
2013	1,442	886	1,353	121	687	1,125	643	197	356	3,206	1,513	11,529
2014	1,641	1,031	1,542	137	787	1,284	771	225	412	3,687	1,852	13,369
2015	1,859	1,170	1,742	154	896	1,471	897	252	459	4,105	2,228	15,233
2016	2,054	1,298	1,914	169	986	1,626	1,022	281	541	4,818	2,411	17,120
2017	2,268	1,433	2,109	186	1,089	1,806	1,168	303	600	5,335	2,733	19,030
2018	2,452	1,565	2,284	202	1,181	1,961	1,275	322	641	5,722	2,952	20,557

Forecast of Cumulative Reductions in Annual Energy by Zone Relative to 2018 - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	169	154	167	16	86	142	74	14	28	313	111	1,274
2020	336	239	332	31	171	282	160	34	67	756	316	2,724
2021	484	325	478	45	247	406	246	53	106	1,194	502	4,086
2022	611	404	603	56	312	513	326	71	143	1,608	757	5,404
2023	745	490	736	69	380	625	417	92	184	2,068	1,077	6,883
2024	861	569	850	80	439	722	503	110	221	2,482	1,336	8,173
2025	1,012	678	1,000	93	516	849	605	134	269	3,023	1,667	9,846
2026	1,161	791	1,147	107	592	974	708	159	318	3,580	1,997	11,534
2027	1,285	900	1,269	119	655	1,078	794	180	360	4,054	2,258	12,952
2028	1,391	991	1,374	128	710	1,168	868	199	397	4,471	2,386	14,083
2029	1,502	1,082	1,483	139	766	1,260	948	218	437	4,915	2,452	15,202
2030	1,600	1,162	1,581	148	816	1,343	1,022	238	475	5,346	2,532	16,263
2031	1,700	1,241	1,680	157	867	1,427	1,102	255	511	5,744	2,614	17,298
2032	1,797	1,321	1,776	166	917	1,509	1,177	271	541	6,087	2,696	18,258
2033	1,893	1,395	1,870	175	965	1,589	1,245	284	567	6,381	2,824	19,188
2034	1,982	1,463	1,958	183	1,011	1,663	1,319	295	590	6,637	2,925	20,026
2035	2,067	1,526	2,042	191	1,054	1,735	1,382	305	610	6,861	2,987	20,760
2036	2,147	1,589	2,121	198	1,095	1,802	1,456	313	627	7,052	3,034	21,434
2037	2,222	1,646	2,195	205	1,133	1,865	1,514	321	642	7,222	3,080	22,045
2038	2,291	1,703	2,264	212	1,169	1,923	1,582	327	655	7,369	3,179	22,674
2039	2,359	1,754	2,330	218	1,203	1,980	1,645	334	667	7,508	3,273	23,271

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Table I-8b: Energy Efficiency and Codes & Standards Peak Impacts

Reflects Cumulative Impacts

Reductions in Coincident Summer Peak Demand by Zone Relative to 2018 - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	30	27	29	3	15	25	13	2	5	55	24	228
2020	59	42	58	5	30	50	28	6	12	132	73	495
2021	85	57	84	8	43	71	43	9	19	209	123	751
2022	107	71	106	10	55	90	57	13	25	282	187	1,003
2023	131	86	129	12	67	110	73	16	32	362	275	1,293
2024	151	100	149	14	77	127	88	19	39	435	347	1,546
2025	178	119	176	16	91	149	106	24	47	529	436	1,871
2026	204	139	201	19	104	171	124	28	56	627	525	2,198
2027	226	158	223	21	115	189	139	32	63	710	598	2,474
2028	244	174	241	23	125	205	152	35	70	783	640	2,692
2029	264	190	261	24	134	221	166	38	76	861	660	2,895
2030	281	204	278	26	143	236	179	42	83	936	682	3,090
2031	299	218	295	28	152	251	193	45	89	1,006	704	3,280
2032	316	232	312	29	161	265	206	47	95	1,066	726	3,455
2033	332	245	328	31	170	279	218	50	99	1,117	760	3,629
2034	348	257	344	32	177	292	231	52	103	1,162	794	3,792
2035	363	268	359	34	185	305	242	53	107	1,201	815	3,932
2036	377	279	372	35	192	316	255	55	110	1,235	828	4,054
2037	390	289	386	36	199	328	265	56	112	1,264	841	4,166
2038	402	299	398	37	205	338	277	57	115	1,290	863	4,281
2039	414	308	409	38	211	348	288	58	117	1,315	884	4,390

Reductions in Coincident Winter Peak Demand by Zone Relative to 2018-19 - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019-20	24	22	24	2	12	20	11	2	4	44	21	186
2020-21	47	34	47	4	24	40	23	5	10	107	45	386
2021-22	68	46	67	6	35	57	35	8	15	170	69	576
2022-23	86	57	85	8	44	72	46	10	20	228	114	770
2023-24	105	69	104	10	54	88	59	13	26	294	153	975
2024-25	121	80	120	11	62	102	72	16	31	352	206	1,173
2025-26	143	96	141	13	73	120	86	19	38	429	258	1,416
2026-27	164	111	162	15	83	137	101	23	45	508	304	1,653
2027-28	181	127	179	17	92	152	113	26	51	576	332	1,846
2028-29	196	140	194	18	100	164	123	28	56	635	348	2,002
2029-30	212	152	209	20	108	178	135	31	62	698	358	2,163
2030-31	226	164	223	21	115	189	145	34	67	759	369	2,312
2031-32	240	175	237	22	122	201	157	36	72	816	381	2,459
2032-33	253	186	250	23	129	213	167	38	77	864	394	2,594
2033-34	267	197	264	25	136	224	177	40	81	906	408	2,725
2034-35	279	206	276	26	142	234	188	42	84	942	420	2,839
2035-36	291	215	288	27	149	244	196	43	87	974	428	2,942
2036-37	303	224	299	28	154	254	207	44	89	1,001	435	3,038
2037-38	313	232	309	29	160	263	215	46	91	1,025	443	3,126
2038-39	323	240	319	30	165	271	225	46	93	1,046	451	3,209
2039-40	332	247	328	31	170	279	234	47	95	1,066	459	3,288

2019 Load & Capacity Data Report

Table I-9a: Solar PV Nameplate Capacity, Behind-the-Meter

Reflects Total Cumulative Nameplate Capacity

Nameplate Capacity by Zone - MW DC

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2009	2	1	2	0	1	4	4	1	1	3	15	34
2010	3	1	3	0	1	6	7	1	2	5	23	52
2011	5	2	5	0	2	11	11	2	3	8	34	83
2012	8	3	9	1	4	18	18	3	5	14	49	132
2013	12	5	14	1	7	30	28	5	7	23	71	203
2014	18	8	23	1	12	50	44	7	11	38	101	313
2015	28	13	37	2	21	80	68	11	16	60	173	509
2016	41	21	57	2	34	123	102	17	23	91	268	779
2017	61	32	86	3	55	177	146	23	31	129	356	1,099
2018	89	47	124	4	84	239	197	29	39	171	456	1,479
2019	125	63	169	5	123	299	251	34	46	210	537	1,862
2020	172	80	219	7	169	354	305	38	53	245	581	2,223
2021	226	96	268	9	220	402	354	41	58	276	620	2,570
2022	285	110	313	11	272	445	396	43	62	326	627	2,890
2023	344	122	350	14	320	481	429	45	65	373	630	3,173
2024	397	132	380	18	362	513	456	46	67	410	633	3,414
2025	441	141	403	22	398	540	476	47	68	440	636	3,612
2026	477	148	421	26	427	562	492	47	69	465	638	3,772
2027	504	153	435	30	451	582	505	48	70	485	641	3,904
2028	524	158	446	35	470	598	516	48	71	501	644	4,011
2029	539	162	455	39	485	612	524	49	72	514	647	4,098
2030	550	165	462	42	498	625	531	49	72	525	650	4,169
2031	557	168	468	45	509	636	538	49	73	531	666	4,240
2032	563	171	473	48	518	645	543	49	73	537	670	4,290
2033	568	173	477	50	526	653	547	50	73	541	674	4,332
2034	571	174	481	51	533	659	551	50	74	544	678	4,366
2035	573	176	484	53	538	665	554	50	74	546	682	4,395
2036	576	177	486	54	543	670	557	50	74	548	686	4,421
2037	578	179	489	55	548	675	560	50	74	550	690	4,448
2038	580	180	491	56	552	679	562	50	74	552	694	4,470
2039	581	180	492	57	555	682	564	50	74	554	698	4,487

Note: Historical values reflect information from New York State's "Solar Electric Programs Reported by NYSERDA" database and from Transmission Owners.

2019 Load & Capacity Data Report

Table I-9b: Solar PV Impacts, Behind-the-Meter

Reflects Total Cumulative Impacts

Reductions in Annual Energy by Zone - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	148	75	200	6	146	354	298	40	55	249	637	2,208
2020	205	95	261	8	201	422	363	45	63	292	692	2,647
2021	271	115	321	11	263	481	424	49	69	331	742	3,077
2022	343	132	377	13	327	536	477	52	75	392	755	3,479
2023	416	148	423	17	387	582	519	54	79	451	762	3,838
2024	483	160	462	22	440	624	554	56	81	498	769	4,149
2025	539	172	492	27	486	660	581	57	83	538	777	4,412
2026	586	182	517	32	524	690	604	58	85	571	783	4,632
2027	622	189	537	37	556	718	623	59	86	598	791	4,816
2028	650	196	553	43	583	742	640	60	88	621	799	4,975
2029	672	202	567	49	604	763	653	61	90	641	806	5,108
2030	689	207	579	53	624	783	665	61	90	658	814	5,223
2031	701	211	589	57	641	801	677	62	92	668	838	5,337
2032	712	216	598	61	655	816	687	62	92	679	848	5,426
2033	722	220	606	64	669	830	695	64	93	688	857	5,508
2034	730	222	615	65	681	842	704	64	95	695	866	5,579
2035	736	226	622	68	691	854	711	64	95	701	876	5,644
2036	743	228	627	70	701	865	719	65	95	707	885	5,705
2037	750	232	634	71	711	875	726	65	96	713	895	5,768
2038	756	235	640	73	720	885	733	65	96	720	905	5,828
2039	761	236	645	75	727	893	739	65	97	726	914	5,878

Reductions in Coincident Summer Peak Demand by Zone - MW AC

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	34	17	48	1	35	86	74	10	14	63	160	542
2020	47	22	62	2	48	102	89	11	16	73	173	645
2021	62	27	76	3	62	115	104	12	17	82	185	745
2022	78	30	89	3	77	128	116	13	18	97	187	836
2023	95	34	99	4	91	138	126	13	19	111	188	918
2024	109	37	108	5	103	147	134	14	20	122	189	988
2025	121	39	114	7	113	155	140	14	20	131	190	1,044
2026	131	41	120	8	121	161	144	14	21	139	190	1,090
2027	139	42	123	9	128	167	148	14	21	145	191	1,127
2028	144	44	127	10	133	172	151	14	21	149	192	1,157
2029	148	45	129	12	138	176	154	15	21	153	193	1,184
2030	151	46	131	13	141	179	156	15	21	157	194	1,204
2031	153	46	133	13	145	182	158	15	22	158	199	1,224
2032	155	47	134	14	147	185	159	15	22	160	200	1,238
2033	156	48	135	15	149	187	160	15	22	161	201	1,249
2034	157	48	137	15	151	189	162	15	22	162	202	1,260
2035	158	49	137	16	153	191	162	15	22	163	203	1,269
2036	159	49	138	16	154	192	163	15	22	163	205	1,276
2037	159	50	139	16	156	194	164	15	22	164	206	1,285
2038	160	50	139	17	157	195	165	15	22	165	207	1,292
2039	160	50	140	17	158	196	165	15	22	165	208	1,296

Note: The actual impact of solar PV varies considerably by hour of day. The hour of the NYCA coincident peak varies yearly. The solar PV peak impact reported here assumes that the NYCA coincident peak occurs from 4 PM to 5 PM EDT in late July.

Note: The winter coincident peak behind-the-meter solar PV impact is zero because the sun has set before the assumed peak hour of 6 PM EST.

2019 Load & Capacity Data Report

**Table I-10a: Non-Solar Distributed Generation Nameplate Capacity,
Behind-the-Meter**

Reflects Total Cumulative Nameplate Capacity

Nameplate Capacity by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2009	11	2	3	0	8	9	0	0	1	16	3	53
2010	11	2	33	0	9	10	1	1	1	61	3	132
2011	11	2	34	0	9	10	1	1	1	63	3	135
2012	15	2	35	0	9	11	1	1	1	65	3	143
2013	15	3	35	0	9	16	1	1	1	71	3	155
2014	15	3	41	0	9	16	1	1	1	72	3	162
2015	15	3	42	0	9	16	1	1	3	75	3	168
2016	16	3	44	0	10	19	1	1	3	79	5	181
2017	16	3	45	1	10	19	1	1	3	84	5	188
2018	16	3	46	1	10	20	1	1	3	102	5	208
2019	17	3	48	1	12	22	1	1	3	149	17	274
2020	17	3	49	1	17	36	2	1	3	169	20	318
2021	18	3	50	1	18	39	2	1	3	199	49	383
2022	18	3	51	1	19	42	3	1	4	209	53	404
2023	19	3	51	1	20	45	3	1	4	221	54	422
2024	19	3	52	1	21	48	3	1	4	238	54	444
2025	20	3	53	1	22	51	4	1	4	249	55	463
2026	20	4	54	1	23	53	4	1	4	260	56	480
2027	20	4	54	1	24	55	5	1	5	277	57	503
2028	21	4	55	1	24	58	5	1	5	288	57	519
2029	21	4	56	1	25	60	5	1	5	298	58	534
2030	22	4	56	1	26	62	6	1	5	314	58	555
2031	22	4	57	1	27	64	6	1	5	324	58	569
2032	22	4	57	1	27	66	6	1	5	333	58	580
2033	23	4	58	1	28	68	7	1	6	346	58	600
2034	23	4	58	1	28	69	7	1	6	355	59	611
2035	23	4	59	1	29	71	7	1	6	364	60	625
2036	24	4	59	1	30	73	7	1	6	376	60	641
2037	24	4	60	1	30	74	8	1	6	384	60	652
2038	24	4	60	2	31	76	8	1	6	391	60	663
2039	24	4	61	2	31	77	8	1	6	396	61	671

Note: Historical values reflect information from NYSERDA's "DG Integrated Data System" and from Transmission Owners.

2019 Load & Capacity Data Report

Table I-10b: Non-Solar Distributed Generation Impacts, Behind-the-Meter

Reflects Total Cumulative Impacts

Reductions in Annual Energy by Zone - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	97	17	279	6	67	127	9	6	18	552	37	1,215
2020	98	18	282	6	95	206	9	7	18	624	127	1,490
2021	101	18	288	6	103	228	12	8	20	732	368	1,884
2022	105	19	293	6	109	245	15	8	21	771	402	1,994
2023	108	19	298	7	115	262	17	8	22	815	407	2,078
2024	110	20	302	7	121	278	20	8	24	877	413	2,180
2025	113	20	307	7	126	293	22	8	25	916	417	2,254
2026	116	20	311	7	131	307	25	8	26	958	422	2,331
2027	118	21	315	7	136	321	27	8	27	1,018	428	2,426
2028	120	21	318	7	141	334	29	8	28	1,060	434	2,500
2029	123	22	322	8	145	346	31	8	29	1,100	435	2,569
2030	125	22	325	8	149	358	33	8	30	1,156	438	2,652
2031	127	22	329	8	153	369	34	8	31	1,190	438	2,709
2032	129	23	332	8	157	380	36	8	31	1,226	441	2,771
2033	131	23	335	8	161	390	38	8	32	1,275	443	2,844
2034	133	23	338	8	165	400	39	8	33	1,306	446	2,899
2035	134	23	341	8	168	410	41	8	34	1,340	448	2,955
2036	136	24	343	9	171	420	42	8	34	1,386	452	3,025
2037	138	24	346	9	175	429	44	9	35	1,410	453	3,072
2038	139	24	348	9	178	438	45	9	36	1,438	456	3,120
2039	141	25	351	9	181	446	47	9	36	1,458	459	3,162

Reductions in Coincident Summer and Winter Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	15	3	42	1	10	19	1	1	3	112	17	224
2020	15	3	42	1	14	31	1	1	3	127	20	258
2021	15	3	43	1	15	34	2	1	3	149	49	315
2022	16	3	44	1	16	37	2	1	3	157	53	333
2023	16	3	45	1	17	39	3	1	3	166	54	348
2024	17	3	45	1	18	42	3	1	4	178	55	367
2025	17	3	46	1	19	44	3	1	4	187	56	381
2026	17	3	47	1	20	46	4	1	4	195	57	395
2027	18	3	47	1	20	48	4	1	4	208	58	412
2028	18	3	48	1	21	50	4	1	4	216	60	426
2029	18	3	48	1	22	52	5	1	4	224	60	438
2030	19	3	49	1	22	54	5	1	4	235	61	454
2031	19	3	49	1	23	56	5	1	5	243	61	466
2032	19	3	50	1	24	57	5	1	5	250	61	476
2033	20	3	50	1	24	59	6	1	5	260	62	491
2034	20	3	51	1	25	60	6	1	5	267	62	501
2035	20	4	51	1	25	62	6	1	5	273	63	511
2036	20	4	52	1	26	63	6	1	5	282	64	524
2037	21	4	52	1	26	65	7	1	5	288	64	534
2038	21	4	52	1	27	66	7	1	5	293	65	542
2039	21	4	53	1	27	67	7	1	5	298	65	549

Note: Peak reductions reflect estimated summer reductions for the year listed, along with reductions for the following winter. For example, the values listed in 2019 reflect reductions to the 2019 Summer peak and the 2019-20 Winter peak.

2019 Load & Capacity Data Report

Table I-11a: Electric Vehicle Energy Usage Forecast
Reflects Total Cumulative Impacts

Total Annual Energy Consumption by Zone - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	14	13	14	2	7	18	17	9	11	38	67	210
2020	24	22	24	3	12	32	30	16	19	67	122	371
2021	31	28	31	3	15	41	38	20	24	87	212	530
2022	41	38	41	4	20	56	51	27	32	120	300	730
2023	53	49	54	6	26	73	67	36	42	158	402	966
2024	67	63	70	7	33	94	86	46	54	205	518	1,243
2025	84	81	88	9	41	122	111	60	70	267	655	1,588
2026	111	107	117	12	56	161	147	79	91	351	796	2,028
2027	144	138	153	15	74	208	189	101	116	447	948	2,533
2028	179	172	192	19	94	260	235	126	143	554	1,112	3,086
2029	217	206	232	23	116	311	281	150	168	658	1,291	3,653
2030	252	239	271	26	137	361	326	173	193	762	1,486	4,226
2031	289	274	311	30	158	414	373	199	219	872	1,701	4,840
2032	334	316	361	35	185	479	431	229	251	1,005	1,939	5,565
2033	379	358	410	40	212	544	488	260	283	1,139	2,203	6,316
2034	430	406	466	45	243	617	553	295	317	1,287	2,497	7,156
2035	479	453	521	50	272	690	618	331	353	1,439	2,825	8,031
2036	532	504	579	55	304	767	688	369	390	1,600	3,193	8,981
2037	584	555	636	61	335	846	759	409	428	1,766	3,604	9,983
2038	637	609	696	66	367	928	832	450	468	1,940	4,064	11,057
2039	693	665	759	72	400	1,014	910	495	510	2,122	4,479	12,119

Note: Electric Vehicle energy usage is included in the Baseline Forecast (Table I-2).

2019 Load & Capacity Data Report

Table I-11b: Electric Vehicle Peak Usage Forecast

Reflects Total Cumulative Impacts

Total Increase in Coincident Summer Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	2	2	2	0	1	2	2	1	1	5	6	24
2020	3	3	3	0	1	4	4	2	2	10	8	40
2021	3	3	4	0	2	5	5	3	3	13	10	51
2022	5	5	5	0	2	7	6	3	4	18	13	68
2023	6	6	6	1	3	9	8	5	5	25	16	90
2024	7	8	8	1	3	11	10	6	7	33	19	113
2025	9	10	10	1	4	15	14	8	9	43	21	144
2026	12	13	13	1	6	19	18	10	12	57	25	186
2027	16	16	17	2	7	25	23	13	15	73	29	236
2028	19	20	21	2	9	31	28	16	18	92	34	290
2029	23	24	25	2	12	37	34	19	22	111	38	347
2030	28	29	30	3	14	43	40	22	25	133	43	410
2031	32	33	35	3	17	50	46	26	28	156	48	474
2032	38	39	41	4	20	59	54	30	33	185	54	557
2033	45	45	48	5	24	68	62	34	37	215	60	643
2034	52	51	57	6	29	78	71	39	42	250	67	742
2035	61	59	66	6	35	90	81	44	47	289	74	852
2036	71	67	76	8	42	102	92	50	53	333	82	976
2037	82	76	88	9	49	116	104	56	59	381	91	1,111
2038	94	86	101	10	58	131	117	62	66	435	101	1,261
2039	108	97	116	12	68	148	132	69	73	495	112	1,430

Total Increase in Coincident Winter Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019-20	3	3	3	0	1	4	4	2	2	9	11	42
2020-21	5	5	5	1	2	7	6	3	4	16	14	68
2021-22	6	6	6	1	3	8	8	4	5	21	17	85
2022-23	8	8	8	1	3	11	10	6	7	29	22	113
2023-24	10	10	10	1	4	14	13	8	9	39	27	145
2024-25	12	12	13	1	6	19	17	10	11	51	32	184
2025-26	16	16	16	2	7	24	22	13	15	67	35	233
2026-27	20	21	21	2	9	32	29	17	19	89	41	300
2027-28	25	27	27	3	12	40	37	21	24	114	48	378
2028-29	31	33	33	3	15	50	46	27	30	143	55	466
2029-30	37	40	40	4	18	60	55	32	35	173	62	556
2030-31	44	46	47	5	21	70	64	37	41	205	70	650
2031-32	51	53	55	5	25	80	73	42	47	242	78	751
2032-33	59	62	64	6	30	94	85	49	54	285	87	875
2033-34	69	71	74	7	36	107	97	56	61	332	97	1,007
2034-35	80	81	86	8	43	123	111	63	68	387	107	1,157
2035-36	92	92	99	10	50	140	127	72	77	447	119	1,325
2036-37	106	105	114	11	59	159	143	81	86	515	132	1,511
2037-38	121	118	130	13	69	180	161	90	95	590	145	1,712
2038-39	139	133	148	15	81	202	181	100	105	673	161	1,938
2039-40	158	149	169	17	94	227	202	111	116	767	177	2,187

Note: Electric Vehicle energy coincident peak usage is included in the Baseline Forecast (Tables I-3, I-4, and I-5).

The summer coincident peak is assumed to occur during hour beginning 4 PM EDT.

The winter coincident peak is assumed to occur during hour beginning 6 PM EST.

2019 Load & Capacity Data Report

Table I-12a: Energy Storage Nameplate Capacity

Reflects Total Cumulative Nameplate Capacity - Including Wholesale and Behind-the-Meter

Nameplate Capacity by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	1	0	1	0	1	22	2	0	0	4	13	44
2020	9	4	11	0	9	40	18	1	2	39	33	166
2021	17	8	22	0	18	60	36	2	4	77	55	299
2022	29	14	38	1	30	86	60	3	6	128	85	480
2023	44	20	59	1	45	119	89	6	9	191	121	704
2024	60	27	81	1	61	150	117	8	13	254	158	930
2025	75	34	105	2	76	182	146	11	17	315	193	1,156
2026	92	41	129	2	91	213	174	13	22	375	228	1,380
2027	109	48	154	3	108	244	201	17	25	434	263	1,606
2028	126	55	181	4	124	274	227	19	30	493	297	1,830
2029	142	62	210	4	139	304	254	24	35	550	331	2,055
2030	158	69	233	5	155	336	282	26	39	611	367	2,281
2031	174	76	257	5	170	367	310	29	43	672	403	2,506
2032	190	83	280	5	185	399	338	32	47	734	438	2,731
2033	206	90	303	6	201	430	367	34	51	795	474	2,957
2034	222	97	327	6	216	462	395	37	55	856	510	3,183
2035	235	103	347	7	230	489	419	39	58	909	541	3,377
2036	247	108	364	7	241	513	440	41	61	954	567	3,543
2037	256	112	378	7	250	532	457	43	63	990	588	3,676
2038	264	115	389	8	258	546	470	44	65	1,019	605	3,783
2039	269	117	397	8	263	557	479	45	66	1,039	617	3,857

Note: Nameplate capacity values include both wholesale market and behind-the-meter storage.

Pumped Storage is not included. See Table III-2 for current resources.

2019 Load & Capacity Data Report

Table I-12b: Energy Storage Energy Impacts

Reflects Total Cumulative Impacts - Including Wholesale and Behind-the-Meter

Annual Net Electricity Consumption by Zone - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	0	0	0	0	0	2	0	0	0	0	1	3
2020	1	0	1	0	1	4	2	0	0	3	3	15
2021	2	1	2	0	2	6	3	0	0	7	5	28
2022	3	1	3	0	3	8	5	0	1	11	8	43
2023	4	2	5	0	4	11	8	0	1	17	11	63
2024	5	2	7	0	5	13	10	1	1	22	14	80
2025	7	3	9	0	7	16	13	1	2	28	17	103
2026	8	4	11	0	8	19	15	1	2	33	20	121
2027	10	4	14	0	9	22	18	1	2	38	23	141
2028	11	5	16	0	11	24	20	2	3	43	26	161
2029	12	5	18	0	12	27	22	2	3	48	29	178
2030	14	6	20	0	14	30	25	2	3	54	32	200
2031	15	7	22	0	15	32	27	3	4	59	35	219
2032	17	7	25	0	16	35	30	3	4	64	39	240
2033	18	8	27	1	18	38	32	3	4	70	42	261
2034	19	8	29	1	19	41	35	3	5	75	45	280
2035	21	9	30	1	20	43	37	3	5	80	47	296
2036	22	9	32	1	21	45	39	4	5	84	50	312
2037	22	10	33	1	22	47	40	4	6	87	52	324
2038	23	10	34	1	23	48	41	4	6	89	53	332
2039	24	10	35	1	23	49	42	4	6	91	54	339

Note: Net energy consumption values include both wholesale and behind-the-meter Storage.

2019 Load & Capacity Data Report

Table I-12c: Energy Storage Peak Reductions, Behind-the-Meter

Reflects Total Cumulative Impacts

Reductions in Coincident Summer Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	0	0	0	0	0	1	0	0	0	1	5	7
2020	1	0	3	0	1	8	1	0	0	5	8	27
2021	2	1	6	0	2	15	2	0	1	10	11	50
2022	3	1	11	0	3	24	4	1	2	17	15	81
2023	5	2	16	0	4	34	7	1	2	26	20	117
2024	7	3	21	0	6	44	10	2	3	34	26	156
2025	9	4	26	0	8	52	13	2	4	43	31	192
2026	11	5	31	0	11	59	17	2	5	52	36	229
2027	14	6	36	1	13	66	20	3	6	62	42	269
2028	17	7	41	1	16	71	25	4	7	71	47	307
2029	20	8	46	1	18	75	29	4	7	81	53	342
2030	22	9	51	1	20	84	32	5	8	90	58	380
2031	24	10	56	1	22	92	35	5	9	99	64	417
2032	27	11	61	1	24	100	39	6	10	108	69	456
2033	29	12	66	1	26	109	42	6	11	117	74	493
2034	31	13	71	1	28	117	45	7	12	125	80	530
2035	33	13	75	1	30	124	48	7	12	133	84	560
2036	35	14	79	1	32	130	50	8	13	140	88	590
2037	36	15	82	1	33	135	52	8	13	145	91	611
2038	37	15	84	1	34	139	54	8	14	149	94	629
2039	38	15	86	1	34	142	55	8	14	152	96	641

Reductions in Coincident Winter Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019-20	0	0	0	0	0	1	0	0	0	0	3	4
2020-21	0	0	2	0	0	5	1	0	0	3	5	16
2021-22	1	0	4	0	1	10	2	0	1	7	7	33
2022-23	2	1	7	0	2	16	3	0	1	11	10	53
2023-24	3	1	10	0	3	23	5	1	2	17	13	78
2024-25	4	2	14	0	4	29	7	1	2	23	17	103
2025-26	6	2	17	0	6	35	9	1	3	29	20	128
2026-27	8	3	21	0	7	40	11	2	3	35	24	154
2027-28	9	4	24	0	9	44	14	2	4	41	28	179
2028-29	11	5	27	0	10	48	16	2	4	48	31	202
2029-30	13	5	31	0	12	50	19	3	5	54	35	227
2030-31	15	6	34	1	14	56	22	3	6	60	39	256
2031-32	16	7	37	1	15	62	24	4	6	66	42	280
2032-33	18	7	41	1	16	67	26	4	7	72	46	305
2033-34	19	8	44	1	18	73	28	4	7	78	49	329
2034-35	21	8	47	1	19	78	30	5	8	84	53	354
2035-36	22	9	50	1	20	83	32	5	8	89	56	375
2036-37	23	9	53	1	21	87	34	5	9	94	59	395
2037-38	24	10	55	1	22	91	35	5	9	97	61	410
2038-39	25	10	57	1	23	93	36	5	9	100	62	421
2039-40	25	10	58	1	23	95	37	6	9	102	64	430

Note: Peak reductions due to behind-the-meter storage. Wholesale market storage is assumed to be dispatched as generation.
Approximately one third of energy storage nameplate capacity is behind-the-meter.

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Table I-13a: Topline Forecast of Annual Energy

Prior to Impacts of Energy Saving Programs & Behind-the-Meter Generation

Annual Energy by Zone - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	15,964	10,221	16,859	4,873	8,114	12,740	10,174	2,799	5,996	52,988	21,428	162,156
2020	15,966	10,202	16,858	5,442	8,117	12,757	10,189	2,811	5,988	53,063	21,512	162,905
2021	16,028	10,239	16,917	5,448	8,149	12,820	10,250	2,829	6,000	53,337	21,630	163,647
2022	16,137	10,315	17,020	5,457	8,205	12,923	10,358	2,851	6,042	53,838	21,886	165,032
2023	16,224	10,381	17,106	5,466	8,250	13,009	10,462	2,882	6,092	54,436	22,063	166,371
2024	16,333	10,473	17,216	5,476	8,306	13,113	10,592	2,907	6,149	55,102	22,221	167,888
2025	16,402	10,546	17,284	5,482	8,342	13,192	10,683	2,941	6,201	55,725	22,353	169,151
2026	16,519	10,661	17,403	5,494	8,405	13,312	10,813	2,982	6,263	56,445	22,580	170,877
2027	16,621	10,776	17,506	5,504	8,459	13,421	10,936	3,029	6,325	57,164	22,824	172,565
2028	16,751	10,903	17,639	5,515	8,529	13,556	11,081	3,074	6,394	57,901	23,227	174,570
2029	16,832	10,995	17,720	5,524	8,574	13,647	11,195	3,115	6,458	58,590	23,476	176,126
2030	16,899	11,075	17,791	5,530	8,612	13,730	11,295	3,155	6,506	59,173	23,821	177,587
2031	16,979	11,162	17,873	5,538	8,656	13,824	11,411	3,202	6,561	59,758	24,237	179,201
2032	17,118	11,292	18,018	5,551	8,733	13,972	11,568	3,251	6,634	60,524	24,693	181,354
2033	17,190	11,371	18,092	5,560	8,774	14,064	11,671	3,298	6,679	61,031	25,112	182,842
2034	17,302	11,478	18,209	5,570	8,837	14,191	11,817	3,350	6,745	61,673	25,625	184,797
2035	17,417	11,584	18,330	5,582	8,901	14,323	11,958	3,407	6,813	62,350	26,180	186,845
2036	17,572	11,721	18,491	5,596	8,985	14,486	12,141	3,464	6,897	63,188	26,817	189,358
2037	17,652	11,806	18,574	5,604	9,031	14,592	12,264	3,520	6,955	63,743	27,347	191,088
2038	17,764	11,919	18,695	5,615	9,094	14,726	12,424	3,579	7,026	64,433	28,073	193,348
2039	17,883	12,031	18,820	5,627	9,160	14,865	12,584	3,646	7,099	65,127	28,495	195,337

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Table I-13b: Topline Forecast of Coincident Peak Demand

Prior to Impacts of Energy Saving Programs & Behind-the-Meter Generation

Coincident Summer Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019	2,665	1,964	2,863	543	1,355	2,489	2,304	643	1,410	11,727	5,420	33,383
2020	2,669	1,961	2,865	637	1,358	2,492	2,318	645	1,424	11,876	5,382	33,627
2021	2,693	1,976	2,888	639	1,369	2,512	2,328	649	1,438	12,033	5,399	33,924
2022	2,715	1,993	2,910	641	1,381	2,532	2,353	655	1,447	12,145	5,452	34,224
2023	2,732	2,007	2,925	643	1,390	2,548	2,389	656	1,444	12,161	5,481	34,376
2024	2,747	2,022	2,939	645	1,398	2,561	2,411	660	1,453	12,256	5,487	34,579
2025	2,769	2,040	2,960	646	1,409	2,580	2,435	666	1,464	12,394	5,512	34,875
2026	2,791	2,061	2,980	649	1,419	2,600	2,453	671	1,475	12,517	5,542	35,158
2027	2,809	2,082	2,999	650	1,429	2,617	2,463	676	1,481	12,612	5,585	35,403
2028	2,825	2,101	3,014	653	1,438	2,634	2,474	681	1,488	12,697	5,645	35,650
2029	2,845	2,122	3,035	654	1,447	2,654	2,492	687	1,493	12,788	5,757	35,974
2030	2,858	2,138	3,047	656	1,454	2,667	2,499	692	1,500	12,879	5,804	36,194
2031	2,874	2,154	3,061	658	1,462	2,683	2,510	697	1,510	12,975	5,861	36,445
2032	2,893	2,173	3,081	659	1,473	2,701	2,527	704	1,526	13,132	5,908	36,777
2033	2,911	2,192	3,099	662	1,484	2,721	2,555	711	1,542	13,291	5,975	37,143
2034	2,931	2,211	3,119	663	1,494	2,741	2,575	719	1,560	13,465	6,041	37,519
2035	2,952	2,231	3,141	666	1,506	2,764	2,595	727	1,582	13,668	6,106	37,938
2036	2,975	2,253	3,162	667	1,520	2,786	2,617	736	1,603	13,858	6,163	38,340
2037	2,997	2,273	3,186	670	1,533	2,811	2,638	745	1,624	14,056	6,228	38,761
2038	3,021	2,295	3,210	672	1,547	2,835	2,659	754	1,647	14,249	6,300	39,189
2039	3,046	2,316	3,234	674	1,562	2,861	2,689	762	1,662	14,390	6,379	39,575

Coincident Winter Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2019-20	2,331	1,588	2,549	770	1,329	1,978	1,533	483	897	7,692	3,387	24,537
2020-21	2,317	1,572	2,532	769	1,320	1,967	1,515	480	894	7,668	3,371	24,405
2021-22	2,309	1,564	2,521	768	1,315	1,961	1,508	478	890	7,650	3,417	24,381
2022-23	2,324	1,573	2,535	769	1,321	1,974	1,516	482	900	7,742	3,435	24,571
2023-24	2,339	1,583	2,549	771	1,329	1,989	1,528	487	913	7,863	3,431	24,782
2024-25	2,350	1,592	2,561	771	1,335	2,001	1,542	492	924	7,965	3,450	24,983
2025-26	2,367	1,607	2,576	773	1,342	2,017	1,555	498	938	8,079	3,470	25,222
2026-27	2,384	1,623	2,593	774	1,349	2,035	1,573	505	951	8,199	3,497	25,483
2027-28	2,398	1,640	2,607	776	1,357	2,051	1,589	512	965	8,318	3,531	25,744
2028-29	2,414	1,656	2,623	776	1,365	2,069	1,606	520	980	8,443	3,614	26,066
2029-30	2,433	1,675	2,642	779	1,374	2,091	1,628	529	997	8,584	3,646	26,378
2030-31	2,446	1,689	2,655	780	1,380	2,105	1,642	536	1,009	8,688	3,678	26,608
2031-32	2,461	1,703	2,670	781	1,387	2,121	1,660	543	1,022	8,800	3,709	26,857
2032-33	2,477	1,721	2,687	782	1,397	2,143	1,680	552	1,037	8,917	3,744	27,137
2033-34	2,497	1,739	2,707	785	1,407	2,163	1,701	562	1,052	9,036	3,780	27,429
2034-35	2,517	1,757	2,728	786	1,418	2,187	1,726	571	1,066	9,165	3,816	27,737
2035-36	2,539	1,777	2,751	789	1,431	2,212	1,750	582	1,084	9,301	3,852	28,068
2036-37	2,564	1,799	2,776	791	1,445	2,240	1,779	593	1,101	9,448	3,892	28,428
2037-38	2,588	1,820	2,801	794	1,461	2,270	1,806	606	1,118	9,602	3,932	28,798
2038-39	2,616	1,844	2,829	797	1,477	2,299	1,838	617	1,137	9,762	3,974	29,190
2039-40	2,644	1,868	2,860	800	1,496	2,332	1,869	631	1,156	9,932	4,014	29,602

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Table I-13c: Topline Forecast of Non-Coincident Peak Demand

Prior to Impacts of Energy Saving Programs & Behind-the-Meter Generation

Non-Coincident Summer Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K
2019	2,815	2,032	2,970	575	1,414	2,560	2,339	653	1,429	11,841	5,447
2020	2,820	2,028	2,972	674	1,417	2,563	2,353	655	1,443	11,991	5,409
2021	2,845	2,044	2,996	676	1,429	2,584	2,363	659	1,458	12,150	5,426
2022	2,868	2,062	3,019	678	1,441	2,604	2,388	665	1,467	12,263	5,479
2023	2,886	2,076	3,034	680	1,450	2,621	2,425	666	1,464	12,279	5,508
2024	2,902	2,092	3,049	682	1,459	2,634	2,447	670	1,473	12,375	5,514
2025	2,925	2,110	3,071	684	1,470	2,654	2,472	677	1,484	12,514	5,540
2026	2,948	2,132	3,091	687	1,481	2,674	2,490	682	1,495	12,638	5,570
2027	2,967	2,154	3,111	688	1,491	2,692	2,500	687	1,501	12,734	5,613
2028	2,984	2,173	3,127	691	1,501	2,709	2,511	692	1,508	12,820	5,673
2029	3,005	2,195	3,149	692	1,510	2,730	2,529	698	1,513	12,912	5,786
2030	3,019	2,212	3,161	694	1,517	2,743	2,536	703	1,520	13,004	5,833
2031	3,036	2,228	3,175	696	1,526	2,760	2,548	708	1,531	13,101	5,890
2032	3,056	2,248	3,196	697	1,537	2,778	2,565	715	1,547	13,259	5,938
2033	3,075	2,267	3,215	700	1,549	2,799	2,593	722	1,563	13,420	6,005
2034	3,096	2,287	3,236	702	1,559	2,819	2,614	730	1,581	13,596	6,071
2035	3,118	2,308	3,258	705	1,572	2,843	2,634	738	1,604	13,801	6,137
2036	3,143	2,331	3,280	706	1,586	2,866	2,656	748	1,625	13,992	6,194
2037	3,166	2,351	3,305	709	1,600	2,891	2,678	757	1,646	14,192	6,259
2038	3,191	2,374	3,330	711	1,614	2,916	2,699	766	1,669	14,387	6,332
2039	3,218	2,396	3,355	713	1,630	2,943	2,729	774	1,685	14,530	6,411

Non-Coincident Winter Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K
2019-20	2,360	1,609	2,554	790	1,361	1,994	1,544	507	910	7,764	3,406
2020-21	2,345	1,593	2,537	789	1,352	1,983	1,526	504	907	7,739	3,390
2021-22	2,337	1,585	2,526	788	1,347	1,977	1,519	501	903	7,721	3,436
2022-23	2,353	1,594	2,540	789	1,353	1,990	1,527	506	914	7,814	3,455
2023-24	2,368	1,604	2,554	791	1,361	2,005	1,539	511	927	7,936	3,451
2024-25	2,379	1,613	2,566	791	1,367	2,017	1,553	516	938	8,039	3,470
2025-26	2,396	1,629	2,581	793	1,374	2,034	1,566	522	952	8,154	3,490
2026-27	2,413	1,645	2,598	794	1,382	2,052	1,584	530	965	8,275	3,517
2027-28	2,427	1,662	2,612	796	1,390	2,068	1,600	537	979	8,395	3,551
2028-29	2,444	1,678	2,629	796	1,398	2,086	1,618	545	995	8,522	3,635
2029-30	2,463	1,697	2,648	799	1,407	2,108	1,640	555	1,012	8,664	3,667
2030-31	2,476	1,712	2,661	800	1,413	2,122	1,654	562	1,024	8,769	3,699
2031-32	2,491	1,726	2,676	801	1,421	2,138	1,672	570	1,037	8,882	3,730
2032-33	2,507	1,744	2,693	802	1,431	2,161	1,692	579	1,053	9,000	3,765
2033-34	2,528	1,762	2,713	805	1,441	2,181	1,713	590	1,068	9,120	3,802
2034-35	2,548	1,781	2,734	806	1,452	2,205	1,738	599	1,082	9,250	3,838
2035-36	2,570	1,801	2,757	809	1,466	2,230	1,763	611	1,100	9,387	3,874
2036-37	2,596	1,823	2,782	811	1,480	2,258	1,792	622	1,118	9,536	3,914
2037-38	2,620	1,844	2,807	815	1,496	2,289	1,819	636	1,135	9,691	3,954
2038-39	2,648	1,869	2,835	818	1,513	2,318	1,851	647	1,154	9,853	3,997
2039-40	2,677	1,893	2,866	821	1,532	2,351	1,882	662	1,173	10,024	4,037

Table I-14: Projection of SCR and EDRP Enrollment

Special Case Resources - MW

Zone	Summer	Winter
A	281	127
B	55	35
C	118	85
D	58	60
E	40	35
F	103	74
G	63	42
H	12	10
I	37	23
J	494	330
K	48	32
NYCA	1,309	853

Emergency Demand Response Program - MW

Zone	Summer	Winter
A	1	35
B	0	0
C	1	2
D	1	1
E	1	1
F	0	0
G	0	0
H	0	0
I	0	0
J	1	1
K	0	0
NYCA	5	40

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Table I-15: Historical NYCA System Peak Demand

New York Control Area System Coincident Peaks

Summer Coincident Peak Dates & Times

May 1 through October 31

Year	Date	Hour Beginning	Summer Peak MW
1997	7/15/1997	14	28,699
1998	7/22/1998	16	28,161
1999	7/6/1999	13	30,311
2000	6/26/2000	16	28,138
2001	8/9/2001	14	30,982
2002	7/29/2002	16	30,664
2003	6/26/2003	16	30,333
2004	6/9/2004	16	28,433
2005	7/26/2005	16	32,075
2006	8/2/2006	13	33,939
2007	8/8/2007	16	32,169
2008	6/9/2008	16	32,432
2009	8/17/2009	15	30,844
2010	7/6/2010	16	33,452
2011	7/22/2011	15	33,865
2012	7/17/2012	16	32,439
2013	7/19/2013	16	33,956
2014	9/2/2014	15	29,782
2015	7/29/2015	16	31,138
2016	8/11/2016	16	32,076
2017	7/19/2017	17	29,699
2018	8/29/2018	16	31,861

Winter Coincident Peak Dates & Times

November 1 through following April 30

Year	Date	Hour Beginning	Winter Peak MW
1997 - 98	12/10/1997	17	22,445
1998 - 99	1/14/1999	17	23,878
1999 - 00	1/18/2000	17	24,041
2000 - 01	12/13/2000	17	23,774
2001 - 02	4/18/2002	16	23,713
2002 - 03	1/23/2003	18	24,454
2003 - 04	1/15/2004	18	25,262
2004 - 05	12/20/2004	17	25,541
2005 - 06	12/14/2005	18	25,060
2006 - 07	2/5/2007	17	25,057
2007 - 08	1/3/2008	18	25,021
2008 - 09	12/22/2008	17	24,673
2009 - 10	12/17/2009	17	24,074
2010 - 11	12/14/2010	17	24,654
2011 - 12	1/3/2012	17	23,901
2012 - 13	1/24/2013	18	24,658
2013 - 14	1/7/2014	18	25,738
2014 - 15	1/7/2015	18	24,648
2015 - 16	1/19/2016	18	23,317
2016 - 17	12/15/2016	17	24,164
2017 - 18	1/5/2018	17	25,081
2018 - 19	1/21/2019	18	24,728

Note: Record peaks are highlighted.

Note: Peak hours are reported as hour beginning (e.g., if the peak occurs during the 4 to 5 PM hour, the hour beginning value is 16).

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SECTION II

**Changes in Generating Facilities & Generation
since the 2018 Gold Book**



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Section II

This section provides an overview of significant changes in generating facilities since the 2018 *Gold Book* was issued, together with a summary of changes in energy generation in the past year. This information is presented in two steps. Reported first is the net change in existing generation from the 2018 Gold Book through March 15, 2019, which totals 228 MW. Second, any additional changes from March 15, 2019 until the Summer of 2019 are reported, which total 0 MW. This results in a total capacity increase of 228 MW from the summer of 2018 to the summer of 2019.

Changes in Existing Generation Since the 2018 Gold Book

The existing 2019 NYCA installed generating capacity as of March 15, 2019 of 39,294 MW increased by 228 MW above the Summer 2018 generating capacity of 39,066 MW, as shown in Table II-1a. The Winter 2019-2020 NYCA installed generating capacity as of March 15, 2019 of 41,791 MW increased by 323 MW above the Winter 2018-2019 generating capacity of 41,468 MW, as shown in Table II-1b.

Table II-1a: Summary of Changes in Summer Capacity Since 2018 – MW

Generator Fuel Types	2018 Capacity	Deactivations	Additions & Uprates	Reclassifications	Ratings Changes	2019 Capacity
Gas	3,791				-14	3,777
Oil	2,494				-87	2,407
Gas & Oil	18,618	-214	744		-36	19,112
Coal	979	-140			-2	837
Nuclear	5,402				-2	5,400
Pumped Storage	1,409				2	1,411
Hydro	4,252				1	4,253
Wind	1,739				0	1,739
Other	382	-19			-5	358
Total	39,066	-373	744	0	-143	39,294

Since the publication of the 2018 *Gold Book*, eight new units with 622 MW of summer capability and 755 MW of winter capability have been added. Two units have been uprated, resulting in capability increases of 122 MW in summer and 131 MW in

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winter. Nine units totaling 373 MW of summer capacity and 462 MW of winter capacity have been deactivated. Capability changes in existing generators resulted in a net decrease of 143 MW in summer and 101 MW in winter. There were no reclassifications from one fuel type to another.

Table II-1b: Summary of Changes in Winter Capacity Since 2018 – MW

Generator Fuel Types	2018/19 Capacity	Deactivations	Additions & Uprates	Reclassifications	Ratings Changes	2019/20 Capacity
Gas	4,100				-69	4,031
Oil	2,876				-37	2,839
Gas & Oil	20,313	-284	886		-2	20,913
Coal	1,001	-158			1	844
Nuclear	5,425				5	5,430
Pumped Storage	1,410				-1	1,409
Hydro	4,223				1	4,224
Wind	1,739				0	1,739
Other	381	-20			1	362
Total	41,468	-462	886	0	-101	41,791

The gas & oil fuel type is identified based upon whether or not environmental permits, pipeline connections, and/or storage tanks, as appropriate, are in place to allow for the use of the fuel(s) listed for each generating unit in Table III-2. The fuel type selection is not meant to provide any information on current fuel inventory. It should be noted that maximum capabilities on secondary fuels may be limited.

Generator ratings are updated semi-annually for the Summer and Winter Capability periods. Additional information on existing generation is provided in Section III.

Proposed Changes to Generation for Summer 2019

Returning, new, and deactivated generation results in a change of 0 MW from March 15, 2018 to the Summer 2019 Capability Period, as shown in Table V-2a.

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Demand Response Resources for Summer 2019 and Winter 2019-20

The projected 2019 Summer Capability for Special Case Resources (SCR) is 1,309 MW. The projected Summer 2019 enrollment for the Emergency Demand Response Program (EDRP) is 5 MW. For Winter 2019-20, the SCR total is 853 MW and the EDRP enrollment is 40 MW.

Total Resource Capability for Summer 2019 and Winter 2019-20

The Total Resource Capability forecasted for the 2019 Summer Capability period is 42,056 MW. This value is the sum of existing facilities (39,295 MW), Special Case Resources (1,309 MW), Net Generation Additions (0 MW) and Net Purchases from external areas (1,452 MW). This is a decrease of 201 MW from the 2018 value of 42,257 MW.

For the Winter Capability period, the forecasted Total Resource Capability is 43,321 MW. This value is the sum of existing facilities (41,790 MW), Special Case Resources (853 MW), Net Generation Additions (0 MW), and Net Purchases from external areas (678 MW). This is a decrease of 861 MW from the 2018-2019 value of 44,182 MW.

Summary of 2018 Electric Generation

In 2018, a total of 135,585 GWh was generated in New York State, an increase of 3.4% from the 131,182 GWh generated in 2017. Renewable energy generation was 35,808 GWh in 2018 (26% of total NYCA generation), compared to 36,739 GWh in 2017 (28%). Fossil-fueled energy generation in 2018 was 56,774 GWh (42%), compared to 52,268 GWh in 2017 (40%). Nuclear energy generation was 43,003 GWh in 2018 (32%), compared to 42,175 GWh in 2017 (32%).

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SECTION III

Existing Generating Facilities



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Section III

This section provides a detailed listing of all existing generating resources operating in the NYCA as of March 15, 2019. Table III-2 reports information on generator ownership, location, in-service date, fuels used, and generator type. It includes values for nameplate rating, NYISO summer Capacity Resource Interconnection Service (CRIS) MW values³ for generators, summer and winter capability, and net energy generated during the preceding calendar year. Generator facilities that have been deactivated since the publication of the 2018 *Gold Book* remain listed in Table III-2 for one year.

The values for the summer capability period in this *Gold Book* reflect the most recent DMNC values available. The 2019 Summer Installed Capacity market will generally use DMNC values taken from the 2018 Summer Capability Period. The Winter Capability values represent the most recent DMNC values demonstrated during a Winter Capability Period. The 2019-20 Winter Installed Capacity Market will generally use DMNC values taken from the 2018-19 Winter Capability Period.

Units are classified as dual-fuel (gas & oil) when there are adequate environmental permits, pipeline connections, and/or storage tanks in place to allow for the use of the Type 2 fuel listed for each generating unit in Table III-2. Generators may choose the fuel type when conducting their DMNC test. The fuel type selection is not meant to provide any information on current fuel inventories, nor does it indicate which of the fuels might be considered as primary. The NYISO does not report the DMNC for generation with alternate fuels since: (1) the NYISO does not currently require a DMNC test on alternate fuels, (2) alternate fuel inventories are unit-specific, and (3) permit capabilities do not necessarily reflect unit performance.

Table III-3c provides the amount of energy generated in the state, and Table III-3d provides the amount of NYCA net energy interchange with other control areas.

³ CRIS values, in MW of Installed Capacity, for the Summer Capability Period are established pursuant to applicable procedures contained in Attachments X, S and Z to the NYISO OATT.

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Table III-1: Existing Generating Facilities Codes and Abbreviations

FUEL TYPE	UNIT TYPE
BAT - Battery	CC - Combined Cycle
BIT - Bituminous Coal	CG - Cogeneration
BUT - Butane	CT - Combustion Turbine Portion (CC)
COL - Liquefied Coal	CW - Waste Heat Only (CC)
FO2 - No. 2 Fuel Oil	ES - Energy Storage
FO4 - No. 4 Fuel Oil	FC - Fuel Cell
FO6 - No. 6 Fuel Oil	GT - Combustion Turbine
FW - Fly Wheel	HY - Conventional Hydro
JF - Jet Fuel	IC - Internal Combustion
KER - Kerosene	IG - Integrated Coal Gasification (CC)
MTE - Methane (Bio Gas)	JE - Jet Engine
NG - Natural Gas	NB - Steam (BWR Nuclear)
OT - Other (Describe In Footnote)	NP - Steam (PWR Nuclear)
REF - Refuse (Solid Waste)	PS - Pumped Storage Hydro
SUN - Sunlight	PV - Photovoltaic
UR - Uranium	ST - Steam Turbine (Fossil)
WAT - Water	WT - Wind Turbine
WD - Wood and/or Wood Waste	
WND - Wind	

COUNTY CODES NEW YORK - NY - 36	
001 - Albany	063 - Niagara
003 - Allegany	065 - Oneida
005 - Bronx	067 - Onondaga
007 - Broome	069 - Ontario
009 - Cattaraugus	071 - Orange
011 - Cayuga	073 - Orleans
013 - Chautauqua	075 - Oswego
015 - Chemung	077 - Otsego
017 - Chenango	079 - Putnam
019 - Clinton	081 - Queens
021 - Columbia	083 - Rensselaer
023 - Cortland	085 - Richmond
025 - Delaware	087 - Rockland
027 - Dutchess	089 - St Lawrence
029 - Erie	091 - Saratoga
031 - Essex	093 - Schenectady
033 - Franklin	095 - Schoharie
035 - Fulton	097 - Schuyler
037 - Genesee	099 - Seneca
039 - Greene	101 - Steuben
041 - Hamilton	103 - Suffolk
043 - Herkimer	105 - Sullivan
045 - Jefferson	107 - Tioga
047 - Kings	109 - Tompkins
049 - Lewis	111 - Ulster
051 - Livingston	113 - Warren
053 - Madison	115 - Washington
055 - Monroe	117 - Wayne
057 - Montgomery	119 - Westchester
059 - Nassau	121 - Wyoming
061 - New York	123 - Yates

COUNTY CODES PENNSYLVANIA - PA - 42	
001 - Adams	067 - Juniata
003 - Allegheny	069 - Lackawanna
005 - Armstrong	071 - Lancaster
007 - Beaver	073 - Lawrence
009 - Bedford	075 - Lebanon
011 - Berks	077 - Lehigh
013 - Blair	079 - Luzerne
015 - Bradford	081 - Lycoming
017 - Bucks	083 - McKean
019 - Butler	085 - Mercer
021 - Cambria	087 - Mifflin
023 - Cameron	089 - Monroe
025 - Carbon	091 - Montgomery
027 - Centre	093 - Montour
029 - Chester	095 - Northampton
031 - Clarion	097 - Northumberland
033 - Clearfield	099 - Perry
035 - Clinton	101 - Philadelphia
037 - Columbia	103 - Pike
039 - Crawford	105 - Potter
041 - Cumberland	107 - Schuylkill
043 - Dauphin	109 - Snyder
045 - Delaware	111 - Somerset
047 - Elk	113 - Sullivan
049 - Erie	115 - Susquehanna
051 - Fayette	117 - Tioga
053 - Forest	119 - Union
055 - Franklin	121 - Venango
057 - Fulton	123 - Warren
059 - Greene	125 - Washington
061 - Huntingdon	127 - Wayne
063 - Indiana	129 - Westmoreland
065 - Jefferson	131 - Wyoming
	133 - York

COUNTY CODES MASSACHUSETTS - MA - 25	
001 - Barnstable	
003 - Berkshire	
005 - Bristol	
007 - Dukes	
009 - Essex	
011 - Franklin	
013 - Hampden	
015 - Hampshire	
017 - Middlesex	
019 - Nantucket	
021 - Norfolk	
023 - Plymouth	
025 - Suffolk	
027 - Worcester	

COUNTY CODES NEW JERSEY - NJ - 34	
001 - Atlantic	
003 - Bergen	
005 - Burlington	
007 - Camden	
009 - Cape May	
011 - Cumberland	
013 - Essex	
015 - Gloucester	
017 - Hudson	
019 - Hunterdon	
021 - Mercer	
023 - Middlesex	
025 - Monmouth	
027 - Morris	
029 - Ocean	
031 - Passaic	
033 - Salem	
035 - Somerset	
037 - Sussex	
039 - Union	
041 - Warren	

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TABLE III-2 (cont'd) Existing Generating Facilities

Owner, Operator, and / or Billing Organization	Station	Unit	Z O N E	PTID	Location			In-Service Date YYYY-MM-DD	Name Plate Rating ^(V) MW	2019 CRIS ^(A) MW		2019 Capability ^(B) MW		D U A L	Unit Type	Fuel ^(U)		2018 Net ^(C) Energy GWh	Notes	
					Town	Cnty	St			SUM	WIN	SUM	WIN			Type 1	Type 2			
Astoria Generating Company L.P.	Gowanus 4-7		J	24136	Brooklyn	047	36	1971-07-01	20.0	16.6	21.7	17.2	21.7	GT	F02			0.0		
Astoria Generating Company L.P.	Gowanus 4-8		J	24137	Brooklyn	047	36	1971-07-01	20.0	19.0	24.8	17.4	21.9	GT	F02			0.2		
Astoria Generating Company L.P.	Narrows 1-1		J	24228	Brooklyn	047	36	1972-05-01	22.0	21.0	27.4	19.3	24.9	YES	GT	F02	NG	6.4		
Astoria Generating Company L.P.	Narrows 1-2		J	24229	Brooklyn	047	36	1972-05-01	22.0	19.5	25.5	17.1	23.8	YES	GT	F02	NG	3.6		
Astoria Generating Company L.P.	Narrows 1-3		J	24230	Brooklyn	047	36	1972-05-01	22.0	20.4	26.6	18.3	24.9	YES	GT	F02	NG	4.0		
Astoria Generating Company L.P.	Narrows 1-4		J	24231	Brooklyn	047	36	1972-05-01	22.0	20.1	26.3	18.8	24.9	YES	GT	F02	NG	2.7		
Astoria Generating Company L.P.	Narrows 1-5		J	24232	Brooklyn	047	36	1972-05-01	22.0	19.8	25.9	19.9	24.9	YES	GT	F02	NG	3.0		
Astoria Generating Company L.P.	Narrows 1-6		J	24233	Brooklyn	047	36	1972-05-01	22.0	18.9	24.7	16.5	22.2	YES	GT	F02	NG	3.0		
Astoria Generating Company L.P.	Narrows 1-7		J	24234	Brooklyn	047	36	1972-05-01	22.0	18.4	24.0	19.4	24.9	YES	GT	F02	NG	6.1		
Astoria Generating Company L.P.	Narrows 1-8		J	24235	Brooklyn	047	36	1972-05-01	22.0	19.9	26.0	17.5	23.2	YES	GT	F02	NG	4.6		
Astoria Generating Company L.P.	Narrows 2-1		J	24236	Brooklyn	047	36	1972-06-01	22.0	19.4	25.3	19.2	24.8	YES	GT	F02	NG	3.4		
Astoria Generating Company L.P.	Narrows 2-2		J	24237	Brooklyn	047	36	1972-06-01	22.0	18.7	24.4	16.4	22.9	YES	GT	F02	NG	3.4		
Astoria Generating Company L.P.	Narrows 2-3		J	24238	Brooklyn	047	36	1972-06-01	22.0	18.4	24.0	17.5	23.8	YES	GT	F02	NG	3.4		
Astoria Generating Company L.P.	Narrows 2-4		J	24239	Brooklyn	047	36	1972-06-01	22.0	18.4	24.0	17.9	24.2	YES	GT	F02	NG	7.0		
Astoria Generating Company L.P.	Narrows 2-5		J	24240	Brooklyn	047	36	1972-06-01	22.0	19.9	26.0	18.1	24.4	YES	GT	F02	NG	4.8		
Astoria Generating Company L.P.	Narrows 2-6		J	24241	Brooklyn	047	36	1972-06-01	22.0	18.1	23.6	16.3	21.9	YES	GT	F02	NG	2.8		
Astoria Generating Company L.P.	Narrows 2-7		J	24242	Brooklyn	047	36	1972-06-01	22.0	20.7	27.0	18.5	24.9	YES	GT	F02	NG	6.6		
Astoria Generating Company L.P.	Narrows 2-8		J	24243	Brooklyn	047	36	1972-06-01	22.0	17.5	22.9	16.3	21.9	YES	GT	F02	NG	6.4		
Bayonne Energy Center, LLC	Bayonne EC CTG1		J	323682	Bayonne	NJ	017	34	2012-06-01	64.0	64.0	66.5	57.5	62.9	YES	JE	NG	KER	78.1	
Bayonne Energy Center, LLC	Bayonne EC CTG2		J	323683	Bayonne	NJ	017	34	2012-06-01	64.0	64.0	66.5	57.9	62.5	YES	JE	NG	KER	86.6	
Bayonne Energy Center, LLC	Bayonne EC CTG3		J	323684	Bayonne	NJ	017	34	2012-06-01	64.0	64.0	66.5	59.3	62.3	YES	JE	NG	KER	72.4	
Bayonne Energy Center, LLC	Bayonne EC CTG4		J	323685	Bayonne	NJ	017	34	2012-06-01	64.0	64.0	66.5	56.5	62.4	YES	JE	NG	KER	74.3	
Bayonne Energy Center, LLC	Bayonne EC CTG5		J	323686	Bayonne	NJ	017	34	2012-06-01	64.0	64.0	66.5	56.5	62.4	YES	JE	NG	KER	79.8	
Bayonne Energy Center, LLC	Bayonne EC CTG6		J	323687	Bayonne	NJ	017	34	2012-06-01	64.0	64.0	66.5	57.7	62.7	YES	JE	NG	KER	72.1	
Bayonne Energy Center, LLC	Bayonne EC CTG7		J	323688	Bayonne	NJ	017	34	2012-06-01	64.0	64.0	66.5	59.7	63.1	YES	JE	NG	KER	89.9	
Bayonne Energy Center, LLC	Bayonne EC CTG8		J	323689	Bayonne	NJ	017	34	2012-06-01	64.0	64.0	66.5	58.5	62.9	YES	JE	NG	KER	80.7	
Bayonne Energy Center, LLC	Bayonne EC CTG9		J	323749	Bayonne	NJ	017	34	2018-06-01	64.0	60.2	64.7	61.3	65.6	YES	JE	NG	KER	65.7	(1) (N)
Bayonne Energy Center, LLC	Bayonne EC CTG10		J	323750	Bayonne	NJ	017	34	2018-06-01	64.0	60.2	64.7	60.8	65.3	YES	JE	NG	KER	62.5	(2) (N)
Binghamton BOP, LLC	Binghamton (RET - 1/9/18)		C	23790	Binghamton	007	36	2001-03-01	47.7	43.8	57.2	0.0	0.0	YES	CC	NG	KER	3.5	(3) (R)	
Black River Hydroelectric, LLC	Glen Park Hydro		E	23778	Glen Park	045	36	1986-01-01	32.6	40.4	40.4	32.6	32.6	HY	WAT			147.9		
Boralax Hydro Operations Inc	Fourth Branch		F	23824	Waterford	091	36	1987-12-01	3.3	3.5	3.5	3.3	3.3	HY	WAT			15.9		
Boralax Hydro Operations Inc	NYS Dam		F	23527	Waterford	091	36	1990-12-01	11.4	11.3	11.3	11.4	11.4	HY	WAT			54.8		
Boralax Hydro Operations Inc	Sissonville		E	23735	Potsdam	089	36	1990-08-01	3.1	3.0	3.0	3.1	3.1	HY	WAT			14.4		
Boralax Hydro Operations Inc	Warrensburg		F	23737	Warrensburg	113	36	1988-12-01	2.9	3.0	3.0	2.9	2.9	HY	WAT			10.7		
Calpine Energy Services LP	Bethpage		K	23823	Hicksville	059	36	1989-09-01	83.6	54.9	55.1	51.5	59.7	CC	NG			262.0		
Calpine Energy Services LP	Bethpage GT4		K	323586	Hicksville	059	36	2002-07-01	60.0	48.2	51.2	45.0	47.6	GT	NG			70.4		
Calpine Energy Services LP	KIAC_JFK_GT1		J	23816	Jamaica	081	36	1995-02-01	60.6	58.7	58.7	57.5	60.8	YES	CC	NG	F02	603.1	(G)	
Calpine Energy Services LP	KIAC_JFK_GT2		J	23817	Jamaica	081	36	1995-02-01	60.6	58.3	58.3	56.4	59.4	YES	CC	NG	F02			

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TABLE III-2 (cont'd) Existing Generating Facilities

Owner, Operator, and / or Billing Organization	Station	Unit	Z O N E	PTID	Location			In-Service Date YYYY-MM-DD	Name Plate Rating ^(V) MW	2019 CRIS ^(A) MW		2019 Capability ^(B) MW		D U A L	Unit Type	Fuel ^(L)		2018 Net ^(C) Energy GWh	Notes
					Town	Cnty	St			SUM	WIN	SUM	WIN			Type 1	Type 2		
Consolidated Edison Energy, Inc.	Danskammer 1		G	23586	Newburgh	071	36	1951-12-01	72.0	69.0	69.0	69.6	69.0	YES	ST	NG	F06	2.7	
Consolidated Edison Energy, Inc.	Danskammer 2		G	23589	Newburgh	071	36	1954-09-01	73.5	64.7	64.7	65.1	67.0	YES	ST	NG	F06	2.7	
Consolidated Edison Energy, Inc.	Danskammer 3		G	23590	Newburgh	071	36	1959-10-01	147.1	139.2	139.2	136.7	140.6	ST	NG			14.2	
Consolidated Edison Energy, Inc.	Danskammer 4		G	23591	Newburgh	071	36	1967-09-01	239.4	238.2	238.2	224.0	228.7	ST	NG			10.9	
Consolidated Edison Energy, Inc.	Massena		D	23902	Massena	089	36	1992-07-01	102.1	82.2	107.9	81.2	92.3	YES	CC	NG	F02	1.7	
Consolidated Edison Energy, Inc.	Munnsville Wind Power		E	323609	Bouckville	053	36	2007-08-20	34.5	34.5	34.5	34.5	34.5	WT	WND			58.2	
Consolidated Edison Energy, Inc.	Rensselaer		F	23796	Rensselaer	083	36	1993-12-01	96.9	79.0	79.0	77.0	82.7	YES	CC	NG	F02	4.2	
Consolidated Edison Energy, Inc.	Roseton 1		G	23587	Newburgh	071	36	1974-12-01	621.0	614.8	614.8	584.2	608.0	YES	ST	F06	NG	264.8	
Consolidated Edison Energy, Inc.	Roseton 2		G	23588	Newburgh	071	36	1974-09-01	621.0	605.7	605.7	600.0	603.5	YES	ST	F06	NG	251.7	
Consolidated Edison Energy, Inc.	Selkirk-I		F	23801	Selkirk	001	36	1992-03-01	107.2	82.1	107.2	80.3	105.5	YES	CC	NG	F02	25.1	
Consolidated Edison Energy, Inc.	Selkirk-II		F	23799	Selkirk	001	36	1994-09-01	338.8	291.3	380.5	281.0	333.1	YES	CC	NG	F02	389.2	
Consolidated Edison Energy, Inc.	Syracuse		C	23985	Syracuse	067	36	1993-09-01	102.7	86.8	107.3	85.3	98.9	YES	CC	NG	F02	32.5	
Consolidated Hydro New York, Inc.	Groveville Hydro		G	323602	Beacon	027	36	1983-12-01	0.9	0.9	0.9	0.0	0.0	HY	WAT			0.0	
Consolidated Hydro New York, Inc.	Walden Hydro		G	24148	Walden	071	36	1983-12-01	2.4	0.0	0.0	0.0	0.0	HY	WAT			3.8	
Covanta Niagara, LP	American Ref-Fuel 1		A	24010	Niagara	063	36	1993-05-01	25.0	19.6	19.6	15.6	16.1	ST	REF			214.4	(G)
Covanta Niagara, LP	American Ref-Fuel 2		A	24010	Niagara	063	36	1993-05-01	25.0	19.6	19.6	15.6	16.1	ST	REF				
CPV Valley, LLC	CPV_VALLEY___CC1		G	323721	Wawayanda	071	36	2018-03-01	385.0	340.0	380.5	309.3	377.8	YES	CC	NG	F02	686.8	(6) (N)
CPV Valley, LLC	CPV_VALLEY___CC2		G	323722	Wawayanda	071	36	2018-03-01	385.0	340.0	380.5	312.4	377.2	YES	CC	NG	F02	667.3	(7) (N)
Cubit Power One Inc.	Arthur Kill Cogen		J	323718	Staten Island	085	36	2018-05-22	11.1	11.1	11.1	0.0	0.0	IC	NG			0.2	(8) (N)
Dynegy Marketing and Trade, LLC	Independence		C	23970	Scriba	075	36	1994-11-01	1,254.0	956.4	1,130.9	988.0	1,130.9	CC	NG			4,912.1	
Eagle Creek Hydro Power, LLC	Mongaup 1		G	23641	Forestburg	105	36	1923-07-01	1.0	0.9	0.9	1.0	1.0	HY	WAT			15.1	(G)
Eagle Creek Hydro Power, LLC	Mongaup 2		G	23641	Forestburg	105	36	1923-07-01	1.0	1.0	1.0	1.0	1.0	HY	WAT				
Eagle Creek Hydro Power, LLC	Mongaup 3		G	23641	Forestburg	105	36	1923-07-01	1.0	1.0	1.0	1.0	1.0	HY	WAT				
Eagle Creek Hydro Power, LLC	Mongaup 4		G	23641	Forestburg	105	36	1926-01-01	1.0	1.0	1.0	1.0	1.0	HY	WAT				
Eagle Creek Hydro Power, LLC	Rio		G	23641	Glen Spey	105	36	1927-12-01	10.8	10.8	10.8	10.6	10.7	HY	WAT			42.3	
Eagle Creek Hydro Power, LLC	Swinging Bridge 2		G	23641	Forestburg	105	36	1930-02-01	7.0	7.9	7.9	6.9	7.0	HY	WAT			20.3	
East Coast Power, LLC	Linden Cogen		J	23786	Linden NJ	039	34	1992-05-01	800.0	790.8	924.9	786.5	826.4	YES	CC	NG	BUT	4,289.8	
EDF Renewable Energy	Copenhagen Wind Farm		E	323753	Copenhagen	049	36	2018-12-01	79.9	79.9	79.9	0.0	0.0	WT	WND			8.2	(9) (N)
EDP Renewables NA	Arkwright Summit Wind Farm		A	323751	Arkwright	013	36	2018-09-01	78.4	0.0	0.0	0.0	0.0	WT	WND			82.0	(10) (N)
Emera Energy Services, Inc	Lockport		A	23791	Lockport	063	36	1992-07-01	221.3	225.2	261.7	210.8	230.8	YES	CC	NG	F02	444.9	
Emera Energy U.S. Sub. No. 1, Inc.	Greenidge 4		C	23583	Torrey	123	36	1953-12-01	112.5	106.3	106.3	104.0	104.0	ST	NG	WD		202.4	
Emera Energy Services Sub. No. 3 LLC	Fortistar - N.Tonawanda		A	24026	N Tonawanda	029	36	1993-06-01	68.5	59.0	75.0	59.1	68.5	YES	CC	NG	F02	24.1	
Empire Generating Co, LLC	EMPIRE_CC_1		F	323656	Rensselaer	083	36	2010-09-02	335.0	294.2	360.2	299.8	333.0	YES	CC	NG	F02	1,355.4	
Empire Generating Co, LLC	EMPIRE_CC_2		F	323658	Rensselaer	083	36	2010-09-02	335.0	298.2	365.1	299.8	333.0	YES	CC	NG	F02	843.1	
ENGIE Energy Marketing NA, Inc.	Nassau Energy Corporation		K	323695	Garden City	059	36	1991-03-01	55.0	51.6	60.1	43.7	53.9	YES	CC	NG	F02	331.0	
Entergy Nuclear Power Marketing LLC	Indian Point 2		H	23530	Buchanan	119	36	1973-08-01	1,299.0	1,026.5	1,026.5	1,016.1	1,025.9	NP	UR			8,000.5	
Entergy Nuclear Power Marketing LLC	Indian Point 3		H	23531	Buchanan	119	36	1976-04-01	1,012.0	1,040.4	1,040.4	1,037.9	1,039.9	NP	UR			8,333.5	
Erie Blvd. Hydro - Beaver River	Belfort 1		E	24048	Belfort	049	36	1903-01-01	0.4	0.4	0.4	0.4	0.4	HY	WAT			1.5	

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TABLE III-2 (cont'd) Existing Generating Facilities

Owner, Operator, and / or Billing Organization	Station	Unit	Z O N E	PTID	Location			In-Service Date YYYY-MM-DD	Name Plate Rating ^(V) MW	2019 CRIS ^(A) MW		2019 Capability ^(B) MW		D U A L	Unit Type	Fuel ^(L)		2018 Net ^(C) Energy GWh	Notes
					Town	Cnty	St			SUM	WIN	SUM	WIN			Type 1	Type 2		
Erie Blvd. Hydro - Black River	Sewalls 2		E	24047	Watertown	045	36	1925-01-01	1.0	1.1	1.1	1.0	1.0	HY	WAT			4.5	
Erie Blvd. Hydro - East Canada Capital	Beardslee 1		F	24051	Little Falls	043	36	1924-01-01	10.0	9.5	9.5	10.0	10.0	HY	WAT			24.7	
Erie Blvd. Hydro - East Canada Capital	Beardslee 2		F	24051	Little Falls	043	36	1924-01-01	10.0	9.5	9.5	10.0	10.0	HY	WAT			32.2	
Erie Blvd. Hydro - East Canada Capital	Ephratah 1		F	24051	Caroga Lake	035	36	1920-01-01	1.4	0.7	0.7	1.4	1.4	HY	WAT			0.4	
Erie Blvd. Hydro - East Canada Capital	Ephratah 2		F	24051	Caroga Lake	035	36	1911-01-01	1.2	0.6	0.6	1.2	1.2	HY	WAT			2.6	
Erie Blvd. Hydro - East Canada Capital	Ephratah 3		F	24051	Caroga Lake	035	36	1911-01-01	1.3	0.0	0.0	0.0	0.0	HY	WAT			2.9	
Erie Blvd. Hydro - East Canada Capital	Ephratah 4		F	24051	Caroga Lake	035	36	1911-01-01	1.3	0.7	0.7	1.3	1.3	HY	WAT			5.6	
Erie Blvd. Hydro - East Canada Mohawk	Inghams 1		E	24050	Little Falls	043	36	1912-01-01	3.2	3.5	3.5	3.2	3.2	HY	WAT			14.9	
Erie Blvd. Hydro - East Canada Mohawk	Inghams 2		E	24050	Little Falls	043	36	1912-01-01	3.2	3.5	3.5	3.2	3.2	HY	WAT			13.4	
Erie Blvd. Hydro - Lower Hudson	Johnsonville 1		F	24059	Johnsonville	083	36	1909-01-01	1.2	1.3	1.3	1.2	1.2	HY	WAT			3.9	
Erie Blvd. Hydro - Lower Hudson	Johnsonville 2		F	24059	Johnsonville	083	36	1909-01-01	1.2	1.3	1.3	1.2	1.2	HY	WAT			3.4	
Erie Blvd. Hydro - Lower Hudson	Schaghticoke 1		F	24059	Schaghticoke	083	36	1908-01-01	3.3	4.1	4.1	3.3	3.3	HY	WAT			21.5	
Erie Blvd. Hydro - Lower Hudson	Schaghticoke 2		F	24059	Schaghticoke	083	36	1908-01-01	3.3	4.1	4.1	3.3	3.3	HY	WAT			19.5	
Erie Blvd. Hydro - Lower Hudson	Schaghticoke 3		F	24059	Schaghticoke	083	36	1908-01-01	3.3	4.1	4.1	3.3	3.3	HY	WAT			9.2	
Erie Blvd. Hydro - Lower Hudson	Schaghticoke 4		F	24059	Schaghticoke	083	36	1908-01-01	3.3	4.1	4.1	3.3	3.3	HY	WAT			19.4	
Erie Blvd. Hydro - Lower Hudson	School Street 1		F	24059	Cohoes	001	36	1974-01-01	7.2	6.9	6.9	7.2	7.2	HY	WAT			27.9	
Erie Blvd. Hydro - Lower Hudson	School Street 2		F	24059	Cohoes	001	36	1915-01-01	7.2	6.9	6.9	7.2	7.2	HY	WAT			34.2	
Erie Blvd. Hydro - Lower Hudson	School Street 3		F	24059	Cohoes	001	36	1915-01-01	7.2	6.9	6.9	7.2	7.2	HY	WAT			32.3	
Erie Blvd. Hydro - Lower Hudson	School Street 4		F	24059	Cohoes	001	36	1922-01-01	7.2	6.9	6.9	7.2	7.2	HY	WAT			29.1	
Erie Blvd. Hydro - Lower Hudson	School Street 5		F	24059	Cohoes	001	36	1924-01-01	10.0	9.6	9.6	10.0	10.0	HY	WAT			24.9	
Erie Blvd. Hydro - Lower Hudson	Schuylerville		F	24059	Schuylerville	091	36	1919-01-01	1.2	1.5	1.5	1.2	1.2	HY	WAT			1.2	
Erie Blvd. Hydro - Lower Raquette	Colton 1		E	24057	Colton	089	36	1962-01-01	10.0	10.0	10.0	10.0	10.0	HY	WAT			68.3	
Erie Blvd. Hydro - Lower Raquette	Colton 2		E	24057	Colton	089	36	1918-01-01	10.0	10.0	10.0	10.0	10.0	HY	WAT			56.4	
Erie Blvd. Hydro - Lower Raquette	Colton 3		E	24057	Colton	089	36	1928-01-01	10.0	10.0	10.0	10.0	10.0	HY	WAT			49.2	
Erie Blvd. Hydro - Lower Raquette	East Norfolk		E	24057	East Norfolk	089	36	1928-01-01	3.6	4.0	4.0	3.5	3.5	HY	WAT			21.9	
Erie Blvd. Hydro - Lower Raquette	Hannawa Falls 1		E	24057	Hannawa Falls	089	36	1914-01-01	3.6	3.7	3.7	3.6	3.6	HY	WAT			25.3	
Erie Blvd. Hydro - Lower Raquette	Hannawa Falls 2		E	24057	Hannawa Falls	089	36	1920-01-01	3.6	3.7	3.7	3.6	3.6	HY	WAT			21.2	
Erie Blvd. Hydro - Lower Raquette	Higley 1		E	24057	Colton	089	36	1913-01-01	1.2	1.1	1.1	1.2	1.2	HY	WAT			10.3	
Erie Blvd. Hydro - Lower Raquette	Higley 2		E	24057	Colton	089	36	1913-01-01	1.2	1.1	1.1	1.2	1.2	HY	WAT			7.6	
Erie Blvd. Hydro - Lower Raquette	Higley 3		E	24057	Colton	089	36	1943-01-01	2.1	2.0	2.0	2.1	2.1	HY	WAT			8.8	
Erie Blvd. Hydro - Lower Raquette	Higley 4		E	24057	Colton	089	36	1943-01-01	2.1	2.0	2.0	2.1	2.1	HY	WAT			8.2	
Erie Blvd. Hydro - Lower Raquette	Norfolk		E	24057	Norfolk	089	36	1928-01-01	4.5	4.8	4.8	4.5	4.5	HY	WAT			22.4	
Erie Blvd. Hydro - Lower Raquette	Norwood		E	24057	Norwood	089	36	1928-01-01	2.0	2.2	2.2	2.0	2.0	HY	WAT			10.1	
Erie Blvd. Hydro - Lower Raquette	Raymondville		E	24057	Raymondville	089	36	1928-01-01	2.0	2.1	2.1	2.0	2.0	HY	WAT			10.6	
Erie Blvd. Hydro - Lower Raquette	Sugar Island 1		E	24057	Potsdam	089	36	1924-01-01	2.5	2.1	2.1	2.6	2.6	HY	WAT			10.9	
Erie Blvd. Hydro - Lower Raquette	Sugar Island 2		E	24057	Potsdam	089	36	1924-01-01	2.5	2.0	2.0	2.4	2.4	HY	WAT			13.6	
Erie Blvd. Hydro - Lower Raquette	Yaleville 1		E	24057	Norwood	089	36	1940-01-01	0.5	0.2	0.2	0.5	0.5	HY	WAT			1.8	
Erie Blvd. Hydro - Lower Raquette	Yaleville 2		E	24057	Norwood	089	36	1940-01-01	0.2	0.3	0.3	0.2	0.2	HY	WAT			1.2	

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TABLE III-2 (cont'd) Existing Generating Facilities

Owner, Operator, and / or Billing Organization	Station	Unit	Z O N E	PTID	Location			In-Service Date YYYY-MM-DD	Name Plate Rating ^(V) MW	2019 CRIS ^(A) MW		2019 Capability ^(B) MW		D U A L	Unit Type	Fuel ^(L)		2018 Net Energy ^(C) GWh	Notes
					Town	Cnty	St			SUM	WIN	SUM	WIN			Type 1	Type 2		
Erie Blvd. Hydro - North Salmon	Allens Falls		D	24042	Allens Falls	089	36	1927-01-01	4.4	5.0	5.0	4.4	4.4	HY	WAT			13.7	
Erie Blvd. Hydro - North Salmon	Chasm 1		D	24042	Chateaugay	033	36	1913-01-01	1.0	1.1	1.1	1.0	1.0	HY	WAT			7.9	
Erie Blvd. Hydro - North Salmon	Chasm 2		D	24042	Chateaugay	033	36	1913-01-01	1.0	1.1	1.1	1.0	1.0	HY	WAT			6.6	
Erie Blvd. Hydro - North Salmon	Chasm 3		D	24042	Chateaugay	033	36	1926-01-01	1.4	1.6	1.6	1.4	1.4	HY	WAT			7.5	
Erie Blvd. Hydro - North Salmon	Franklin 1		D	24042	Franklin	033	36	1911-01-01	1.1	1.1	1.1	1.1	1.1	HY	WAT			5.3	
Erie Blvd. Hydro - North Salmon	Franklin 2		D	24042	Franklin	033	36	1926-01-01	1.1	1.1	1.1	1.1	1.1	HY	WAT			5.4	
Erie Blvd. Hydro - North Salmon	Macomb		D	24042	Malone	033	36	1940-01-01	1.0	1.1	1.1	1.0	1.0	HY	WAT			6.3	
Erie Blvd. Hydro - North Salmon	Parishville		D	24042	Parishville	089	36	1925-01-01	2.4	2.4	2.4	2.4	2.4	HY	WAT			19.8	
Erie Blvd. Hydro - North Salmon	Piercefield 1		D	24042	Piercefield	089	36	1957-01-01	1.5	1.6	1.6	1.5	1.5	HY	WAT			8.9	
Erie Blvd. Hydro - North Salmon	Piercefield 2		D	24042	Piercefield	089	36	1924-01-01	0.6	0.6	0.6	0.6	0.6	HY	WAT			3.2	
Erie Blvd. Hydro - North Salmon	Piercefield 3		D	24042	Piercefield	089	36	1924-01-01	0.6	0.6	0.6	0.6	0.6	HY	WAT			3.2	
Erie Blvd. Hydro - NYS Barge	Hydraulic Race		A	23848	Lockport	063	36	1942-01-01	4.7	3.1	3.1	4.7	4.7	HY	WAT			9.2	
Erie Blvd. Hydro - Oak Orchard	Glenwood 1		B	24046	Medina	073	36	1950-01-01	0.5	0.5	0.5	0.5	0.5	HY	WAT			1.3	
Erie Blvd. Hydro - Oak Orchard	Glenwood 2		B	24046	Medina	073	36	1950-01-01	0.5	0.5	0.5	0.5	0.5	HY	WAT			1.0	
Erie Blvd. Hydro - Oak Orchard	Glenwood 3		B	24046	Medina	073	36	1950-01-01	0.5	0.5	0.5	0.5	0.5	HY	WAT			0.3	
Erie Blvd. Hydro - Oak Orchard	Oak Orchard		B	24046	Waterport	073	36	1941-01-01	0.4	0.3	0.3	0.4	0.4	HY	WAT			0.0	
Erie Blvd. Hydro - Oak Orchard	Waterport 1		B	24046	Waterport	073	36	1941-01-01	2.3	1.6	1.6	2.3	2.3	HY	WAT			8.5	
Erie Blvd. Hydro - Oak Orchard	Waterport 2		B	24046	Waterport	073	36	1968-01-01	2.5	1.8	1.8	2.5	2.5	HY	WAT			8.7	
Erie Blvd. Hydro - Oswegatchie	Browns Falls 1		E	24044	Oswegatchie	089	36	1923-01-01	7.5	8.0	8.0	7.5	7.5	HY	WAT			20.4	
Erie Blvd. Hydro - Oswegatchie	Browns Falls 2		E	24044	Oswegatchie	089	36	1923-01-01	7.5	8.0	8.0	7.5	7.5	HY	WAT			34.1	
Erie Blvd. Hydro - Oswegatchie	Eel Weir 1		E	24044	Heuvelton	089	36	1928-01-01	0.5	0.3	0.3	0.5	0.5	HY	WAT			1.9	
Erie Blvd. Hydro - Oswegatchie	Eel Weir 2		E	24044	Heuvelton	089	36	1938-01-01	1.1	0.8	0.8	1.1	1.1	HY	WAT			2.0	
Erie Blvd. Hydro - Oswegatchie	Eel Weir 3		E	24044	Heuvelton	089	36	1938-01-01	1.1	0.8	0.8	1.1	1.1	HY	WAT			3.1	
Erie Blvd. Hydro - Oswegatchie	Flat Rock 1		E	24044	Flat Rock	089	36	1924-01-01	3.0	2.6	2.6	3.0	3.0	HY	WAT			10.7	
Erie Blvd. Hydro - Oswegatchie	Flat Rock 2		E	24044	Flat Rock	089	36	1924-01-01	3.0	2.6	2.6	3.0	3.0	HY	WAT			8.7	
Erie Blvd. Hydro - Oswegatchie	Heuvelton 1		E	24044	Heuvelton	089	36	1924-01-01	0.5	0.4	0.4	0.5	0.5	HY	WAT			2.0	
Erie Blvd. Hydro - Oswegatchie	Heuvelton 2		E	24044	Heuvelton	089	36	1924-01-01	0.5	0.4	0.4	0.5	0.5	HY	WAT			1.4	
Erie Blvd. Hydro - Oswegatchie	Lower Newton Falls 1		E	24044	Newton Falls	089	36	2002-07-01	0.5	0.6	0.6	0.5	0.5	HY	WAT			3.0	
Erie Blvd. Hydro - Oswegatchie	Oswegatchie 1		E	24044	Oswegatchie	089	36	1937-01-01	0.6	1.3	1.3	0.6	0.6	HY	WAT			3.8	
Erie Blvd. Hydro - Oswegatchie	Oswegatchie 2		E	24044	Oswegatchie	089	36	1937-01-01	0.2	0.5	0.5	0.2	0.2	HY	WAT			2.9	
Erie Blvd. Hydro - Oswegatchie	South Edwards 1		E	24044	South Edwards	089	36	1937-01-01	1.0	1.2	1.2	1.0	1.0	HY	WAT			4.7	
Erie Blvd. Hydro - Oswegatchie	South Edwards 2		E	24044	South Edwards	089	36	1937-01-01	1.0	1.2	1.2	1.0	1.0	HY	WAT			4.0	
Erie Blvd. Hydro - Oswegatchie	South Edwards 3		E	24044	South Edwards	089	36	1921-01-01	0.7	0.8	0.8	0.7	0.7	HY	WAT			2.6	
Erie Blvd. Hydro - Oswegatchie	South Edwards 4		E	24044	South Edwards	089	36	1937-01-01	0.2	0.2	0.2	0.2	0.2	HY	WAT			1.4	
Erie Blvd. Hydro - Oswegatchie	Talcville 1		E	24044	Edwards	089	36	1986-12-01	0.5	0.4	0.4	0.5	0.5	HY	WAT			3.4	
Erie Blvd. Hydro - Oswegatchie	Talcville 2		E	24044	Edwards	089	36	1986-12-01	0.5	0.4	0.4	0.5	0.5	HY	WAT			0.5	
Erie Blvd. Hydro - Oswegatchie	Upper Newton Falls 2		E	24044	Newton Falls	089	36	2002-07-01	0.5	0.4	0.4	0.5	0.5	HY	WAT			3.2	
Erie Blvd. Hydro - Oswegatchie	Upper Newton Falls 3		E	24044	Newton Falls	089	36	2002-07-01	0.5	0.4	0.4	0.5	0.5	HY	WAT			2.6	

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TABLE III-2 (cont'd) Existing Generating Facilities

Owner, Operator, and / or Billing Organization	Station	Unit	Z O N E	PTID	Location			In-Service Date YYYY-MM-DD	Name Plate Rating ^(V) MW	2019 CRIS ^(A) MW		2019 Capability ^(B) MW		D U A L	Unit Type	Fuel ^(L)		2018 Net ^(C) Energy GWh	Notes
					Town	Cnty	St			SUM	WIN	SUM	WIN			Type 1	Type 2		
Erie Blvd. Hydro - Oswegatchie	Upper Newton Falls 4		E	24044	Newton Falls	089	36	2002-07-01	0.5	0.4	0.4	0.5	0.5	HY	WAT			1.4	
Erie Blvd. Hydro - Seneca Oswego	Baldwinsville 1		C	24041	Baldwinsville	067	36	1927-01-01	0.3	0.2	0.2	0.3	0.3	HY	WAT			2.0	
Erie Blvd. Hydro - Seneca Oswego	Baldwinsville 2		C	24041	Baldwinsville	067	36	1927-01-01	0.3	0.2	0.2	0.3	0.3	HY	WAT			1.4	
Erie Blvd. Hydro - Seneca Oswego	Fulton 1		C	24041	Fulton	075	36	1924-01-01	0.8	0.8	0.8	0.8	0.8	HY	WAT			3.8	
Erie Blvd. Hydro - Seneca Oswego	Fulton 2		C	24041	Fulton	075	36	1928-01-01	0.5	0.4	0.4	0.5	0.5	HY	WAT			2.2	
Erie Blvd. Hydro - Seneca Oswego	Granby 1		C	24041	Granby	075	36	1983-05-01	5.0	5.1	5.1	5.2	5.2	HY	WAT			20.7	
Erie Blvd. Hydro - Seneca Oswego	Granby 2		C	24041	Granby	075	36	1983-05-01	5.0	5.1	5.1	5.2	5.2	HY	WAT			21.0	
Erie Blvd. Hydro - Seneca Oswego	Minetto 2		C	24041	Minetto	075	36	1915-01-01	1.6	1.5	1.5	1.7	1.7	HY	WAT			5.6	
Erie Blvd. Hydro - Seneca Oswego	Minetto 3		C	24041	Minetto	075	36	1915-01-01	1.6	1.5	1.5	1.7	1.7	HY	WAT			6.7	
Erie Blvd. Hydro - Seneca Oswego	Minetto 4		C	24041	Minetto	075	36	1915-01-01	1.6	1.5	1.5	1.7	1.7	HY	WAT			6.1	
Erie Blvd. Hydro - Seneca Oswego	Minetto 5		C	24041	Minetto	075	36	1975-01-01	1.6	1.5	1.5	1.7	1.7	HY	WAT			4.2	
Erie Blvd. Hydro - Seneca Oswego	Minetto 6		C	24041	Minetto	075	36	1975-01-01	1.6	1.5	1.5	1.7	1.7	HY	WAT			4.5	
Erie Blvd. Hydro - Seneca Oswego	Oswego Falls E 1		C	24041	Oswego	075	36	1914-01-01	1.5	1.5	1.5	1.6	1.6	HY	WAT			8.6	
Erie Blvd. Hydro - Seneca Oswego	Oswego Falls E 2		C	24041	Oswego	075	36	1914-01-01	1.5	1.5	1.5	1.6	1.6	HY	WAT			8.6	
Erie Blvd. Hydro - Seneca Oswego	Oswego Falls E 3		C	24041	Oswego	075	36	1914-01-01	1.5	1.5	1.5	1.6	1.6	HY	WAT			8.9	
Erie Blvd. Hydro - Seneca Oswego	Oswego Falls W 4		C	24041	Oswego	075	36	1914-01-01	0.9	1.0	1.0	0.9	0.9	HY	WAT			3.5	
Erie Blvd. Hydro - Seneca Oswego	Oswego Falls W 5		C	24041	Oswego	075	36	1914-01-01	0.9	1.0	1.0	0.9	0.9	HY	WAT			2.8	
Erie Blvd. Hydro - Seneca Oswego	Oswego Falls W 6		C	24041	Oswego	075	36	2007-01-01	0.5	0.5	0.5	0.5	0.5	HY	WAT			0.8	
Erie Blvd. Hydro - Seneca Oswego	Oswego Falls W 7		C	24041	Oswego	075	36	2007-01-01	0.5	0.5	0.5	0.5	0.5	HY	WAT			0.8	
Erie Blvd. Hydro - Seneca Oswego	Varick 2		C	24041	Oswego	075	36	1926-01-01	2.2	1.9	1.9	2.3	2.3	HY	WAT			9.7	
Erie Blvd. Hydro - Seneca Oswego	Varick 3		C	24041	Oswego	075	36	1926-01-01	2.2	2.1	2.1	2.3	2.3	HY	WAT			5.7	
Erie Blvd. Hydro - Seneca Oswego	Varick 4		C	24041	Oswego	075	36	1926-01-01	2.2	1.9	1.9	2.3	2.3	HY	WAT			2.9	
Erie Blvd. Hydro - Seneca Oswego	Varick 5		C	24041	Oswego	075	36	1926-01-01	2.2	1.9	1.9	2.3	2.3	HY	WAT			7.9	
Erie Blvd. Hydro - South Salmon	Bennetts Bridge 1		C	24043	Altmar	075	36	1964-01-01	6.4	7.0	7.0	6.4	6.4	HY	WAT			11.0	
Erie Blvd. Hydro - South Salmon	Bennetts Bridge 2		C	24043	Altmar	075	36	1966-01-01	6.4	7.0	7.0	6.4	6.4	HY	WAT			16.5	
Erie Blvd. Hydro - South Salmon	Bennetts Bridge 3		C	24043	Altmar	075	36	1970-01-01	7.0	7.7	7.7	7.0	7.0	HY	WAT			36.5	
Erie Blvd. Hydro - South Salmon	Bennetts Bridge 4		C	24043	Altmar	075	36	1970-01-01	7.0	7.7	7.7	7.0	7.0	HY	WAT			40.5	
Erie Blvd. Hydro - South Salmon	Lighthouse Hill 1		C	24043	Altmar	075	36	1930-01-01	3.8	4.1	4.1	3.8	3.8	HY	WAT			14.4	
Erie Blvd. Hydro - South Salmon	Lighthouse Hill 2		C	24043	Altmar	075	36	1930-01-01	3.8	4.1	4.1	3.8	3.8	HY	WAT			10.8	
Erie Blvd. Hydro - Upper Hudson	E J West 1		F	24058	Hadley	091	36	1930-01-01	10.0	11.9	11.9	10.0	10.0	HY	WAT			23.6	
Erie Blvd. Hydro - Upper Hudson	E J West 2		F	24058	Hadley	091	36	1930-01-01	10.0	11.9	11.9	10.0	10.0	HY	WAT			30.4	
Erie Blvd. Hydro - Upper Hudson	Feeder Dam 1		F	24058	S Glens Falls	091	36	1924-01-01	1.2	0.9	0.9	1.2	1.2	HY	WAT			5.3	
Erie Blvd. Hydro - Upper Hudson	Feeder Dam 2		F	24058	S Glens Falls	091	36	1924-01-01	1.2	0.9	0.9	1.2	1.2	HY	WAT			5.0	
Erie Blvd. Hydro - Upper Hudson	Feeder Dam 3		F	24058	S Glens Falls	091	36	1924-01-01	1.2	0.9	0.9	1.2	1.2	HY	WAT			5.6	
Erie Blvd. Hydro - Upper Hudson	Feeder Dam 4		F	24058	S Glens Falls	091	36	1924-01-01	1.2	0.9	0.9	1.2	1.2	HY	WAT			5.1	
Erie Blvd. Hydro - Upper Hudson	Feeder Dam 5		F	24058	S Glens Falls	091	36	1924-01-01	1.2	0.9	0.9	1.2	1.2	HY	WAT			5.6	
Erie Blvd. Hydro - Upper Hudson	Sherman Island 1		F	24058	Queensbury	113	36	2009-03-01	8.0	0.0	0.0	0.0	0.0	HY	WAT			29.7	
Erie Blvd. Hydro - Upper Hudson	Sherman Island 2		F	24058	Queensbury	113	36	1923-01-01	7.2	8.1	8.1	7.2	7.2	HY	WAT			29.0	

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TABLE III-2 (cont'd) Existing Generating Facilities

Owner, Operator, and / or Billing Organization	Station	Unit	Z O N E	PTID	Location			In-Service Date YYYY-MM-DD	Name Plate Rating ^(V) MW	2019 CRIS ^(A) MW		2019 Capability ^(B) MW		D U A L	Unit Type	Fuel ^(L)		2018 Net ^(C) Energy GWh	Notes
					Town	Cnty	St			SUM	WIN	SUM	WIN			Type 1	Type 2		
Niagara Mohawk Power Corp.	Cons. HY-Victory		F	23643	Victory Falls	091	36	1986-12-01	1.7	0.0	0.0	0.0	0.0	HY	WAT			6.6	
Niagara Mohawk Power Corp.	Copenhagen Assoc.		E	23633	Copenhagen	049	36	1986-01-01	3.3	0.0	0.0	0.0	0.0	HY	WAT			7.3	
Niagara Mohawk Power Corp.	Cottrell Paper		F	23643	Rock City Falls	091	36	1987-01-01	0.3	0.0	0.0	0.0	0.0	HY	WAT			0.0	
Niagara Mohawk Power Corp.	Cranberry Lake		E	23633	Cranberry Lake	049	36	1987-12-01	0.5	0.0	0.0	0.0	0.0	HY	WAT			1.6	
Niagara Mohawk Power Corp.	Edison Hydro Electric		F	23643	Stottville	021	36	2009-11-01	0.3	0.0	0.0	0.0	0.0	HY	WAT			0.5	
Niagara Mohawk Power Corp.	Empire Hydro Partners		E	23633	Port Leyden	049	36	1984-11-01	1.0	0.0	0.0	0.0	0.0	HY	WAT			4.8	
Niagara Mohawk Power Corp.	Finch Paper LLC - Glens Falls		F	23643	Glens Falls	113	36	2009-11-01	11.8	0.0	0.0	0.0	0.0	HY	WAT			0.2	
Niagara Mohawk Power Corp.	Finch Prunyn		F	23643	Glens Falls	113	36	1989-12-01	29.0	0.0	0.0	0.0	0.0	HY	WAT			0.0	
Niagara Mohawk Power Corp.	Forestport Hydro		E	23633	Forestport	065	36	1987-12-01	3.4	0.0	0.0	0.0	0.0	HY	WAT			7.2	
Niagara Mohawk Power Corp.	Fort Miller Assoc (Hudson River)		F	23643	Schuyerville	091	36	1985-10-01	5.0	0.0	0.0	0.0	0.0	HY	WAT			22.7	
Niagara Mohawk Power Corp.	Fortis Energy - Diana		E	23633	Diana	049	36	1985-07-01	1.8	0.0	0.0	0.0	0.0	HY	WAT			6.6	
Niagara Mohawk Power Corp.	Franklin Hydro		D	24055	Franklin Falls	033	36	1995-03-01	0.3	0.0	0.0	0.0	0.0	HY	WAT			0.0	
Niagara Mohawk Power Corp.	Gloversville Johnstown WWT		F	23643	Gloversville	035	36	2010-01-01	0.7	0.0	0.0	0.0	0.0	IC	MTE			1.2	
Niagara Mohawk Power Corp.	Green Island Power Authority		F	23643	Green Island	001	36	1971-01-01	6.0	0.0	0.0	0.0	0.0	HY	WAT			39.8	
Niagara Mohawk Power Corp.	Hewittville Hydro		E	23633	Potsdam	089	36	1984-07-01	3.0	0.0	0.0	0.0	0.0	HY	WAT			13.2	
Niagara Mohawk Power Corp.	Hollings&Vose-Center		F	23643	Easton	115	36	1986-01-01	0.4	0.0	0.0	0.0	0.0	HY	WAT			0.7	
Niagara Mohawk Power Corp.	Hollings&Vose-Lower		F	23643	Easton	115	36	1986-01-01	0.4	0.0	0.0	0.0	0.0	HY	WAT			0.0	
Niagara Mohawk Power Corp.	Hollings&Vose-Upper		F	23643	Easton	115	36	1986-01-01	0.4	0.0	0.0	0.0	0.0	HY	WAT			0.0	
Niagara Mohawk Power Corp.	Hollow Dam Power		E	23633	Saint Lawrence	089	36	1987-12-01	1.0	0.0	0.0	0.0	0.0	HY	WAT			2.8	
Niagara Mohawk Power Corp.	Hoosick Falls		F	23643	Hoosick Falls	083	36	1988-08-01	0.6	0.0	0.0	0.0	0.0	HY	WAT			0.0	
Niagara Mohawk Power Corp.	Hydrocarbon-Algny		A	23774	Allegany	003	36	1992-12-01	0.2	0.0	0.0	0.0	0.0	IC	NG			0.0	
Niagara Mohawk Power Corp.	Indian Falls HY		E	23633	Theresa	045	36	1986-01-01	0.3	0.0	0.0	0.0	0.0	HY	WAT			0.0	
Niagara Mohawk Power Corp.	Kayuta Lake		E	23633	Kayuta	065	36	1988-05-01	0.4	0.0	0.0	0.0	0.0	HY	WAT			1.4	
Niagara Mohawk Power Corp.	Kings Falls		E	23633	Copenhagen	049	36	1988-05-01	1.6	0.0	0.0	0.0	0.0	HY	WAT			0.0	
Niagara Mohawk Power Corp.	Laidlaw Energy		A	23774	Ellicottville	009	36	1991-07-01	3.4	0.0	0.0	0.0	0.0	GT	NG			0.0	
Niagara Mohawk Power Corp.	Laidlaw Energy		A	23774	Ellicottville	009	36	1991-07-01	2.4	0.0	0.0	0.0	0.0	ST	NG			0.0	
Niagara Mohawk Power Corp.	Long Falls Hydro		E	23633	Carthage	045	36	1991-06-01	3.3	0.0	0.0	0.0	0.0	HY	WAT			4.9	
Niagara Mohawk Power Corp.	Lyonsdale Assoc. (Burrows)		E	23633	Lyons Falls	049	36	1984-07-01	3.0	0.0	0.0	0.0	0.0	HY	WAT			8.7	
Niagara Mohawk Power Corp.	Mechanicville		F	23643	Halfmoon	091	36	2005-03-01	3.8	0.0	0.0	0.0	0.0	HY	WAT			21.9	
Niagara Mohawk Power Corp.	Mount Ida Hydro		F	23643	Troy	083	36	1986-01-01	3.0	0.0	0.0	0.0	0.0	HY	WAT			8.9	
Niagara Mohawk Power Corp.	Mountaineire Massage Spa		F	23643	Wevertown	113	36	2009-11-01	0.0	0.0	0.0	0.0	0.0	HY	WAT			0.0	
Niagara Mohawk Power Corp.	Newport Hydro Assoc.		E	23633	Newport	043	36	1987-12-01	1.7	0.0	0.0	0.0	0.0	HY	WAT			5.9	
Niagara Mohawk Power Corp.	Northbrook Carthage		E	23633	Carthage	045	36	1986-01-01	4.4	0.0	0.0	0.0	0.0	HY	WAT			21.4	
Niagara Mohawk Power Corp.	Nottingham High School		C	23634	Syracuse	067	36	1988-06-01	0.2	0.0	0.0	0.0	0.0	CG	NG			0.0	
Niagara Mohawk Power Corp.	Oakvale Construction		D	24055	Wilmington	031	36	2009-11-01	0.4	0.0	0.0	0.0	0.0	HY	WAT			2.0	
Niagara Mohawk Power Corp.	Ogdensburg Hydro		E	23633	Ogdensburg	089	36	1987-12-01	3.5	0.0	0.0	0.0	0.0	HY	WAT			9.2	
Niagara Mohawk Power Corp.	Onondaga Energy Partners		C	23634	Onondaga	067	36	1987-12-01	1.4	0.0	0.0	0.0	0.0	IC	MTE			0.0	
Niagara Mohawk Power Corp.	Oswego County		C	23634	Oswego	075	36	1986-03-01	3.6	0.0	0.0	0.0	0.0	ST	REF			4.3	

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TABLE III-2 (cont'd) Existing Generating Facilities

Owner, Operator, and / or Billing Organization	Station	Unit	Z O N E	PTID	Location			In-Service Date YYYY-MM-DD	Name Plate Rating ^(V) MW	2019 CRIS ^(A) MW		2019 Capability ^(B) MW		D U A L	Unit Type	Fuel ^(U)		2018 Net ^(C) Energy GWh	Notes
					Town	Cnty	St			SUM	WIN	SUM	WIN			Type 1	Type 2		
					Rockville Centre, Village of	Charles P Keller 14				K	1661	Rockville Centre	059			36	1994-09-01		
Seneca Energy II, LLC	Ontario LFGE		C	23819	Canandaigua	069	36	2003-12-01	11.2	7.6	7.6	11.2	11.2	IC	MTE			71.7	
Seneca Energy II, LLC	Seneca Energy 1		C	23797	Seneca Falls	099	36	1996-03-01	8.8	8.8	8.8	8.8	8.8	IC	MTE			106.6	(G)
Seneca Energy II, LLC	Seneca Energy 2		C	23797	Seneca Falls	099	36	1997-08-01	8.8	8.8	8.8	8.8	8.8	IC	MTE				
Seneca Falls Power Corp.	Seneca Falls 1		C	23627	Seneca Falls	099	36	1998-06-01	1.8	1.6	1.6	0.0	0.0	HY	WAT			0.0	
Seneca Falls Power Corp.	Seneca Falls 2		C	23627	Seneca Falls	099	36	1998-06-01	1.8	1.6	1.6	0.0	0.0	HY	WAT			0.0	
Seneca Falls Power Corp.	Seneca Falls 4		C	23627	Seneca Falls	099	36	1998-06-01	2.0	1.8	1.8	0.0	0.0	HY	WAT			0.0	
Seneca Power Partners, L.P.	Allegany		B	23514	Hume	003	36	1995-03-01	67.0	62.9	82.2	61.4	63.4	CC	NG			35.7	
Seneca Power Partners, L.P.	Batavia		B	24024	Batavia	037	36	1992-06-01	67.3	57.1	71.7	48.8	60.1	CC	NG			35.3	
Seneca Power Partners, L.P.	Carthage Energy		E	23857	Carthage	045	36	1991-08-01	62.9	59.0	70.6	56.3	64.5	YES	CC	NG	F02	19.9	
Seneca Power Partners, L.P.	Hillburn GT		G	23639	Hillburn	087	36	1971-04-01	46.5	37.9	51.8	35.4	45.1	YES	JE	NG	KER	0.4	
Seneca Power Partners, L.P.	Shoemaker GT		G	23640	Middletown	071	36	1971-05-01	41.9	33.1	45.2	32.7	40.8	YES	JE	NG	KER	0.4	
Seneca Power Partners, L.P.	Sterling		E	23777	Sherrill	065	36	1991-06-01	65.3	57.4	72.1	50.9	62.5	CC	NG			26.2	
Sheldon Energy LLC	High Sheldon Wind Farm		C	323625	Sheldon	121	36	2009-02-01	118.1	112.5	112.5	118.1	118.1	WT	WND			247.7	
Shoreham Solar Commons LLC	Shoreham Solar		K	323752	East Shoreham	103	36	2018-07-01	25.0	24.9	24.9	0.0	0.0	PV	SUN				(N)
Somerset Operating Company, LLC	Somerset		A	23543	Somerset	063	36	1984-08-01	655.1	686.5	686.5	685.9	692.5	ST	BIT			593.0	
Stephentown Spindle LLC	Beacon LESR		F	323632	Stephentown	083	36	2010-11-29	20.0	0.0	0.0	0.0	0.0	ES	FW			0.0	
Stony Creek Energy LLC	Orangeville Wind Farm		C	323706	Orangeville	121	36	2013-12-01	93.9	94.4	94.4	93.9	93.9	WT	WND			289.6	
Tenaska Power Services Co.	Freeport CT 1		K	23764	Freeport	059	36	2004-06-01	60.0	48.3	51.3	45.7	46.4	YES	GT	NG	F02	36.7	
TransAlta Energy Marketing (U.S.) Inc.	Saranac Energy		D	23793	Plattsburgh	019	36	1994-06-01	285.6	253.7	298.4	249.8	276.2	CC	NG			70.8	
Triton Power Company	Chateaugay High Falls		D	323578	Chateaugay	033	36	1987-12-01	1.7	1.7	1.7	0.0	0.0	HY	WAT			6.9	
Western New York Wind Corp.	Western NY Wind Power		B	24143	Wethersfield	121	36	2000-10-01	6.6	0.0	0.0	0.0	0.0	WT	WND			4.6	
Wheelabrator Hudson Falls, LLC	Wheelabrator Hudson Falls		F	23798	Hudson Falls	115	36	1991-10-01	14.4	12.7	12.7	10.5	11.0	ST	REF			76.8	
Wheelabrator Westchester, LP	Wheelabrator Westchester		H	23653	Peekskill	119	36	1984-04-01	59.7	53.5	53.5	52.0	51.6	ST	REF			392.0	
									45,091.7	41,127.4	44,177.8	39,294.5	41,790.4				135,585.2		

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NOTES FOR TABLE III-2 (Existing Generating Facilities)

Note	Owner / Operator	Station Unit	Zone	PTID	Description
1	Bayonne Energy Center, LLC	Bayonne EC CTG9	J	323749	Unit produced power during months Jun - Dec 2018
2	Bayonne Energy Center, LLC	Bayonne EC CTG10	J	323750	Unit produced power during months Jun - Dec 2018
3	Binghamton BOP, LLC	Binghamton	C	23790	Unit Retired on 1/9/2018.
4	Calpine Energy Services LP	Stony Brook	K	24151	BTM:NG Resources - Summer and Winter Net-ICAP replaces Summer Capability and Winter Capability values
5	Cayuga Operating Company, LLC	Cayuga 2	C	23585	Unit became ICAP Ineligible on 7/1/2018.
6	CPV Valley, LLC	CPV_VALLEY___CC1	G	323721	Unit produced power during months Jan - Dec 2018
7	CPV Valley, LLC	CPV_VALLEY___CC2	G	323722	Unit produced power during months Feb - Dec 2018
8	Cubit Power One Inc.	Arthur Kill Cogen	J	323718	Unit produced power during months Aug - Dec 2018
9	EDF Renewable Energy	Copenhagen Wind Farm	E	323753	Unit produced power during months Nov - Dec 2018
10	EDP Renewables NA	Arkwright Summit Wind Farm	A	323751	This unit is a member of Class Year 2017-2 but is in-service under limited operation for energy. Unit produced power during months Aug - Dec 2018.
11	Helix Ravenswood, LLC	Ravenswood GTs	J	Various	Units became ICAP Ineligible on 4/1/2018.
12	Lyonsdale Biomass, LLC	Lyonsdale	E	23803	Unit became ICAP Ineligible on 4/1/2018.
13	New York Power Authority	Gilboa 1	F	23756	Unit became ICAP Ineligible on 1/1/2019
A	Various	Generating Units	A-K	Various	Summer/Winter CRIS caps reflect capacity level of the unit that is deemed deliverable. See Definitions of Labels for the Load & Capacity Schedules (Section V) for description.
B	Various	Generating Units	A-K	Various	Summer Capability reflects DMNC values that are applicable to the Summer 2019 ICAP Market. Winter Capability reflects DMNC values that were applicable to the Winter 2018-2019 ICAP Market. DMNC stands for Dependable Maximum Net Generating Capability.
C	Various	Generating Units	A-K	Various	Net Energy from resources not directly participating in NYISO markets is obtained directly from the local TO.
D	Various	Reactivated Generator	A-K	Various	Unit(s) returned to service from mothballed status or from a Mothball Outage as defined in the MST.
E	Various	Behind-the-Meter: Net Generation Resource	A-K	Various	Units that are Behind the Meter Net Generation Resources.
G	Various	Generating Station	A-K	Various	Generation is reported as Station Total.
I	Various	ICAP Ineligible Generator	A-K	Various	This unit is in an ICAP Ineligible Forced Outage (IIFO) as defined in the MST.
M	Various	Mothballed Generator	A-K	Various	This unit is mothballed or is in a Mothball Outage per MST Section 5.18.
N	Various	New Generator	A-K	Various	Unit(s) added since the publication of the 2018 Load and Capacity Data Report.
R	Various	Retired Generator	A-K	Various	This unit is retired or Retired as defined in the MST.
U	Various	Generating Units	A-K	Various	The fuel type selection is not meant to provide any information on current fuel inventories, nor does it indicate which of the fuels might be considered as primary.
V	Various	Generating Units	A-K	Various	Typically, Name Plate refers to a historical rating and may not reflect the most current value.

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Table III-3a: Capability by Zone and Type – Summer 2019

<i>Generator Type</i>		ZONE											<i>TOTAL</i>
		A	B	C	D	E	F	G	H	I	J	K	
Summer Capability Period (MW) ⁽²⁾													
<i>Fossil</i>	Steam Turbine (Oil)	0.0	0.0	801.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	801.7
	Steam Turbine (Oil & Gas)	0.0	0.0	815.0	0.0	0.0	0.0	2,423.2	0.0	0.0	2,791.9	2,338.0	8,368.1
	Steam Turbine (Gas)	41.0	0.0	104.0	0.0	0.0	0.0	360.7	0.0	0.0	1,027.2	0.0	1,532.9
	Steam Turbine (Coal)	685.9	0.0	151.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	836.9
	Combined Cycle (Oil & Gas)	394.7	0.0	277.8	81.2	137.6	3,040.3	621.7	0.0	0.0	3,320.8	583.7	8,457.8
	Combined Cycle (Gas)	0.0	110.2	988.0	249.8	50.9	0.0	0.0	0.0	0.0	0.0	128.0	1,526.9
	Jet Engine (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	674.0	674.0
	Jet Engine (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	68.1	0.0	0.0	1,041.8	162.4	1,272.3
	Jet Engine (Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.1	55.1
	Combustion Turbine (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	18.6	0.0	0.0	347.9	544.6	911.1
	Combustion Turbine (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	19.5	0.0	0.0	584.5	381.2	985.2
	Combustion Turbine (Gas)	40.9	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	445.2	174.0	661.8
	Internal Combustion (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.1	20.1
	Internal Combustion (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.9	28.9
	Internal Combustion (Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Pumped Storage</i>	Pumped Storage Hydro	240.0	0.0	0.0	0.0	0.0	1,171.3	0.0	0.0	0.0	0.0	0.0	1,411.3
<i>Nuclear</i>	Steam (PWR Nuclear)	0.0	581.0	0.0	0.0	0.0	0.0	0.0	2,054.0	0.0	0.0	0.0	2,635.0
	Steam (BWR Nuclear)	0.0	0.0	2,765.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,765.1
<i>Renewable ⁽¹⁾</i>	Conventional Hydro	2,439.7	63.8	110.0	914.8	376.3	269.5	78.6	0.0	0.0	0.0	0.0	4,252.7
	Internal Combustion (Methane)	18.4	13.6	45.7	6.4	11.2	12.0	0.0	0.0	0.0	0.0	0.0	107.3
	Steam Turbine (Wood)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Steam Turbine (Refuse)	31.2	0.0	0.0	0.0	0.0	10.5	6.2	52.0	0.0	0.0	119.7	219.6
	Wind	100.5	0.0	518.4	678.4	441.9	0.0	0.0	0.0	0.0	0.0	0.0	1,739.2
	Solar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.5	31.5
<i>Totals</i>		3,992.3	768.6	6,578.4	1,930.6	1,017.9	4,503.6	3,596.6	2,106.0	0.0	9,559.3	5,241.2	39,294.5

(1) - The Renewable Category does not necessarily match the New York State Clean Energy Standard (CES) Definition.

(2) - Values are from the Summer Capability column in Table III-2: Existing Generators.

2019 Load & Capacity Data Report

Table III-3b: Capability by Zone and Type – Winter 2019-20

<i>Generator Type</i>		ZONE											TOTAL
		A	B	C	D	E	F	G	H	I	J	K	
Winter Capability Period (MW) ⁽²⁾													
<i>Fossil</i>	Steam Turbine (Oil)	0.0	0.0	827.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	827.0
	Steam Turbine (Oil & Gas)	0.0	0.0	827.5	0.0	0.0	0.0	2,464.9	0.0	0.0	2,815.0	2,338.1	8,445.5
	Steam Turbine (Gas)	40.4	0.0	104.0	0.0	0.0	0.0	369.3	0.0	0.0	1,035.2	0.0	1,548.9
	Steam Turbine (Coal)	692.5	0.0	151.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	843.5
	Combined Cycle (Oil & Gas)	443.0	0.0	328.9	92.3	156.2	3,498.8	755.0	0.0	0.0	3,776.6	656.8	9,707.6
	Combined Cycle (Gas)	0.0	123.5	1,130.9	276.2	62.5	0.0	0.0	0.0	0.0	0.0	137.6	1,730.7
	Jet Engine (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	795.4	795.4
	Jet Engine (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	85.9	0.0	0.0	1,225.8	199.5	1,511.2
	Jet Engine (Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	58.6	58.6
	Combustion Turbine (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	23.4	0.0	0.0	438.4	732.5	1,194.3
	Combustion Turbine (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	23.7	0.0	0.0	775.9	419.9	1,219.5
	Combustion Turbine (Gas)	46.2	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	452.6	186.6	692.7
	Internal Combustion (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.3	22.3
	Internal Combustion (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.9	28.9
Internal Combustion (Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Pumped Storage</i>	Pumped Storage Hydro	240.0	0.0	0.0	0.0	0.0	1,168.7	0.0	0.0	0.0	0.0	0.0	1,408.7
<i>Nuclear</i>	Steam (PWR Nuclear)	0.0	581.7	0.0	0.0	0.0	0.0	0.0	2,065.8	0.0	0.0	0.0	2,647.5
	Steam (BWR Nuclear)	0.0	0.0	2,782.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,782.5
<i>Renewable ⁽¹⁾</i>	Conventional Hydro	2,439.7	63.8	110.0	885.8	376.3	269.6	78.8	0.0	0.0	0.0	0.0	4,224.0
	Internal Combustion (Methane)	18.4	13.6	45.7	6.4	11.2	12.0	0.0	0.0	0.0	0.0	0.0	107.3
	Steam Turbine (Wood)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Steam Turbine (Refuse)	32.2	0.0	0.0	0.0	0.0	11.0	6.9	51.6	0.0	0.0	121.9	223.6
	Wind	100.5	0.0	518.4	678.4	441.9	0.0	0.0	0.0	0.0	0.0	0.0	1,739.2
	Solar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.5	31.5
Totals		4,052.9	782.6	6,833.2	1,939.1	1,048.1	4,960.1	3,807.9	2,117.4	0.0	10,519.5	5,729.6	41,790.4

(1) - The Renewable Category does not necessarily match the New York State Clean Energy Standard (CES) Definition.

(2) - Values are from the Winter Capability column in Table III-2: Existing Generators.

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Table III-3c: Annual Net Energy Generation by Zone and Type - 2018

<i>Generator Type</i>		ZONE											TOTAL
		A	B	C	D	E	F	G	H	I	J	K	
Annual Net Energy Production (GWh) ⁽²⁾													
<i>Fossil</i>	Steam Turbine (Oil)	0.0	0.0	24.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.4
	Steam Turbine (Oil & Gas)	0.0	0.0	24.9	0.0	0.0	0.0	989.6	0.0	0.0	3,761.2	4,300.1	9,075.8
	Steam Turbine (Gas)	24.5	0.0	202.4	0.0	0.0	0.0	25.1	0.0	0.0	1,001.3	0.0	1,253.3
	Steam Turbine (Coal)	593.0	0.0	99.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	692.0
	Combined Cycle (Oil & Gas)	656.3	0.0	328.7	1.7	30.7	12,206.5	1,354.1	0.0	0.0	18,914.1	3,607.5	37,099.6
	Combined Cycle (Gas)	0.0	72.2	4,912.1	70.8	26.2	0.0	0.0	0.0	0.0	0.0	383.8	5,465.1
	Jet Engine (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.0	89.0
	Jet Engine (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	806.9	108.3	916.0
	Jet Engine (Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	140.8	140.8
	Combustion Turbine (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	3.0	32.7	36.0
	Combustion Turbine (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	87.5	344.0	432.1
	Combustion Turbine (Gas)	111.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	382.0	239.5	732.9
	Internal Combustion (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.2
	Internal Combustion (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0
Internal Combustion (Gas)	0.1	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.2	0.0	1.7	
<i>Pumped Storage</i>	Pumped Storage Hydro	404.0	0.0	0.0	0.0	0.0	406.8	0.0	0.0	0.0	0.0	0.0	810.8
<i>Nuclear</i>	Steam (PWR Nuclear)	0.0	4,706.6	0.0	0.0	0.0	0.0	0.0	16,334.0	0.0	0.0	0.0	21,040.6
	Steam (BWR Nuclear)	0.0	0.0	21,962.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21,962.5
<i>Renewable ⁽¹⁾</i>	Conventional Hydro	16,152.5	57.2	520.5	7,928.9	2,153.0	2,013.5	219.5	0.0	0.0	0.0	0.0	29,045.1
	Internal Combustion (Methane)	150.6	99.7	226.2	28.8	64.9	77.4	0.0	0.0	0.0	0.0	0.0	647.6
	Steam Turbine (Wood)	0.0	0.0	0.0	0.0	203.4	0.0	0.0	0.0	0.0	0.0	0.0	203.4
	Steam Turbine (Refuse)	214.4	0.0	221.1	0.0	0.0	76.8	23.4	392.0	0.0	0.0	950.7	1,878.4
	Wind	347.9	4.6	1,266.1	1,365.4	1,001.1	0.0	0.0	0.0	0.0	0.0	0.0	3,985.1
	Solar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.8	48.8
Totals		18,654.7	4,940.3	29,787.9	9,395.6	3,480.7	14,781.0	2,613.4	16,726.0	0.0	24,956.2	10,249.4	135,585.2

(1) - The Renewable Category does not necessarily match the New York State Clean Energy Standard (CES) Definition.

(2) - Values are from the 2018 Net Energy column in Table III-2: Existing Generators.

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Table III-3d: Scheduled Real-Time Transactions by Control Area and Proxy Bus (GWh) - 2018

Control Area	Proxy Bus Name	Imports	Wheels-In	Exports	Wheels-Out	Net Imports
HQ	Cedars	1,140	0	7	0	1,133
HQ	Chateaugay	8,804	1,790	87	0	10,507
IESO	Bruce	7,150	7	78	5	7,074
ISO-NE	1385 Line	437	0	220	0	217
ISO-NE	Cross Sound Cable	1,353	0	7	0	1,346
ISO-NE	Sandy Pond	3,868	6	7,170	1,796	-5,092
PJM	HTP	1,953	0	0	0	1,953
PJM	Keystone	4,902	10	1,744	12	3,156
PJM	Linden VFT	1,811	0	90	0	1,721
PJM	Neptune	4,744	0	0	0	4,744
	NYCA Total	36,162	1,813	9,403	1,813	26,759

Figure III-1: 2018 NYCA Energy Production by Zone

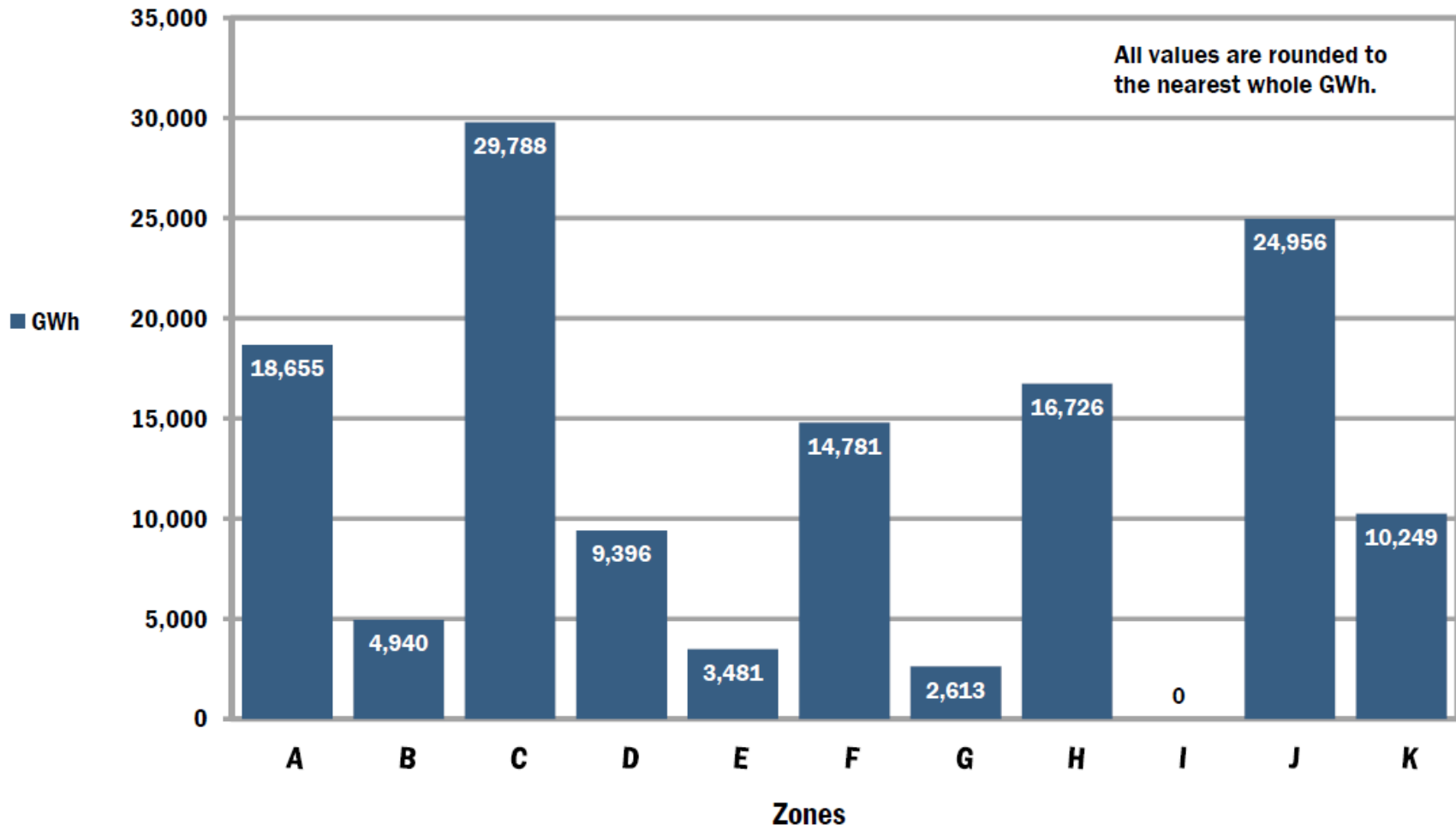
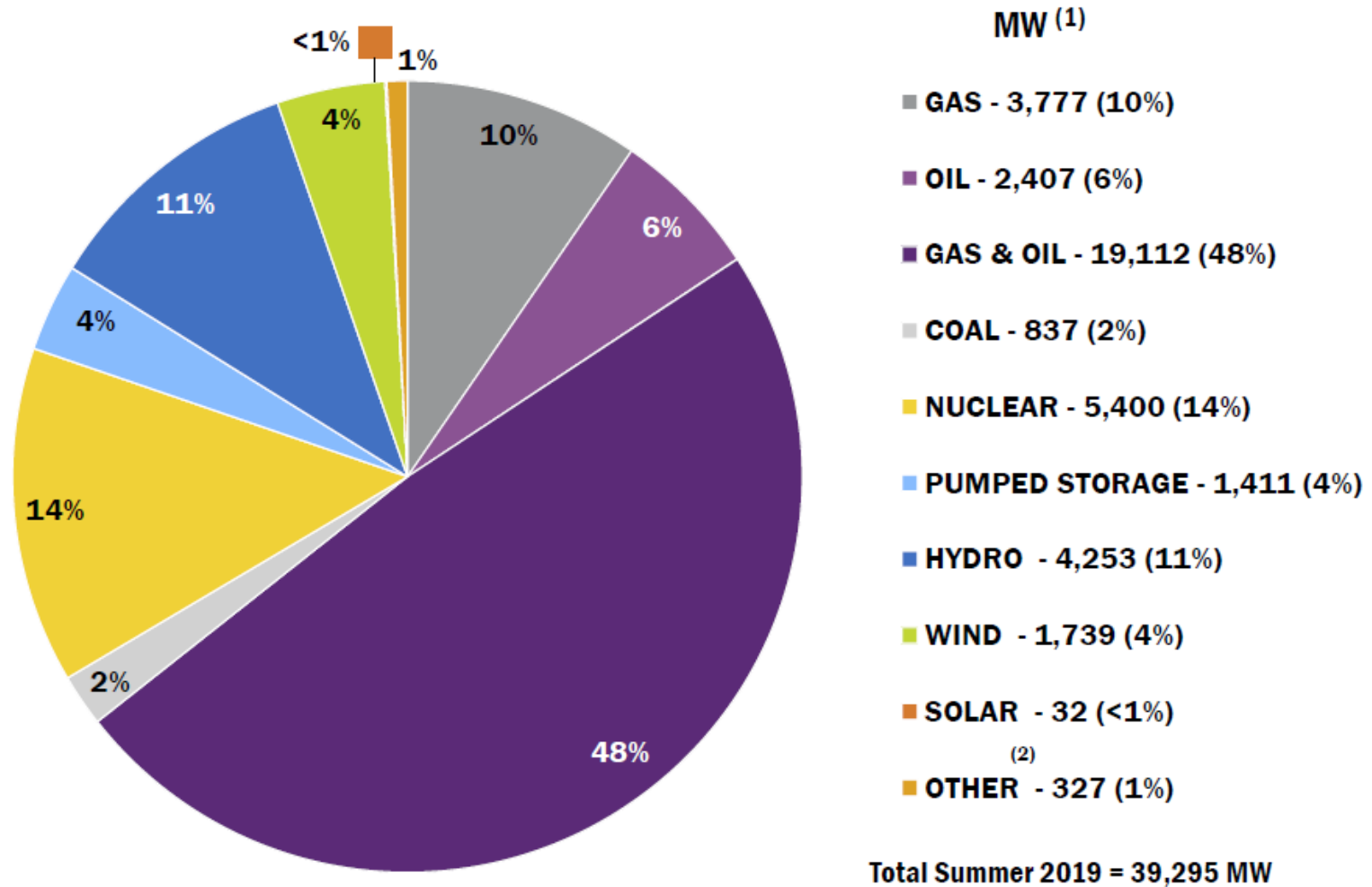


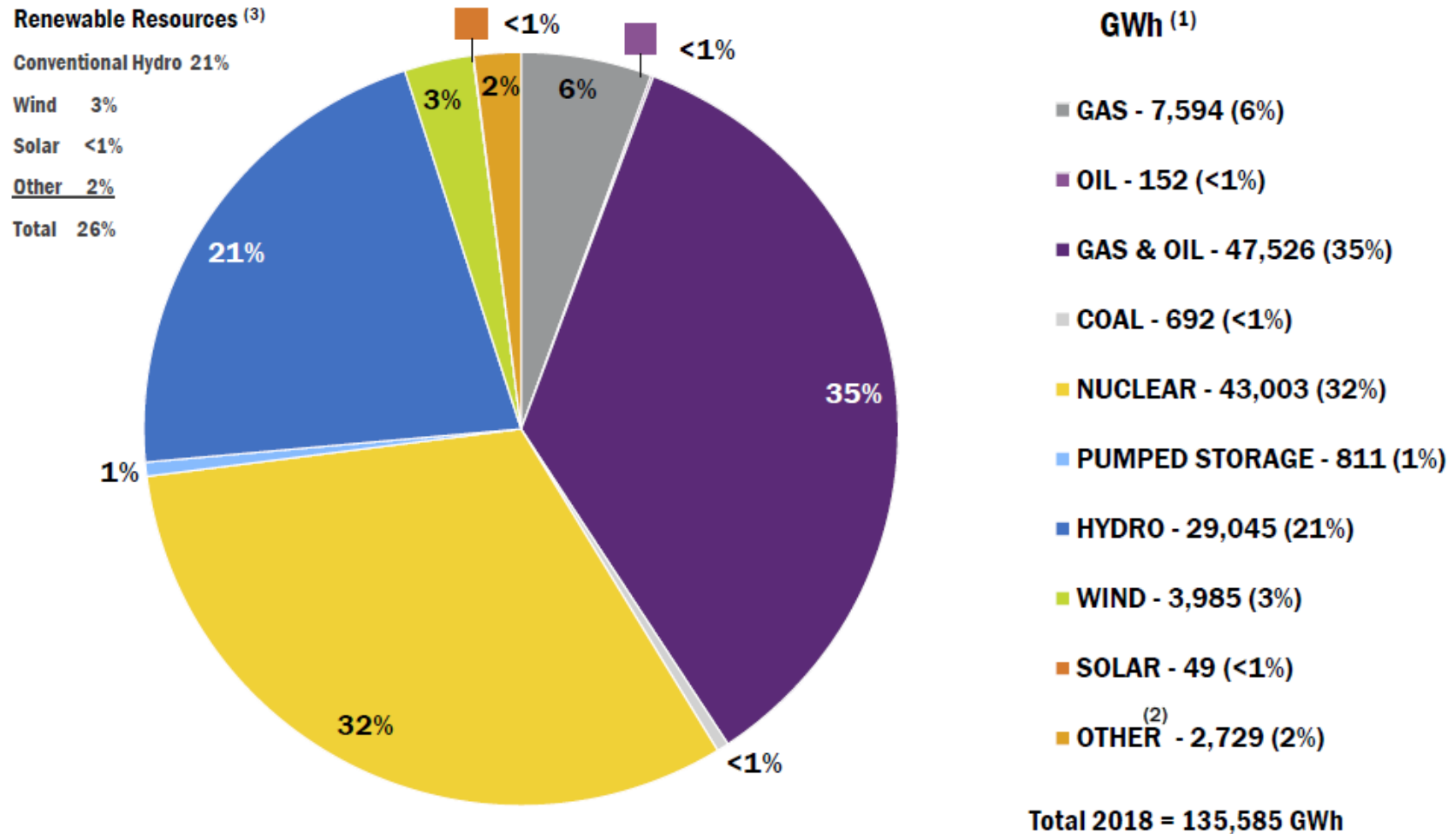
Figure III-2: 2019 NYCA Summer Capability by Fuel Type



(1) All values are from the Summer Capability column in Table III-2 and are rounded to the nearest whole MW.

(2) Includes Methane, Refuse & Wood.

Figure III-3: 2018 NYCA Energy Production by Fuel Type



(1) All values are rounded to the nearest whole GWh.

(2) Includes Methane, Refuse & Wood.

(3) Renewable Resources do not necessarily match the NYS Clean Energy Standard (CES) definition.

Figure III-4a: NYCA Wind Resources – Historical Installed Nameplate Capacity

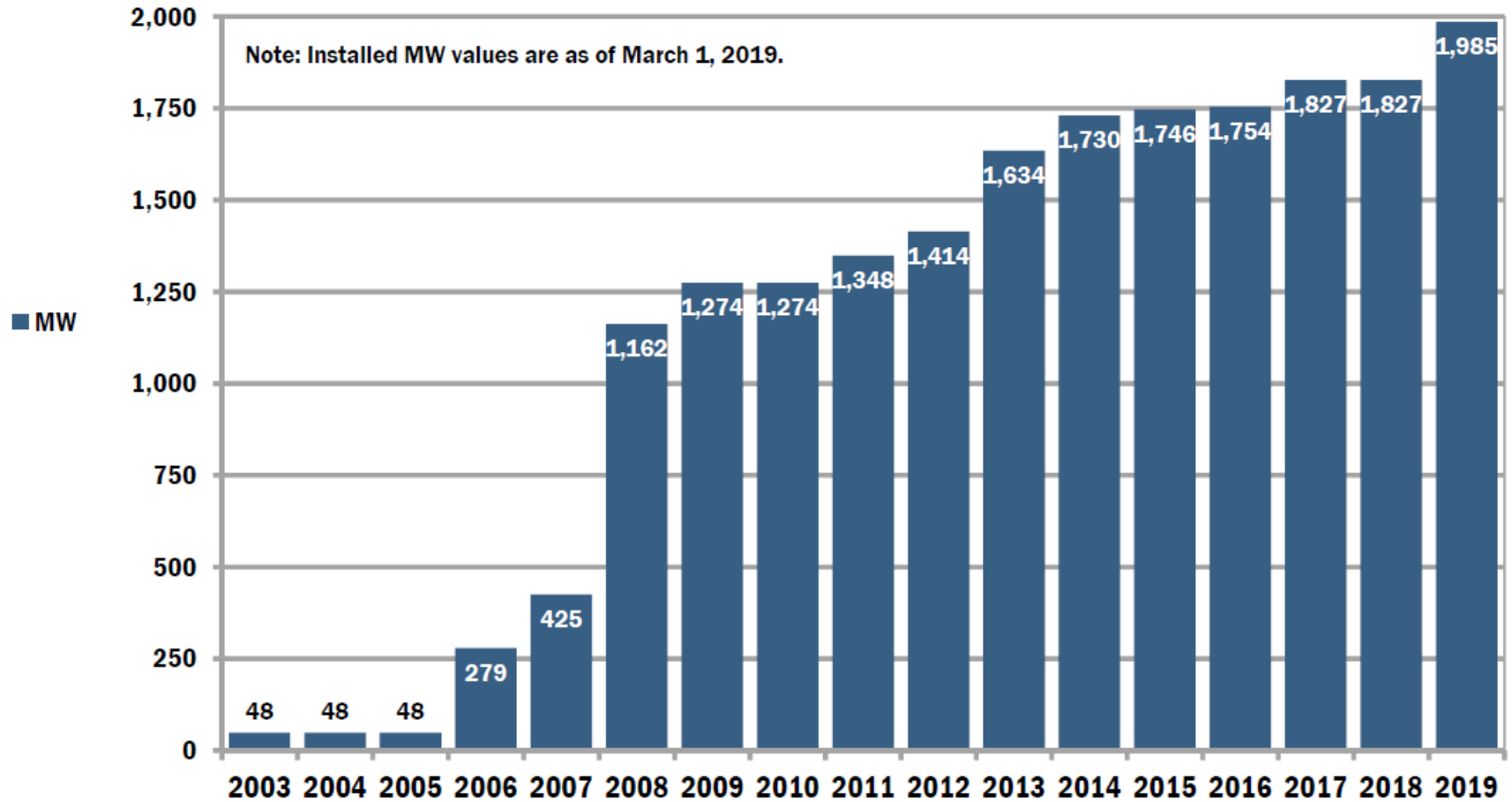
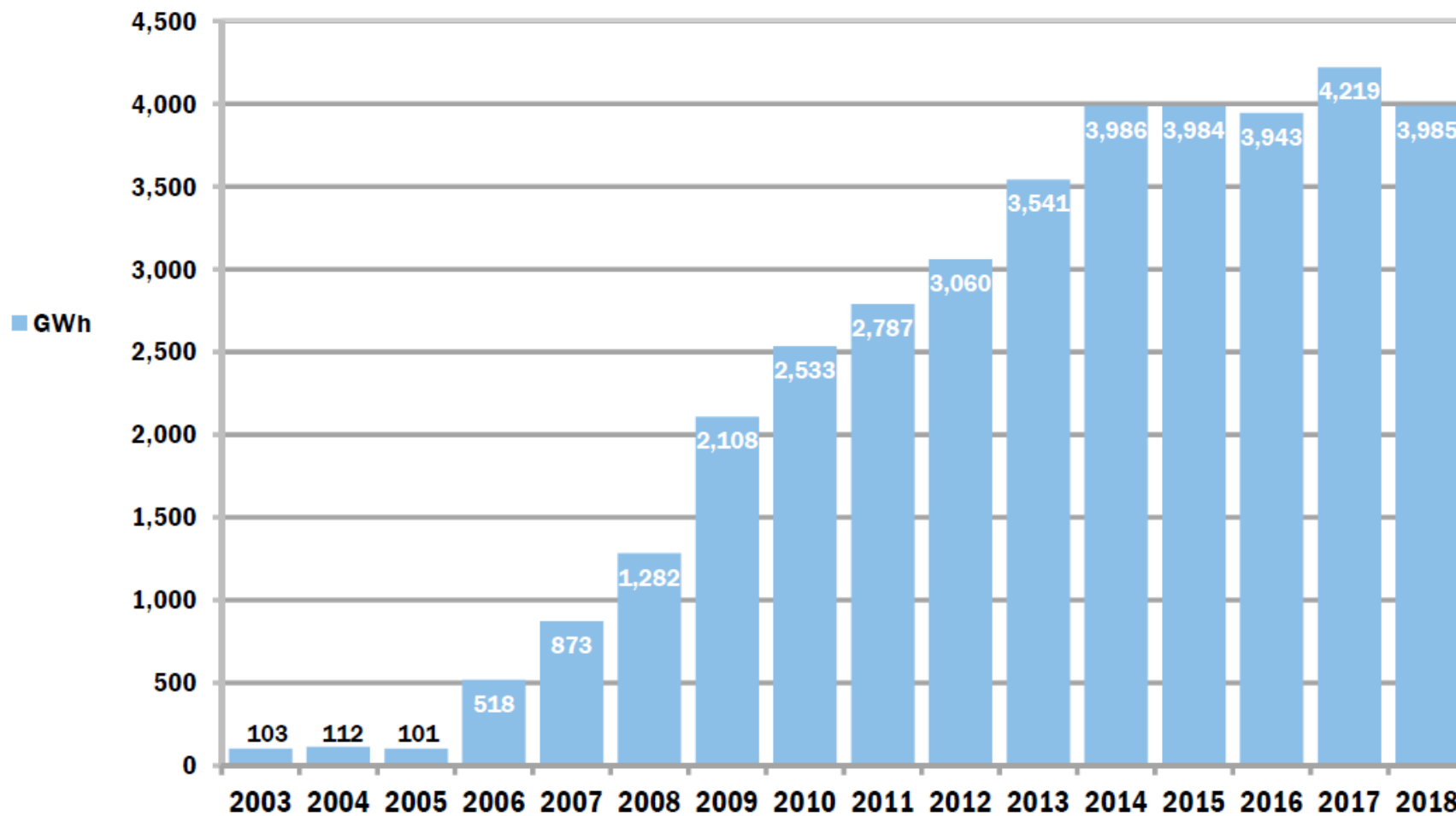


Figure III-4b: NYCA Wind Resources – Historical Energy Production



SECTION IV

Changes in Generating Capacity



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Section IV

This section reports proposed projects in the NYISO interconnection process by Class Year⁴, together with other generator additions, re-ratings, and deactivations. Table IV-1 lists proposed facilities that have completed, are enrolled in, or are candidates to enter a Class Year Interconnection Facilities Study; or have met other comparable milestones. Table IV-2 reports units that have proposed re-ratings. Table IV-3 shows deactivated units that are no longer listed in Existing Capacity Table III-2 and have unexpired CRIS MW. Table IV-4 shows units that remain listed in Table III-2 and that have been deactivated since the publication of the 2018 *Gold Book*. Table IV-5 lists units which have provided a notice of deactivation at some future date. These tables are current through March 15, 2019. Monthly updates to this information are available in the *Generator Status Updates* folder on the *NY Power System Information & Outlook* page:

<https://www.nyiso.com/ny-power-system-information-outlook>.

⁴ Under the NYISO interconnection process, Interconnection Facilities Studies for proposed generation and merchant transmission projects are performed under the Class Year process defined in Attachment S of the NYISO OATT. A “Class Year” refers to the group of such projects included for evaluation in a given Class Year Facilities Study.

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Table IV-1: Proposed Generator Additions & CRIS Requests

QUEUE POS.	OWNER / OPERATOR	STATION	UNIT	ZONE	Proposed Date ⁶ (M-YY)	NAMEPLATE RATING (MW)	REQUESTED CRIS (MW) ¹	CRIS ¹ (MW)	SUMMER (MW)	WINTER (MW)	UNIT TYPE	CLASS YEAR	NOTES
<u>Completed Class Year Facilities Study</u>													
444	Cricket Valley Energy Center, LLC	Cricket Valley Energy Center II		G	Mar-20	1,177.2	1,020.0	1,020.0	1,020.0	1,132.0	Combined Cycle	2017	(2)
387	Cassadaga Wind, LLC	Cassadaga Wind		A	Dec-20	126.0	126.0	126.0	126.0	126.0	Wind Turbines	2017	(2)
396	Baron Winds, LLC	Baron Winds		C	Dec-20	300.0	300.0	300.0	300.0	300.0	Wind Turbines	2017	(2)
422	NextEra Energy Resources, LLC	Eight Point Wind Energy Center		B	Dec-20	101.2	101.2	101.2	101.2	101.2	Wind Turbines	2017	(2)
363	Anbaric Development Partners, LLC	Poseidon Offshore		K	Jan-21	500.0	500.0	500.0	500.0	500.0	Wind Turbines	2015	(2)
349	Taylor Biomass Energy Montgomery, LLC	Taylor Biomass		G	Apr-21	21.0	19.0	19.0	19.0	22.5	Solid Waste	2011	(2)
393	NRG Berrians East Development, LLC	Berrians East Replacement		J	Feb-23	643.0	508.0	508.0	508.0	584.0	Combustion Turbines	2017	(2) (7)
<u>Class Year 2017³</u>													
421	EDP Renewables North America	Arkwright Summit		A	Oct-18	78.4	78.4	TBD	78.4	78.4	Wind Turbines		
511	AG Energy, LP	Ogdensburg		E	Jun-19	102.2	79.0	TBD	79.0	90.1	Combined Cycle		
468	Apex Clean Energy LLC	Galloo Island Wind		C	Dec-19	110.4	108.9	TBD	110.4	110.4	Wind Turbines		
505	RES America Development Inc.	Ball Hill Wind		A	Dec-19	100.0	100.0	TBD	100.0	100.0	Wind Turbines		
496	Renovo Energy Center, LLC	Renovo Energy Center		C	Jun-20	531.0	480.0	TBD	480.0	504.0	Combined Cycle		
494	Alabama Ledge Wind Farm LLC	Alabama Ledge Wind		A	Oct-20	79.8	79.8	TBD	79.8	79.8	Wind Turbines		
<u>CRIS Requests³</u>													
	East Coast Power, LLC	Linden Cogen		J	N/A	974.1	31.9	TBD	N/A	N/A			
<u>Completed CRIS Requests</u>													
430	HQUS	Cedar Rapids Transmission Upgrade		D	N/A	N/A	80.0	80.0	N/A	N/A			
477	Riverhead Solar Farm, LLC	Riverhead Solar		K	May-19	20.0	20.0	20.0	N/A	N/A			
<u>Future Class Year Candidates⁴</u>													
591	RES America Developments LLC	High Top Solar		B	Jun-19	20.0	TBD	TBD	20.0	20.0	Solar		
520	EDP Renewables North America	Rolling Upland Wind		E	Oct-19	72.6	TBD	TBD	72.6	72.6	Wind Turbines		
522	NYC Energy LLC	NYC Energy		J	Oct-19	92.5	TBD	TBD	79.9	79.9	Combustion Turbines		
449	Stockbridge Wind, LLC	Stockbridge Wind		E	Dec-19	72.6	TBD	TBD	72.6	72.6	Wind Turbines		
594	North Park Energy, LLC	NW Energy		B	Dec-19	64.8	TBD	TBD	64.8	64.8	Energy Storage		
595	North Park Energy, LLC	SW Energy		A	Dec-19	100.0	TBD	TBD	100.0	100.0	Energy Storage		
523	Dunkirk Power, LLC	Dunkirk Unit 2		A	Apr-20	75.0	TBD	TBD	75.0	75.0	Steam Turbine		
524	Dunkirk Power, LLC	Dunkirk Unit 3 & 4		A	Apr-20	370.0	TBD	TBD	370.0	370.0	Steam Turbine		
561/576	Astoria Generating Company	Astoria Generating Station Unit 4		J	May-20	385.0	TBD	TBD	385.0	385.0	Steam Turbine		
683	KCE NY 2, LLC	KCE NY 2		G	Sep-20	200.0	TBD	TBD	200.0	200.0	Energy Storage		
704	Bear Ridge Solar, LLC	Bear Ridge Solar		A	Sep-20	100.0	TBD	TBD	100.0	100.0	Solar		
371	South Mountain Wind, LLC	South Mountain Wind		E	Dec-20	18.0	TBD	TBD	18.0	18.0	Wind Turbines		
372	Dry Lots Wind, LLC	Dry Lots Wind		E	Dec-20	33.0	TBD	TBD	33.0	33.0	Wind Turbines		
445	Lighthouse Wind, LLC	Lighthouse Wind		A	Dec-20	201.3	TBD	TBD	201.3	201.3	Wind Turbines		
519	Canisteo Wind Energy LLC	Canisteo Wind		C	Dec-20	290.7	TBD	TBD	290.7	290.7	Wind Turbines		

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Table IV-1: Proposed Generator Additions & CRIS Requests (cont'd)

QUEUE POS.	OWNER / OPERATOR	STATION	UNIT	ZONE	Proposed Date ⁷ (M-YY)	NAMEPLATE RATING (MW)	REQUESTED CRIS (MW) ¹	CRIS ¹ (MW)	SUMMER (MW)	WINTER (MW)	UNIT TYPE	CLASS YEAR	NOTES
526	Atlantic Wind, LLC	North Ridge Wind		E	Dec-20	100.0	TBD	TBD	100.0	100.0	Wind Turbines		
531	Invenery Wind Development LLC	Number 3 Wind		E	Dec-20	105.8	TBD	TBD	105.8	105.8	Wind Turbines		
532	Invenery Wind Development LLC	Allegany Wind		B	Dec-21	100.0	TBD	TBD	100.0	100.0	Wind Turbines		
535	sPower Development Company, LLC	Riverhead Expansion		K	Dec-20	36.0	TBD	TBD	36.0	36.0	Solar		
546	Atlantic Wind, LLC	Roaring Brook Wind		E	Dec-20	78.0	TBD	TBD	78.0	78.0	Wind Turbines		
560	Atlantic Wind, LLC	Deer River Wind		E	Dec-20	100.0	TBD	TBD	100.0	100.0	Wind Turbines		
571	Heritage Renewables, LLC	Heritage Wind		A	Dec-20	200.1	TBD	TBD	200.1	200.1	Wind Turbines		
574	Atlantic Wind, LLC	Mad River Wind		C	Dec-21	450.0	TBD	TBD	450.0	450.0	Wind Turbines		
579	Bluestone Wind, LLC	Bluestone Wind		E	Dec-20	124.2	TBD	TBD	124.2	124.2	Wind Turbines		
617	North Park Energy, LLC	Watkins Glen Solar		C	Dec-20	50.0	TBD	TBD	50.0	50.0	Solar		
618	North Park Energy, LLC	High River Solar		F	Dec-20	100.0	TBD	TBD	100.0	100.0	Solar		
619	North Park Energy, LLC	East Point Solar		F	Dec-20	50.0	TBD	TBD	50.0	50.0	Solar		
624	Franklin Solar, LLC	Franklin Solar		D	Dec-20	150.0	TBD	TBD	150.0	150.0	Solar		
498	ESC Tioga County Power, LLC	Tioga County Power		C	May-21	644.3	TBD	TBD	550.0	550.0	Combined Cycle		
361	US PowerGen Co.	Luyster Creek Energy		J	Jun-21	440.9	TBD	TBD	401.0	444.0	Combined Cycle		
474	EDP Renewables North America	North Slope Wind		D	Oct-21	200.0	TBD	TBD	200.0	200.0	Wind Turbines		
466	Atlantic Wind, LLC	Bone Run Wind		A	Dec-21	132.0	TBD	TBD	132.0	132.0	Wind Turbines		
495	Mohawk Solar LLC	Mohawk Solar		F	Dec-21	98.0	TBD	TBD	98.0	98.0	Wind Turbines		
596	Invenery Wind Development LLC	Alle Catt II Wind		A	Dec-21	339.1	TBD	TBD	339.1	339.1	Wind Turbines		
383	NRG Energy, Inc.	Bowline Gen. Station Unit #3		G	Jun-22	722.0	TBD	TBD	775.0	814.0	Combined Cycle		
497	Invenery Wind Development LLC	Bull Run		D	Dec-22	303.6	TBD	TBD	303.6	303.6	Wind Turbines		
521	Invenery NY, LLC	Bull Run II Wind		D	Dec-22	145.4	TBD	TBD	145.4	145.4	Wind Turbines		
612	Deepwater Wind South Fork, LLC	South Fork Wind Farm		K	Dec-22	96.0	TBD	TBD	96.0	96.0	Wind Turbines		
276	Air Energie TCI, Inc.	Crown City Wind		C	Dec-23	90.0	TBD	TBD	90.0	90.0	Wind Turbines		
668	North Bergen Liberty Generating, LLC	North Bergen Liberty Gen. Alt.		J	Feb-24	1,200.0	TBD	TBD	1,171.0	1,172.0	Combustion Turbines		
<u>Other Non Class Year Generators</u>													
696	Eagle Creek Hydro Power, LLC	Swinging Bridge Unit 3		G	Mar-19	9.0	N/A	N/A	9.0	9.0	Hydro		(5)
477	Riverhead Solar Farm, LLC	Riverhead Solar		K	May-19	20.0	N/A	N/A	20.0	20.0	Solar		(5)
570	Hecate Energy, LLC	Albany County		F	Jun-19	20.0	N/A	N/A	20.0	20.0	Solar		(5)
584	SED NY Holdings LLC	Dog Corners Solar		C	Jun-19	20.0	N/A	N/A	20.0	20.0	Solar		(5)
590	Duke Energy Renewables Solar, LLC	Scipio Solar		C	Nov-19	20.0	N/A	N/A	20.0	20.0	Solar		(5)
592	Duke Energy Renewables Solar, LLC	Niagara Solar		B	Nov-19	20.0	N/A	N/A	20.0	20.0	Solar		(5)
545	Sky High Solar, LLC	Sky High Solar		C	Dec-19	20.0	N/A	N/A	20.0	20.0	Solar		(5)
621	Blue Stone Solar Energy, LLC	Saugerties Solar		G	Dec-19	20.0	N/A	N/A	20.0	20.0	Solar		(5)
534	OneEnergy Development, LLC	Great Valley Solar		F	Jun-20	20.0	N/A	N/A	20.0	20.0	Solar		(5)
598	Hecate Energy, LLC	Albany County II		F	Jun-20	20.0	N/A	N/A	20.0	20.0	Solar		(5)
513	Stoney Creek Energy, LLC	Orangeville		C	Dec-20	20.0	N/A	N/A	20.0	20.0	Energy Storage		(5)
575	Little Pond Solar, LLC	Little Pond Solar		G	Dec-20	20.0	N/A	N/A	20.0	20.0	Solar		(5)
									11,758.9 12,068.5				
Total													

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Notes for Table IV-1 (Proposed Generator Additions & CRIS Requests)

1	"Requested CRIS" values reflect the Summer CRIS MW initially requested in the current Class Year Deliverability Study. "CRIS" values reflect the Summer CRIS MW deemed deliverable. See Definitions of Labels on Load & Capacity Schedule (Sec. V) for description.
2	Projects included as new additions in this year's Load and Capacity Schedule, Table V-2a & V-2b.
3	Projects that are members of Class Year 2017.
4	Projects that are potential candidates for a Class Year Study after Class Year 2017, i.e., Large Generating Facilities with Operating Committee approved System Reliability Impact Studies and Small Generating Facilities that have completed a comparable milestone and for which non-Local System Upgrade Facilities are required.
5	Small Generating Facilities that are not subject to a Class Year Facilities Study but have an executed Small Generator Facilities Study Agreement.
6	For projects in this Table, this date is the proposed Commercial Operation Date. These dates are proposed to the NYISO by the Developer and are typically updated throughout the interconnection study process and throughout project development, to the extent permitted by Attachments X and Z to the OATT.
7	Q#393 Berrians East Replacement is a repowering project that would include retiring NRG GTs 2, 3, and 4 (PTIDs 24094 through 24105). The Q#393 Berrians East Replacement, as proposed, will have a total ERIS capability of 508 MW (Summer) and 584 MW (Winter) and CRIS (Summer) of 508 MW (3.6 MW Summer CRIS increase).

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Table IV-2: Proposed Generator Re-ratings¹

QUEUE POS.	OWNER / OPERATOR	STATION	UNIT	ZONE	DATE	PTID	Class Year	INCREMENTAL CAPABILITY (MW)				TOTAL CAPABILITY (MW)				Notes
								Nameplate Rating	CRIS	SUMMER	WINTER	Nameplate Rating	CRIS	SUMMER	WINTER	
512	Northbrook Lyons Falls	Lyons Falls Mill Hydro		E	2021/11	23570	N/A	3.0	0.0	2.5	2.5	11.0	7.3	10.5	10.5	(3)
338	Rochester Gas & Electric Corp	Station 2		B	2019/10	23604	N/A	6.3	0.0	6.3	6.3	14.8	6.5	14.8	14.8	(3)
401	Caithness Long Island II, LLC	Caithness Long Island II		K	2023/05	323624	(4)	675.4	TBD	599.0	632.0	1,050.4	TBD	914.6	966.2	
516	East Coast Power LLC	Linden Cogen Uprate		J	2020/05	23786	(2)	235.5	TBD	234.4	234.4	1,035.5	TBD	1,031.1	1,034.4	
671	East Coast Power LLC	Linden Cogen Uprate		J	2019/05		(4)	TBD	TBD	31.9	22.7	TBD	TBD	822.7	826.4	
Total								920.2	0.0	874.1	897.9	2,111.7	13.8	2,793.7	2,852.3	

1. Re-ratings other than de minimis increases in capacity permitted by Section 30.3.1 of Attachments X and Section 32.1.3 of Attachment Z to the OATT.

2. Projects that are members of Class Year 2017.

3. Small Generating Facilities that are not subject to a Class Year Interconnection Facilities Study but have an executed Small Generator Facilities Study Agreement.

4. Projects that are potential candidates for a Class Year Study after Class Year 2017, i.e., Large Generating Facilities with Operating Committee approved System Reliability Impact Studies and Small Generating Facilities that have completed a comparable milestone and for which non-Local System Upgrade Facilities are required.

2018 Load & Capacity Data Report

Tables IV-3, IV-4 and IV-5: Generator Deactivations

Table IV-3: Deactivated Units with Unexpired CRIS Rights Not Listed in Existing Generating Facilities Table III-2

OWNER / OPERATOR	STATION	UNIT	ZONE	DATE ⁽¹⁾	PTID	CRIS (MW)		CAPABILITY (MW)		Status ⁽³⁾
						SUMMER ⁽²⁾	WINTER ⁽²⁾	SUMMER ⁽²⁾	WINTER ⁽²⁾	
Helix Ravenswood LLC	Ravenswood 04		J	05/01/2016	24252	15.2		12.9	15.6	M
Helix Ravenswood LLC	Ravenswood 05		J	05/01/2016	24254	15.7		15.5	17.2	M
Helix Ravenswood LLC	Ravenswood 06		J	05/01/2016	24253	16.7		12.6	16.5	M
Helix Ravenswood, LLC	Ravenswood 09		J	11/01/2017	24257	21.7	27.6	16.3	22.8	I
International Paper Company	Ticonderoga ⁽⁴⁾		F	05/01/2017	23804		7.6	9.5	9.8	See Note
NRG Power Marketing LLC	Astoria GT 11		J	07/01/2016	24225	23.6		16.5	25.0	M
Total						100.5	27.6	83.3	106.9	

1. Approximate date of generator status change; not necessarily the date the generator became CRIS-inactive.

2. The CRIS, and Summer and Winter capacity levels are those that were in effect when the unit was last in service.

3. M = Mothball Outage per MST Section 5.18; R = retired or Retired as defined in the MST; I = ICAP Ineligible Forced Outage per MST Section 5.18.

4. Resource is currently participating in the ICAP Market as a Special Case Resource (SCR).

2018 Load & Capacity Data Report

Table IV-4: Deactivated Units Listed in Existing Generating Facilities Table III-2

OWNER / OPERATOR	STATION	UNIT	ZONE	DATE	PTID	CRIS (MW)		CAPABILITY (MW)		Status ⁽¹⁾
						SUMMER ⁽²⁾	WINTER ⁽²⁾	SUMMER ⁽²⁾	WINTER ⁽²⁾	
Binghamton BOP, LLC	Binghamton		C	01/09/2018	23790	43.8	57.2	43.7	47.1	R
Cayuga Operating Company, LLC	Cayuga 2		C	07/01/2018	23585	154.7	154.7	139.6	158.0	I
Helix Ravenswood, LLC	Ravenswood 2-1		J	04/01/2018	24244	40.4	51.4	31.4	41.7	I
Helix Ravenswood, LLC	Ravenswood 2-2		J	04/01/2018	24245	37.6	47.8	29.9	41.9	I
Helix Ravenswood, LLC	Ravenswood 2-3		J	04/01/2018	24246	39.2	49.9	28.9	37.3	I
Helix Ravenswood, LLC	Ravenswood 2-4		J	04/01/2018	24247	39.8	50.6	30.7	41.6	I
Helix Ravenswood, LLC	Ravenswood 3-1		J	04/01/2018	24248	40.5	51.5	31.9	40.8	I
Helix Ravenswood, LLC	Ravenswood 3-2		J	04/01/2018	24249	38.1	48.5	29.4	40.3	I
Helix Ravenswood, LLC	Ravenswood 3-4		J	04/01/2018	24251	35.8	45.5	31.2	40.8	I
Lyonsdale Biomass, LLC	Lyonsdale		E	04/01/2018	23803	20.2	20.2	19.3	19.7	I
New York Power Authority	Gilboa 1		F	01/01/2019	23756	290.7	290.7	293.7	292.5	I
Total						780.8	868.0	709.7	801.7	

1. M = Mothball Outage per MST Section 5.18; R = retired or Retired as defined in the MST; I = ICAP Ineligible Forced Outage per MST Section 5.18.

2. The CRIS, and Summer and Winter capacity levels are those that were in effect when the unit was last in service.

2018 Load & Capacity Data Report

Table IV-5: Notices of Proposed Deactivations¹ as of March 15, 2019

OWNER / OPERATOR	STATION	UNIT	ZONE	DATE	PTID	CRIS (MW)		CAPABILITY (MW)		Notes
						SUMMER	WINTER	SUMMER	WINTER	
Entergy Nuclear Power Marketing, LLC	Indian Point 2		H	04/30/2020	23530	1,026.5	1,026.5	1,016.1	1,025.9	
Entergy Nuclear Power Marketing, LLC	Indian Point 3		H	04/30/2021	23531	1,040.4	1,040.4	1,037.9	1,039.9	
Total						2,066.9	2,066.9	2,054.0	2,065.8	

1. Units listed in Table IV-5 have provided a notice to the NYSPSC and/or have a completed Generator Deactivation Notice with the NYISO.

SECTION V

Load & Capacity Schedule



2019 Load & Capacity Data Report

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Section V

This section provides a summary of NYCA load and capacity from 2018 through 2029 (as of March 15, 2019). Table V-1 summarizes Net Capacity Purchases (MW) from External Control Areas from 2019 through 2029. Table V-2a summarizes the NYCA Load and Capacity Schedule for the Summer Capability Period from 2018 through 2029. Table V-2b summarizes the NYCA Load and Capacity Schedule for the Winter Capability Period from 2018-19 through 2029-30. For reference, the values for the summer of 2018 and winter of 2018-19 are repeated from the *2018 Gold Book*. Information for Tables V-2a and V-2b is obtained from Tables I-1, III-2, IV-1 through IV-5, and V-1. Definitions of the entries reported in Table V-2 are on the following page.

The NYISO's Installed Capacity market rules allow Special Case Resources (*i.e.*, interruptible load customers and qualified Local Generators) to participate in the Installed Capacity market. Based on current projections, these customers are expected to provide 1,309 MW of summer capacity and 853 MW of winter capacity. Tables V-2a and V-2b also report the summer and winter capacity projections for Special Case Resources.

The NYCA Resource Capability for the 2019 Summer Capability Period is 40,604 MW. This value is the sum of existing facilities (39,295 MW), Special Case Resources (1,309 MW), and Net Generation Changes (0 MW). With the inclusion of Net Capacity Purchases of 1,452 MW, the Total Resource Capability is 42,056 MW.

2019 Load & Capacity Data Report

Definitions of Labels on Load and Capacity Schedule

Existing Generating Facilities	Generating facilities that have been in operation prior to the seasonal peak demand
Additions	Generating additions expected prior to the seasonal peak demand
Re-rates	Generator re-rates expected prior to the seasonal peak demand
Noticed Deactivations	Noticed generator deactivations (retirements, mothballs, generator outages) expected prior to the seasonal peak demand
Special Case Resources (SCR)	SCR are loads capable of being interrupted upon demand and Local Generators that are not visible to the ISO's Market Information System. SCR are subject to special rules in order to participate as Capacity suppliers
NYCA Resource Capability	Summation of all existing generation, additions, re-ratings, retirements and Special Case Resources
Net Capacity Purchases	Positive values of net capacity purchases represent capacity that is imported to NYCA, after subtracting sales that are exported to other control areas
Unforced Capacity Deliverability Right (UDR)	Controllable transmission project that provides a transmission interface into NYCA
Total Resource Capability	The sum of NYCA Resource Capability and Net Purchases
Peak Demand Forecast	Baseline forecast of coincident peak demand of the New York Control Area
Installed Reserve	Total Resource Capability minus Peak Demand Forecast.
Installed Reserve Percent	Installed Reserve divided by Peak Demand Forecast expressed as a percentage
Proposed Resource Changes	All proposed generator additions, re-ratings and retirements from Section IV, except those that have met Base Case inclusion rules as described in the Reliability Planning Process (RPP) manual
Adjusted Resource Capability	The Total Resource Capability plus all Proposed Resource Changes
Adjusted Installed Reserve	Adjusted Resource Capability minus Peak Demand Forecast
Adjusted Installed Reserve Percent	Adjusted Installed Reserve divided by Peak Demand Forecast expressed as a percentage
Capacity Resource Interconnection Service (CRIS)	CRIS values, in MW of Installed Capacity, for the Summer/Winter Capability Period established pursuant to the applicable deliverability requirements contained in Attachments X, S, and Z to the NYISO OATT

2019 Load & Capacity Data Report

Table V-1: Summary of Projected Net Capacity Purchases from External Control Areas

SUMMER NET CAPACITY PURCHASES (1, 2, 3)

MW

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1,452.4	1,783.3	1,797.2	1,801.0	1,939.1	1,939.1	1,939.1	1,939.1	1,939.1	1,939.1	1,939.1

WINTER NET CAPACITY PURCHASES (1, 2, 3)

MW

2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
678.0	1,219.2	1,233.1	1,236.9	1,375.0	1,375.0	1,375.0	1,375.0	1,375.0	1,375.0	1,375.0

(1) – Positive values of Net Capacity Purchases represent capacity that is imported to NYCA, after subtracting capacity sales that are exported to other control areas.

(2) – Figures include the election of Unforced Capacity Deliverability Rights (UDRs), External CRIS Rights, Existing Transmission Capacity for Native Load (ETCNL) elections, estimated First Come First Serve Rights (FCFSR), and grandfathered exports. For more information on the use of UDRs, please see section 4.14 of the ICAP Manual.

(3) – The only forward capacity market transactions reflected in the above values are forward capacity market transactions with ISO-NE through 2022, excluding wheel transactions from HQ to ISO-NE.

2019 Load & Capacity Data Report

Table V-2b: NYCA Load and Capacity Schedule – Winter Capability Period

<i>WINTER CAPABILITY</i>	2018/19	MW											Totals	
	(from 2018 Gold Book)	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30		
Steam Turbine (Oil)	825.5	827.0	827.0	827.0	827.0	827.0	827.0	827.0	827.0	827.0	827.0	827.0	827.0	
Steam Turbine (Oil & Gas)	8,489.3	8,445.5	8,445.5	8,445.5	8,445.5	8,445.5	8,445.5	8,445.5	8,445.5	8,445.5	8,445.5	8,445.5	8,445.5	
Steam Turbine (Gas)	1,540.5	1,548.9	1,548.9	1,548.9	1,548.9	1,548.9	1,548.9	1,548.9	1,548.9	1,548.9	1,548.9	1,548.9	1,548.9	
Steam Turbine (Coal)	1,000.7	843.5	843.5	843.5	843.5	843.5	843.5	843.5	843.5	843.5	843.5	843.5	843.5	
Combined Cycle (Oil & Gas)	8,919.6	9,707.6	9,707.6	10,839.6	10,839.6	10,839.6	10,839.6	10,839.6	10,839.6	10,839.6	10,839.6	10,839.6	10,839.6	
Combined Cycle (Gas)	1,805.6	1,730.7	1,730.7	1,730.7	1,730.7	1,730.7	1,730.7	1,730.7	1,730.7	1,730.7	1,730.7	1,730.7	1,730.7	
Jet Engine (Oil)	806.4	795.4	795.4	795.4	795.4	795.4	795.4	795.4	795.4	795.4	795.4	795.4	795.4	
Jet Engine (Oil & Gas)	1,656.7	1,511.2	1,511.2	1,511.2	1,511.2	1,511.2	1,511.2	1,511.2	1,511.2	1,511.2	1,511.2	1,511.2	1,511.2	
Jet Engine (Gas)	58.4	58.6	58.6	58.6	58.6	58.6	58.6	58.6	58.6	58.6	58.6	58.6	58.6	
Combustion Turbine (Oil)	1,219.9	1,194.3	1,194.3	1,194.3	1,194.3	1,194.3	1,194.3	1,194.3	1,194.3	1,194.3	1,194.3	1,194.3	1,194.3	
Combustion Turbine (Oil & Gas)	1,218.7	1,219.5	1,219.5	1,219.5	1,219.5	1,219.5	1,257.9	1,257.9	1,257.9	1,257.9	1,257.9	1,257.9	1,257.9	
Combustion Turbine (Gas)	695.9	692.7	692.7	692.7	692.7	692.7	692.7	692.7	692.7	692.7	692.7	692.7	692.7	
Internal Combustion (Oil)	24.6	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	
Internal Combustion (Oil & Gas)	28.3	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	
Internal Combustion (Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pumped Storage Hydro	1,409.9	1,408.7	1,408.7	1,408.7	1,408.7	1,408.7	1,408.7	1,408.7	1,408.7	1,408.7	1,408.7	1,408.7	1,408.7	
Steam (PWR Nuclear)	2,645.0	2,647.5	2,647.5	1,621.6	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7	
Steam (BWR Nuclear)	2,780.2	2,782.5	2,782.5	2,782.5	2,782.5	2,782.5	2,782.5	2,782.5	2,782.5	2,782.5	2,782.5	2,782.5	2,782.5	
Conventional Hydro (5)	4,223.1	4,224.0	4,224.0	4,224.0	4,224.0	4,224.0	4,224.0	4,224.0	4,224.0	4,224.0	4,224.0	4,224.0	4,224.0	
Internal Combustion (Methane) (5)	107.3	107.3	107.3	107.3	107.3	107.3	107.3	107.3	107.3	107.3	107.3	107.3	107.3	
Steam Turbine (Wood) (5)	20.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Steam Turbine (Refuse) (5)	221.7	223.6	223.6	223.6	246.1	246.1	246.1	246.1	246.1	246.1	246.1	246.1	246.1	
Wind (5) (6)	1,739.2	1,739.2	1,739.2	2,766.4	2,766.4	2,766.4	2,766.4	2,766.4	2,766.4	2,766.4	2,766.4	2,766.4	2,766.4	
Solar (5) (8)	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	
EXISTING GENERATING FACILITIES	41,468.3	41,790.4	41,790.4	42,923.7	41,906.3	41,906.3	41,944.7	41,944.7	41,944.7	41,944.7	41,944.7	41,944.7	41,944.7	
Special Case Resources - SCR (3)	884.4	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	
Additions and Re-rates (2)	832.8	0.0	2,159.2	22.5	0.0	584.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,765.7
Noticed Deactivations (9)	-485.5	0.0	-1,025.9	-1,039.9	0.0	-545.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2,611.4
NYCA RESOURCE CAPABILITY	42,700.0	42,643.4	43,776.7	42,759.3	42,759.3	42,797.7	42,797.7	42,797.7	42,797.7	42,797.7	42,797.7	42,797.7	42,797.7	
Net Capacity Purchases (1) (7)	1,482.4	678.0	1,219.2	1,233.1	1,236.9	1,375.0	1,375.0	1,375.0	1,375.0	1,375.0	1,375.0	1,375.0	1,375.0	
TOTAL RESOURCE CAPABILITY	44,182.4	43,321.4	44,995.9	43,992.4	43,996.2	44,172.7	44,172.7	44,172.7	44,172.7	44,172.7	44,172.7	44,172.7	44,172.7	
<i>BASE FORECAST</i>														
Peak Demand Forecast		24,123.0	23,745.0	23,457.0	23,415.0	23,381.0	23,340.0	23,297.0	23,281.0	23,307.0	23,436.0	23,550.0		
Installed Reserve		19,198.4	21,250.9	20,535.4	20,581.2	20,791.7	20,832.7	20,875.7	20,891.7	20,865.7	20,736.7	20,622.7		
Installed Reserve Percent (4)		79.6	89.5	87.5	87.9	88.9	89.3	89.6	89.7	89.5	88.5	87.6		

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Notes for Table V-2 (Load and Capacity Schedule)

<p>(1) — Net Capacity Purchases - Positive values of Net Capacity Purchases represent capacity that is imported to NYCA, after subtracting capacity sales that are exported to other control areas.</p>
<p>(2) — Additions and Re-rates: Projects that have completed a Class Year Interconnection Facilities Study, as shown in Tables IV-1 & IV-2.</p>
<p>(3) — Special Case Resources (SCR) are loads capable of being interrupted upon demand and Local Generators that are not visible to the ISO's Market Information System. SCRs are subject to special rules in order to participate as Capacity suppliers.</p>
<p>(4) — The Installed Reserve Margin requirement determined by the NYSRC for the 2019 - 2020 Capability Year is 17.0%. The Installed Reserve Percent calculated in Table V-2a should be compared to the Installed Reserve Margin requirement in the 2019 - 2020 Capability Year.</p>
<p>(5) — The Renewable Category does not necessarily match the New York State Clean Energy Standard (CES) definition.</p>
<p>(6) — Existing wind generators are listed at their full nameplate rating.</p>
<p>(7) — Figures include the use of Unforced Capacity Deliverability Rights (UDR) as currently known. For more information on the use of UDR, please see Section 4.14 of the ICAP Manual.</p>
<p>(8) — Existing solar generators are listed at their full nameplate rating.</p>
<p>(9) — Noticed deactivations as shown in Table IV-5. Existing Retirements in Table IV-3 are accounted for in the list of 2019 Existing Generating Facilities.</p>
<p>(10) — Proposed Resource Changes: Projects that have not completed a Class Year Interconnection Facilities Study, as shown in Tables IV-1 & IV-2.</p>

SECTION VI

Existing Transmission Facilities



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Section VI

This section contains the updated list of existing transmission facilities as provided by each Transmission Owner operating in the NYCA (as of March 15, 2019). The information in Table VI-1 is redacted as it may contain Critical Energy Infrastructure Information.

A version of the 2019 *Gold Book* that includes this table is available to individuals with a *myNYISO* account. To access a version of the 2019 *Gold Book* that includes Table VI-1, log in to *myNYISO* and visit the *Load & Capacity Data Report (Gold Book) – Secure* folder on the following webpage:

<https://www.nyiso.com/cspp>

To register for a *myNYISO* account visit:

https://www.nyiso.com/login?p_p_id=com_liferay_login_web_portlet_LoginPortlet&p_p_lifecycle=0&_com_liferay_login_web_portlet_LoginPortlet_redirect=%2F

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Table VI-2: Mileage of Existing Transmission Facilities

Facilities by kV Class Overhead (OH) Underground (UG)	115 kV		138 kV		230 kV		345 kV		500 kV	765 kV	150 kV DC	500 kV DC	Total
	OH	UG	OH	UG	OH	UG	OH	UG	OH	OH	UG	UG	
CENTRAL HUDSON GAS & ELECTRIC CORPORATION	230.1	4.1	0.0	0.0	0.0	0.0	76.1	0.0	0.0	0.0			310.3
CONSOLIDATED EDISON EDISON COMPANY OF NEW YORK, INC	0.0	0.0	21.7	208.9 (a)	0.5	0.0	405.3 (b) (i)	185.8 (h)	5.3	0.0			827.5 (b)
LONG ISLAND POWER AUTHORITY	0.0	0.0	244.0	161.5 (e)	0.0	0.0	0.0	9.3 (g)	0.0	0.0	24.0	66.0 (g)	504.8
NEW YORK POWER AUTHORITY	52.7 (f)	1.8	0.0	0.0	338.1	0.0	885.0	43.2	0.0	155.0			1,475.8
NEW YORK STATE ELECTRIC & GAS CORPORATION	1,489.5	7.5	0.0	0.0	241.1	0.0	550.5	0.0	0.0	0.0			2,288.6
NATIONAL GRID WESTERN, CENTRAL & EASTERN	4,127.8	24.0	0.0	0.0	498.4	20.2	687.8	0.4	0.0	0.0			5,358.6
ORANGE AND ROCKLAND UTILITIES INC.	0.0	0.0	90.6	2.3 (a)	0.0	0.0	64.0 (b)	3.4 (d)	0.0	0.0			160.3
ROCHESTER GAS AND ELECTRIC CORPORATION	248.0	27.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			275.6
NEW YORK TRANSCO, LLC							11.8						11.8
TOTALS BY kV CLASS (c)	6,148.2	65.0	356.4	372.7	1,078.1	20.2	2,633.1	242.1	5.3	155.0	24.0	66.0	11,166.1 (c)

TOTAL OVERHEAD = 10,376.1 (c)
 TOTAL UNDERGROUND = 790.0 (c)
 TOTAL = 11,166.1 (c)

- Notes:**
- (a) 1.4 circuit miles are owned by GenOn
 - (b) 47.2 circuit miles are jointly owned by Con Ed and Orange & Rockland
 - (c) These totals reflect the appropriate adjustments for jointly owned facilities (footnote b)
 - (d) 3.4 circuit miles are owned by GenOn as indicated in the list of existing transmission facilities
 - (e) Includes 5.6 miles of three parallel cables from LIPA's Northport to the NY/CT State Border (middle of Long Island Sound). Additional 3.9 miles energized in 1983 is part of an existing cable circuit between Newbridge and Bagatelle.
 - (f) 18.54 circuit miles are owned by Alcoa
 - (g) A total of 67.7 circuit miles are owned by NRTS-Neptune Regional Transmission as indicated in the list of existing transmission facilities
 - (h) 1.5 circuit miles are owned by East Coast Power, LLC as indicated in the list of existing transmission facilities
 - (i) 0.5 miles (345 kV) are owned by Entergy as indicated in the list of existing transmission facilities

SECTION VII

Proposed Transmission Facilities



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Section VII

This section contains the list of firm and non-firm proposed transmission projects and merchant transmission projects (as of March 15, 2019). Projects that were placed in-service since the publication of the 2018 *Gold Book* are maintained on the list of proposed transmission projects for one year. The transmission projects selected by the NYISO Board of Directors on April 8, 2019 to meet the AC Transmission Public Policy Transmission Needs are not included in this table.

2019 Load & Capacity Data Report

Table VII: Proposed Transmission Facilities

[Project Queue Position] / Project Notes	Transmission Owner	Terminals		Line Length in Miles (1)	Expected In-Service Date/Yr		Nominal Voltage in kV		# of ccts	Thermal Ratings (4)		Project Description / Conductor Size	Class Year / Type of Construction
					Prior to (2)	Year	Operating	Design		Summer	Winter		
Class Year Transmission Projects (18)													
[358]	West Point Partners	Leeds 345kV	Buchanan North 345kV	72	S	2021	320	320	1	1000 MW	1000 MW	-/+ 320kV Bipolar HVDC cable	TBD
[631],15	Transmission Developers Inc.	Hertel 735kV (Quebec)	New Scotland, Astoria Annex 345kV	333	S	2021	320	320	1	1000 MW	1000 MW	-/+ 320kV Bipolar HVDC cable	TBD
[458],15	Transmission Developers Inc.	Hertel 735kV (Quebec)	Astoria Annex 345kV	333	S	2023	320	320	1	1000 MW	1000 MW	-/+ 320kV Bipolar HVDC cable	2017
TIP Projects (19) (Included in FERC 715 Base Case)													
545A	NextEra Energy Transmission NY	Dysinger (New Station)	East Stolle (New Station)	20	S	2022	345	345	1	1356 MVA	1612 MVA	Western NY - Empire State Line Project	OH
Firm Plans (6) (Included in FERC 715 Base Case)													
3/6	CHGE	East Fishkill	Shenandoah	1.98	In-Service	2018	115	115	1	1210	1225	1-1033 ACSR	OH
	CHGE	Fishkill Plains	East Fishkill	2.05	W	2019	115	115	1	995	1218	1-1033.5 ACSR	OH
14	CHGE	Hurley Avenue	Leeds	Static synchronous series compensator	S	2020	345	345	1	2336	2866	21% Compensation	-
	CHGE	Hurley Ave	Saugerties	11.40	W	2021	69	115	1	1114	1359	1-795 ACSR	OH
11	CHGE	St. Pool	High Falls	5.61	S	2022	115	115	1	1010	1245	1-795 ACSR	OH
11	CHGE	High Falls	Kerhonkson	10.03	S	2022	115	115	1	1010	1245	1-795 ACSR	OH
11	CHGE	Modena	Galeville	4.62	S	2022	115	115	1	1010	1245	1-795 ACSR	OH
11	CHGE	Galeville	Kerhonkson	8.96	S	2022	115	115	1	1010	1245	1-795 ACSR	OH
	CHGE	Saugerties	North Catskill	12.46	S	2023	69	115	1	1114	1359	1-795 ACSR	OH
3	ConEd	Jamaica	Reconfiguration		In-Service	2019	138	138		N/A	N/A	Reconfiguration	-
	ConEd	East 13th Street	East 13th Street	xmnr	S	2019	345	345		N/A	N/A	Replacing xmnr 10 and xmnr 11	-
	ConEd	Gowanus	Gowanus	xmnr	S	2019	345	345		N/A	N/A	Replacing xmnr T2	-
	ConEd	East 13th Street	East 13th Street	Reconfiguration	S	2019	345	345		N/A	N/A	Reconfiguration (xmnr 10 -xmnr 11)	-
	ConEd	Rainey	Corona	xmnr/Phase shifter	S	2019	345/138	345/138	1	268 MVA	320 MVA	xmnr/Phase shifter	UG
	ConEd	Hudson Ave East	Hudson Ave Distribution Switching Station	xmnr/PARs/Feeders	S	2024	138/27	138/27		N/A	N/A	New Hudson Ave Distribution Switching Station	UG
	ConEd	Farragut	Farragut	Reconfiguration	S	2024	138	138		N/A	N/A	Install PASS Breaker	-
3/6/7	LIPA	Ridge	Coram	-8.50	In-Service	2018	69	69	1	883	976	795 AL	OH
3/6/7	LIPA	Ridge	West Bartlett	5.85	In-Service	2018	69	69	1	883	976	795 AL	OH
3/6/7	LIPA	West Bartlett	Coram	2.65	In-Service	2018	69	69	1	883	976	795 AL	OH
6/7	LIPA	West Hempstead	East Garden City	-2.92	S	2019	69	69	1	1158	1245	477 ACSS	OH
6/7	LIPA	West Hempstead	Hempstead	0.97	S	2019	69	69	1	1158	1245	477 ACSS	OH
6/7	LIPA	Hempstead	East Garden City	1.95	S	2019	69	69	1	1158	1245	477 ACSS	OH
6/7	LIPA	Pilgrim	West Bus	-11.86	S	2019	138	138	1	2087	2565	2493 ACAR	OH
6/7	LIPA	West Bus	Kings Hwy	5.86	S	2019	138	138	1	2087	2565	2493 ACAR	OH
6/7	LIPA	Pilgrim	Kings Hwy	6.00	S	2019	138	138	1	2087	2565	2493 ACAR	OH
	LIPA	Far Rockaway	Far Rockaway	Reconfiguration	S	2019	34.5	34.5		N/A	N/A	Reconfigure 34.5 kV switchgear	-
	LIPA	Elwood	Elwood	Breaker	S	2019	138	138		N/A	N/A	Install double bus tie - Operate Normally Open	-
	LIPA	Canal	Southampton	5.00	S	2019	69	69		140MVA	140MVA	2500 kcmil XLPE CU	UG
3/6	NGRID	Gardenville	Erie	0.30	In-Service	2018	115	115	1	939	1144	Replace 400CU and 636AL with 636 ACSR	-
3	NGRID	Orheida	Porter	Reactor	In-Service	2018	115	115	1	-	-	Install reactor on Line #7; 8%	-
3	NGRID	Porter	Yahnundasis	Reactor	In-Service	2018	115	115	1	-	-	Install reactor on Line #3; 12%	-
3/6	NGRID	Rotterdam	Rotterdam	-	In-Service	2018	115	115		N/A	N/A	Reconfigure Rotterdam 115kV station to eliminate R1 and R82 Contingencies	-
3/6	NGRID	Menands	State Campus	5.00	In-Service	2018	115	115	1	744	744	Replace 3.2 miles of 4/0 Cu conductor with 795kcmil ACSR 26/7	OH
3	NGRID	Ticonderoga	Ticonderoga	-	In-Service	2018	115	115		N/A	N/A	Install 20MVAR Cap Bank at Ticonderoga	-
3/6	NGRID	Menands	Wolf Rd	4.54	In-Service	2018	115	115	1	916	1118	Replace 2.1 miles of 4/0 Cu conductor with 795kcmil ACSR 26/7	OH
	NGRID	Golah	Golah	Cap Bank	S	2019	115	115	1	18MVAR	18MVAR	Capacitor Bank	-
7	NGRID	Falls Park	Schodack(NG)	17.33	S	2019	115	115	1	186 MVA	227 MVA	Loop for NYSEG Sub Will Reconfigure NG Line #14 Into Two New Lines	OH
7	NGRID	Falls Park	Churchtown	9.41	S	2019	115	115	1	175 MVA	206 MVA	Loop for NYSEG Sub Will Reconfigure NG Line #14 Into Two New Lines	OH
6	NGRID	Rotterdam	Curry Rd	7	S	2019	115	115	1	808	856	Replace 7.0 miles of mainly 4/0 Cu conductor with 795kcmil ACSR 26/7	-
	NGRID	Batavia	Batavia	Cap Bank	S	2019	115	115	1	30MVAR	30MVAR	Second Capacitor Bank	-
7	NGRID	Battenkill	Eastover Road	-22.72	S	2019	115	115	1	937	1141	New Schaghticoke Switching Station	OH
7	NGRID	Battenkill	Schaghticoke (New Station)	14.31	S	2019	115	115	1	937	1141	New Schaghticoke Switching Station	OH
7	NGRID	Schaghticoke (New Station)	Eastover Road	8.41	S	2019	115	115	1	937	1141	New Schaghticoke Switching Station	OH

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Table VII: Proposed Transmission Facilities (cont'd)

[Project Queue Position] / Project Notes	Transmission Owner	Terminals		Line Length in Miles (1)	Expected In-Service Date/Yr Prior to (2)	Year	Nominal Voltage in kV		# of ccts	Thermal Ratings (4)		Project Description / Conductor Size	Class Year / Type of Construction
							Operating	Design		Summer	Winter		
							7	NYSEG		Wethersfield	Meyer		
3/7	NYSEG	South Perry	Meyer	20.00	In-Service	2018	230	230	1	1080	1310	795 ACSR	OH
3/7	NYSEG	Wethersfield	South Perry	11.50	In-Service	2018	230	230	1	1080	1310	795 ACSR	OH
3	NYSEG	Stephentown	Stephentown	xmnr	In-Service	2018	115/34.5	115/34.5	1	37 MVA	44MVA	Transformer #2	-
3	NYSEG	Pawling	-	Cap Bank	In-Service	2018	115	115	1	88MVAR	88MVAR	Capacitor Bank	-
7/8	NYSEG	Wood Street	Carmel	1.34	W	2019	115	115	1	261MVA	261MVA	477 ACSR	OH
	NYSEG	Flat Street	Flat Street	xmnr	W	2019	115/34.5	115/34.5	2	40MVA	45.2MVA	Transformer #2	-
7	NYSEG	Falls Park 115/34.5kV Substation			W	2019	115/34.5	115/34.5				Tap to interconnect NG Line #14	
	NYSEG	Falls Park	Falls Park	xmnr	W	2019	115/34.5	115/34.5	1	62 MVA	70 MVA	Transformer #1	-
	NYSEG	Meyer	Meyer	xmnr	S	2020	115/34.5	115/34.5	2	59.2MVA	66.9MVA	Transformer #2	-
	NYSEG	Watercure Road	Watercure Road	xmnr	S	2020	345/230	345/230	1	426 MVA	494 MVA	Transformer #2 and Station Reconfiguration	-
	NYSEG	Willett	Willett	xmnr	W	2020	115/34.5	115/34.5	1	39 MVA	44 MVA	Transformer #2	-
	NYSEG	South Perry	South Perry	xmnr	S	2021	115	34.5	1	59MVA	67MVA	Transformer #3	-
	NYSEG	South Perry	South Perry	xmnr	S	2021	230/115	230/115	1	246 MVA	291 MVA	Transformer	-
	NYSEG	Fraser	Fraser	xmnr	W	2022	345/115	345/115	1	305 MVA	364 MVA	Transformer #2 and Station Reconfiguration	-
	NYSEG	Gardenville	Gardenville	xmnr	W	2022	230/115	230/115	1	316 MVA	370 MVA	NYSEG Transformer #3 and Station Reconfiguration	-
	NYSEG	Oakdale 345	Oakdale 115	xmnr	S	2023	345/115	345/115/34.5	1	494MVA	527 MVA	Transformer #3 and Station Reconfiguration	-
	NYSEG	Wood Street	Wood Street	xmnr	S	2023	345/115	345/115	1	327 MVA	378 MVA	Transformer #3	-
	NYSEG	Coopers Corners	Coopers Corners	xmnr	W	2025	115/34.5	115/34.5	1	58 MVA	66 MVA	Transformer #2 and Station Reconfiguration	-
	NYSEG	Coopers Corners	Coopers Corners	xmnr	W	2025	345/115	345/115	1	232 MVA	270 MVA	Transformer #3 and Station Reconfiguration	-
	O & R	West Nyack	West Nyack	Cap Bank	S	2019	69	69	1	-	-	Capacitor Bank	-
	O & R	Harings Comer (RECO)	Closter (RECO)	3.20	S	2020	69	69	1	1098	1312	UG Cable	UG
7	O & R/ConEd	Ladentown	Buchanan	-9.5	S	2021	345	345	1	3000	3211	2-2493 ACAR	OH
7	O & R/ConEd	Ladentown	Lovett 345 kV Station (New Station)	5.5	S	2021	345	345	1	3000	3211	2-2493 ACAR	OH
7	O & R/ConEd	Lovett 345 kV Station (New Station)	Buchanan	4	S	2021	345	345	1	3000	3211	2-2493 ACAR	OH
	O & R	Lovett 345 kV Station (New Station)	Lovett	xmnr	S	2021	345/138	345/138	1	562 MVA	562 MVA	Transformer	-
	RGE	Station 262	Station 23	1.46	S	2019	115	115	1	2008	2008	Underground Cable	UG
	RGE	Station 122-Pannell-PC1	Station 122-Pannell-PC1 and PC2		S	2019	345	345	1	1314 MVA-LTE	1314 MVA-LTE	Relay Replacement	-
	RGE	Station 23	Station 23	xmnr	W	2019	115/11.5/11.5	115/11.5/11.5	2	75 MVA	84 MVA	Transformer	-
	RGE	Station 23	Station 23	xmnr	W	2019	115/34.5	115/34.5	2	75 MVA	84 MVA	Transformer	-
	RGE	Station 42	Station 23	Phase Shifter	W	2019	115	115	1	253 MVA	253 MVA	Phase Shifter	-
	RGE	Station 33	Station 262	2.97	W	2019	115	115	1	2008	2008	Underground Cable	UG
	RGE	Station 262	Station 262	xmnr	S	2020	115/34.5	115/34.5	1	58.8MVA	58.8MVA	Transformer	-
	RGE	Station 255 (New Station)	Rochester	3.80	S	2021	345	345	1	2177	2662	2-795 ACSR	OH
	RGE	Station 255 (New Station)	Station 255 (New Station)	xmnr	S	2021	345/115	345/115	1	400 MVA	450 MVA	Transformer	-
	RGE	Station 255 (New Station)	Station 255 (New Station)	xmnr	S	2021	345/115	345/115	2	400 MVA	450 MVA	Transformer	-
	RGE	Station 255 (New Station)	Station 418	9.60	S	2021	115	115	1	1506	1807	New 115kV Line	OH
	RGE	Station 255 (New Station)	Station 23	11.10	S	2021	115	115	1	1506	1807	New 115kV Line	OH+UG
7	RGE	Station 168	Mortimer (NG Trunk #2)	26.4	W	2021	115	115	1	145 MVA	176 MVA	Station 168 Reinforcement Project	OH
7	RGE	Station 168	Elbridge (NG Trunk # 6)	45.5	W	2021	115	115	1	145 MVA	176 MVA	Station 168 Reinforcement Project	OH
	RGE	Station 127		xmnr	S	2022	115	34.5	1	75MVA	75MVA	Transformer #2	-
	RGE	Station 418	Station 48	7.6	W	2022	115	115	1	175 MVA	225 MVA	New 115kV Line	OH
	RGE	Station 82	Station 251 (Upgrade Line #902)		S	2025	115	115	1	400MVA	400MVA	Line Upgrade	-
	RGE	Mortimer	Station 251 (Upgrade Line #901)	1.00	S	2025	115	115	1	400MVA	400MVA	Line Upgrade	-

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Table VII: Proposed Transmission Facilities (cont'd)

[Project Queue Position] / Project Notes	Transmission Owner	Terminals	Line Length In Miles (1)	Expected In-Service Date/Yr		Nominal Voltage In kV		# of ckts	Thermal Ratings (4)		Project Description / Conductor Size	Class Year / Type of Construction	
				Prior to (2)	Year	Operating	Design		Summer	Winter			
Non-Firm Plans (not included in Base Cases)													
	LIPA	MacArthur	-	Cap Bank	S	2020	69	69	1	27MVAR	27 MVAR	Capacitor bank	-
13	LIPA	Valley Stream	East Garden City	7.00	W	2020	138	138	1	1171	1171	2000 SQMM XLPE	UG
9	LIPA	Riverhead	Wildwood	10.63	S	2021	138	138	1	1399	1709	1192ACSR	OH
13	LIPA	Riverhead	Canal	16.49	S	2021	138	138	1	1000	1110	2368 KCMIL (1200 mm ²) Copper XLPE	UG
	LIPA	Deer Park	-	Cap Bank	S	2021	69	69	1	27MVAR	27 MVAR	Capacitor bank	-
	LIPA	Canal	Wainscott	19.00	S	2026	69	138	1	1171	1171	2000 SQMM XLPE	UG
6	NGRID	Mohican	Butler	3.50	S	2019	115	115	1	TBD	TBD	Replace 3.5 miles of conductor w/min 336.4 ACSR	OH
	NGRID	Gardenville 230kV	Gardenville 115kV	xfmr	S	2022	230/115	230/115	-	347 MVA	422 MVA	Replacement of 230/115kV TB#3 stepdown with larger unit	-
	NGRID	Niagara	Packard	3.7	S	2022	115	115	2	1729	2256	Replace 3.7 miles of 191 and 192 lines	OH
	NGRID	Packard	Packard	Reactor	S	2022	115	115	1	n/a	n/a	Add a series reactor to line 182	OH
	NGRID	Coffeen	Coffeen	-	S	2022	115	115	-	TBD	TBD	Terminal equipment replacements	-
	NGRID	Browns Falls	Browns Falls	-	S	2022	115	115	-	TBD	TBD	Terminal equipment replacements	-
	NGRID	Taylorville	Taylorville	-	S	2022	115	115	-	TBD	TBD	Terminal equipment replacements	-
	NGRID	Malone	Malone	-	S	2023	115	115	-	TBD	TBD	Station Rebuild	-
	NGRID	Taylorville	Boonville	-	S	2023	115	115	-	TBD	TBD	Install series reactors on the 5 and 6 lines. Size TBD	-
6	NGRID	Packard	Erie	16.9	S	2023	115	115	1	TBD	TBD	Replace 16.9 miles of 181 line	OH
6	NGRID	Niagara	Gardenville	3.9	S	2023	115	115	1	TBD	TBD	Replace 3.9 miles of 180 line	OH
6	NGRID	Packard	Huntley	9	S	2023	115	115	2	1200	1200	Replace 9.0 miles of 130 and 133 lines	OH
	NGRID	Inghams	Saint Johnsville	2.94	W	2024	115	115	1	1114	1359	Reconductor 2.94mi of 2/0 + 4/0 Cu (of 7.11mi total) to 795 ACSR	OH
	NGRID	Inghams 115kV	Inghams 115kV	Breaker	W	2024	115	115	-	2000	2000	Add series breaker to Inghams R15 (Inghams - Meco #15 115kV)	-
	NGRID	Schenectady International	Rotterdam	0.93	W	2024	69	115	1	1114	1359	Reconductor 0.93mi of 4/0 Cu + 336.4 ACSR (of 21.08mi total) to 795 ACSR	OH
	NGRID	Rotterdam	Soharie	0.93	W	2024	69	115	1	1114	1359	Reconductor 0.93mi of 4/0 Cu (of 21.08mi total) to 795 ACSR	OH
	NGRID	Stoner	Rotterdam	9.81	W	2025	115	115	1	1398	1708	Reconductor 9.81mi of 4/0 Cu + 336.4 ACSR (of 23.12mi total) to 1192.5 ACSR	OH
	NGRID	Meco	Rotterdam	9.81	W	2025	115	115	1	1398	1708	Reconductor 9.96mi of 4/0 Cu + 336.4 ACSR (of 30.79mi total) to 1192.5 ACSR	OH
	NYP&A	Plattsburg 230 kV	Plattsburg 115 kV	xfmr	W	2019	230/115	230/115	1	249	288	Refurbishment of Plattsburgh Auto Transformer #1	-
	NYP&A	Astoria 500 MW	Astoria 500 MW	GSU	W	2019	138/18	138/18	1	220 MVA	220 MVA	Astoria 500MW Combined Cycle GSU Refurbishment	-
	NYP&A	Niagara 230 kV	Niagara 230 kV	Breaker	S	2020	230	230	-	TBD	TBD	Add a new breaker to remove STB #2014 Ctg	-
	NYP&A	Niagara 230 kV	Niagara 115 kV	xfmr	S	2020	230/115	230/115	1	TBD	TBD	Replacement of Niagara AutoTransformer #1	-
	NYP&A	Astoria Annex	Astoria Annex	Shunt Reactor	W	2020	345	345	1	TBD	TBD	Replacement of Two Shunt Reactors at Astoria Annex 345kV Substation	-
760	NYP&A	Moses 230 kV	Adirondack 230 kV	Series Compensation	W	2020	230	230	-	±13.2kV	±13.2kV	Voltage Source Series Compensation	-
	NYP&A	Niagara 345 kV	Niagara 230 kV	xfmr	W	2022	345/230	345/230	1	TBD	TBD	Replacement of Niagara AutoTransformer #3	-
	NYP&A	Niagara 345 kV	Niagara 230 kV	xfmr	W	2023	345/230	345/230	1	TBD	TBD	Replacement of Niagara AutoTransformer #5	-
	O & R	Little Tor	-	Cap Bank	S	2021	138	138	1	32 MVAR	32 MVAR	Capacitor bank	-
	O & R	Ramapo (NY)	South Mahwah (RECO)	5.50	W	2022	138	138	2	1980	2120	1272 ACSS	-
	O & R	Burns	West Nyack	5.00	S	2023	138	138	1	940	940	UG Cable	UG
6	O & R	Shoemaker	Pocatiello	2.00	W	2023	69	69	1	1604	1723	795 ACSS	OH
6	O & R	Sugarloaf	Shoemaker	12.00	W	2023	69	138	2	1062	1141	397 ACSS	OH
	O & R	Montvale (RECO)	-	Cap Bank	S	2024	69	69	1	32 MVAR	32 MVAR	Capacitor bank	-
	O & R	Ramapo	Sugarloaf	17.00	W	2024	138	138	1	1980	2120	1272 ACSS	OH
	O & R	Burns	Corporate Drive	5.00	W	2024	138	138	1	1980	2120	1272 ACSS	OH
	O & R	West Nyack	West Nyack	-	S	2026	138	138	1			Station Reconfiguration	-
	O & R	West Nyack (NY)	Haring's Corner (RECO)	7.00	W	2026	69	138	1	1604	1723	795 ACSS	OH

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Table VII: Proposed Transmission Facilities (cont'd)

Number	Note
1	Line Length Miles: Negative values indicate removal of Existing Circuit being tapped
2	S = Summer Peak Period W = Winter Peak Period
3	Equipment (Transformers & Capacitor Banks) is retained on this list for one year after it goes in In-Service, and then it is deleted. A Transmission Line is reflected in Table VI, when it goes In-Service
4	Thermal Ratings in Amperes, except where labeled otherwise
5	Firm projects are those which have been reported by TOs as being sufficiently firm, and either (i) have an Operating Committee approved System Impact Study (if applicable) and, for projects subject to Article VII, have a determination from New York Public Service Commission that the Article VII application is in compliance with Public Service Law § 122, or (ii) is under construction and is scheduled to be in-service prior to June 1 of the current year.
6	Reconductoring of Existing Line
7	Segmentation of Existing Circuit
8	115 kV operation as opposed to previous 46 kV operation
9	Upgrade of existing 69 kV to 138 kV operation
10	Deleted
11	Upgrade of existing 69 kV to 115 kV operation
12	Deleted
13	Contingent on future generation resources
14	This transmission upgrade was identified as a System Deliverability Upgrade (SDU) in the Class Year 2011 Study process required to make certain interconnection projects fully deliverable in the Rest of State Capacity Region. Upon the completion of Class Year 2011, the security posted for the SDU constituted greater than 60% of the total estimated costs for the SDUs and thereby "triggered" the SDU for construction.
15	The Class Year Transmission Project, Queue #458 or 631 includes, as an elective System Upgrade Facility, an Astoria-Rainey 345kV cable. The Operating Committee (OC) approved the Q#631 NS Power Express System Reliability Impact Study (SRIS) report as presented and discussed at the January 17, 2019 OC meeting, provided however, Q#458 CH Interconnection (the SRIS for which was approved by the OC on February 9, 2017) and Q#631 NS Power Express may not enter the same Class Year Interconnection Facilities Study unless Q#631 has a non-material modification specifying that it is not an alternative to Q#458 CH Interconnection.
16	Deleted
17	Deleted
18	This project has a System Reliability Impact Study that has been approved by the NYISO Operating Committee, and therefore is a potential candidate to enter the next Open Class Year study
19	These transmission projects are included in the FERC 715 Report models. Please see FERC 715 report for an explanation of the inclusion criteria.
20	Deleted

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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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