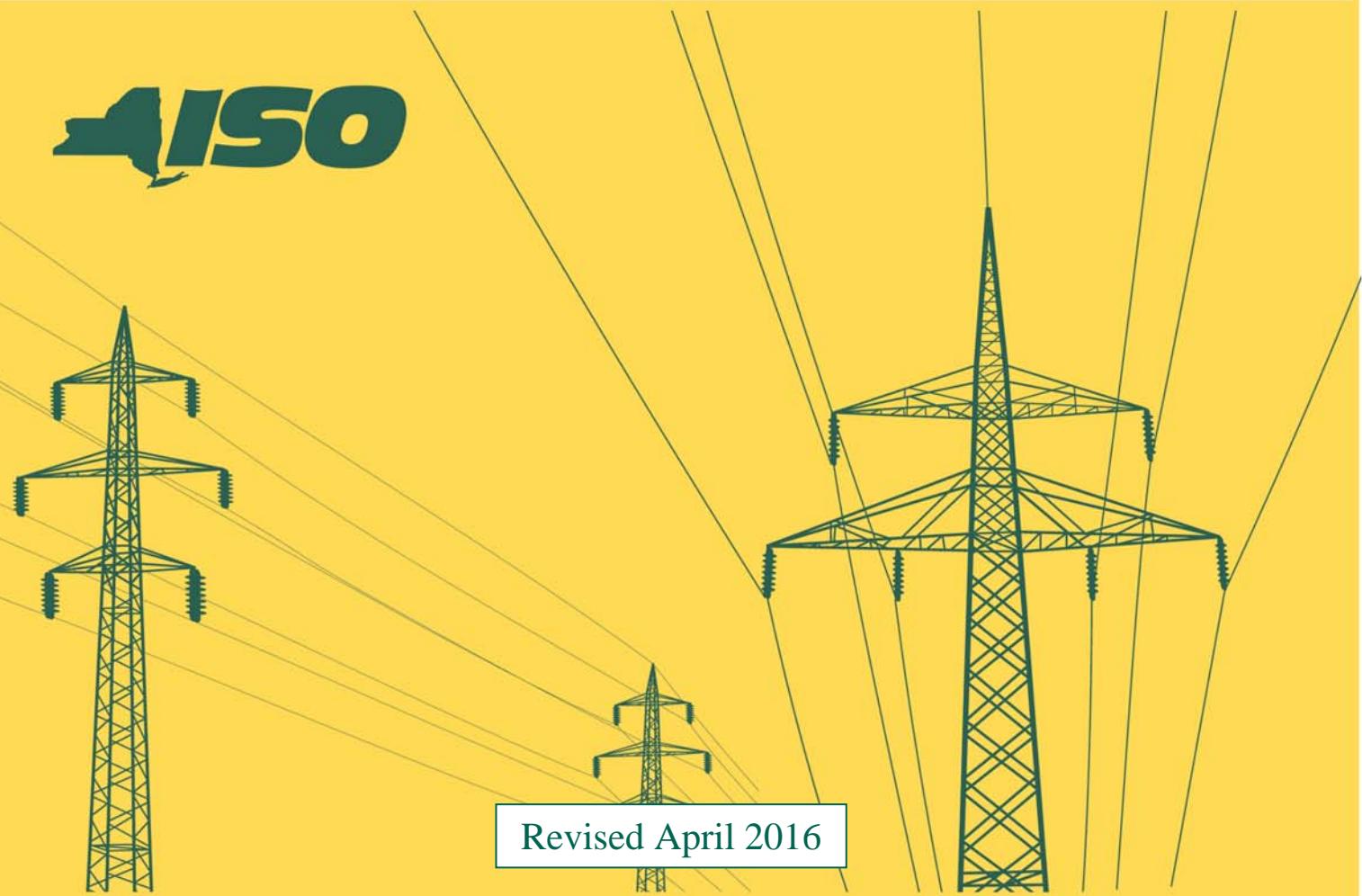


# 2015 Load & Capacity Data

*A report by*

*The New York Independent System Operator, Inc.*

## “Gold Book”



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# NEW YORK INDEPENDENT SYSTEM OPERATOR

## 2015

### LOAD & CAPACITY DATA

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# OVERVIEW

This report presents the New York Independent System Operator, Inc. (NYISO) load and capacity data for the years 2015-2025. The seven sections of this *Load and Capacity Data* report (*Gold Book*) address the following topics:

- **Historic and forecast peak demand, energy usage, and energy efficiency;**
- **Existing and proposed generation and other capacity resources; and**
- **Existing and proposed transmission facilities.**

## Historic and Forecast Baseline Load

During the past few years wholesale electricity load in the New York Control Area (NYCA<sup>1</sup>) has revealed a trend of nearly flat energy usage along with some growth in summer peak demand. However, there are notable disparities in these trends across the various regions of the state. With respect to energy usage:

- the Western region (Zones A - C) has been relatively flat;
- the Mid-state region (Zones E and F) has exhibited strong growth; and
- the Downstate region, (NYISO Zones G - K) shows a persistent decline.<sup>2</sup>

Summer peak demand, on the other hand, has grown modestly in both the western and mid-state zones with Downstate zones showing slow growth. Winter peak demand is relatively flat statewide with some growth apparent in the Upstate regions (NYISO Zones A - F).

The 2015 baseline figures reflect the historical trends and forecasted patterns for both energy and peak. The 2015 baseline forecasts for energy and peak are lower than those published in the 2014 *Gold Book*.

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<sup>1</sup> 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).

<sup>2</sup> It must be noted that there have been significant fluctuations in industrial load in Zone D over the past few years. Therefore, Zone D has been excluded from regional discussions.

- The baseline forecast of NYCA energy usage for 2015 is 160,121 GWh, which is 0.30% lower than the weather-normalized forecast for energy usage in 2014. Annual average energy growth is 0.0% in this year's forecast; last year it was 0.16%.
- The baseline forecast for the NYCA 2015 summer peak is 33,567 MW, which is 0.83% higher than the weather-normalized summer peak for 2014. Annual average summer coincident peak growth is 0.48% in this year's forecast; last year it was 0.83%.

By all accounts, the economic health of the state continues to be robust with growth and strength reported broadly across all sectors. However, as has been noted by load forecasters nationwide, we no longer observe a close linkage between the economy and energy usage. The lower forecasted growth in energy usage can largely be attributed to the projected impact of existing statewide energy efficiency programs<sup>3</sup> and the growing impact of distributed *behind-the-meter* energy resources. These include retail solar photovoltaic (SPV)<sup>4</sup>, combined heat and power (CHP), anaerobic digester gas (ADG), fuel cells, and energy storage. Such resources are expected to continue to affect forecasted energy usage, as programs authorized under New York State's NY-SUN Initiative, Clean Energy Fund and Green Bank programs are implemented. Moreover, the overall growth of distributed energy resources (DERs) at the local distribution level is expected to be facilitated by New York State's Reforming Energy Vision (REV) initiative.

The NYISO employed a two-stage process in developing load forecasts for each of the 11 zones within the NYCA. In the first stage, zonal load forecasts are based upon econometric projections that recognize the influence of weather and the economy. The NYISO also prepared separate forecasts for the various energy-savings impacts – both existing and new programs, including the initiatives being considered under the auspices of the Clean Energy Fund Proposal<sup>5</sup>, *behind-the-meter* activity from SPV, and other distributed generation. The impact of retail SPV on both energy usage and peak demand is displayed separately this year due to its rising significance in New York's energy

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<sup>3</sup> The Clean Energy Fund programs encompass and continue renewable energy and energy efficiency programs that originated with New York's Renewable Portfolio Standard, Energy Efficiency Portfolio Standard (EEPS) and System Benefits Charge (SBC). The NYISO will continue to serve as a technical advisor to those state agencies that are implementing these programs, and will monitor their impact on the NYISO's system planning processes.

<sup>4</sup> Retail solar PV refers to small-scale solar powered photo-voltaic systems which generate electric energy and are installed at locations on the customer's side of the meter, rather than large-scale systems that are interconnected to the bulk power system.

<sup>5</sup> The Clean Energy Fund incorporates and continues, with modifications, programs implemented under the Renewable Portfolio Standard, Energy Efficiency Portfolio Standard, and the System Benefits Charge.

landscape. The econometric forecast reflects energy usage levels that would occur in the absence of energy saving impacts and *behind-the-meter* activity.

## **Generation and Other Capacity Resources**

The total resource capability in the NYCA for the summer of 2015 is 41,610 MW, which is an increase of 312 MW from summer 2014 due to the net impact of additions, uprates, revised unit ratings, retirements<sup>6</sup>, changes in Special Case Resources (SCR), and changes in net purchases of capacity from other control areas. The total resource capability for 2015 includes:

- existing NYCA generating capacity (38,665 MW);
- SCR (1,124 MW);
- additions and uprates (374 MW); and
- net long-term purchases with neighboring control areas (1,446 MW)<sup>7</sup>.

The existing NYCA capability includes wind generation (1,461 MW)<sup>8</sup> and non-wind renewable generation (511 MW, including 32 MW of large-scale solar PV).

Since the 2014 *Gold Book*, a total of 33 MW of summer capacity has been retired or mothballed, as compared with 123 MW in the prior year. There are also units that are in transitional states, e.g., some have provided notice of intent to mothball, but are operating under Reliability Support Services Agreements. Certain generation owners provided status changes since the 2014 *Gold Book*, including generators returning to service, withdrawal of a notice of intent to mothball, and a restoration to full capacity operation. There is a general trend of generating capacity returning to service in Southeast New York and other parts of the New York Control Area.

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<sup>6</sup> The term “retirement” is defined per PSC Order in Case 05-E-0889, footnote 1: ‘The Instituting Order defined “retirements” to collectively include shut-downs, abandonments, mothballing, and other circumstances where a generating unit is taken out of service for a substantial period of time, excluding scheduled maintenance and forced outages.’

<sup>7</sup> Additional information on these changes is provided in Section II.

<sup>8</sup> This value represents the amount of wind resources that participate in the NYISO’s capacity markets. There is a total of 1,746 MW of wind resources interconnected to the NYCA system.

Some generators returning to service have refueled or are expected to refuel their units with natural gas, converting from coal. These actions reflect the increasing reliance of New York's generator fleet on natural gas. Currently, there are 17,684 MW of dual-fueled capacity with the capability of burning natural gas or fuel oil and 3,781 MW of gas-burning capacity. Dependable Maximum Net Capability (DMNC) is reported in Table III-2<sup>9</sup>.

Beyond 2014, the resource capability in the NYCA will be affected by the net effect of additions of new generation, re-ratings of operating units, the retirement of existing generators and net purchases. Table IV-1 shows the proposed facilities that have either completed, are enrolled in, or are candidates to enter a Class Year Interconnection Facilities Study, or have met other comparable milestones. Of the total reported, 3,315 MW are natural gas or dual-fuel projects, 1,265 MW are wind turbine projects and 22 MW are non-wind renewable energy projects.

## **Transmission Facilities**

This report lists all existing transmission facilities in the NYCA. It also includes several new transmission facilities that came into service since the publication of the 2014 *Gold Book*. The list of proposed transmission facilities includes merchant projects as well as firm and non-firm projects submitted by each transmission owner.

The Transmission Owner Transmission Solutions (TOTS) listed in Table VII consist of three distinct transmission projects approved by the PSC as part of the Indian Point Contingency Plan in October 2013 and are projected by the Transmission Owners to be in service by summer 2016<sup>10</sup>. The objective of the plan is to increase transfer capability into Southeast New York. The Marcy South Series Compensation project includes adding compensation to the Marcy South transmission corridor through the installation of series capacitors, and includes re-conductoring the Fraser – Coopers Corners 345 kV line. The Rock Tavern – Ramapo project will add a second Rock Tavern – Ramapo 345 kV line and create a Sugarloaf 345/138 kV connection to the Orange and Rockland system. The Marcy South Series Compensation and Rock Tavern – Ramapo projects together will increase the

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<sup>9</sup> The NYISO does not specify the fuel to be used in DMNC testing.

<sup>10</sup> The Indian Point Contingency Plan also included 125 MW of additional demand response and combined heat and power resources to be implemented by Consolidated Edison, some of which is already in effect.

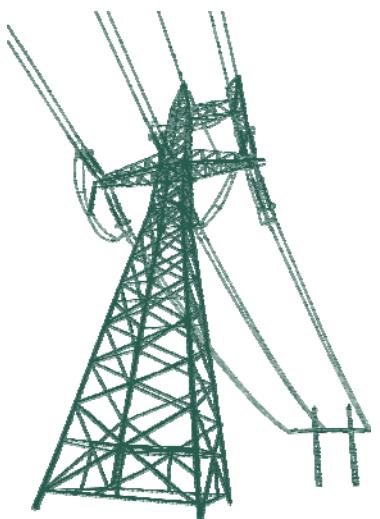
transfer capability from upstate to downstate New York. The Staten Island Unbottling project will relieve transmission constraints between Staten Island and the rest of New York City through the reconfiguration of two substations and the forced cooling of four existing 345 kV feeders.

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## **SECTION I:**

### **ANNUAL ENERGY & PEAK DEMAND - HISTORY & FORECASTS**



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## Section I

This section of the 2015 *Gold Book* presents forecasts and historical data on energy and peak demand. The baseline forecasts reflect the impact of energy efficiency programs as well as the impact of *behind-the-meter* generation attributed to SPV and other distributed energy resources. The tables below report historical and forecast annual average growth rates for Zones A through F, Zones G through I, Zone J, Zone K and the NYCA. The tables report growth rates for annual energy, summer coincident peaks and summer non-coincident peaks. The historical growth rates are not weather-adjusted. Recent industrial load curtailment<sup>11</sup> in one of the upstate zones has reduced growth rates in Zones A to F by an additional 0.20% to 0.25%.

### Historical and Forecasted Annual Average Growth Rates

#### Annual Energy

Period	Zones A to C	Zones E & F	Zones G to K	NYCA
2005-2014	-0.55%	0.44%	-0.47%	-0.48%
2015-2025	-0.19%	-0.17%	-0.10%	0.00%

#### Summer Coincident Peak

Period	Zones A to C	Zones E & F	Zones G to K	NYCA
2005-2014	-1.78%	-0.58%	-0.42%	-0.82%
2015-2025	0.10%	0.28%	0.56%	0.48%

#### Summer Non-coincident Peak

Period	Zones A to C	Zones E & F	Zones G to K
2005-2014	-0.75%	0.29%	-0.70%
2015-2025	0.10%	0.28%	0.56%

The NYISO employs a two-stage process in developing load forecasts for each of the 11 zones within the NYCA. In the first stage, zonal load forecasts are based upon regression models that are reflective of annual changes in economic conditions and weather. In the second stage, the NYISO prepares forecasts of energy reductions resulting from statewide energy

<sup>11</sup> This load is expected to return by 2019.

efficiency programs, new building codes and appliance efficiency standards, and the impact of retail solar PV. These forecasts are based upon new and updated information about the performance of such programs provided by the New York State Department of Public Service (DPS), the New York State Energy Research and Development Authority (NYSERDA), state power authorities, electric utilities, and through NYISO's previous participation in the DPS Evaluation Advisory Group. The NYISO forecast for SPV impacts is based upon historical data, an assumed trend of future SPV installations over time, a geographical distribution of the units, and performance parameters derived from operational data.

The NYISO baseline forecast is reported in Tables I-1, I-2a, and I-2b. In addition to the baseline forecast, the NYISO provides high and low forecasts for each zone that represent a range of weather conditions, as found in Tables I-2d and I-2e. The NYISO forecasts of the impacts of energy savings programs and *behind-the-meter* generation are in Table I-2f; the impacts of SPV are in Table I-2g. The econometric forecast is reported in Tables I-3a and I-3b. The baseline and econometric forecasts reflect a combination of data submitted by Transmission Owners for their respective territories and forecasts prepared by the NYISO.

**Table I-1: NYCA Energy and Demand Forecasts Net of Energy Saving Impacts**

**2015 Long Term Forecast<sup>1</sup> - 2015 to 2025**

Energy - GWh				Summer <sup>2</sup> Peak Demand - MW				Winter <sup>2</sup> Peak Demand - MW			
Year	Low <sup>3</sup>	Baseline <sup>4</sup>	High <sup>3</sup>	Year	Low <sup>3</sup>	Baseline <sup>4,5</sup>	High <sup>3</sup>	Year	Low <sup>3</sup>	Baseline <sup>4</sup>	High <sup>3</sup>
2014		160,598		2014		33,291		2014-15		24,500	
2015	157,707	160,121	162,535	2015	30,494	33,567	35,862	2015-16	22,933	24,515	26,097
2016	157,557	159,970	162,383	2016	30,555	33,636	35,932	2016-17	22,942	24,524	26,106
2017	156,583	158,980	161,377	2017	30,685	33,779	36,084	2017-18	22,908	24,488	26,068
2018	155,896	158,280	160,664	2018	30,778	33,882	36,191	2018-19	22,885	24,463	26,041
2019	156,418	158,797	161,176	2019	30,997	34,119	36,443	2019-20	23,014	24,603	26,192
2020	157,208	159,585	161,962	2020	31,171	34,309	36,645	2020-21	23,158	24,757	26,356
2021	156,883	159,256	161,629	2021	31,315	34,469	36,815	2021-22	23,194	24,796	26,398
2022	156,954	159,328	161,702	2022	31,470	34,639	36,997	2022-23	23,237	24,843	26,449
2023	157,128	159,506	161,884	2023	31,636	34,823	37,192	2023-24	23,286	24,895	26,504
2024	157,620	160,006	162,392	2024	31,805	35,010	37,391	2024-25	23,337	24,951	26,565
2025	157,677	160,065	162,453	2025	31,994	35,219	37,614	2025-26	23,401	25,020	26,639

Average Annual Growth - Percent											
Period	Low	Baseline	High	Period	Low	Baseline	High	Period	Low	Baseline	High
2015-25	0.00%	0.00%	-0.01%	2015-25	0.48%	0.48%	0.48%	2015-25	0.20%	0.20%	0.21%
2015-20	-0.06%	-0.07%	-0.07%	2015-20	0.44%	0.44%	0.43%	2015-20	0.20%	0.20%	0.20%
2020-25	0.06%	0.06%	0.06%	2020-25	0.52%	0.52%	0.52%	2020-25	0.21%	0.21%	0.21%

Notes

1. All results in the Section I tables include transmission & distribution losses and exclude station power and other Local Generation.
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 2014 are weather-normalized. The actual levels for the energy, Summer peak, and Winter peak are, respectively, 160,059 GWh, 29,782 MW, and 24,648 MW.
5. 2015 NYCA summer peak is the same as the 2015 ICAP forecast.

**Table I-2a: Baseline Forecast of Annual Energy & Coincident Peak Demand**  
*Reflects Impacts of Energy Saving Programs & Behind-the-Meter Generation*

**Forecast of Annual Energy by Zone - GWh**

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2015	15,789	9,849	16,055	4,620	8,058	11,906	9,826	2,944	6,051	52,918	22,105	160,121
2016	15,836	9,838	16,074	4,636	8,077	11,868	9,791	2,932	6,037	52,803	22,078	159,970
2017	15,745	9,774	16,015	4,625	8,053	11,757	9,693	2,904	5,995	52,435	21,984	158,980
2018	15,690	9,731	15,958	4,627	8,049	11,657	9,608	2,884	5,969	52,208	21,899	158,280
2019	15,643	9,699	15,915	5,604	8,051	11,571	9,523	2,866	5,957	52,098	21,870	158,797
2020	15,651	9,690	15,913	6,582	8,089	11,532	9,477	2,853	5,940	51,955	21,903	159,585
2021	15,581	9,640	15,854	6,584	8,094	11,452	9,401	2,830	5,928	51,847	22,045	159,256
2022	15,563	9,613	15,842	6,585	8,117	11,425	9,355	2,818	5,923	51,804	22,283	159,328
2023	15,549	9,589	15,837	6,587	8,140	11,412	9,315	2,811	5,923	51,808	22,535	159,506
2024	15,578	9,587	15,871	6,588	8,204	11,444	9,299	2,810	5,928	51,845	22,852	160,006
2025	15,520	9,542	15,841	6,590	8,214	11,418	9,243	2,803	5,934	51,898	23,062	160,065

**Forecast of Coincident Summer Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2015	2,635	2,042	2,923	551	1,398	2,376	2,256	644	1,478	11,800	5,464	33,567
2016	2,632	2,040	2,927	551	1,397	2,380	2,260	647	1,489	11,882	5,431	33,636
2017	2,633	2,044	2,935	550	1,405	2,382	2,262	650	1,503	12,004	5,411	33,779
2018	2,632	2,047	2,935	550	1,412	2,384	2,264	648	1,516	12,106	5,388	33,882
2019	2,631	2,050	2,936	666	1,420	2,386	2,266	646	1,527	12,195	5,396	34,119
2020	2,631	2,052	2,935	780	1,429	2,388	2,268	646	1,535	12,251	5,394	34,309
2021	2,633	2,056	2,939	782	1,439	2,390	2,270	646	1,544	12,330	5,440	34,469
2022	2,637	2,060	2,943	782	1,449	2,392	2,272	644	1,555	12,413	5,492	34,639
2023	2,641	2,063	2,948	782	1,459	2,394	2,274	645	1,567	12,502	5,548	34,823
2024	2,646	2,065	2,952	780	1,471	2,396	2,276	646	1,577	12,593	5,608	35,010
2025	2,651	2,069	2,960	782	1,482	2,398	2,278	646	1,591	12,689	5,673	35,219

**Forecast of Coincident Winter Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2015-16	2,361	1,544	2,664	660	1,341	1,930	1,548	542	919	7,447	3,559	24,515
2016-17	2,365	1,540	2,668	660	1,343	1,930	1,545	541	918	7,440	3,574	24,524
2017-18	2,362	1,537	2,676	661	1,347	1,933	1,543	540	913	7,398	3,578	24,488
2018-19	2,359	1,533	2,677	661	1,351	1,935	1,538	538	910	7,375	3,586	24,463
2019-20	2,357	1,531	2,680	801	1,355	1,939	1,533	538	909	7,368	3,592	24,603
2020-21	2,355	1,527	2,681	938	1,361	1,943	1,528	537	908	7,357	3,622	24,757
2021-22	2,354	1,525	2,685	941	1,368	1,947	1,525	535	907	7,351	3,658	24,796
2022-23	2,352	1,523	2,688	941	1,374	1,950	1,521	536	908	7,354	3,696	24,843
2023-24	2,351	1,520	2,691	941	1,379	1,953	1,517	535	909	7,364	3,735	24,895
2024-25	2,349	1,517	2,692	939	1,387	1,956	1,512	535	911	7,378	3,775	24,951
2025-26	2,348	1,515	2,696	942	1,393	1,959	1,509	535	913	7,395	3,815	25,020

**Table I-2b-1: Baseline Forecast of Zonal Non-Coincident Peak Demand**

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

**Forecast of Zonal Non-Coincident Summer Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K
2015	2,673	2,073	2,952	606	1,421	2,397	2,281	651	1,494	11,929	5,539
2016	2,670	2,071	2,956	606	1,420	2,401	2,285	654	1,505	12,013	5,506
2017	2,671	2,075	2,964	605	1,428	2,403	2,287	657	1,520	12,136	5,485
2018	2,670	2,078	2,964	605	1,435	2,405	2,289	655	1,533	12,239	5,462
2019	2,669	2,081	2,965	733	1,443	2,407	2,291	653	1,544	12,329	5,470
2020	2,669	2,083	2,964	858	1,453	2,409	2,293	653	1,552	12,386	5,468
2021	2,671	2,087	2,968	860	1,463	2,412	2,295	653	1,561	12,466	5,515
2022	2,675	2,091	2,972	860	1,473	2,414	2,297	651	1,572	12,550	5,567
2023	2,679	2,094	2,977	860	1,483	2,416	2,299	652	1,584	12,640	5,624
2024	2,684	2,096	2,982	858	1,495	2,418	2,301	653	1,594	12,732	5,685
2025	2,689	2,100	2,990	860	1,506	2,420	2,303	653	1,609	12,829	5,751

**Forecast of Non-Coincident Winter Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K
2015-16	2,395	1,555	2,664	667	1,368	1,937	1,548	543	924	7,536	3,608
2016-17	2,399	1,551	2,668	667	1,370	1,937	1,545	542	923	7,529	3,623
2017-18	2,396	1,548	2,676	668	1,374	1,940	1,543	541	918	7,487	3,627
2018-19	2,393	1,544	2,677	668	1,378	1,942	1,538	539	915	7,464	3,635
2019-20	2,391	1,542	2,680	809	1,382	1,946	1,533	539	914	7,456	3,642
2020-21	2,389	1,538	2,681	947	1,388	1,950	1,528	538	913	7,445	3,671
2021-22	2,388	1,536	2,685	950	1,395	1,954	1,525	536	912	7,439	3,708
2022-23	2,386	1,534	2,688	950	1,401	1,957	1,521	537	913	7,442	3,746
2023-24	2,385	1,531	2,691	950	1,407	1,960	1,517	536	914	7,452	3,787
2024-25	2,383	1,528	2,692	948	1,415	1,963	1,512	536	916	7,467	3,827
2025-26	2,382	1,526	2,696	951	1,421	1,966	1,509	536	918	7,484	3,867

**Table I-2b-2: Baseline Forecast of Non-Coincident Peak Demand in G-J Locality***Reflects Impacts of Energy Saving Programs & Behind-the-Meter Generation***Forecast of G-J Locality, Non-Coincident Summer Peak - MW**

Year	G	H	I	J	G-J
2015	2,279	651	1,493	11,917	16,340
2016	2,283	653	1,504	12,001	16,441
2017	2,285	657	1,518	12,124	16,584
2018	2,287	654	1,531	12,227	16,699
2019	2,289	652	1,542	12,317	16,800
2020	2,291	652	1,550	12,374	16,867
2021	2,293	652	1,559	12,453	16,957
2022	2,295	650	1,571	12,537	17,053
2023	2,297	651	1,583	12,627	17,158
2024	2,299	652	1,593	12,719	17,263
2025	2,301	652	1,607	12,816	17,376

**Forecast of G-J Locality, Non-Coincident Winter Peak - MW**

Year	G	H	I	J	G-J
2015-16	1,548	543	924	7,527	10,542
2016-17	1,545	542	923	7,520	10,530
2017-18	1,543	541	918	7,478	10,480
2018-19	1,538	539	915	7,455	10,447
2019-20	1,533	539	914	7,448	10,434
2020-21	1,528	538	913	7,436	10,415
2021-22	1,525	536	912	7,430	10,403
2022-23	1,521	537	913	7,433	10,404
2023-24	1,517	536	914	7,444	10,411
2024-25	1,512	536	916	7,458	10,422
2025-26	1,509	536	918	7,475	10,438

**Table I-2c: Projection of Emergency Demand Response Program Enrollment**

**Forecast of Reductions in Coincident Summer Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2015	13	1	13	4	12	26	0	2	0	14	1	86
2016	13	1	13	4	12	26	0	2	0	14	1	86
2017	13	1	13	4	12	26	0	2	0	14	1	86
2018	13	1	13	4	12	26	0	2	0	14	1	86
2019	13	1	13	4	12	26	0	2	0	14	1	86
2020	13	1	13	4	12	26	0	2	0	14	1	86
2021	13	1	13	4	12	26	0	2	0	14	1	86
2022	13	1	13	4	12	26	0	2	0	14	1	86
2023	13	1	13	4	12	26	0	2	0	14	1	86
2024	13	1	13	4	12	26	0	2	0	14	1	86
2025	13	1	13	4	12	26	0	2	0	14	1	86

\* The facilities providing Emergency Demand Response are not considered Installed Capacity resources.

**Forecast of Reductions in Coincident Winter Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2015	13	3	12	4	11	33	0	2	0	0	0	78
2016	13	3	12	4	11	33	0	2	0	0	0	78
2017	13	3	12	4	11	33	0	2	0	0	0	78
2018	13	3	12	4	11	33	0	2	0	0	0	78
2019	13	3	12	4	11	33	0	2	0	0	0	78
2020	13	3	12	4	11	33	0	2	0	0	0	78
2021	13	3	12	4	11	33	0	2	0	0	0	78
2022	13	3	12	4	11	33	0	2	0	0	0	78
2023	13	3	12	4	11	33	0	2	0	0	0	78
2024	13	3	12	4	11	33	0	2	0	0	0	78
2025	13	3	12	4	11	33	0	2	0	0	0	78

\* The facilities providing Emergency Demand Response are not considered Installed Capacity resources.





**Table I-2f: Energy Efficiency & Behind-the-Meter Generation Other Than Retail Solar PV**

**Forecast of Reductions in Annual Energy by Zone - GWh**

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2015	198	133	357	17	136	241	115	22	45	394	216	1,874
2016	396	263	552	36	246	440	267	56	105	925	563	3,849
2017	583	385	748	54	351	632	407	81	154	1,346	937	5,678
2018	693	458	874	65	417	754	489	102	198	1,727	1,310	7,087
2019	773	511	968	74	466	845	550	113	213	1,864	1,628	8,005
2020	841	556	1,053	81	508	922	599	120	222	1,941	1,918	8,761
2021	901	596	1,125	86	544	988	642	124	226	1,972	2,175	9,379
2022	953	631	1,186	90	575	1,042	678	131	229	2,002	2,355	9,872
2023	998	661	1,234	94	600	1,086	709	134	233	2,033	2,534	10,316
2024	1,038	688	1,276	97	622	1,125	736	137	237	2,064	2,727	10,747
2025	1,074	713	1,310	101	642	1,159	762	143	240	2,094	2,924	11,162

**Forecast of Reductions in Coincident Summer Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2015	24	18	42	2	16	27	13	4	8	65	46	265
2016	53	41	71	5	32	54	29	9	25	198	121	638
2017	81	63	100	7	47	79	44	13	30	239	214	917
2018	97	75	118	9	56	95	54	15	34	273	301	1,127
2019	112	86	132	11	65	113	65	15	35	277	368	1,279
2020	123	94	144	12	71	123	72	18	37	298	436	1,428
2021	133	101	155	13	77	133	78	19	39	312	498	1,558
2022	142	108	165	14	82	142	83	20	39	312	550	1,657
2023	150	114	173	14	86	150	88	20	39	313	600	1,747
2024	158	119	180	15	90	156	92	21	39	313	648	1,831
2025	171	128	192	16	97	169	97	22	39	313	695	1,939

**Forecast of Reductions in Coincident Winter Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2015-16	19	14	36	1	13	22	10	2	6	47	53	223
2016-17	39	30	57	3	24	41	21	6	13	110	94	438
2017-18	59	45	77	5	35	59	32	10	20	165	136	643
2018-19	70	54	90	6	41	70	38	13	27	217	174	800
2019-20	81	61	101	8	48	83	46	14	29	234	210	915
2020-21	88	67	110	8	52	91	51	15	30	239	248	999
2021-22	96	72	118	9	56	98	55	16	31	243	278	1,072
2022-23	102	77	125	9	60	104	59	16	31	248	307	1,138
2023-24	108	81	131	10	63	109	62	17	32	254	336	1,203
2024-25	113	85	136	10	66	114	65	17	32	258	362	1,258
2025-26	122	91	145	11	71	123	69	19	33	263	386	1,333

**Table I-2g: Retail Solar PV**

**Forecast of Reductions in Annual Energy by Zone - GWh**

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2015	34	10	35	3	19	101	67	9	4	37	34	353
2016	53	16	55	4	31	162	104	18	10	90	251	794
2017	79	23	80	5	46	244	148	28	17	153	319	1,142
2018	107	31	109	6	64	343	196	40	28	241	345	1,510
2019	134	39	138	7	81	445	240	53	40	347	344	1,868
2020	154	45	161	8	96	532	274	68	54	477	343	2,212
2021	167	49	177	8	105	592	297	85	76	664	343	2,563
2022	172	51	186	9	112	631	311	96	90	787	342	2,787
2023	173	53	191	9	116	656	319	102	99	864	341	2,923
2024	176	53	194	8	119	671	325	105	104	907	340	3,002
2025	181	53	195	8	120	676	327	108	107	933	294	3,002

**Forecast of Reductions in Coincident Summer Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2015	5	2	5	1	3	15	10	2	1	10	11	65
2016	12	3	12	1	7	34	22	4	2	19	79	195
2017	18	5	18	1	10	53	32	6	4	33	101	281
2018	25	7	25	1	15	77	44	8	7	52	112	373
2019	33	9	33	2	19	103	56	11	10	77	112	465
2020	39	11	39	2	23	128	66	16	13	105	111	553
2021	44	13	45	2	27	147	73	20	18	145	111	645
2022	46	14	48	2	29	160	78	23	23	184	111	718
2023	47	14	50	2	30	168	81	25	26	209	111	763
2024	48	14	51	2	31	173	82	26	28	224	110	789
2025	49	14	51	2	32	176	83	27	29	232	104	799

**Forecast of Reductions in Coincident Winter Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2015-16	0	0	0	0	0	0	0	0	0	0	0	0
2016-17	0	0	0	0	0	0	0	0	0	0	0	0
2017-18	0	0	0	0	0	0	0	0	0	0	0	0
2018-19	0	0	0	0	0	0	0	0	0	0	0	0
2019-20	0	0	0	0	0	0	0	0	0	0	0	0
2020-21	0	0	0	0	0	0	0	0	0	0	0	0
2021-22	0	0	0	0	0	0	0	0	0	0	0	0
2022-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-24	0	0	0	0	0	0	0	0	0	0	0	0
2024-25	0	0	0	0	0	0	0	0	0	0	0	0
2025-26	0	0	0	0	0	0	0	0	0	0	0	0

The winter coincident peak for Behind-the-Meter SPV is zero because the peak typically occurs after sunset.



**Table I-3b: Econometric Forecast of Zonal Non-Coincident Peak Demand**

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

**Forecast of Non-Coincident Summer Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K
2015	2,703	2,093	3,000	609	1,440	2,440	2,304	657	1,503	12,006	5,596
2016	2,736	2,115	3,040	613	1,460	2,490	2,336	667	1,533	12,232	5,706
2017	2,772	2,144	3,084	614	1,486	2,537	2,364	676	1,554	12,411	5,800
2018	2,794	2,161	3,109	616	1,507	2,579	2,388	678	1,574	12,568	5,875
2019	2,816	2,177	3,132	747	1,529	2,625	2,413	679	1,589	12,687	5,949
2020	2,833	2,189	3,149	873	1,548	2,663	2,432	687	1,602	12,793	6,016
2021	2,851	2,203	3,170	877	1,568	2,694	2,448	693	1,619	12,928	6,123
2022	2,866	2,215	3,188	878	1,586	2,718	2,460	695	1,635	13,051	6,228
2023	2,879	2,224	3,203	878	1,601	2,736	2,470	698	1,650	13,167	6,335
2024	2,893	2,231	3,215	877	1,618	2,750	2,477	701	1,662	13,274	6,444
2025	2,913	2,244	3,235	880	1,638	2,768	2,485	703	1,677	13,380	6,550

**Forecast of Non-Coincident Winter Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K
2015-16	2,415	1,569	2,700	668	1,381	1,959	1,558	545	930	7,584	3,660
2016-17	2,439	1,581	2,725	670	1,394	1,978	1,566	548	936	7,641	3,717
2017-18	2,456	1,593	2,753	673	1,410	1,999	1,575	551	938	7,654	3,763
2018-19	2,464	1,598	2,767	674	1,420	2,012	1,576	552	942	7,683	3,809
2019-20	2,473	1,603	2,781	817	1,431	2,029	1,579	553	943	7,693	3,852
2020-21	2,478	1,605	2,791	955	1,441	2,041	1,579	553	943	7,687	3,920
2021-22	2,486	1,608	2,803	960	1,452	2,052	1,580	552	943	7,685	3,986
2022-23	2,490	1,611	2,813	960	1,463	2,061	1,580	553	944	7,693	4,053
2023-24	2,495	1,612	2,822	961	1,471	2,069	1,579	553	946	7,709	4,122
2024-25	2,498	1,613	2,828	958	1,482	2,077	1,577	553	948	7,728	4,189
2025-26	2,506	1,617	2,841	963	1,493	2,089	1,578	555	951	7,750	4,256



**Table I-4b: Historic Zonal Non-Coincident Peaks**

**Historic Summer Non-Coincident Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K
2005	2,787	2,037	3,042	823	1,360	2,254	2,296	632	1,492	11,162	5,295
2006	2,786	2,144	3,153	845	1,435	2,380	2,497	627	1,545	11,350	5,752
2007	2,738	2,015	2,888	829	1,349	2,301	2,316	607	1,438	10,971	5,396
2008	2,611	2,001	2,939	875	1,388	2,302	2,344	665	1,441	11,262	5,281
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

**Historic Winter Non-Coincident Peak Demand by Zone - MW**

Year	A	B	C	D	E	F	G	H	I	J	K
2005-06	2,450	1,546	2,700	912	1,266	2,196	1,663	541	1,058	7,668	3,584
2006-07	2,400	1,566	2,755	943	1,280	1,932	1,641	532	944	7,680	3,506
2007-08	2,370	1,573	2,621	936	1,312	1,886	1,727	556	955	7,761	3,596
2008-09	2,332	1,574	2,573	949	1,299	1,837	1,694	558	899	8,340	3,633
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

**Table I-4c: Historic Non-Coincident Peaks in G-J Locality**

**Historic G-J Locality Non-Coincident Summer Peak Demand by Zone - MW**

Year	G	H	I	J	G-J
2005	2,285	618	1,492	11,162	15,557
2006	2,497	624	1,509	11,350	15,980
2007	2,316	595	1,438	10,971	15,320
2008	2,338	661	1,441	11,262	15,702
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

**Historic G-J Locality Non-Coincident Winter Peak Demand by Zone - MW**

Year	G	H	I	J	G-J
2005-06	1,663	515	955	7,497	10,630
2006-07	1,638	504	944	7,680	10,766
2007-08	1,691	516	898	7,761	10,866
2008-09	1,694	465	899	8,340	11,398
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

**Table I-4d: Historic NYCA System Coincident Peaks**

**Summer Peak Dates & Times**

May 1 through October 31

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

\* Record peaks are highlighted.

**Winter Peak Dates & Times**

November 1 through following April 30

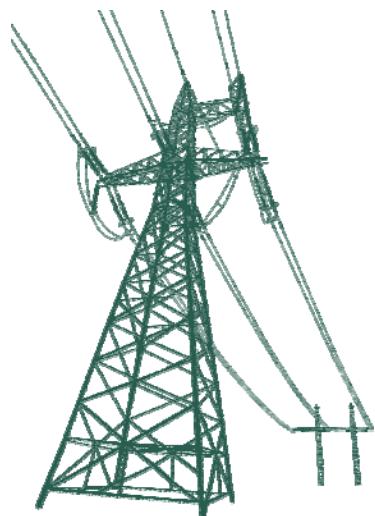
Year	Date	Hour Ending	Winter Peak MW
1997 - 08	12/10/1997	18	22,445
1998 - 09	1/14/1999	18	23,878
1999 - 00	1/18/2000	18	24,041
2000 - 01	12/13/2000	18	23,774
2001 - 02	4/18/2002	17	23,713
2002 - 03	1/23/2003	19	24,454
2003 - 04	1/15/2004	19	25,262
2004 - 05	12/20/2004	18	25,541
2005 - 06	12/14/2005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

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## **SECTION II:**

### **CHANGES IN GENERATING FACILITIES & GENERATION SINCE THE 2014 *GOLD BOOK***



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## Section II

This section provides an overview of significant changes in generating facilities since the 2014 *Gold Book* was issued, together with a summary of changes in energy generation in the past year.

### **Changes in Existing Generation since the 2014 Gold Book**

The summer 2015 installed generating capacity of 38,665 MW in the NYCA is 687 MW more than the summer 2014 generating capacity of 37,978 MW, due to retirements, additions, and ratings changes (see Table II-1a).

**Table II-1a: Summary of Changes in Summer Capacity since 2014 – MW**

Generator Fuel Type	2014 Capacity	Retirements	Additions & Uprates	Reclassifications	Ratings Changes	2015 Capacity
Gas	3,226	-33	567	49	-28	3,781
Oil	2,563	0	0	0	97	2,660
Gas & Oil	17,627	0	167	-49	-61	17,684
Coal	1,495	0	0	0	-26	1,469
Nuclear	5,418	0	0	0	-18	5,400
Pumped Storage	1,406	0	0	0	1	1,407
Hydro	4,272	0	0	0	20	4,292
Wind	1,463	0	0	0	-2	1,461
Other	508	0	0	0	3	511
Total	37,978	-33	734	0	-14	38,665

The winter 2015 installed generating capacity of 41,013 MW in the NYCA is 791 MW more than the winter 2014 generating capacity of 40,222 MW, due to retirements, additions, and ratings changes (see Table II-1b).

Generating facilities totaling 33 MW of Summer Capability have either retired or provided notice of retirement since the publication of the 2014 report. Generator ratings are

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

New units, units returning to service, or uprated generating facilities with Summer Capability of 734 MW have been added since the publication of the 2014 *Gold Book*. Ratings changes in existing generators resulted in a net decrease of 14 MW. The reclassification of units resulted in an increase of 49 MW in gas-only units with a corresponding decrease in dual fuel capability.

**Table II-1b: Summary of Changes in Winter Capacity since 2014 – MW**

Generator Fuel Type	2014 Capacity	Retirements	Additions & Upgrades	Reclassifications	Ratings Changes	2015 Capacity
Gas	3,568	-38	521	50	-15	4,086
Oil	3,046	0	0	0	45	3,091
Gas & Oil	19,027	0	167	-50	139	19,283
Coal	1,485	0	0	0	-16	1,469
Nuclear	5,449	0	0	0	-9	5,440
Pumped Storage	1,409	0	0	0	0	1,409
Hydro	4,264	0	0	0	3	4,267
Wind	1,463	0	0	0	-2	1,461
Other	511	0	0	0	-4	507
Total	40,222	-38	688	0	141	41,013

The gas & oil fuel-type is identified based upon a determination of whether or not environmental permits, pipeline connections, and/or storage tanks, as appropriate, are in place to allow for the use of the Type 2 or Type 3 fuel listed for each generating unit in Table III-2. The fuel type selection is not meant to provide any information on current inventory. It must be noted that maximum capabilities on secondary fuels may be limited.

#### **Scheduled Changes to Generation after March 1, 2015 for the Summer of 2015**

Returning and exiting generation result in a net increase in capacity of 374 MW for summer 2015.

### **Demand Response Resources for the Summer and Winter of 2015**

The projected 2015 Summer Capability for Special Case Resources is 1,124 MW. The projected 2015 enrollment for the Emergency Demand Response Program is 86 MW. For winter, the Special Case Resources total 885 MW and the Emergency Demand Response Program enrollment is 78 MW.

### **Total Resource Capability for the Summer and Winter of 2015**

The Total Resource Capability projected for the 2015 Summer Capability period is 41,610 MW, which is comprised of the sum of existing facilities (38,665 MW), Special Case Resources (1,124 MW), Net Generation Additions (374 MW) and Net Purchases from external areas (1,446 MW). This is an increase of 312 MW from the 2014 value of 41,298 MW.

For the Winter Capability period, the projected Total Resource Capability is 42,610 MW, consisting of the sum of existing facilities (41,013 MW), Special Case Resources (885 MW), Net Generation Additions (374 MW), and Net Purchases from external areas (338 MW). This is an increase of 469 MW from the 2014 value of 42,141 MW.

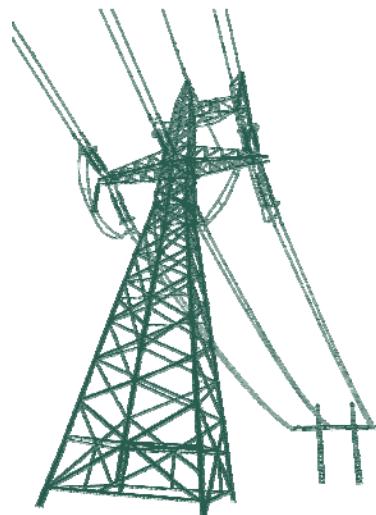
### **Summary of 2014 Electric Generation**

In 2014, a total of 141,187 GWh was generated in the state, an increase of 0.6% above 2013, during which 140,338 GWh was generated. Renewable energy generation was 33,205 GWh in 2014 (24% of total NYCA generation), as compared to 32,226 GWh in 2013 (23%). Fossil-fueled energy generation in 2014 was 64,941 GWh (46%), as compared to 63,356 GWh in 2013 (45%). Nuclear energy generation was 43,041 GWh in 2014 (30%), as compared to 44,756 GWh in 2013 (32%).

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**SECTION III:**  
EXISTING GENERATING FACILITIES  
AS OF MARCH 15, 2015



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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, 2015. Table III-2 reports information on generator ownership, location, in-service date, fuels used, and generator type. Numerical values are provided for nameplate rating, summer Capacity Resource Interconnection Service (CRIS) MW, summer and winter capability, and net energy generated during the preceding calendar year. This table includes the NYISO summer CRIS values<sup>12</sup> for generators.

The values for the summer capability period in this *Gold Book* reflect the most recent DMNC values available. The 2015 summer Installed Capacity market will generally use DMNC values taken from the 2014 Summer Capability Period. The Winter Capability values represent the most recent DMNC values demonstrated during a Winter Capability Period. The 2015/2016 Winter Installed Capacity Market will generally use DMNC values taken from the 2014/2015 Winter Capability Period.

Units are classified as dual-fuel when there are adequate environmental permits, pipeline connections, and/or storage tanks, in place to allow for the use of Type 2 or Type 3 fuel listed for each generating unit in Table III-2. Generators may choose the fuel 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 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.

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<sup>12</sup> 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
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
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	







































## NOTES FOR TABLE III-2 (Existing Generating Facilities)

Note	Owner / Operator	Station Unit	Zone	PTID	Note
1	Astoria Generating Company L.P.	Astoria 2 (Reactivation - 12/31/14)	J	24149	Unit produced power during Dec 2014.
2	Binghamton BOP, LLC	Binghamton (Reactivation - 12/16/2014)	C	23790	Unit produced power during Dec 2014.
3	Danskammer Energy, LLC	Danskammer 3 (Reactivation - 12/16/14)	G	23590	Unit produced power during Dec 2014.
4	Danskammer Energy, LLC	Danskammer 4 (Reactivation - 11/1/14)	G	23591	Unit produced power during months Nov - Dec 2014.
5	Marsh Hill Energy LLC	Marsh Hill Wind Farm	C	323713	Unit produced power during months Nov - Dec 2014.
6	TC Ravenswood, LLC	Ravenswood 3-3 (Mothball - 10/31/14)	J	24250	Unit produced power during months Jan - Jul 2014.
7	TC Ravenswood, LLC	Ravenswood 3-4 (Reactivation - 8/20/14)	J	24251	Unit produced power during months Aug - Dec 2014
A	Various	Generating Units	A-K	Various	Summer 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 2015 ICAP Market. Winter Capability reflects DMNC values that were applicable to the Winter 2014-2015 ICAP Market. DMNC stands for Dependable Maximum Net Generating Capability.
D	Various	Generating Units	A-K	Various	Unit(s) returned to service from mothballed status.
G	Various	Generating Station	A-K	Various	Generation is reported as Station Total.
M	Various	Mothballed Generator	A-K	Various	This unit is mothballed and therefore treated as retired, per PSC order in Case 05-E-0889, fn 1.
N	Various	New Generator	A-K	Various	Unit(s) added since the publication of the 2014 Load and Capacity Data Report.
S	Various	RSS Generator	A-K	Various	This unit is operating under a RSS (Reliability Support Services) agreement.
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 historic rating and may not reflect the most current value.

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

		ZONE											
		A	B	C	D	E	F	G	H	I	J	K	TOTAL
Generator Type		Summer Capability Period (MW) (1)											
<b>Fossil</b>	Steam Turbine (Oil)	0.0	0.0	828.5	0.0	0.0	9.5	0.0	0.0	0.0	0.0	0.0	838.0
	Steam Turbine (Oil & Gas)	0.0	0.0	826.5	0.0	0.0	0.0	2,090.0	0.0	0.0	2,777.8	2,363.2	8,057.5
	Steam Turbine (Gas)	0.0	0.0	0.0	0.0	0.0	0.0	369.5	0.0	0.0	1,009.2	0.0	1,378.7
	Steam Turbine (Coal)	1,164.3	0.0	304.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,468.6
	Combined Cycle (Oil & Gas)	381.5	0.0	313.0	80.3	136.6	2,900.6	0.0	0.0	0.0	3,196.4	559.6	7,568.0
	Combined Cycle (Gas)	0.0	108.8	910.8	244.9	50.1	0.0	0.0	0.0	0.0	0.0	127.1	1,441.7
	Jet Engine (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	66.4	0.0	0.0	0.0	656.1	722.5
	Jet Engine (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	908.2	159.4	0.0	1,067.6
	Jet Engine (Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	187.9	53.9	0.0	241.8
	Combustion Turbine (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0	466.1	590.3	1,074.6
	Combustion Turbine (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0	0.0	604.9	337.2	961.1
	Combustion Turbine (Gas)	38.6	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	446.5	228.9	719.0
	Internal Combustion (Oil / Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54.5	54.5
<b>Pumped Storage</b>	Pumped Storage Hydro	240.0	0.0	0.0	0.0	0.0	1,167.2	0.0	0.0	0.0	0.0	0.0	1,407.2
	Nuclear	0.0	581.4	0.0	0.0	0.0	0.0	0.0	2,054.8	0.0	0.0	0.0	2,636.2
<b>Renewable (2)</b>	Steam (PWR Nuclear)	0.0	0.0	2,763.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,763.8
	Conventional Hydro	2,449.4	63.8	108.7	902.7	375.8	313.5	78.1	0.0	0.0	0.0	0.0	4,292.0
	Internal Combustion (Methane)	18.4	13.6	45.3	6.4	11.2	10.4	0.0	0.0	0.0	0.0	0.0	105.3
	Steam Turbine (Wood)	43.2	0.0	0.0	0.0	71.1	0.0	0.0	0.0	0.0	0.0	0.0	114.3
	Steam Turbine (Refuse)	36.8	0.0	32.1	0.0	0.0	11.4	7.7	52.7	0.0	0.0	119.2	259.9
	Wind	120.5	0.0	512.8	385.5	441.9	0.0	0.0	0.0	0.0	0.0	0.0	1,460.7
	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
<b>Totals</b>		4,492.7	767.6	6,650.8	1,619.8	1,086.7	4,412.6	2,648.9	2,107.5	0.0	9,597.0	5,280.9	38,664.5

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

(2) The Renewable Category does not necessarily match the New York State Renewable Portfolio Standard (RPS) Definition.

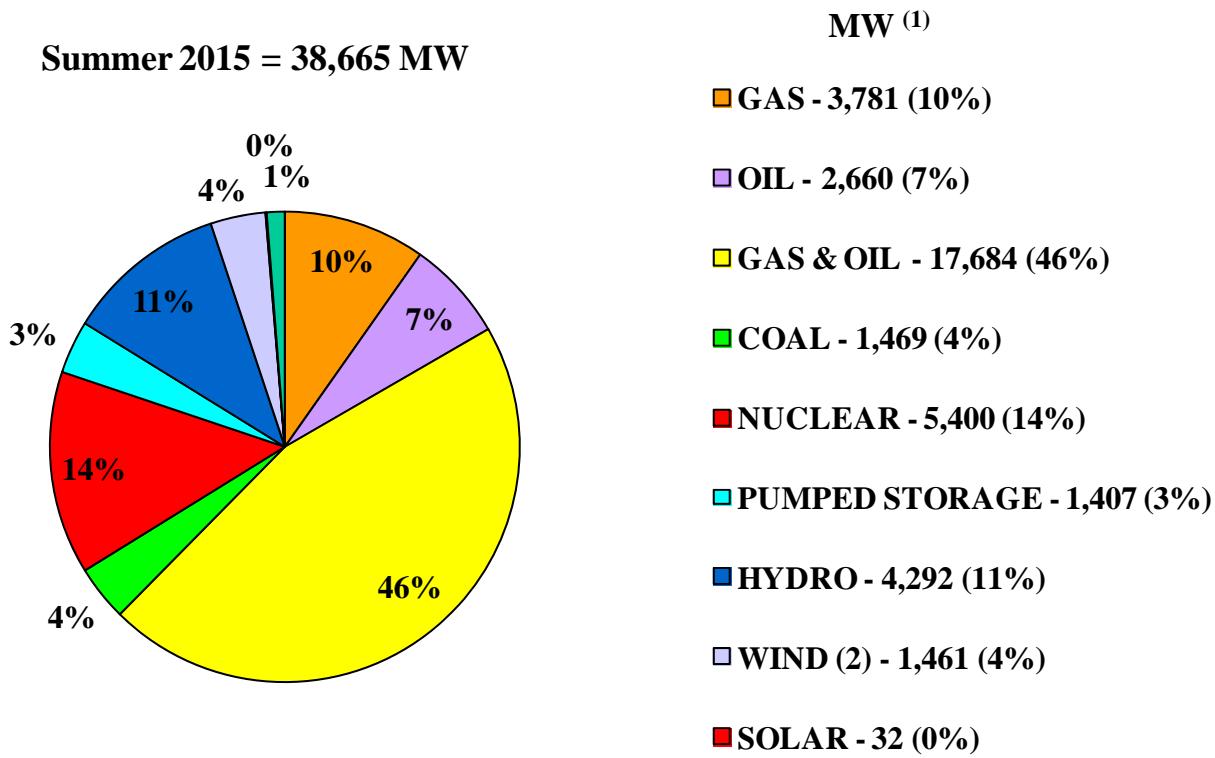
**Table III-3b: Capability by Zone and Type – Winter**

		ZONE											
		A	B	C	D	E	F	G	H	I	J	K	TOTAL
Generator Type		Winter Capability Period (MW) (1)											
<i>Fossil</i>	Steam Turbine (Oil)	0.0	0.0	825.5	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	835.3
	Steam Turbine (Oil & Gas)	0.0	0.0	832.0	0.0	0.0	0.0	2,085.8	0.0	0.0	2,777.3	2,346.0	8,041.1
	Steam Turbine (Gas)	0.0	0.0	0.0	0.0	0.0	0.0	316.2	0.0	0.0	1,034.6	0.0	1,350.8
	Steam Turbine (Coal)	1,161.7	0.0	307.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,469.0
	Combined Cycle (Oil & Gas)	424.8	0.0	372.6	90.7	152.9	3,456.9	0.0	0.0	0.0	3,611.8	655.5	8,765.2
	Combined Cycle (Gas)	0.0	121.8	1,112.0	273.4	63.0	0.0	0.0	0.0	0.0	0.0	134.0	1,704.2
	Jet Engine (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	84.3	0.0	0.0	0.0	788.1	872.4
	Jet Engine (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,082.8	196.6	1,279.4
	Jet Engine (Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	233.2	57.1	290.3
	Combustion Turbine (Oil)	0.0	0.0	0.0	0.0	0.0	0.0	23.3	0.0	0.0	595.0	739.0	1,357.3
	Combustion Turbine (Oil & Gas)	0.0	0.0	0.0	0.0	0.0	0.0	23.3	0.0	0.0	773.5	371.4	1,168.2
	Combustion Turbine (Gas)	45.6	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	452.4	235.7	740.6
	Internal Combustion (Oil / Gas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.7	55.7
<i>Pumped Storage</i>	Pumped Storage Hydro	240.0	0.0	0.0	0.0	0.0	1,169.2	0.0	0.0	0.0	0.0	0.0	1,409.2
<i>Nuclear</i>	Steam (PWR Nuclear)	0.0	582.8	0.0	0.0	0.0	0.0	0.0	2,078.0	0.0	0.0	0.0	2,660.8
	Steam (BWR Nuclear)	0.0	0.0	2,779.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,779.1
<i>Renewable (2)</i>	Conventional Hydro	2,446.7	63.8	108.7	880.3	375.8	313.6	77.7	0.0	0.0	0.0	0.0	4,266.6
	Internal Combustion (Methane)	18.4	13.6	45.3	6.4	11.2	10.4	0.0	0.0	0.0	0.0	0.0	105.3
	Steam Turbine (Wood)	37.2	0.0	0.0	0.0	73.0	0.0	0.0	0.0	0.0	0.0	0.0	110.2
	Steam Turbine (Refuse)	35.0	0.0	30.8	0.0	0.0	11.7	7.4	53.6	0.0	0.0	121.4	259.9
	Wind	120.5	0.0	512.8	385.5	441.9	0.0	0.0	0.0	0.0	0.0	0.0	1,460.7
	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
	<b>Totals</b>	<b>4,529.9</b>	<b>782.0</b>	<b>6,933.0</b>	<b>1,636.3</b>	<b>1,117.8</b>	<b>4,971.6</b>	<b>2,618.0</b>	<b>2,131.6</b>	<b>0.0</b>	<b>10,560.6</b>	<b>5,732.0</b>	<b>41,012.8</b>

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

(2) The Renewable Category does not necessarily match the New York State Renewable Portfolio Standard (RPS) Definition.

**Figure III-1: 2015 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) – While there is a total of 1746 MW of Installed Nameplate, 285 MW do not participate in the Installed Capacity market.

(3) - Includes Methane, Refuse & Wood.

**Figure III-2: 2014 NYCA Energy Generation by Fuel Type**

**Renewable Resources (3)**

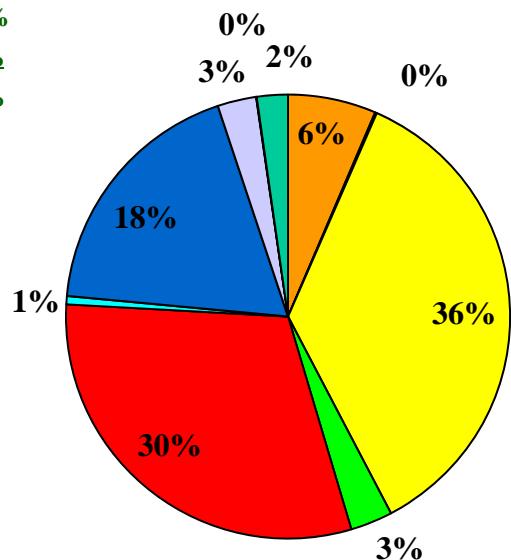
Conventional Hydro 18%

Wind 3%

Solar 0 %

Other 2%

Total 24%



**GWh<sup>(1)</sup>**

- GAS - 9,061 (6%)
- OIL - 182 (0%)
- GAS & OIL - 50,524 (36%)
- COAL - 4,325 (3%)
- NUCLEAR - 43,041 (30%)
- PUMPED STORAGE - 849 (1%)
- HYDRO - 25,974 (18%)
- WIND - 3,986 (3%)
- SOLAR - 51 (0%)
- OTHER (2) - 3,194 (2%)

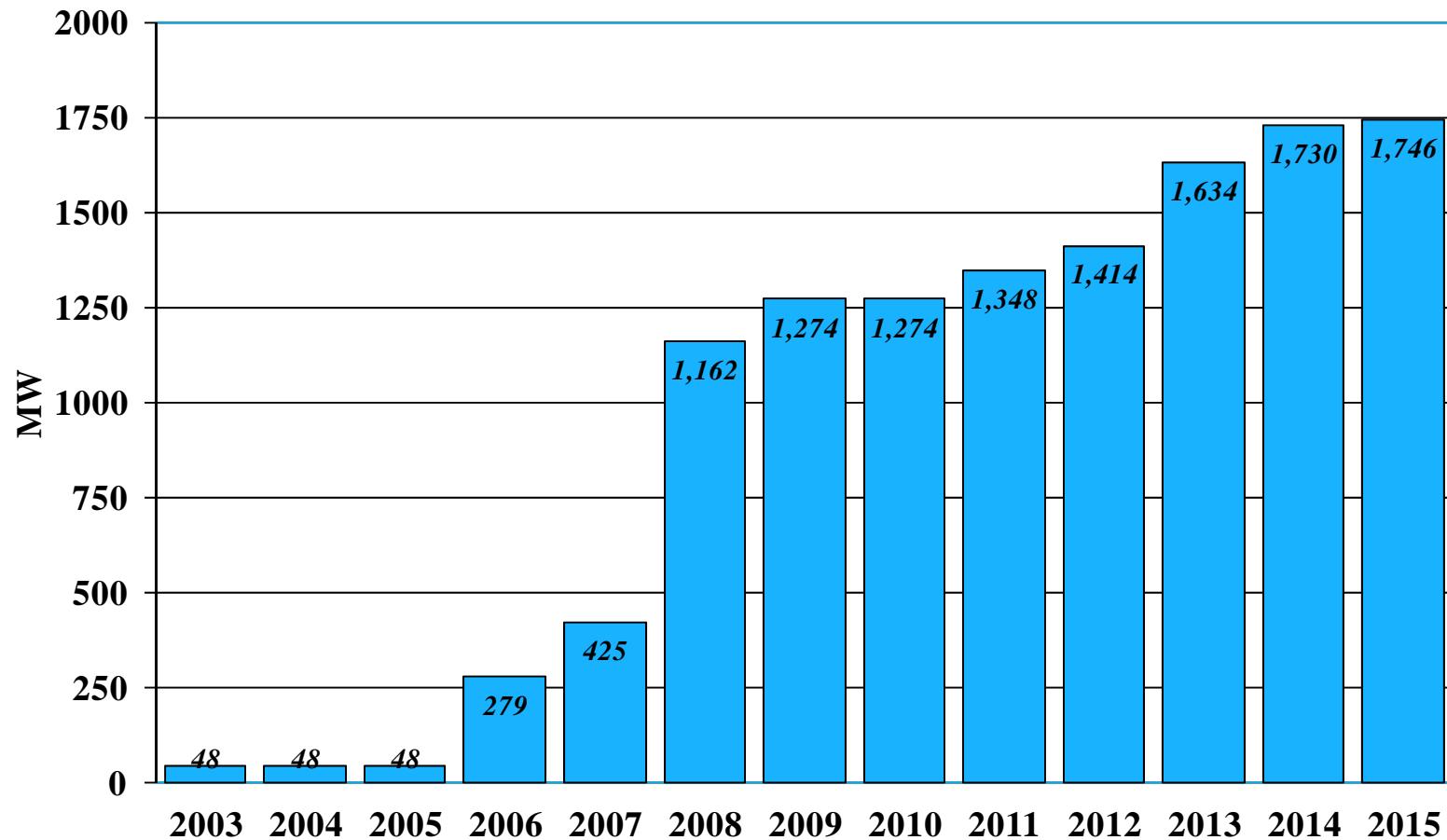
**Total 2014 = 141,187 GWh**

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

(2) - Includes Methane, Refuse & Wood.

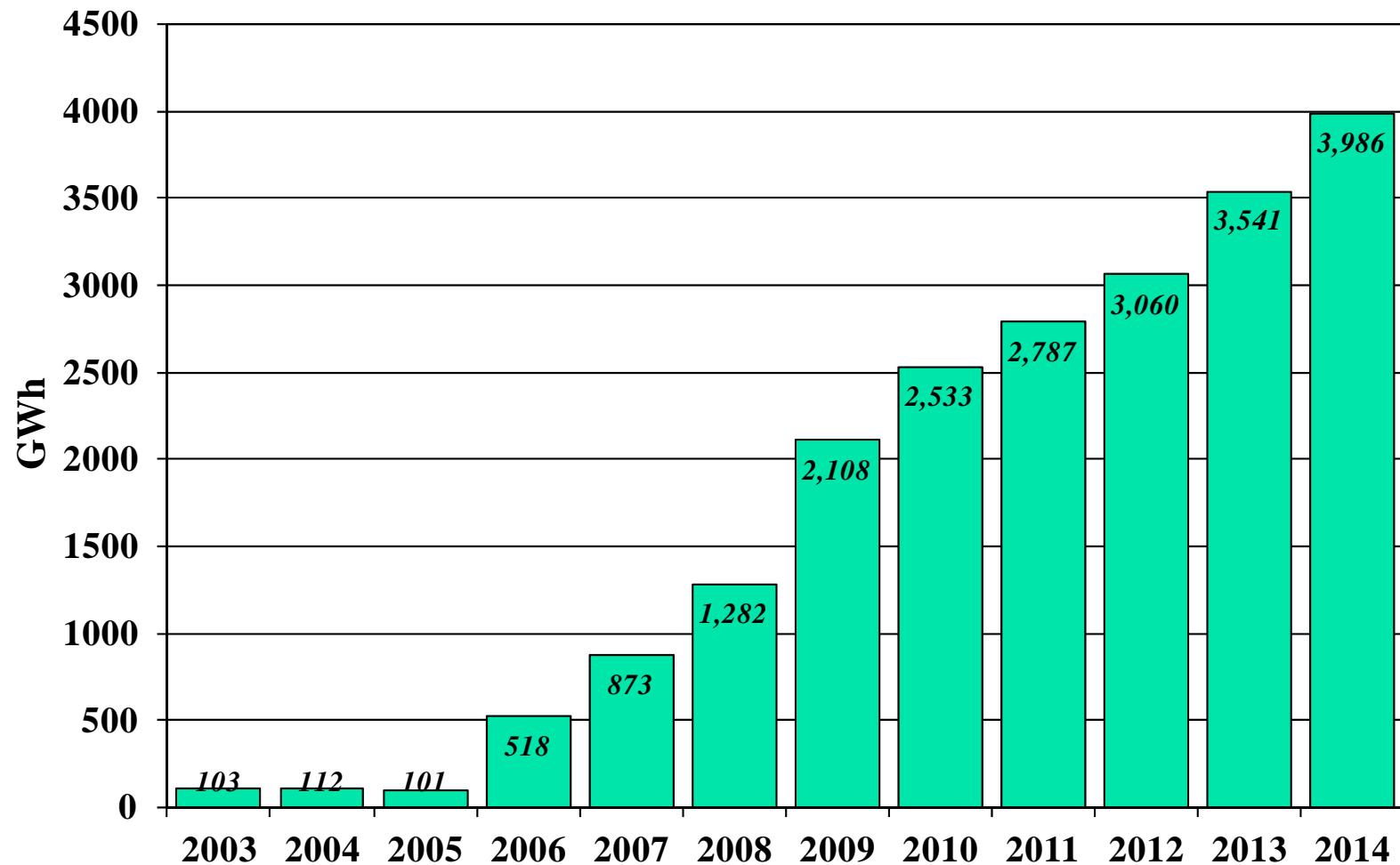
(3) – Renewable Resources do not necessarily match the NYS Renewable Portfolio Standard (RPS) Definition. Percentages are rounded to the nearest 1%.

**Figure III-3: NYCA Wind Plants – Historic Installed Nameplate Capacity**



Note: Not all wind generation participates in the NYISO Capacity Market.

**Figure III-4: NYCA Wind Plants – Historic Energy Generation**

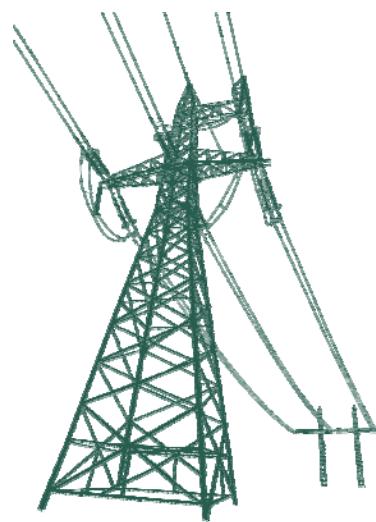


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## **SECTION IV:**

### **CHANGES IN GENERATING CAPACITY**



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## **Section IV**

This section reports a list of proposed projects pursuing the NYISO interconnection process by Class Year<sup>13</sup>, together with other generator additions, re-ratings and retirements. As shown in Table IV-1, one new project amounting to 19 MW of summer capacity and 23 MW of winter capacity has met the inclusion rule for the 2014 Reliability Needs Assessment (RNA) Base Case.

Resources located within the PJM, ISO-New England and Quebec Control Areas may qualify as Installed Capacity Suppliers to the NYCA. Currently, the Independent Electricity System Operator of Ontario (IESO), which operates another Control Area directly interconnected to the NYCA, does not meet the NYISO requirement relating to the recall of transactions associated with capacity sold to New York. Therefore, resources located within the IESO Control Area do not currently qualify as Installed Capacity Suppliers to the NYCA.<sup>14</sup>

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<sup>13</sup> 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.

<sup>14</sup> As noted in Section 4.9.6 of the NYISO Installed Capacity Manual, Version 6.28 (ICAP Manual), the resources within the IESO Control Area may qualify as Installed Capacity Suppliers to the NYCA for the Winter 2015-2016 Capability Period if, prior to September 1, 2015, the IESO Control Area satisfies the eligibility criteria for supplying Unforced Capacity to the NYCA specified in the ICAP Manual, Section 2.7.

**Table IV-1: Proposed Generator Additions**

QUEUE POS.	OWNER / OPERATOR	STATION UNIT	ZONE	DATE	NAMEPLATE RATING (MW)	CRIS <sup>1</sup> (MW)	SUMMER (MW)	WINTER (MW)	UNIT TYPE	CLASS YEAR	NOTES
<b><u>Completed Class Year Facilities Study</u></b>											
197	PPM Roaring Brook, LLC / PPM	Roaring Brook Wind	E	2015/12	78.0	0.0	78.0	78.0	Wind Turbines	2008	
251	CPV Valley, LLC	CPV Valley Energy Center	G	2016/05	820.0	680.0	677.6	690.6	Combined Cycle	2011	
349	Taylor Biomass Energy Mont., LLC	Taylor Biomass	G	2017/02	21.0	19.0	19.0	22.5	Solid Waste	2011	(2)
201	NRG Energy	Berrians GT	J	2017/10	200.0	155.0	200.0	200.0	Combined Cycle	2011	
224	NRG Energy, Inc.	Berrians GT II	J	2017/10	78.9	0.0	50.0	90.0	Combined Cycle	2011	
266	NRG Energy, Inc.	Berrians GT III	J	2019/01	278.9	250.0	250.0	290.0	Combined Cycle	2012	
<b><u>Class Year 2015 Candidates<sup>3</sup></u></b>											
431	Greenidge Generation	Greenidge Unit #4	C	2015/Q1	106.3	TBD	106.3	106.3	Combustion Turbines		
397	EDP Renewables North America	Jericho Rise Wind	D	2015/11	79.9	TBD	79.9	79.9	Wind Turbines		
395	Copenhagen Wind Farm, LLC	Copenhagen Wind	E	2016/12	79.9	TBD	79.9	79.9	Wind Turbines		
401	Caithness Long Island II, LLC	Caithness Long Island II	K	2017/05	807.0	TBD	764.0	807.0	Combined Cycle		
<b><u>Future Class Year Candidates<sup>4</sup></u></b>											
360	NextEra Energy Resources, LLC	Watkins Glen Wind	C	2015/07	122.4	TBD	122.4	122.4	Wind Turbines		
270	Wind Development Contract Co, LLC	Hounsfield Wind	E	2015/12	244.8	TBD	244.8	244.8	Wind Turbines		
347	Franklin Wind Farm, LLC	Franklin Wind	E	2015/12	50.4	TBD	50.4	50.4	Wind Turbines		
387	Cassadaga Wind, LLC	Cassadaga Wind	A	2015/12	126.0	TBD	126.0	126.0	Wind Turbines		
382	Astoria Generating Co.	South Pier Improvement	J	2016/06	95.5	TBD	91.2	95.5	Combustion Turbines		
383	NRG Energy, Inc.	Bowline Cen. Station Unit #3	G	2016/06	814.0	TBD	775.0	814.0	Combined Cycle		
396	Baron Winds, LLC	Baron Winds	C	2016/12	300.0	TBD	300.0	300.0	Wind Turbines		
361	US PowerGen Co.	Luyster Creek Energy	J	2017/06	508.6	TBD	401.0	444.0	Combined Cycle		
372	Dry Lots Wind, LLC	Dry Lots Wind	E	2017/11	33.0	TBD	33.0	33.0	Wind Turbines		
371	South Moutain Wind, LLC	South Mountain Wind	E	2017/12	18.0	TBD	18.0	18.0	Wind Turbines		
276	Air Energie TCI, Inc.	Crown City Wind	C	2018/12	90.0	TBD	90.0	90.0	Wind Turbines		
<b><u>Other Non Class Year Generators<sup>5</sup></u></b>											
180A	Green Power	Cody Rd.	C	2015/07	10.0	0.0	10.0	10.0	Wind Turbines		
398	Black Oak Wind Farm, LLC	Black Oak Wind	C	2015/11	12.6	0.0	12.6	12.6	Wind Turbines		
377	Monroe County	Monroe County Mill Seat	B	2015/Q4	3.2	0.0	3.2	3.2	Methane		
362	Monticello Hills Wind, LLC	Monticello Hills Wind	E	2016/12	19.8	0.0	19.8	19.8	Wind Turbines		
Total							<b>4,602.1</b>	<b>4,827.9</b>			

Notes:

1. CRIS values reflect capacity level of the unit that is deemed deliverable. See Definitions of Labels on Load & Capacity Schedule (Sec. V) for description.
2. Projects that met the inclusion rule for the 2014 RNA Base Case and are included as new additions in this year's Load and Capacity Schedule, Table V-2a & V-2b.
3. Projects that are potential members of the current Class Year -- Class Year 2015 (i.e., projects that have satisfied the eligibility criteria for entry into Class Year 2015 and that have provided notice to the NYISO of their desire to enter Class Year 2015. Membership in Class Year 2015 will be limited to those among this list of projects that execute the required study agreement and provide the required deposit and data within the deadline set forth in Attachment X. This list does not include Merchant Transmission Facilities, uprates to existing facilities, facilities seeking increases in CRIS, or former Class Year projects seeking to be re-evaluated for Deliverability).
4. Projects that are potential candidates for a Class Year Study after Class Year 2015, 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 Interconnection Facilities Study but that have achieved comparable milestones to projects in the "Class Candidates" section.

**Table IV-2a: Proposed Generator Re-ratings**

QUEUE POS.	OWNER / OPERATOR	STATION	UNIT	ZONE	DATE	PTID	Class Year	INCREMENTAL CAPABILITY (MW)				TOTAL CAPABILITY (MW)			
								Nameplate Rating	CRIS	SUMMER	WINTER	Nameplate Rating	CRIS	SUMMER	WINTER
403	PSEG Power New York	Bethlehem Energy Center		F	2017-2018	23843	(1)	11.9	TBD	72	51.2	905	TBD	835	905
338	Rochester Gas & Electric Corp	Station 2		B	2018/09	23604		6.3	0	6.3	6.3	14.8	6.5	14.8	14.8
							Total	18.2	0.0	78.3	57.5	919.8	6.5	849.8	919.8

1. Class Year 2015 Candidate.

**Table IV-2b: Scheduled Generator Re-ratings and Returns to Service**

OWNER / OPERATOR	STATION	UNIT	ZONE	DATE <sup>(1)</sup>	PTID	CRIS	INCREMENTAL CAPABILITY (MW)		TOTAL CAPABILITY <sup>(2)</sup>		Notes
							SUMMER	WINTER	SUMMER	WINTER	
GenOn Energy Management, LLC	Bowline 2		G	Summer 2015	23595		557.4	374.4	374.4	557.4	557.4
NRG Power Marketing LLC	Dunkirk 3		A	Summer 2016	23565		201.4	180.0	180.0	180.0	180.0
NRG Power Marketing LLC	Dunkirk 4		A	Summer 2016	23566		199.1	180.0	180.0	180.0	180.0
					Total		957.9	734.4	734.4	917.4	917.4

1. Date reflects the capability period of the anticipated rerating or returning to service

2. The anticipated capacity has met the inclusion rule for the 2014 CRP Base Case and are included as additions in this year's Load and Capacity Schedule, Table V-2a & V-2b

3. Unit is scheduled to return to full capacity during summer 2015 capability period.

4. Unit is scheduled to operate under a ten-year Reliability Support Services agreement.

## Tables IV-3 and IV-4: Generator Retirements<sup>1</sup>

**Table IV-3: Units Removed from Existing Capacity in the Previous 3 Years with Unexpired CRIS Rights**

OWNER / OPERATOR	STATION UNIT	ZONE	DATE (2)	PTID	CRIS (3)	SUMMER (3)	WINTER (3)	Notes
Astoria Generating Company L.P.	Astoria 4	J	4/18/2012	23517	375.6	381.2	386.8	(5)
Erie Blvd. Hydro - Seneca Oswego	Seneca Oswego Fulton 1	C	1/8/2013	24041	0.7	0.8	0.8	
Erie Blvd. Hydro - Seneca Oswego	Seneca Oswego Fulton 2	C	1/8/2013	24041	0.3	0.5	0.5	
Freeport Electric	Freeport 1-1	K	1/5/2013	1660	0	1.5	2	(4)
Long Island Power Authority	Far Rockaway ST 04	K	1/7/2012	23548	110.6	106.7	106.2	(4)
Long Island Power Authority	Glenwood ST 04	K	1/7/2012	23550	118.7	115	111	(4)
Long Island Power Authority	Glenwood ST 05	K	1/7/2012	23614	122	108.7	105.5	(4)
Long Island Power Authority	Montauk Units #2, #3, #4	K	4/5/2013	23721	6	5.7	3.2	(4)
New York Power Authority	Kensico Units #1, #2, #3	I	9/25/2012	23655	3	3	3	(4)
NRG Power Marketing LLC	Dunkirk 1	A	6/1/2013	23563	96.2	75	75	(5)
NRG Power Marketing LLC	Dunkirk 3	A	9/11/2012	23565	201.4	185	185	(5)
NRG Power Marketing LLC	Dunkirk 4	A	9/11/2012	23566	199.1	185	185	(5)
ReEnergy Chateaugay LLC	Chateaugay Power	D	6/3/2013	23792	18.6	18.2	18.5	(5)
Rochester Gas and Electric Corp.	Station 9	B	3/3/2014	23652	15.8	14.3	18.3	(4)
Syracuse Energy Corporation	Syracuse Energy ST1	C	9/25/2013	323597	11	11	11	(4)
Syracuse Energy Corporation	Syracuse Energy ST2	C	9/25/2013	323598	58.9	63.9	61.4	(4)
TC Ravenswood, LLC	Ravenswood 07	J	3/13/2014	24255	16.5	12.7	15.4	(5)
Total					<b>1354.4</b>	<b>1288.2</b>	<b>1288.6</b>	

1. The term "retirement" is defined per PSC Order in Case 05-E-0889, footnote 1: "The Instituting Order defined "retirements" to collectively include shut-downs, abandonments, mothballing, and other circumstances where a generating unit is taken out of service for a substantial period of time, excluding scheduled maintenance and forced outages."

2. The effective date as per the Letter of Intent to Retire or Mothball Unit, as applicable.

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

4. Unit owner provided notice of retirement. The CRIS, and Summer and Winter capacity levels were in effect when the unit was last in-service.

5. Unit owner provided notice of mothballing. The CRIS, and Summer and Winter capacity levels were in effect when the unit was last in-service.

**Table IV-4a: Proposed Retirements or Mothballing Effective after March 1, 2015**

OWNER / OPERATOR	STATION	UNIT	ZONE	DATE (1)	PTID	CRIS	CAPABILITY (MW)		
							SUMMER	WINTER	Notes
NRG Power Marketing LLC	Astoria	GT 10	J	06/01/2017	24110	24.9	17.2	20.7	(2)
	Astoria	GT 11	J	06/01/2017	24225	23.6	16.5	20.6	(2)
	Astoria	GT 12	J	06/01/2017	24226	22.7	17.2	21.9	(2)
	Astoria	GT 13	J	06/01/2017	24227	24.0	17.1	21.1	(2)
						Total	<b>95.2</b>	<b>68.0</b>	<b>84.3</b>

1. The effective date as per the Letter of Intent to Retire or Mothball.

2. The removal of these units is associated with the addition of the Berrians I and Berrians II units. (See Table IV-1).

**Table IV-4b: 2015 Scheduled Retirements or Mothballing Effective after March 1, 2015**

OWNER / OPERATOR	STATION	UNIT	ZONE	DATE (1)	PTID	CRIS	CAPABILITY (MW)		
							SUMMER	WINTER	Notes
Cayuga Operating Company, LLC	Cayuga	1	C	07/01/2017	23584	154.1	153.3	153.7	(2)
	Cayuga	2	C	07/01/2017	23585	154.7	151.0	153.6	(2)
						Total	<b>308.8</b>	<b>304.3</b>	<b>307.3</b>

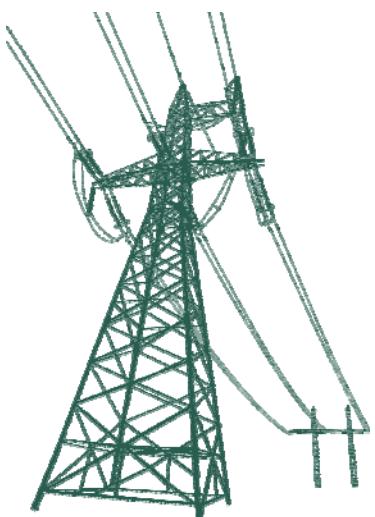
1. The effective date as per the Letter of Intent to Retire or Mothball.

2. Unit is currently operating under a Reliability Support Services agreement through June 30, 2017.

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**SECTION V:**  
**LOAD & CAPACITY SCHEDULE**  
**AS OF MARCH 15, 2015**



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## **Section V**

This section provides a summary of NYCA load and capacity from 2014 through 2025. Table V-1 is a summary of Net Purchases from External Control Areas from 2015 through 2025, Table V-2a is a summary of the NYCA Load and Capacity Schedule for the Summer Capability Period from 2014 through 2025, and Table V-2b is a summary of the NYCA Load and Capacity Schedule for the Winter Capability Period from Winter 2014/2015 through 2025/2026. Information for Tables V-2a and V-2b is obtained from Tables I-1, III-2, IV-1 through IV-4, and V-1. Definitions of the entries reported in Table V-2 are on the following page.

Additionally, 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 1,124 MW of summer capacity and 885 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 2015 Summer Capability Period totals 40,163 MW. With the inclusion of Net Purchases, the Total Resource Capability is 41,610 MW for the 2015 Summer Capability Period. Proposed additions, retirements and re-ratings that do not meet Base Case inclusion rules are reported in total as Proposed Resources Changes in Table V-2a or Table V-2b.

## 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-ratings	Generator re-ratings expected prior to the seasonal peak demand
Retirements	Generating retirements expect 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 Purchases	Positive values of net purchases represent capacity that is imported to NYCA, after subtracting sales that are exported to other areas.
Unforced Capacity Deliverability Rights (UDRs)	Controllable transmission projects that provide 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
Expected Reserve	Total Resource Capability minus Peak Demand.
Reserve Margin %	Expected Reserve divided by Peak Demand 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 Reserve	Adjusted Resource Capability minus Peak Demand
Adjusted Reserve Margin %	Adjusted Reserve divided by Peak Demand expressed as a percentage
Capacity Resource Interconnection Service (CRIS)	CRIS values, in MW of Installed Capacity, for the Summer Capability Period established pursuant to the applicable deliverability requirements contained in Attachments X, S, and Z to the NYISO OATT

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

<b>SUMMER NET PURCHASES</b>											
MW (1, 2, 3)											
2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
<b>1446.4</b>	<b>1147.4</b>	<b>1555.4</b>	<b>1179.4</b>	<b>2233.4</b>							
<b>WINTER NET PURCHASES</b>											
MW (1, 2, 3)											
2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	
<b>338.3</b>	<b>-4.5</b>	<b>403.5</b>	<b>327.5</b>	<b>1081.5</b>							

(1) Positive Net Purchases represent that NYCA purchases from other control areas are greater than total sales to them.

(2) Figures include the use of Unforced Capacity Deliverability Rights (UDRs) as currently known. 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 2018.

**Table V-2a: NYCA Load and Capacity Schedule – Summer Capability Period**

<b>SUMMER CAPABILITY</b>		MW												<b>Totals</b>
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
<i>Fossil</i>	Steam Turbine (Oil)	759.3	838.0	838.0	838.0	838.0	838.0	838.0	838.0	838.0	838.0	838.0	838.0	
	Steam Turbine (Oil & Gas)	7945.4	8057.5	8431.9	8431.9	8431.9	8431.9	8431.9	8431.9	8431.9	8431.9	8431.9	8431.9	
	Steam Turbine (Gas)	837.6	1378.7	1378.7	1738.7	1738.7	1738.7	1738.7	1738.7	1738.7	1738.7	1738.7	1738.7	
	Steam Turbine (Coal)	1495.1	1468.6	1468.6	1468.6	1164.3	1164.3	1164.3	1164.3	1164.3	1164.3	1164.3	1164.3	
	Combined Cycle (Oil & Gas)	7548.7	7568.0	7568.0	7568.0	7568.0	7568.0	7568.0	7568.0	7568.0	7568.0	7568.0	7568.0	
	Combined Cycle (Gas)	1443.9	1441.7	1441.7	1441.7	1441.7	1441.7	1441.7	1441.7	1441.7	1441.7	1441.7	1441.7	
	Jet Engine (Oil)	721.0	722.5	722.5	722.5	722.5	722.5	722.5	722.5	722.5	722.5	722.5	722.5	
	Jet Engine (Oil & Gas)	1083.4	1067.6	1067.6	1067.6	1067.6	1067.6	1067.6	1067.6	1067.6	1067.6	1067.6	1067.6	
	Jet Engine (Gas)	275.4	241.8	241.8	241.8	241.8	241.8	241.8	241.8	241.8	241.8	241.8	241.8	
	Combustion Turbine (Oil)	1058.3	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	
	Combustion Turbine (Oil & Gas)	1020.5	961.1	961.1	961.1	961.1	961.1	961.1	961.1	961.1	961.1	961.1	961.1	
	Combustion Turbine (Gas)	668.6	719.0	719.0	719.0	719.0	719.0	719.0	719.0	719.0	719.0	719.0	719.0	
	Internal Combustion (Oil/Gas)	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	
<i>Pumped Storage</i>	Pumped Storage Hydro	1406.1	1407.2	1407.2	1407.2	1407.2	1407.2	1407.2	1407.2	1407.2	1407.2	1407.2	1407.2	
<i>Nuclear</i>	Steam (PWR Nuclear)	2642.4	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	
	Steam (BWR Nuclear)	2775.9	2763.8	2763.8	2763.8	2763.8	2763.8	2763.8	2763.8	2763.8	2763.8	2763.8	2763.8	
<i>Renewable (5)</i>	Conventional Hydro	4272.1	4292.0	4292.0	4292.0	4292.0	4292.0	4292.0	4292.0	4292.0	4292.0	4292.0	4292.0	
	Internal Combustion (Methane)	104.2	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	
	Steam Turbine (Wood)	109.2	114.3	114.3	114.3	114.3	133.3	133.3	133.3	133.3	133.3	133.3	133.3	
	Steam Turbine (Refuse)	262.6	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	
	Wind	1462.6	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7	
	Solar	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	
<b>EXISTING GENERATING FACILITIES</b>		37978.3	38664.5	39038.9	39398.9	39094.6	39113.6	39113.6	39113.6	39113.6	39113.6	39113.6	39113.6	
	Special Case Resources - SCR (3)	1189.0	1124.4	1124.4	1124.4	1124.4	1124.4	1124.4	1124.4	1124.4	1124.4	1124.4	1124.4	
<i>Changes (10)</i>	Additions and Uprates	0.0	374.4	360.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>753.4</b>
	Scheduled Retirements (9)	0.0	0.0	0.0	-304.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<b>-304.3</b>
	<b>NYCA RESOURCE CAPABILITY</b>	39167.3	40163.3	40523.3	40219.0	40238.0	40238.0	40238.0	40238.0	40238.0	40238.0	40238.0	40238.0	
<i>Contracts</i>	Net Purchases (1) (7)	2130.2	1446.4	1147.4	1555.4	1179.4	2233.4	2233.4	2233.4	2233.4	2233.4	2233.4	2233.4	
	<b>TOTAL RESOURCE CAPABILITY</b>	41297.5	41609.7	41670.7	41774.4	41417.4	42471.4	42471.4	42471.4	42471.4	42471.4	42471.4	42471.4	
<b>BASE FORECAST</b>														
	<b>Peak Demand Forecast</b>	33567.0	33636.0	33779.0	33882.0	34119.0	34309.0	34469.0	34639.0	34823.0	35010.0	35219.0		
	<b>Expected Reserve</b>	8042.7	8034.7	7995.4	7535.4	8352.4	8162.4	8002.4	7832.4	7648.4	7461.4	7252.4		
	<b>Reserve Margin % (4)</b>	24.0	23.9	23.7	22.2	24.5	23.8	23.2	22.6	22.0	21.3	20.6		
	<b>Proposed Resource Changes (2)</b>	238.7	2377.4	3946.1	4247.1	4593.4	4593.4	4593.4	4593.4	4593.4	4593.4	4593.4	4593.4	
	<b>Adjusted Resource Capability</b>	41848.4	44048.1	45720.5	45664.5	47064.8	47064.8	47064.8	47064.8	47064.8	47064.8	47064.8	47064.8	
	<b>Adjusted Reserve</b>	8281.4	10412.1	11941.5	11782.5	12945.8	12755.8	12595.8	12425.8	12241.8	12054.8	11845.8		
	<b>Adjusted Reserve Margin %</b>	24.7	31.0	35.4	34.8	37.9	37.2	36.5	35.9	35.2	34.4	33.6		

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

<u>WINTER CAPABILITY</u>		2014/15	MW											Totals
			2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	
<i>Fossil</i>	Steam Turbine (Oil)	836.0	835.3	835.3	835.3	835.3	835.3	835.3	835.3	835.3	835.3	835.3	835.3	835.3
	Steam Turbine (Oil & Gas)	7975.3	8041.1	8415.5	8415.5	8415.5	8415.5	8415.5	8415.5	8415.5	8415.5	8415.5	8415.5	8415.5
	Steam Turbine (Gas)	850.4	1350.8	1350.8	1710.8	1710.8	1710.8	1710.8	1710.8	1710.8	1710.8	1710.8	1710.8	1710.8
	Steam Turbine (Coal)	1484.6	1469.0	1469.0	1161.7	1161.7	1161.7	1161.7	1161.7	1161.7	1161.7	1161.7	1161.7	1161.7
	Combined Cycle (Oil & Gas)	8560.8	8765.2	8765.2	8765.2	8765.2	8765.2	8765.2	8765.2	8765.2	8765.2	8765.2	8765.2	8765.2
	Combined Cycle (Gas)	1696.7	1704.2	1704.2	1704.2	1704.2	1704.2	1704.2	1704.2	1704.2	1704.2	1704.2	1704.2	1704.2
	Jet Engine (Oil)	867.9	872.4	872.4	872.4	872.4	872.4	872.4	872.4	872.4	872.4	872.4	872.4	872.4
	Jet Engine (Oil & Gas)	1263.8	1279.4	1279.4	1279.4	1279.4	1279.4	1279.4	1279.4	1279.4	1279.4	1279.4	1279.4	1279.4
	Jet Engine (Gas)	326.2	290.3	290.3	290.3	290.3	290.3	290.3	290.3	290.3	290.3	290.3	290.3	290.3
	Combustion Turbine (Oil)	1316.2	1357.3	1357.3	1357.3	1357.3	1357.3	1357.3	1357.3	1357.3	1357.3	1357.3	1357.3	1357.3
	Combustion Turbine (Oil & Gas)	1197.7	1168.2	1168.2	1168.2	1168.2	1168.2	1168.2	1168.2	1168.2	1168.2	1168.2	1168.2	1168.2
	Combustion Turbine (Gas)	694.4	740.6	740.6	740.6	740.6	740.6	740.6	740.6	740.6	740.6	740.6	740.6	740.6
	Internal Combustion (Oil/Gas)	55.7	55.7	55.7	55.7	55.7	55.7	55.7	55.7	55.7	55.7	55.7	55.7	55.7
<i>Pumped Storage</i>	Pumped Storage Hydro	1409.2	1409.2	1409.2	1409.2	1409.2	1409.2	1409.2	1409.2	1409.2	1409.2	1409.2	1409.2	1409.2
<i>Nuclear</i>	Steam (PWR Nuclear)	2659.6	2660.8	2660.8	2660.8	2660.8	2660.8	2660.8	2660.8	2660.8	2660.8	2660.8	2660.8	2660.8
	Steam (BWR Nuclear)	2789.0	2779.1	2779.1	2779.1	2779.1	2779.1	2779.1	2779.1	2779.1	2779.1	2779.1	2779.1	2779.1
<i>Renewable (5)</i>	Conventional Hydro	4263.5	4266.6	4266.6	4266.6	4266.6	4266.6	4266.6	4266.6	4266.6	4266.6	4266.6	4266.6	4266.6
	Internal Combustion (Methane)	104.2	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3
	Steam Turbine (Wood)	109.9	110.2	110.2	110.2	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7
	Steam Turbine (Refuse)	265.3	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9
	Wind	1462.6	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7	1460.7
	Solar	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
<b>EXISTING GENERATING FACILITIES</b>		40220.5	41012.8	41387.2	41747.2	41462.4	41462.4	41462.4	41462.4	41462.4	41462.4	41462.4	41462.4	41462.4
<i>Changes (10)</i>	Special Case Resources - SCR (3)	843.0	884.8	884.8	884.8	884.8	884.8	884.8	884.8	884.8	884.8	884.8	884.8	884.8
	Additions and Uprates	0.0	374.4	360.0	22.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Scheduled Retirements (9)	0.0	0.0	0.0	-307.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-307.3
<i>Contracts</i>	<b>NYCA RESOURCE CAPABILITY</b>	41063.5	42272.0	42632.0	42347.2	42347.2	42347.2	42347.2	42347.2	42347.2	42347.2	42347.2	42347.2	42347.2
	Net Purchases (1) (7)	1077.5	338.3	-4.5	403.5	327.5	1081.5	1081.5	1081.5	1081.5	1081.5	1081.5	1081.5	1081.5
	<b>TOTAL RESOURCE CAPABILITY</b>	42141.0	42610.3	42627.5	42750.7	42674.7	43428.7	43428.7	43428.7	43428.7	43428.7	43428.7	43428.7	43428.7

**BASE FORECAST**

<b>Peak Demand Forecast</b>	24515.0	24524.0	24488.0	24463.0	24603.0	24757.0	24796.0	24843.0	24895.0	24951.0	25020.0
<b>Expected Reserve</b>	18095.3	18103.5	18262.7	18211.7	18825.7	18671.7	18632.7	18585.7	18533.7	18477.7	18408.7
<b>Installed Capacity Reserve Margin % (4)</b>	73.8	73.8	74.6	74.4	76.5	75.4	75.1	74.8	74.4	74.1	73.6

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

(2) - Proposed Resource Changes - Includes all proposed generator additions, uprates and retirements from Section IV, except those that have met Base Case inclusion rules as described in the Reliability Planning Process (RPP) manual. Total net capacity is shown.

(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.

(4) - The current Installed Capacity Reserve Margin requirement for the 2015-2016 Capability Year is 17.0%.

(5) - The Renewable Category does not necessarily match the New York State Renewable Portfolio Standard (RPS) Definition.

(6) - Existing wind generators are listed at their full nameplate rating.

(7) - Figures include the use of Unforced Capacity Deliverability Rights (UDRs) as currently known. For more information on the use of UDRs, please see Section 4.14 of the ICAP Manual.

(8) - Existing solar generators are listed at their full nameplate rating.

(9) - Scheduled Retirements as shown in Table IV-4B. Existing Retirements in Table IV-3A are accounted for in the list of 2015 Existing Generating Facilities.

(10) - Values for the year 2015 reflect the changes since the 2014 Gold Book was published.

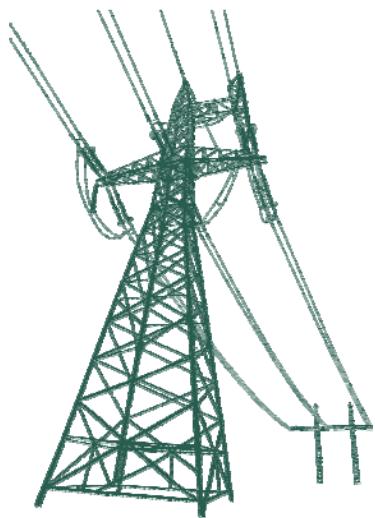
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## **SECTION VI:**

### **EXISTING TRANSMISSION FACILITIES**

#### **AS OF MARCH 15, 2015**



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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. The information in Table VI-1 is redacted as it may contain Critical Energy Infrastructure Information. A version of the 2015 *Gold Book* which includes this section is available to individuals with a myNYISO account. To request a myNYISO account, please visit:

[http://www.nyiso.com/public/webdocs/markets\\_operations/services/customer\\_relations/CEII\\_Request\\_Form/CEII\\_Request\\_Form\\_and\\_NDA\\_complete.pdf](http://www.nyiso.com/public/webdocs/markets_operations/services/customer_relations/CEII_Request_Form/CEII_Request_Form_and_NDA_complete.pdf)

**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
	OH	UG	OH	UG	OH	UG	OH	UG	OH	OH	UG	UG
CENTRAL HUDSON GAS & ELECTRIC CORPORATION	229.7	4.1	0.0	0.0	0.0	0.0	76.1	0.0	0.0	0.0		
CONSOLIDATED EDISON	0.0	0.0	21.7	208.9	(a)	0.5	0.0	406.5	(b) (i)	184.3	(h)	5.3
LONG ISLAND POWER AUTHORITY	0.0	0.0	244.4	161.6	(e)	0.0	0.0	0.0	9.3	(g)	0.0	0.0
NEW YORK POWER AUTHORITY	52.7	(f)	1.6	0.0	0.0	338.1	0.0	884.9	43.2	0.0	154.9	
NEW YORK STATE ELECTRIC & GAS CORP.	1463.3	7.5	0.0	0.0	233.3	0.0	550.1	0.0	0.0	0.0		
NATIONAL GRID	4094.1	24.0	0.0	0.0	498.5	20.2	687.7	0.4	0.0	0.0		
ORANGE AND ROCKLAND UTILITIES INC.	0.0	0.0	107.3	2.3	(a)	0.0	0.0	47.2	(b)	3.4	(d)	0.0
ROCHESTER GAS AND ELECTRIC CORPORATION	248.0	28.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
<b>TOTALS BY kV CLASS (c)</b>	<b>6087.8</b>	<b>65.3</b>	<b>373.4</b>	<b>372.8</b>	<b>1070.3</b>	<b>20.2</b>	<b>2605.3</b>	<b>240.6</b>	<b>5.3</b>	<b>154.9</b>	<b>24.0</b>	<b>66.0</b>

TOTAL OVERHEAD	=	10,297.1	(c)
TOTAL UNDERGROUND	=	788.8	(c)
TOTAL	=	11,085.9	(c)

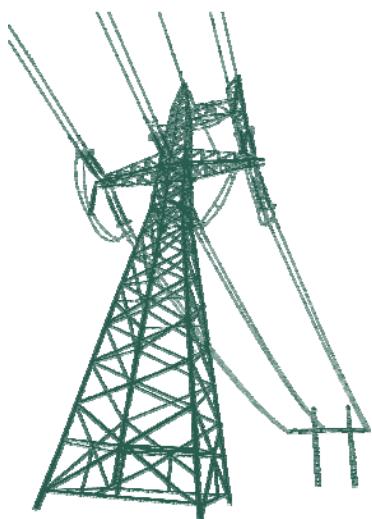
- Notes:
- (a) 1.4 circuit miles are owned by GenOn
  - (b) 47.2 circuit miles are jointly owned by Con Ed and Orange & Rockland
  - (c) These totals reflect the appropriate adjustments for jointly owned facilities (footnote b)
  - (d) 3.4 circuit miles are owned by GenOn as indicated in the list of 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) 21.3 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**

#### **AS OF MARCH 15, 2015**



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## **Section VII**

This section contains the list of firm and non-firm proposed transmission projects and merchant transmission projects. Projects that were placed in-service since the publication of the 2014 *Gold Book* are maintained on the list of proposed transmission projects for one year.

## Table VII: Proposed Transmission Facilities

Merchant 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	Type of Construction	
				Prior to (2)	Year	Operating	Design		Summer	Winter			
<b>Merchant Transmission Projects</b>													
[305],15,19	Transmission Developers Inc.	Hertel 735kV (Quebec)	Astoria Annex 345kV	333	W	2018	320	320	1	1000 MW	1000 MW	/+ 320kV Bipolar HVDC cable	-
[363],19	Poseidon Transmission 1, LLC	Deans 500kV (PJM)	Ruland Road 138kV	82	S	2016	200	200	1	500 MW	500 MW	/+ 200kV Monopole HVDC cable	-
[358],18	West Point Partners	Leeds 345kV	Buchanan North 345kV	72	W	2018	320	320	1	1000 MW	1000 MW	/+ 320kV Bipolar HVDC cable	-
<b>Firm Plans(5) (included in FERC 715 Base Case)</b>													
3	CHGE	North Catskill	Feura Bush	Series Reactor	In-Service	2014	115	115	1	1280	1560	Reactor impedance increase from 12% to 16%	-
6	CHGE	Pleasant Valley	Todd Hill	5.53	S	2016	115	115	1	1280	1563	Rebuild line with 1033 ACSR	OH
6	CHGE	Todd Hill	Fishkill Plains	5.23	S	2016	115	115	1	1280	1563	Rebuild line with 1033 ACSR	OH
14	CHGE	Hurley Avenue	Leeds	Series Compensation	S	2018	345	345	1	1400	1700	21% Compensation	-
11	CHGE	St. Pool	High Falls	5.61	S	2020	115	115	1	1114	1359	1.75k ACSR	OH
11	CHGE	High Falls	Kerhonkson	10.03	S	2020	115	115	1	1114	1359	1.75k ACSR	OH
11	CHGE	Kerhonkson	Honk Falls	4.97	S	2020	115	115	2	1114	1359	1.75k ACSR	OH
11	CHGE	Modena	Galeville	4.62	S	2020	115	115	1	1114	1359	1.75k ACSR	OH
11	CHGE	Galeville	Kerhonkson	8.96	S	2020	115	115	1	1114	1359	1.75k ACSR	OH
3	ConEd	Dunwoodie South	Dunwoodie South	Phase shifter	In-Service	2014	138	138	2	Nominal 132 MVA		PAR Retirement	-
3	ConEd	Dunwoodie South	Dunwoodie South	Phase shifter	In-Service	2014	138	138	1	Nominal 300 MVA		PAR Replacement	-
3	ConEd	Goethals	Goethals	Reconfiguration	In-Service	2014	345	345	-	N/A		Reconfiguration	-
16	ConEd	Rock Tavern	Sugarloaf	13.70	S	2016	345	345	1	1811 MVA	1918 MVA	2-150 ACSR	OH
16	ConEd	Goethals	Gowanus	12.95	S	2016	345	345	2	632 MVA	679 MVA	Additional Cooling	UG
16	ConEd	Gowanus	Farragut	4.05	S	2016	345	345	2	800 MVA	844 MVA	Additional Cooling	UG
16	ConEd	Goethals	Linden Co-Gen	-1.50	S	2016	345	345	1	2504	2504	Feeder Separation	UG
16	ConEd	Goethals	Linden Co-Gen	1.50	S	2016	345	345	1	1252	1252	Feeder Separation	UG
16	ConEd	Goethals	Linden Co-Gen	1.50	S	2016	345	345	1	1252	1252	Feeder Separation	UG
ConEd	East 13th Street	East 13th Street	Reconfiguration	S	2016	345	345	-	N/A	N/A	Reconfiguration	-	
ConEd	East 13th Street	East 13th Street	Reconfiguration	S	2017	345	345	-	N/A	N/A	Reconfiguration	-	
ConEd	Greenwood	Greenwood	Reconfiguration	S	2018	138	138	-	N/A	N/A	Reconfiguration	-	
ConEd	Rainey	Corona	xfrm/Phase shifter	S	2019	345/138	345/138	1	263 MVA	320 MVA	xfrm/Phase shifter	UG	
12, 3	LIPA	Holtsville DRSS	West Bus	N/A	In-Service	2014	138	138	-	150 MVAR	150 MVAR	Dynamic Reactive Support System (DRSS)	-
12	LIPA	Randall Ave	Wildwood	N/A	S	2016	138	138	-	150 MVAR	150 MVAR	Dynamic Reactive Support System (DRSS)	-
3	NGRID	Spier	Rotterdam	32.70	In-Service	2014	115	115	1	916	1070	New/Separate Circuit w/Twin-795 ACSR south end	OH
3	NGRID	Dunkirk	Dunkirk	Cap Bank	In-Service	2014	115	115	1	67 MVAR	67 MVAR	Capacitor Bank 2 - 33.3 MVAR	-
3	NGRID	Rome	Rome	-	In-Service	2014	115	115	-	N/A	N/A	Station Rebuild	-
3	NGRID	Porter	Porter	-	In-Service	2014	115	115	-	N/A	N/A	Rebuild 115kV Station	-
3	NGRID	Huntley	Huntley	Cap Bank	In-Service	2015	115	115	1	75 MVAR	75 MVAR	second Capacitor Bank	-
3	NGRID	Niagara	Packard	3.40	In-Service	2015	115	115	1	1727	1732	115kV line Replacement	-
7, 3	NGRID	Rotterdam	Bear Swamp	-43.64	Retired	2015	230	230	1	1105	1284	795 ACSR	OH
7, 3	NGRID	Rotterdam	Eastover Road (New Station)	22.60	In-Service	2015	230	230	1	1114	1284	Rotterdam-Bear Swamp #E205 Loop (0.2 miles new 1113 kcmil ACSR)	OH
7, 3	NGRID	Eastover Road (New Station)	Bear Swamp	21.44	In-Service	2015	230	230	1	1105	1347	Rotterdam-Bear Swamp #E205 Loop (0.2 miles new 1113 kcmil ACSR)	OH
7, 3	NGRID	Eastover Road (New Station)	Eastover Road (New Station)	xfrm	In-Service	2015	230/115	230/115	1	381MVA	466MVA	Transformer	-
7	NGRID	Luther Forest	North Troy	-18.30	S	2015	115	115	1	937	1141	605 ACSR	OH
7	NGRID	Luther Forest	Eastover Road (New Station)	17.50	S	2015	115	115	1	937	1141	Luther Forest-North Troy Loop (0.9 miles new 1113 kcmil ACSR)	OH
7	NGRID	Eastover Road (New Station)	North Troy	2.60	S	2015	115	115	1	937	1141	Luther Forest-North Troy Loop (0.9 miles new 1113 kcmil ACSR)	OH
7	NGRID	Battenkill	North Troy	-22.39	S	2015	115	115	1	916	1118	605 ACSR	OH
7	NGRID	Battenkill	Eastover Road (New Station)	21.59	S	2015	115	115	1	937	1141	Battenkill-North Troy Loop (0.9 miles new)	OH
7	NGRID	Eastover Road (New Station)	North Troy	2.60	S	2015	115	115	1	916	1118	Battenkill-North Troy Loop (0.9 miles new)	OH
NGRID	Clay	Clay	xfrm	S	2015	345/115	345/115	1	478MVA	590MVA	Replace TBI transformer & reconfigure Clay 345 kV for TB2 transformer	-	
NGRID	Gardenville	Erie	0.30	S	2015	115	115	1	648	846	Replace 400CU and 636AL with 795 ACSR	OH	
NGRID	New Scotland	Long Lane	4.22	S	2015	115	115	1	600	600	20.5% Series Reactor #7 Unionville	-	
NGRID	New Scotland	Feura Bush	4.08	S	2015	115	115	1	600	600	12.5% Series Reactor #9 Unionville	-	
7	NGRID	Homer City	Stolle Road	-204.11	W	2015	345	345	1	1013	1200	New Five Mile substation	OH
7	NGRID	Homer City	Five Mile Rd (New Station)	151.11	W	2015	345	345	1	1013	1200	New Five Mile substation	OH
7	NGRID	Five Mile Rd (New Station)	Stolle Road	53.00	W	2015	345	345	1	1013	1200	New Five Mile substation	OH
7	NGRID	Gardenville	Homer Hill	-65.69	W	2015	115	115	2	584	708	New Five Mile substation	OH

**Table VII: Proposed Transmission Facilities (cont'd)**

[Merchant 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 ckts	Thermal Ratings (4)		Project Description / Conductor Size	Type of Construction	
						Operating	Design		Summer	Winter			
7	NGRID	Gardenville	Five Mile Rd (New Station)	58.30	W	2015	115	115	2	129MVA	156MVA	New Five Mile substation	OH
7	NGRID	Five Mile Rd (New Station)	Homer Hill	8.00	W	2015	115	115	2	221MVA	270MVA	New Five Mile substation	OH
	NGRID	Five Mile Rd (New Station)	Five Mile Rd (New Station)	xfrm	W	2015	345/115	345/115	-	478MVA	590MVA	New Five Mile substation	-
7	NGRID/NYSEG	Homer City	Five Mile Rd (New Station)	-151.11	S	2016	345	345	1	1013	1200	New Five Mile substation	OH
7	NGRID/NYSEG	Homer City	Farmers Valley	120.00	S	2016	345	345	1	1013	1200	New Farmer Valley substation	OH
7	NGRID/NYSEG	Farmers Valley	Five Mile Rd (New Station)	31.00	S	2016	345	345	1	1013	1200	New Farmer Valley substation	OH
	NGRID	Clay	GE	7.3	W	2016	115	115	1	1104	1345	reconductor 4/0 CU & 477 ACSR with 795ACSR (line#14)	OH
	NGRID	Mohican	Battenkill	14.2	S	2017	115	115	1	933	1140	Replace 14.2 miles of conductor w/min 1033.5 ACSR	OH
	NGRID	Clay	Dewitt	10.24	W	2017	115	115	1	193MVA	245MVA	Reconductor 4/0 CU to 795ACSR	OH
	NGRID	Clay	Teall	12.75	W	2017	115	115	1	220 MVA	239MVA	Reconductor 4/0 CU to 795ACSR	OH
	NGRID	Elbridge	Woodard	Reactor	W	2017	115	115	1	-	-	Reactor 3%	-
7	NGRID	Greenbush	Hudson	-26.43	W	2017	115	115	1	648	800	605 ACSR, 350 CU	OH
7	NGRID	Greenbush	Klinekill Tap	20.30	W	2017	115	115	1	648	800	605 ACSR, 350 CU	OH
7	NGRID	Klinekill Tap	Hudson	6.13	W	2017	115	115	1	648	800	605 ACSR, 350 CU	OH
	NGRID	Oneida	Porter	Reactor	W	2017	115	115	1	-	-	install reactor on Line #7; 6%	-
	NGRID	Porter	Yahnundasnis	Reactor	W	2017	115	115	1	-	-	install reactor on Ln#3;8%	-
10.3	NYPA	Moses	Willis	-37.11	Retired	2014	230	230	2	876	1121	795 ACSR	OH
10.3	NYPA	Moses	Willis	37.11	In-Service	2014	230	230	1	876	1121	795 ACSR	OH
10.3	NYPA	Moses	Willis	37.11	In-Service	2014	230	230	1	876	1121	795 ACSR	OH
	NYPA	Massena	Massena	Auto-Transformer	S	2015	765/230	765/230	1	936 MVA	1296 MVA	Replacement of Massena 765/230 kV Auto-Transformer Bank #2	-
	NYPA	Gilboa	Gilboa	GSU	W	2015	345/17	345/17	1	325 MVA	325 MVA	Replacement of Blenheim-Gilboa GSU #2	-
	NYPA	Moses	Moses	Cap Bank	W	2015	115	115	1	100 MVAR	100 MVAR	Cap Bank Installation to Replace Moses Synchronous Condensers	-
	NYPA	Moses	Moses	Cap Bank	S	2016	115	115	1	100 MVAR	100 MVAR	Cap Bank Installation to Replace Moses Synchronous Condensers	-
	NYPA	Massena	Massena	Auto-Transformer	S	2016	765/230	765/230	1	936 MVA	1296 MVA	Replacement of Massena 765/230 kV Auto-Transformer Bank #1	-
	NYPA	Niagara	Niagara	GSU	S	2016	115/13.8	115/13.8	1	250 MVA	250 MVA	Replacement of Niagara GSU #5	-
16	NYPA	Marcy	Coopers Comers	Series Comp	S	2016	345	345	1	1776 MVA	1793 MVA	Installation of Series Compensation on UCC-2-41	-
16	NYPA	Edic	Fraser	Series Comp	S	2016	345	345	1	1793 MVA	1793 MVA	Installation of Series Compensation on EP24-40	-
16	NYPA	Fraser	Coopers Comers	Series Comp	S	2016	345	345	1	1494 MVA	1793 MVA	Installation of Series Compensation on FCC33	-
7	NYPA	Niagara	Rochester	-70.20	W	2019	345	345	1	2177	2662	2.795 ACSR	OH
7	NYPA	Niagara	Station 255 (New Station)	66.40	W	2019	345	345	1	2177	2662	2.795 ACSR	OH
7	NYPA	Station 255 (New Station)	Rochester	3.80	W	2019	345	345	1	2177	2662	2.795 ACSR	OH
7	NYPA	Dysinger Tap	Rochester	-44.00	W	2019	345	345	1	2177	2662	2.795 ACSR	OH
7	NYPA	Dysinger Tap	Station 255 (New Station)	40.20	W	2019	345	345	1	2177	2662	2.795 ACSR	OH
7	NYPA	Station 255 (New Station)	Rochester	3.80	W	2019	345	345	1	2177	2662	2.795 ACSR	OH
3	NYSEG	Meyer	Coopers Comers	Cap Bank	In-Service	2014	115	115	1	18 MVAR	18 MVAR	Capacitor Bank Installation	-
3	NYSEG	Ashley Road	Ashley Road	Cap Bank	In-Service	2014	115	115	1	150 MVAR	150 MVAR	Capacitor Bank (DOE)	-
3	NYSEG	Big Tree	Big Tree	Cap Bank	In-Service	2014	115	115	1	50 MVAR	50 MVAR	Capacitor Bank (DOE)	-
	NYSEG	Goudey	AES Westover	Shunt Reactor	S	2015	345	345	1	200 MVAR	200 MVAR	Shunt Reactor Installation	-
	NYSEG	Jennison	AES Oneonta	reconfig	S	2015	115	115	-	N/A	N/A	substation separation	-
	NYSEG	Homer City	Watercure Road	-177.00	S	2015	345	345	1	1549	1552	2156 ACR	OH
7	NYSEG	Watercure Road	Mainesburg	26.00	S	2015	345	345	1	1549	1552	2156 ACR	OH
7	NYSEG	Mainesburg	Homer City	151.00	S	2015	345	345	1	1549	1552	2156 ACR	OH
16	NYSEG	Fraser	Coopers Comers	21.80	S	2016	345	345	1	2500	3000	ACCR 1742-T9 Reconstructor	OH
	NYSEG	Stephentown	Stephentown	xfrm	S	2016	115/34.5	115/34.5	1	37 MVA	44MVA	Transformer	-
	NYSEG	Eelpot Road	Eelpot Road	Xfrm	S	2016	115/34.5	115/34.5	2	59.2MVA	66.9MVA	Transformer	-
8	NYSEG	Wood Street	Carmel	1.34	S	2016	115	115	1	775	945	477 ACSR	OH
	NYSEG	Elbridge	State Street	14.50	W	2016	115	115	1	250 MVA	305 MVA	1033 ACSR	OH
8	NYSEG	Wood Street	Katonah	11.70	S	2017	115	115	1	1079	1079	convert 46kV to 115kV	OH
	NYSEG	Gardenville	Gardenville	xfrm	S	2017	230/115	230/115	1	200 MVA	225 MVA	Transformer	-
	NYSEG	Flat Street	Flat Street	Xfrm	S	2017	115/34.5	115/34.5	2	40MVA	45.2MVA	Transformer	-
	NYSEG	Klinekill Tap	Klinekill	<10	W	2017	115	115	1	=>124 MVA	=>150 MVA	477 ACSR	OH
	NYSEG	Willet	Willet	xfrm	W	2017	115/34.5	115/34.5	1	39 MVA	44 MVA	Transformer	-
	NYSEG	Meyer	Meyer	Xfrm	S	2018	115/34.5	115/34.5	2	59.2MVA	66.9MVA	Transformer	-
	NYSEG	Oakdale 345	Oakdale 345	reconfig	S	2018	345	345	6	N/A	N/A	bus reconfiguration	-
	NYSEG	Oakdale 345	Oakdale 115/34.5	xfrm	S	2018	345	345	-	400 MVA	400 MVA	new 345/115/34.5kV LTC transformer	-

**Table VII: Proposed Transmission Facilities (cont'd)**

[Merchant 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 cktS	Thermal Ratings (4)		Project Description / Conductor Size	Type of Construction	
						Operating	Design		Summer	Winter			
NYSEG	Watercure Road	Watercure Road	xfrm	S	2018	345/230	345/230	1	426 MVA	494 MVA	Transformer	-	
NYSEG	Pawling	Pawling	Cap Bank	W	2018	230	230	1	95 MVAR	95 MVAR	Capacitor Bank	-	
NYSEG	Stoney Ridge	Stoney Ridge	Cap Bank	W	2018	230	230	1	70 MVAR	70 MVAR	Capacitor Bank	-	
NYSEG	Coopers Corners	Coopers Corners	xfrm	W	2018	115/34.5	115/34.5	1	66 MVA	75 MVA	Transformer	-	
NYSEG	Katonah	Katonah	xfrm	W	2018	115/46	115/46	1	66 MVA	75 MVA	Transformer	-	
NYSEG	Montour Falls	Montour Falls	xfrm	W	2018	115/34.5	115/34.5	1	66 MVA	75 MVA	Transformer	-	
NYSEG	Montour Falls	Montour Falls	xfrm	W	2018	115/34.5	115/34.5	1	66 MVA	75 MVA	Transformer	-	
NYSEG	Willett	Willett	Cap Bank	W	2018	115	115	1	35 MVAR	35 MVAR	Capacitor Bank	-	
NYSEG	Windham	Windham	Cap Bank	W	2018	115	115	1	5.4 MVAR	5.4 MVAR	Capacitor Bank	-	
NYSEG	Coopers Corners	Coopers Corners	xfrm	S	2019	345/115	345/115	1	200 MVA	220 MVA	Transformer	-	
NYSEG	Fraser	Fraser	xfrm	S	2019	345/115	345/115	1	280 MVA	300 MVA	Transformer	-	
NYSEG	Afton	Afton	xfrm	W	2019	115/34.5	115/34.5	1	39 MVA	44 MVA	Transformer	-	
NYSEG	Afton	Afton	Cap Bank	W	2019	115	115	1	10 MVAR	10 MVAR	Capacitor Bank	-	
NYSEG	Colliers	Colliers	xfrm	W	2019	115/46	115/46	1	42 MVA	55 MVA	Transformer	-	
NYSEG	Colliers	Colliers	xfrm	W	2019	115/46	115/46	1	63 MVA	75 MVA	Transformer	-	
NYSEG	Carmel	Carmel	xfrm	W	2019	115/46	115/46	1	80 MVA	96MVA	Transformer	-	
NYSEG	North Endicott	North Endicott	xfrm	W	2019	115/34.5	115/34.5	1	66 MVA	75 MVA	Transformer	-	
NYSEG	North Endicott	North Endicott	xfrm	W	2019	115/34.5	115/34.5	1	66 MVA	75 MVA	Transformer	-	
NYSEG	Northside	Northside	xfrm	W	2019	115/34.5	115/34.5	1	56 MVA	64 MVA	Transformer	-	
NYSEG	Ridge Road	Ridge Road	xfrm	W	2019	115/34.5	115/34.5	1	66 MVA	75 MVA	Transformer	-	
NYSEG	South Owego	South Owego	xfrm	W	2019	115/34.5	115/34.5	1	63 MVA	75 MVA	Transformer	-	
NYSEG	Wood Street	Wood Street	xfrm	S	2020	345/115	345/115	1	280 MVA	300 MVA	Transformer	-	
16, 17, 3	O & R	Ramapo	Sugarloaf	16.00	In-Service	2014	138	345	1	1089	1298	2-1590 ACSR	OH
3	O & R	New Hempstead	-	Cap Bank	In-Service	2014	138	138	1	32 MVAR	32 MVAR	Capacitor bank	-
3	O & R	Hartley	-	Cap Bank	In-Service	2014	69	69	1	32 MVAR	32 MVAR	Capacitor bank	-
O & R	Summit (RECO)	-	Cap Bank	S	2016	69	69	1	32 MVAR	32 MVAR	Capacitor bank	-	
16	O & R	Ramapo	Sugarloaf	16.00	S	2016	345	345	1	3030	3210	2-1590 ACSR	OH
16	O & R	Sugarloaf	Sugarloaf	xfrm	S	2016	345/138	345/138	1	400 MVA	400 MVA	Transformer	OH
O & R	O&R's Line 26	Sterling Forest	xfrm	S	2016	138/69	138/69	1	175 MVA	175 MVA	Transformer	-	
O & R	Haring's Corner (RECO)	Tappan (NY)	-	W	2016	69	69	1	1096	1314	Three-way switch station	OH	
O & R	Little Tor	-	Cap Bank	S	2017	138	138	1	32 MVAR	32 MVAR	Capacitor bank	-	
O & R	Burns	Corporate Drive	5.00	S	2017	138	138	1	1980	2120	1272 ACSS	OH	
O & R	West Nyack (NY)	Harings Corner (RECO)	7.00	W	2020	69	138	1	1604	1723	795 ACSS	OH	
O & R	Ramapo	Sugarloaf	17.00	W	2022	138	138	1	1980	2120	1272 ACSS	OH	
O & R	Montvale (RECO)	-	Cap Bank	S	2022	69	69	1	32 MVAR	32 MVAR	Capacitor bank	-	
RGE	Station 69	Station 69	Cap Bank	S	2015	115	115	1	20 MVAR	20 MVAR	Capacitor Bank (DOE)	-	
RGE	Station 251 (New Station)	Station 251 (New Station)	xfrm	S	2015	115/34.5	115/34.5	2	30 MVA	33.8 MVA	Transformer	-	
RGE	Mortimer	Station 251	1	S	2015	115	115	2	1396	1707	New 115kV Line	OH	
RGE	Station 251	Station 33	0.98	S	2015	115	115	2	1396	1707	New 115kV Line	OH	
RGE	Station 23	Station 23	xfrm	S	2015	115/34.5	115/34.5	2	75 MVA	84 MVA	Transformer	-	
RGE	Station 23	Station 23	xfrm	S	2015	115/11.5/11.5	115/11.5/11.5	2	75 MVA	84 MVA	Transformer	-	
RGE	Station 42	Station 23	Phase Shifter	S	2015	115	115	1	253 MVA	285 MVA	Phase Shifter	-	
RGE	Station 168	Station 262	xfrm	S	2015	115/34.5	115/34.5	1	100 MVA	112 MVA	Transformer	-	
RGE	Station 262	Station 262	xfrm	S	2015	115/34.5	115/34.5	1	56 MVA	63 MVA	Transformer	-	
RGE	Station 33	Station 262	2.97	W	2015	115	115	1	2008	2409	Underground Cable	UG	
RGE	Station 262	Station 23	1.46	W	2015	115	115	1	2008	2409	Underground Cable	UG	
RGE	Station 67	Station 418	3.5	S	2016	115	115	1	1255	1255	New 115kV Line	OH	
RGE	Station 122 (Station upgrade)	Station 122 (Station upgrade)	xfrm	W	2016	345/115	345/115	3	480 MVA	520 MVA	Transformers	-	
RGE	Station 255 (New Station)	Station 23	11.10	W	2016	115	115	1	1506	1807	New 115kV Line	OH+UG	
RGE	Station 255 (New Station)	Rochester	3.80	W	2019	345	345	1	2177	2662	2-795 ACSR	OH	
RGE	Station 255 (New Station)	Station 255 (New Station)	xfrm	W	2019	345/115	345/115	1	400 MVA	450 MVA	Transformer	-	
RGE	Station 255 (New Station)	Station 255 (New Station)	xfrm	W	2020	345/115	345/115	2	400 MVA	450 MVA	Transformer	-	
RGE	Station 255 (New Station)	Station 418	9.60	W	2020	115	115	1	1506	1807	New 115kV Line	OH	

**Table VII: Proposed Transmission Facilities (cont'd)**

Merchant 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 ckts	Thermal Ratings (4)		Project Description / Conductor Size	Type of Construction
						Operating	Design		Summer	Winter		

**Non-Firm Plans (not included in 2015 Base Cases)**

CHGE	E. Fishkill	Merit Park	3.32	S	2019	115	115	1	1280	1563	I-103 ACSR	OH	
CHGE	Hurley Ave	Saugerties	11.40	S	2020	115	115	1	1114	1359	I-795 ACSR	OH	
CHGE	Saugerties	North Catskill	12.46	S	2020	115	115	1	1114	1359	I-795 ACSR	OH	
CHGE	Fishkill Plains	East Fishkill	2.05	W	2020	115	115	1	1454	1777	I-1272 ACSR	OH	
CHGE	Knapps Corners	Myers Corners	2.88	W	2020	115	115	1	1114	1359	I-795 ACSR	OH	
CHGE	Myers Corners	Fishkill Plains	7.77	W	2020	115	115	1	1114	1359	I-795 ACSR	OH	
7	LIPA	Pilgrim	West Bus	-11.74	S	2017	138	138	1	2087	2565	2493 ACAR	OH
7	LIPA	West Bus	Kings Hwy	5.74	S	2017	138	138	1	2087	2565	2493 ACAR	OH
7	LIPA	Pilgrim	Kings Hwy	6.00	S	2017	138	138	1	2087	2565	2493 ACAR	OH
13	LIPA	Valley Stream	East Garden City	7.00	S	2020	138	138	1	TBD	TBD	TBD	TBD
13	LIPA	Shore Rd	Syosset	10.00	S	2020	138	138	1	TBD	TBD	TBD	UG
13	LIPA	Shore Rd	Syosset	Phase Shifter	S	2020	138	138	1	TBD	TBD	Phase Shifter	-
9	LIPA	Riverhead	Wildwood	10.63	S	2023	138	138	1	1399	1709	1192ACSR	OH
13	LIPA	Riverhead	Canal	16.40	S	2023	138	138	1	846	973	2368 KCMIL (1200 mm <sup>2</sup> ) Copper XLPE	UG
13	LIPA	Bellmore	Bellmore	Phase Shifter	S	2025	138	138	1	450 MVA	450 MVA	Phase Shifter	-
13	LIPA	Bellmore	Bellmore	Substation	S	2025	138	138	-	-	-	Substation	-
13	LIPA	Newbridge	Bellmore	5.00	S	2025	138	138	1	TBD	TBD	TBD	UG
[337],13	LIPA	Northport	Pilgrim	8.45	S	2025	138	138	1	825	1010	2000 mm <sup>2</sup> CU	UG
NGRID	Edic 345 kV	Edic 345 kV	Reconfiguration	S	2016	345	345	1	-	-	Create new bay by adding 2 new 345kV breakers, reconnect transformer	-	
NGRID	GE	Geres Lock	7.14	S	2017	115	115	1	-	-	Reconductoring 4/0CU & 336 ACSR to 795ACSR (line 8)	OH	
6	NGRID	Luther Forest	Rotterdam	5.10	S	2017	115	115	1	TBD	TBD	Replace 5.1 miles of conductor w/min 1035.5 ACSR (Bistr TP)	OH
6	NGRID	Luther Forest	Eastover Road (New Station)	6.20	S	2017	115	115	1	TBD	TBD	Replace 6.2 miles of conductor w/min 1035.5 ACSR (#3)	OH
NGRID	Gardenville 230 kV	Gardenville 115 kV	xfrm	S	2017	230/115	230/115	-	-	-	Replacement of two 230/115 kV stepdown with larger units	-	
NGRID	Gardenville 115 kV	Gardenville 115 kV	-	S	2017	-	-	-	-	-	Rebuild of Gardenville 115 kV station to full breaker and a half	-	
NGRID	Elm St	Elm St	xfrm	S	2018	230/23	230/23	1	118MVA	133MVA	Add a fourth 230/23kV transformer	-	
6	NGRID	West Golah (new station)	West Golah (new station)	New Station	W	2018	115	115	-	-	-	New 115 kV Ring Bus connecting lines 3119 and 906	-
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
NYPA	Niagara	Niagara	Auto Transformer	W	2015	345/230	345/230	1	TBD	TBD	Replacement of Niagara AT# 4	-	
NYPA	Moses	Moses	GSU	W	2015	115/13.8/13.8	115/13.8/13.8	1	TBD	TBD	Replacement of St. Lawrence Hydro Unit GSU #8	-	
NYPA	Moses	Moses	GSU	W	2016	230/13.8/13.8	230/13.8/13.8	1	TBD	TBD	Replacement of St. Lawrence Hydro Unit GSU #6	-	
NYPA	Cumberland Head	Gordon Landing	1.63	W	2017	115	230	1	TBD	TBD	Replacement of PV-20 Submarine Cable	Under Water	
NYPA	Astoria Annex	Astoria Annex	Shunt Reactor	W	2017	345	345	1	TBD	TBD	Replacement of Two Shunt Reactors at Astoria Annex 345kV Substation	-	
NYPA	Moses	Moses	GSU	W	2017	115/13.8/13.8	115/13.8/13.8	1	TBD	TBD	Replacement of St. Lawrence Hydro Unit GSU #7	-	
NYPA	Alcoa	Alcoa	6 Ring-Bus Substation	TBD	TBD	115	115	1	TBD	TBD	Construction of a New Alcoa East Six Ring-Bus Substation	-	
6	NYSEG	Elbridge	State Street	14.50	W	2017	115	115	1	1255	1531	Reconductor 336.4 ACSR to 1194 KCM	OH
7	NYSEG	Wethersfield	Meyer	-31.50	W	2017	230	230	1	1080	1310	795 ACSR	OH
7	NYSEG	Wethersfield	South Perry	11.50	W	2017	230	230	1	1080	1310	795 ACSR	OH
7	NYSEG	South Perry	Meyer	20.00	W	2017	230	230	1	1080	1310	795 ACSR	OH
NYSEG	South Perry	South Perry	xfrm	W	2017	230/115	230/115	1	225 MVA	240 MVA	Transformer	-	
NYSEG	South Perry	South Perry	Xfrm	W	2017	115/34.5	115/34.5	2	59.2MVA	66.9MVA	Transformer	-	
O & R	North Rockland (New Station)	Lovett	xfrm	S	2018	345/138	345/138	1	400 MVA	400 MVA	Transformer	-	
7	O & R/ConEd	Ladentown	Buchanan	-9.5	S	2018	345	345	1	3000	3211	2-2493 ACAR	OH
7	O & R/ConEd	Ladentown	North Rockland (New Station)	5.5	S	2018	345	345	1	3000	3211	2-2493 ACAR	OH
7	O & R/ConEd	North Rockland (New Station)	Buchanan	4	S	2018	345	345	1	3000	3211	2-2493 ACAR	OH
6	O & R	Shoemaker	Pocatello	2.00	W	2019	69	69	1	1604	1723	795 ACSS	OH
6	O & R	Sugarloaf	Shoemaker	12.00	W	2022	69	138	2	1062	1141	397 ACSS	OH

**Table VII: Proposed Transmission Facilities (cont'd)**

	<b>Note</b>
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, 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
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	Project involves tower separation which results in the elimination of the double circuit tower contingency
11	Upgrade of existing 69 kV to 115 kV operation
12	MVAR rating +150 Capacitive to -50 Inductive
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. Projects whose security postings triggered this SDU for construction requested to enter Class Year 2015 for purposes of a deliverability “retest” provided for under Attachment S of the OATT. To the extent the Class Year 2015 Deliverability Study finds such projects deliverable without the SDU, there is a possibility the SDU could be “untriggered” for construction and would thereafter no longer be considered a “firm” transmission upgrade
15	An Astoria - Rainey 345kV connection is being considered in association with Merchant Project Queue #305
16	This project is part of the Transmission Owner Transmission Solutions (TOTS) approved by the NYSPSC as part of the Indian Point Energy Center Reliability Contingency Plans (Case 12-E-0503)
17	Will operate at 138kV until summer of 2016
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	Class Year 2015 candidate

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