

RS-1 Budget Forecast, 2020 - 2024

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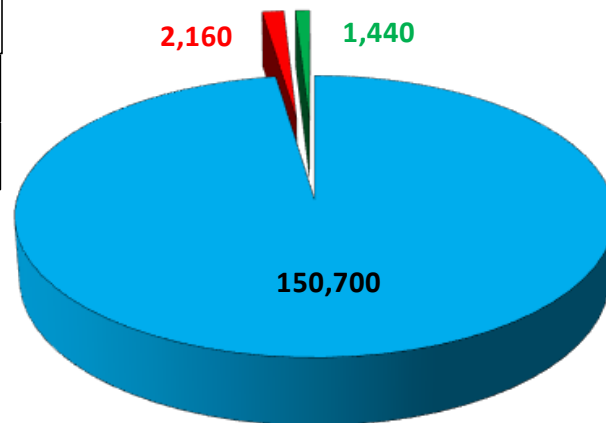
RS-1 Forecast Methodology

- **Net Energy** – Based on end-use energy models, net of transmission losses, with adjustments. Through July 2019, actual is behind budget.
 - **Energy Models:** Reviewed current energy usage patterns across NYCA.
 - Budget forecast is based on the 2019 Gold Book forecast with adjustments.
 - **Energy Efficiency & Load Modifiers:** The budget forecast includes the same energy efficiency, BTM DG, EV, and Energy Storage impacts as the Gold Book forecast.
 - BTM Solar assumptions have been updated to reflect the updated 6,000 MW by 2025 goal.
- **Exports**
 - Annual levels determined by judgment & statistical analysis of recent history. Through July 2019, actual is behind budget.
- **Wheels**
 - Annual levels determined by judgment & statistical analysis of recent history. Through July 2019, actual is behind budget.

Three Components of Forecast

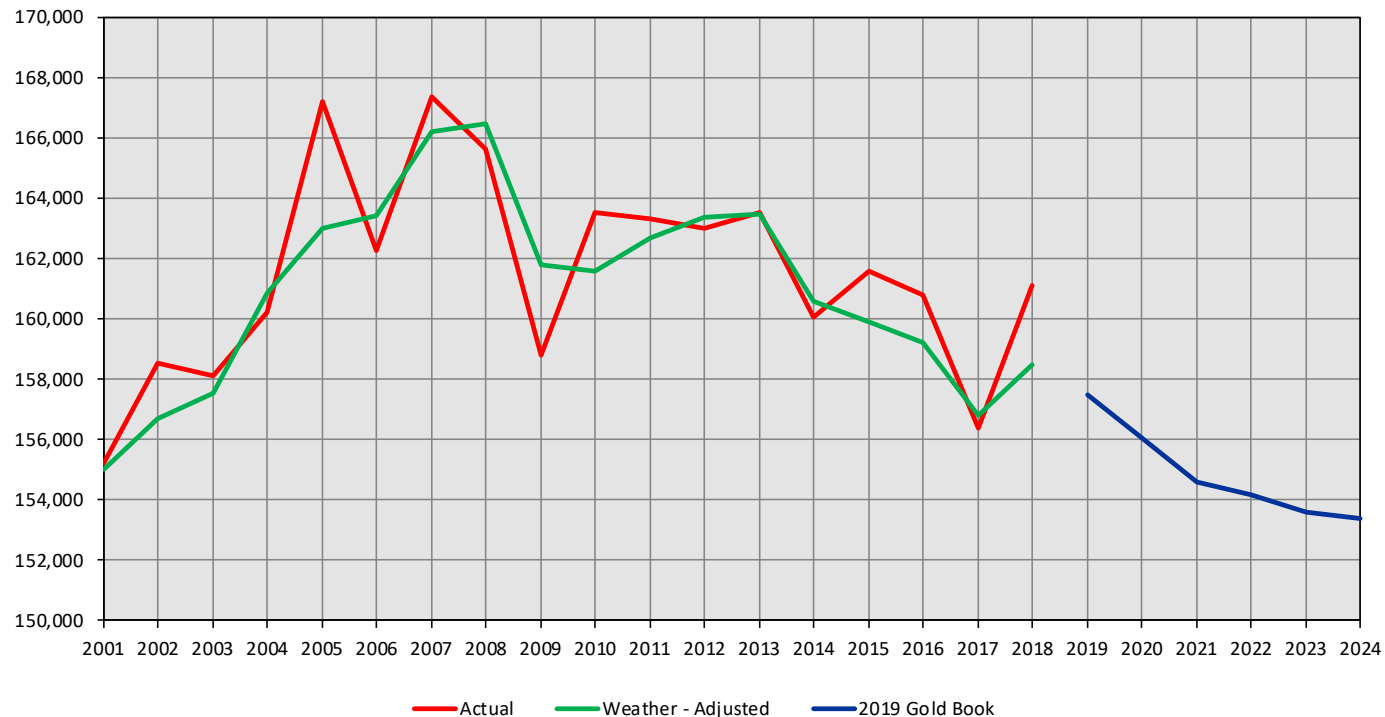
2020 RS-1 Forecast (GWh)

■ Net Energy - 150,700 GWh
■ Exports - 2,160 GWh
■ Wheels - 1,440 GWh
TOTAL - 154,300 GWh
2019 RS-1 - 157,100 GWh

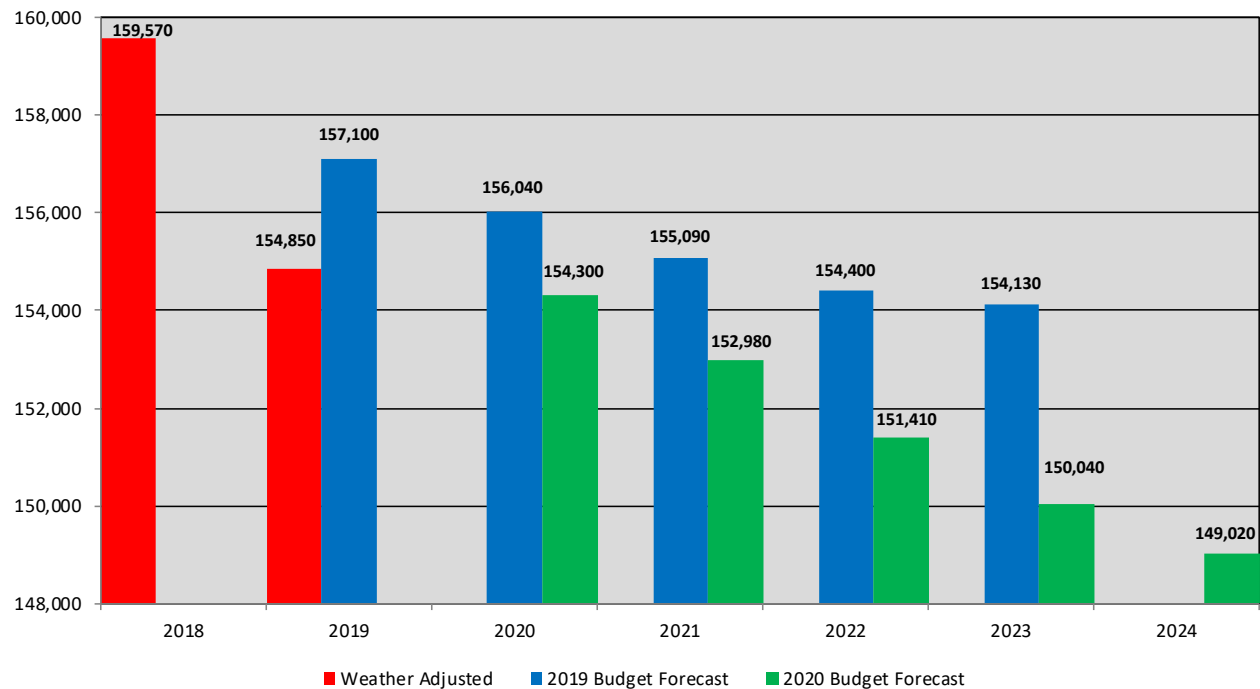


Energy Sendout - GWh

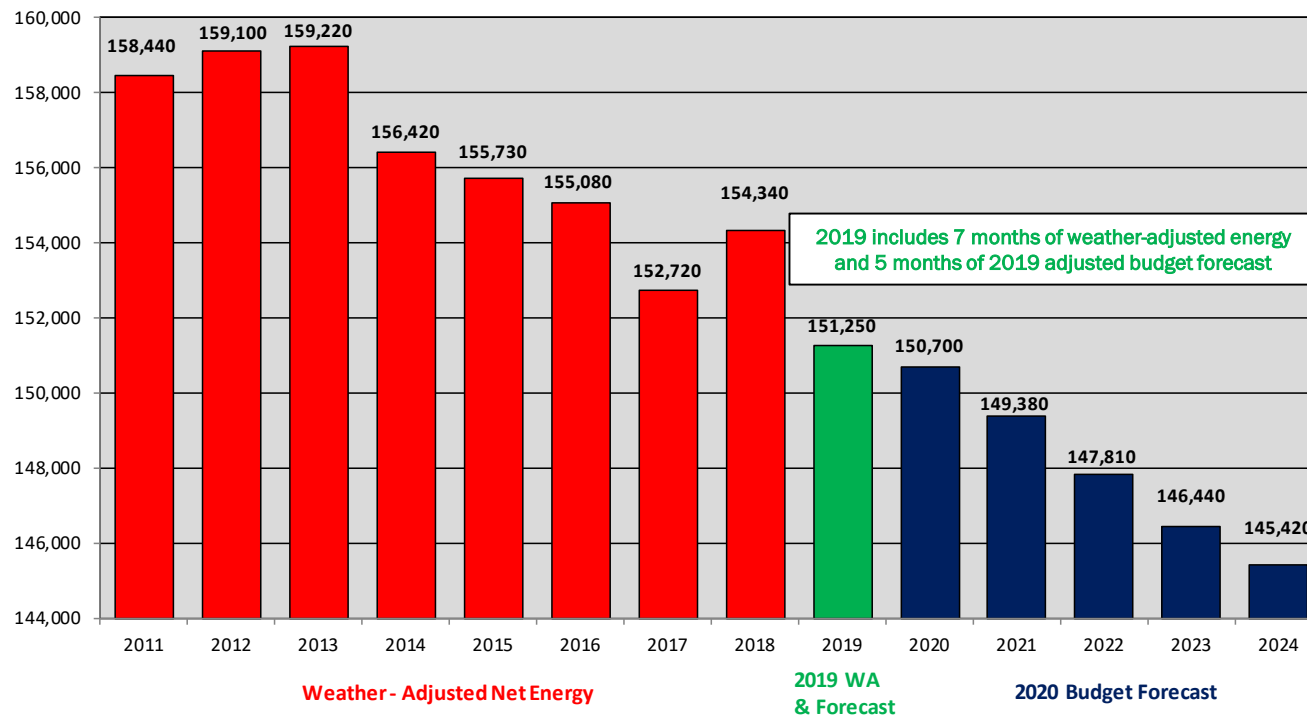
Actual, Weather-Adjusted, and Forecast



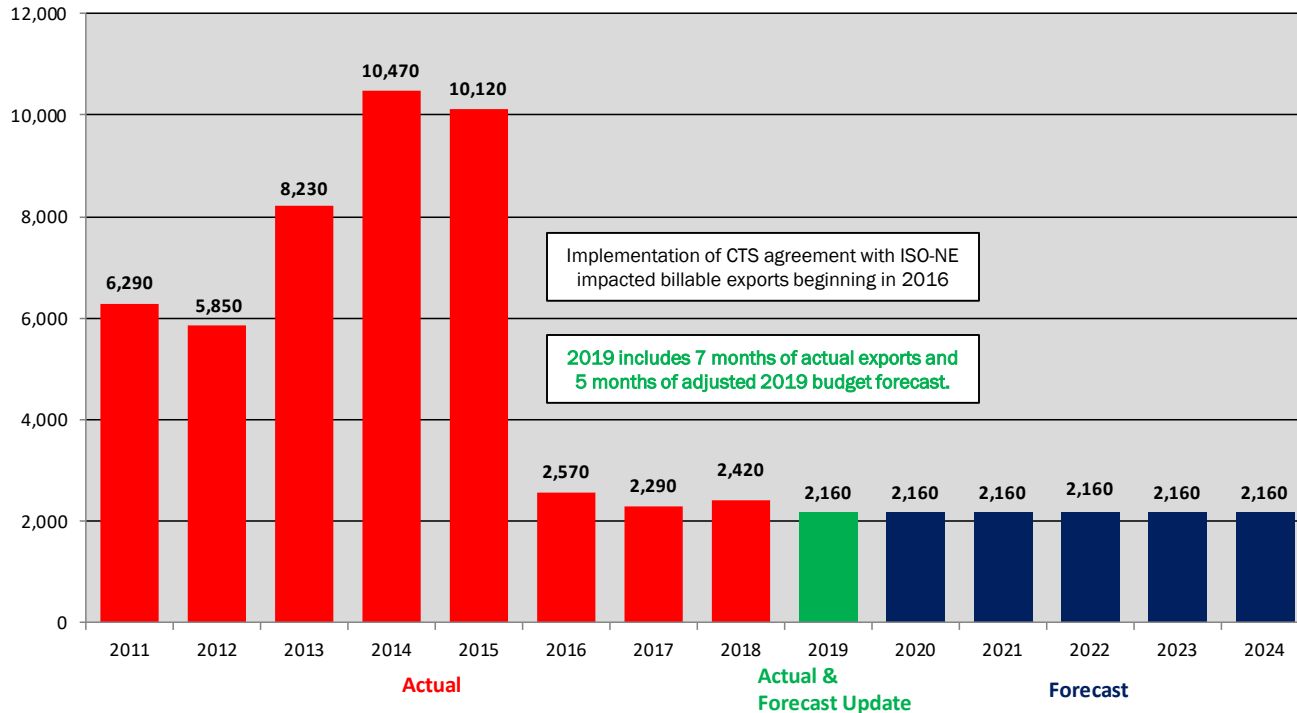
RS-1 Budget Forecast - GWh



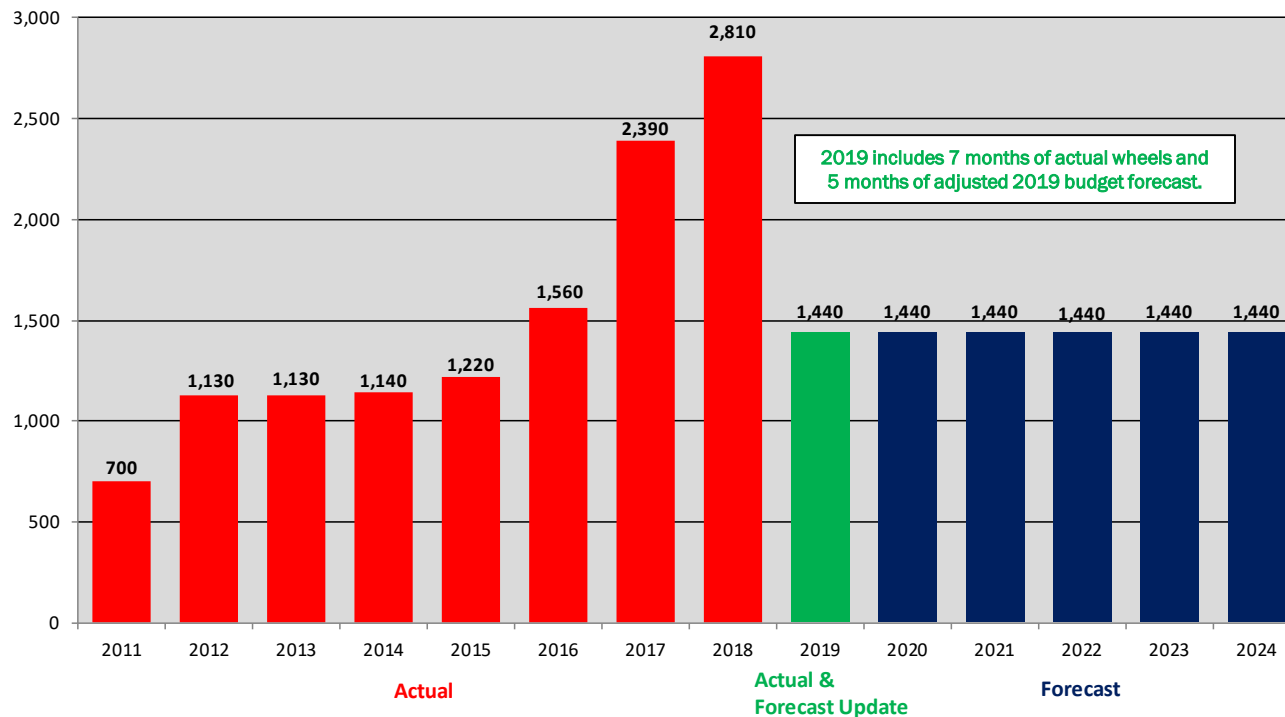
Net Energy - GWh



Exports - GWh



Wheels - GWh



RS-1 Budget Summary - GWh

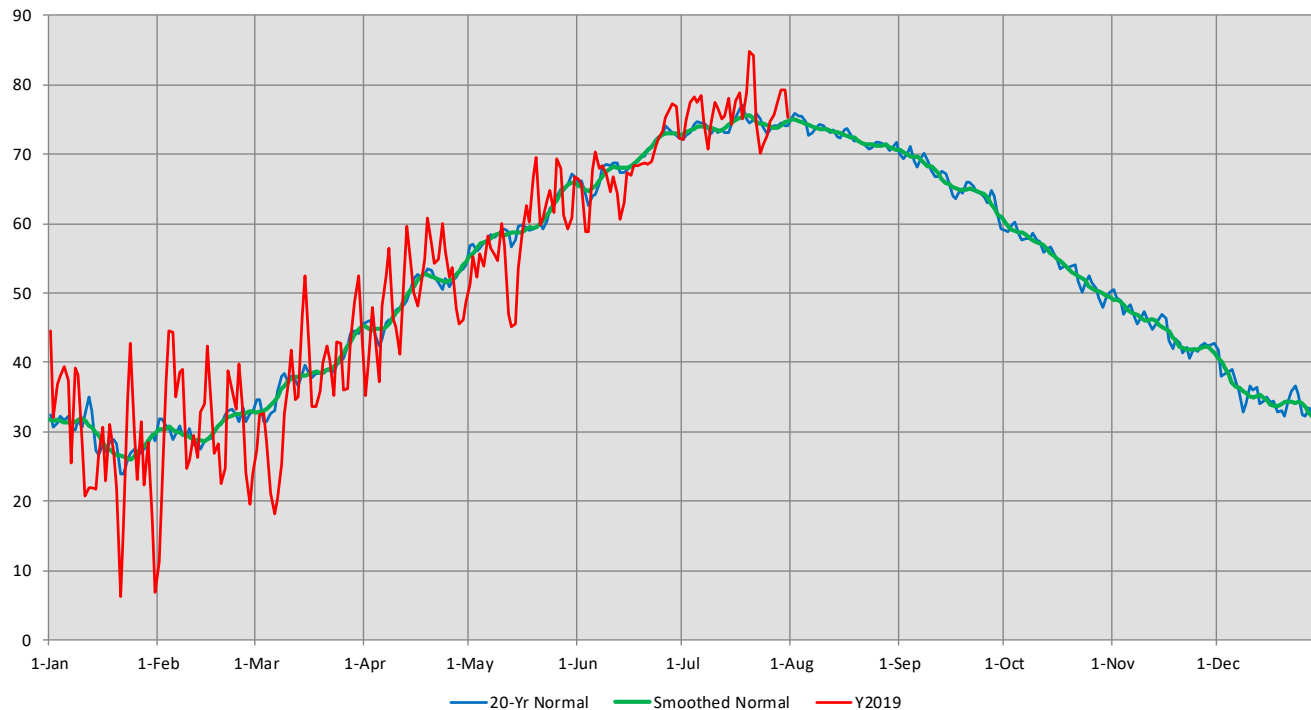
Actual & Forecast Energy - GWh						Pct Growth		
Year	Net Energy	Exports	Wheels	RS-1 Total	Forecast	Net Energy	RS-1 Tot	Cumulative
2013	159,120	8,230	1,140	168,490				
2014	156,030	10,470	1,220	167,720				
2015	157,320	10,120	1,560	169,000				
2016	156,820	2,570	2,480	161,870				
2017	152,040	2,290	2,390	156,720				
2018	156,840	2,230	1,810	160,880				
2019*	152,150	2,160	1,440	155,750	157,100	-2.99%	-2.35%	
2020	150,700	2,160	1,440	154,300	154,300	-0.95%	-1.78%	-1.78%
2021	149,380	2,160	1,440	152,980	152,980	-0.88%	-0.86%	-2.64%
2022	147,810	2,160	1,440	151,410	151,410	-1.05%	-1.03%	-3.66%
2023	146,440	2,160	1,440	150,040	150,040	-0.93%	-0.90%	-4.57%
2024	145,420	2,160	1,440	149,020	149,020	-0.70%	-0.68%	-5.25%

* 2019 Includes 7 months actual & 5 months adjusted 2019 budget forecast

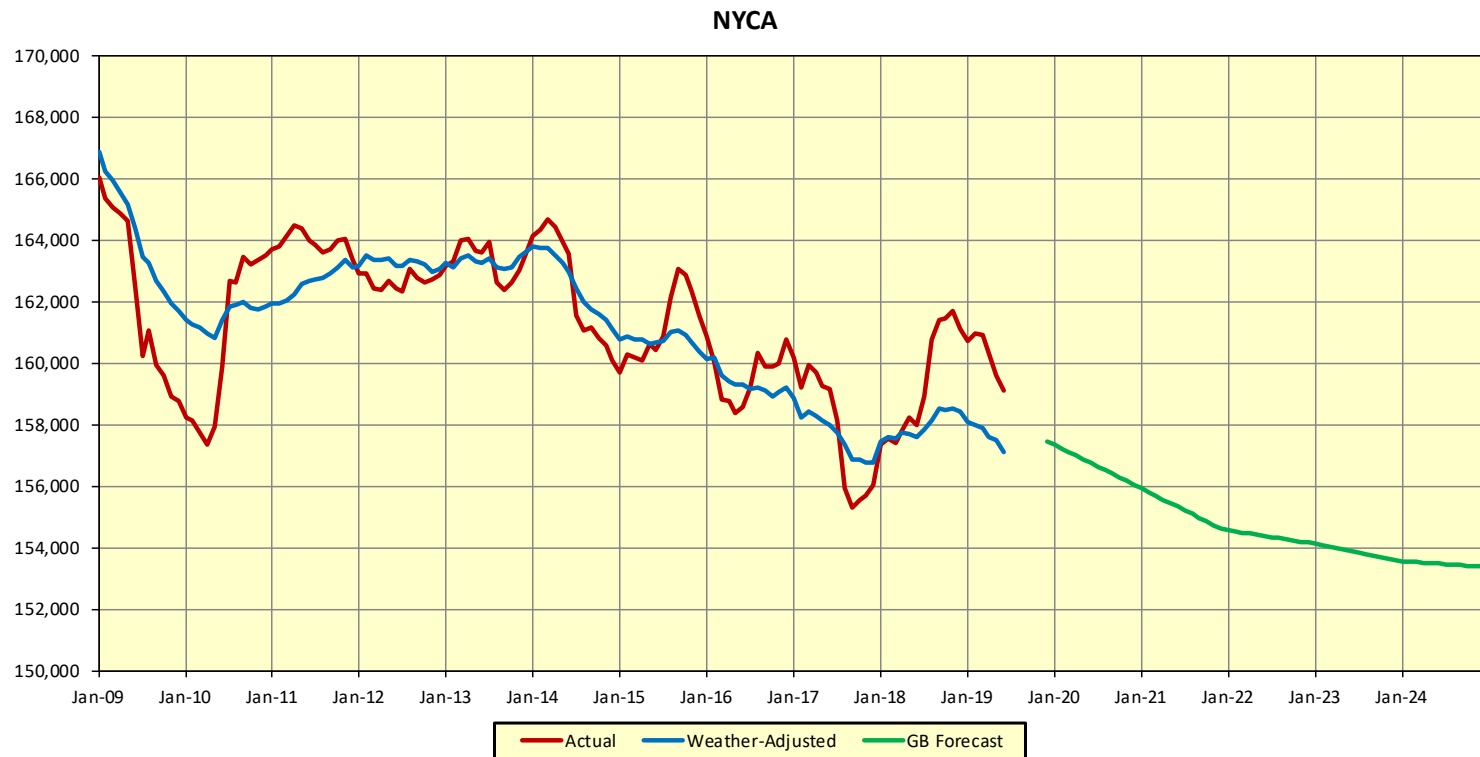
RS-1 Budget by Month, Actual and Forecast - GWh

Month	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
1	14,680	15,800	15,330	13,710	13,380	14,380	13,900	13,540	13,480	13,350	13,230	13,120
2	13,470	14,140	14,660	12,750	11,720	11,860	12,110	12,470	12,030	11,910	11,800	12,070
3	13,750	14,540	14,670	12,400	13,050	12,730	12,610	12,570	12,500	12,380	12,270	12,150
4	12,450	12,190	12,190	11,690	11,280	11,690	11,080	11,170	11,110	10,990	10,890	10,780
5	12,970	12,510	12,960	12,410	12,000	12,360	11,470	11,820	11,750	11,630	11,520	11,410
6	14,220	14,180	13,750	13,730	13,570	13,350	12,860	13,050	12,980	12,850	12,730	12,610
7	17,710	15,690	16,120	16,580	15,470	16,390	16,660	15,410	15,310	15,170	15,040	14,910
8	15,190	14,800	16,140	17,100	14,840	16,630	15,420	14,800	14,710	14,560	14,430	14,310
9	13,280	13,650	14,730	13,840	13,230	13,790	13,320	12,970	12,880	12,740	12,630	12,510
10	12,740	12,710	12,960	12,110	12,320	12,330	11,760	11,820	11,740	11,610	11,500	11,380
11	13,130	13,210	12,680	11,990	12,090	12,280	11,730	11,750	11,660	11,530	11,420	11,310
12	14,900	14,300	12,810	13,560	13,770	13,100	12,830	12,930	12,830	12,690	12,580	12,460
Annual	168,490	167,720	169,000	161,870	156,720	160,890	155,750	154,300	152,980	151,410	150,040	149,020

NYCA Composite Daily Average Temperature, 2019 and Normal



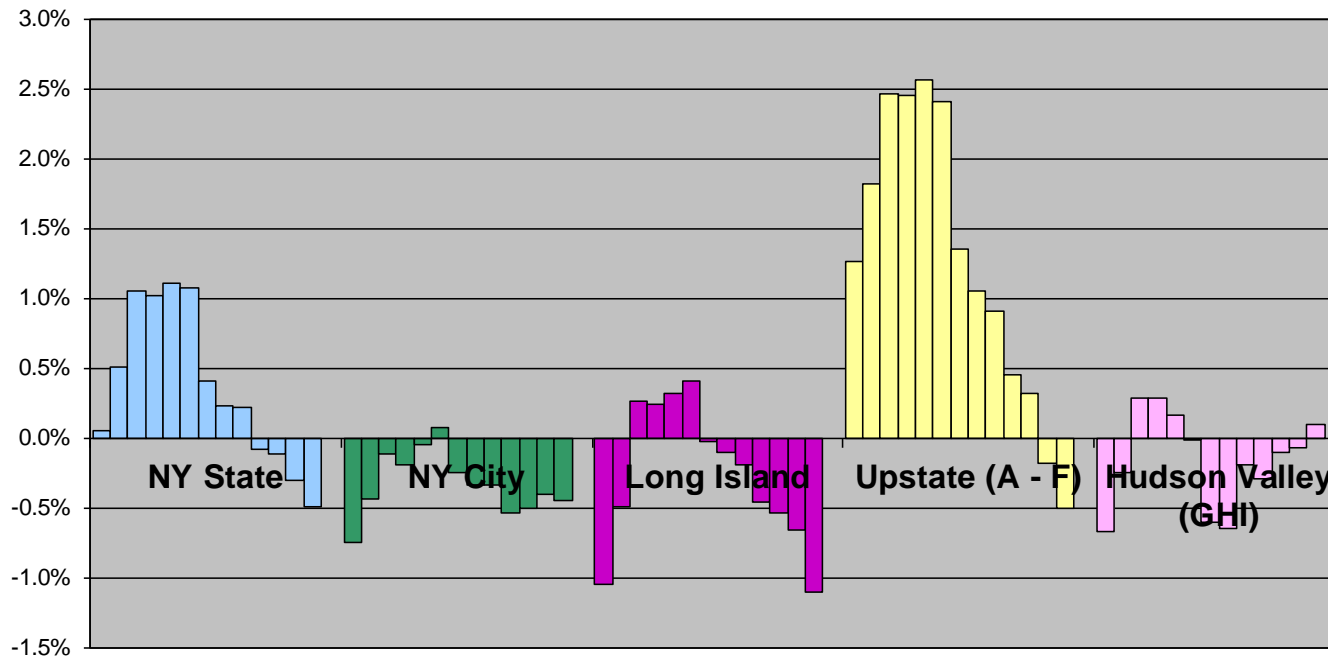
Total Energy GWh 12-Month Moving Sum - NYCA



Weather Adjusted Energy Growth Rates, July 2018 to July 2019

NYCA Sendout - 12-Month Moving Average Annual Growth Rate

Weather Adjusted Growth, Jul-2018 to Jul-2019



Questions?

The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system



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