

2025-29 RS-1 Budget Forecast

Max Schuler Demand Forecasting & Analysis

Budget & Priorities Working Group

September 6, 2024

Agenda

- 2025-29 RS-1 Budget Forecast Summary
- Net Load Forecast
- Incremental Supply Forecast
- Transactions Forecasts: Billable Exports & Wheels



2025-29 RS-1 Budget Forecast Summary



RS-1 Budget Forecast Categories

- Net Load
- Incremental Supply
 - Incremental supply is the additional supply above net load needed to compensate for transmission losses and RS-1 non-billable exports to New England

Transactions

- Billable Exports
- Wheels



Primary Budget Forecast Drivers

Net Load

- Levels driven by economic growth, increasing energy efficiency and BTM solar impacts, large loads, & electrification
- > Variability driven primarily by weather

Billable Exports & Wheels (Transactions)

- Natural gas price
- > Weather most significantly, winter weather for exports
- System conditions and balance with external control areas

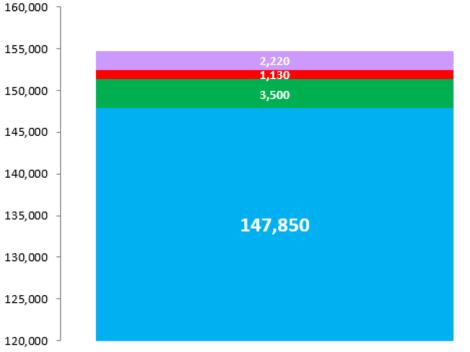
Incremental Supply

- Monthly net load
- Winter weather

2025 RS-1 Budget Forecast

2025 RS-1 Budget Forecast: 154,700 GWh

Net Load :	147,850 GWh							
Billable Exports :	3,500GWh							
Wheels :	1,130 GWh							
Incremental Supply : 2,220 GWh								
TOTAL : 154,700 GWh								
2024 RS-1 Budget Forecast : 152,100 GWh								

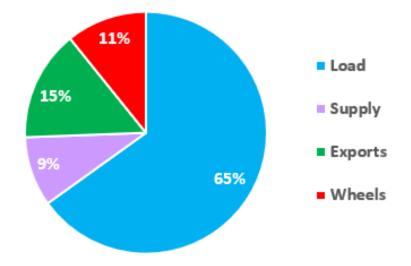




Variability of Budget Forecast Components

Percent of RS-1 Total								
Year	% Load	% Supply	% Exports	% Wheels				
2018	97.6%	1.5%	1.4%	1.1%				
2019	95.9%	1.9%	1.3%	0.9%				
2020	95.8%	2.1%	1.1%	0.9%				
2021	95.9%	1.4%	1.1%	1.5%				
2022	95.5%	1.0%	2.2%	1.6%				
2023	94.2%	1.3%	2.0%	0.9%				
2024	95.2%	1.6%	2.8%	0.4%				
2025	95.6%	1.4%	2.3%	0.7%				

RS-1 Share of Annual Variability by Component





2025 RS-1 Budget Forecast: 154,700 GWh

2025 PS-1 Budget Ecrecest - GWb (000 MWb)

2025 RS-1 Budget Forecast - GWN (000 MWN)										
Year	A/F	Month	Load ¹	Supply ²	Exports ³	Wheels	RS-1 Total	Weather Risk ⁴		
2025	Forecast	Jan	13,210	330	450	90	14,080	+/- 400		
2025	Forecast	Feb	11,770	280	450	90	12,590	+/- 350		
2025	Forecast	Mar	11,810	90	440	90	12,430	+/- 250		
2025	Forecast	Apr	10,380	90	380	80	10,930	+/- 100		
2025	Forecast	May	10,950	90	240	70	11,350	+/- 350		
2025	Forecast	Jun	12,540	180	180	110	13,010	+/- 500		
2025	Forecast	Jul	15,190	210	180	140	15,720	+/- 900		
2025	Forecast	Aug	14,650	200	180	140	15,170	+/- 800		
2025	Forecast	Sep	11,970	170	170	120	12,430	+/- 500		
2025	Forecast	Oct	11,240	140	170	60	11,610	+/- 200		
2025	Forecast	Nov	11,360	160	200	40	11,760	+/- 200		
2025	Forecast	Dec	12,780	280	460	100	13,620	+/- 300		
Ann	ual Forec	ast:	147,850	2,220	3,500	1,130	154,700	+/- 3,000		

1 - Net load (excluding transmission system losses)

2 - Incremental supply of injections (relative to load) in support of non-billable exports and losses

3 - Billable exports (excludes exports to New England per the CTS agreement)

4 - Annual weather risk is lower than the monthly sum due to the likelihood of offsetting impacts

Seasonal weather risks: Summer +/- 2,500 GWh, Winter +/- 1,000 GWh



2025 RS-1 Budget Forecast Discussion

- The 2025 RS-1 budget forecast value is a small decrease of less than 1% relative to the expected 2024 weather normalized RS-1 collections
- Positive year-over-year (YoY) load growth drivers include increasing impacts from interconnecting large loads, electric vehicles, heating electrification, and economic growth
- Negative YoY load drivers include the continued load reductions due to policy-driven growth in energy efficiency and behind-the-meter Solar
- Exports are projected to be lower than 2024, and wheels higher than 2024, as both regress slightly toward their typical levels



2025-29 RS-1 Budget Summary

Actual & Forecast RS-1 Components - GWh									
				WN Pct Growth					
Year	Load ¹	Supply ²	Exports ³	Wheels	RS-1 Total	W-Normal ⁴	Net Load ^a	RS-1 Tot ^b	Cumulative ^c
2018	156,860	2,410	2,250	1,810	163,330	160,650			
2019	151,560	3,030	2,080	1,370	158,040	158,060			
2020	146,240	3,240	1,680	1,370	152,530	152,640			
2021	148,210	2,120	1,720	2,310	154,360	154,530			
2022	149,110	1,630	3,510	2,550	156,800	156,180			
2023	143,940	1,980	3,090	1,390	150,400	152,870			
2024*	148,490	2,470	4,290	650	155,900	155,990	1.48%	2.04%	
2025	147,850	2,220	3,500	1,130	154,700	154,700	-0.49%	-0.83%	-0.83%
2026	149,810	2,240	3,720	1,130	156,900	156,900	1.33%	1.42%	0.58%
2027	151,090	2,270	3,730	1,110	158,200	158,200	0.85%	0.83%	1.42%
2028	151,700	2,270	3,740	1,090	158,800	158,800	0.40%	0.38%	1.80%
2029	152,320	2,270	3,740	1,070	159,400	159,400	0.41%	0.38%	2.19%

* 2024 Includes 7 months estimated actual & 5 months updated budget forecast

(1) - net load (excluding transmission system losses)

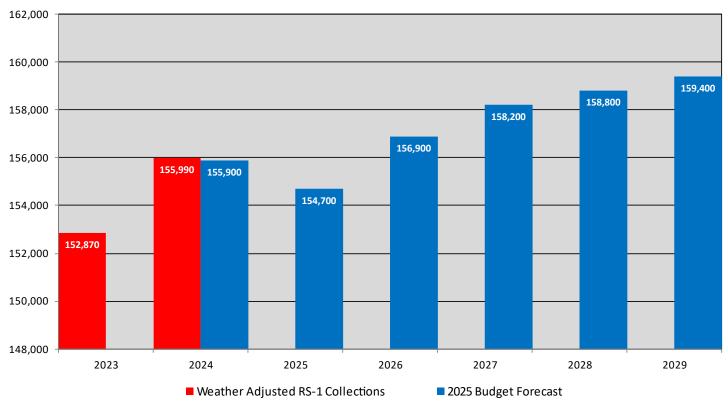
(2) - incremental supply of injections (relative to load) in support of non-billable exports and losses

- (3) billable exports (excludes exports to New England per the CTS agreement)
- (4) weather-normalized RS-1 collections
- (a) year-over-year percent change in weather-normalized net load
- (b) year-over-year percent change in weather-normalized RS-1 Budget forecast

(c) - cumulate percent change in weather-normalized RS-1 Budget forecast relative to 2024 projection

RS-1 Budget Forecast - GWh





Note: Red 2024 bar represents weather adjusted loads through July plus updated budget forecast for rest of year

New York ISO

2025-29 RS-1 Budget Forecast Growth Drivers - Annual Percent Impact*

1.0% 0.9% 1.0% 0.4% 0.4% 0.5% 0.05% 0.03% 0.0% -0.03% -0.06% -0.5% -0.6% -1.0% -1.3% -1.5% Energy **BTM Solar** Billable Incremental Climate Wheels Econometric Large Loads Electrification^ RS-1 Total Efficiency Growth Exports Supply

* 2025-29 average annual growth, relative to projected 2024 collections

^ Includes both electric vehicle and building electrification impacts

1.5%

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

Month	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Jan	14,630	14,270	13,280	13,510	14,560	13,080	14,140	14,080	14,380	14,670	14,820	15,100
Feb	12,010	12,410	12,260	12,430	12,480	11,880	12,380	12,590	12,840	13,100	13,430	13,410
Mar	12,910	12,780	11,760	12,140	12,280	12,170	12,170	12,430	12,670	12,920	13,020	13,230
Apr	11,830	11,240	10,540	10,770	11,240	10,610	11,150	10,930	11,080	11,150	11,140	11,150
May	12,450	11,670	10,760	11,370	12,060	10,910	11,600	11,350	11,460	11,500	11,470	11,440
Jun	13,470	13,080	13,170	13,900	12,930	12,260	13,910	13,010	13,100	13,130	13,070	13,020
Jul	16,540	16,930	16,640	15,080	15,990	15,850	16,290	15,720	15,820	15,830	15,780	15,720
Aug	16,870	15,340	15,420	15,940	16,120	14,050	15,210	15,170	15,280	15,290	15,230	15,190
Sep	13,960	12,820	12,420	12,770	12,500	12,770	12,470	12,430	12,550	12,570	12,530	12,520
Oct	12,650	11,810	11,640	11,820	11,330	11,550	11,510	11,610	11,820	11,910	11,960	12,040
Nov	12,590	12,200	11,430	11,630	11,810	11,970	11,630	11,760	11,980	12,080	12,180	12,280
Dec	13,420	13,490	13,210	13,000	13,500	13,300	13,440	13,620	13,920	14,050	14,170	14,300
Annual	163,330	158,040	152,530	154,360	156,800	150,400	155,900	154,700	156,900	158,200	158,800	159,400



Net Load Forecast

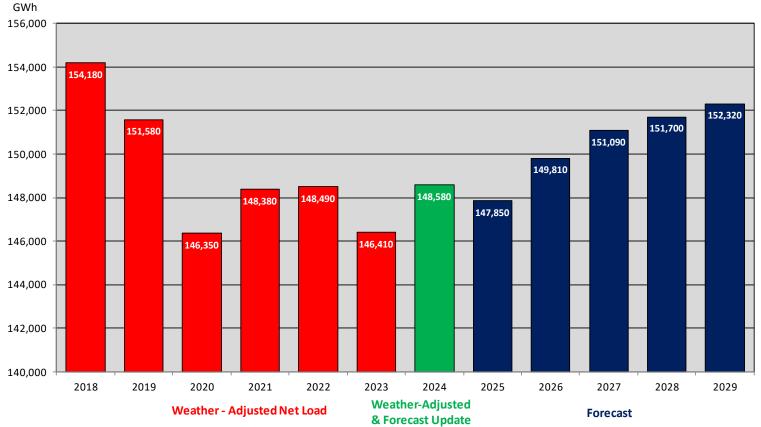


Net Load Forecast

- Net load forecast models developed including the impacts of:
 - Economy models utilize the April 2024 Moody's forecast
 - Climate trends warmer weather in summer months and milder weather in winter months over time
 - Energy efficiency and BTM solar continued load-reducing impacts driven by state policies
 - Electrification load increasing impacts primarily due to electric vehicles and heating electrification
 - Large Loads based on recent information including from Transmission Owners
- Forecast levels are very similar to the 2024 Gold Book forecast

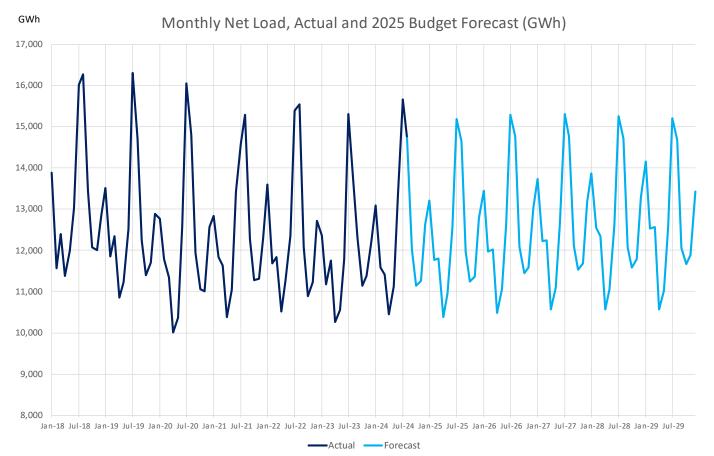


Net Load - GWh



Note: 2024 includes 7 months weather adjusted net load and 5 months updated budget forecast

Monthly Net Load





Incremental Supply Forecast

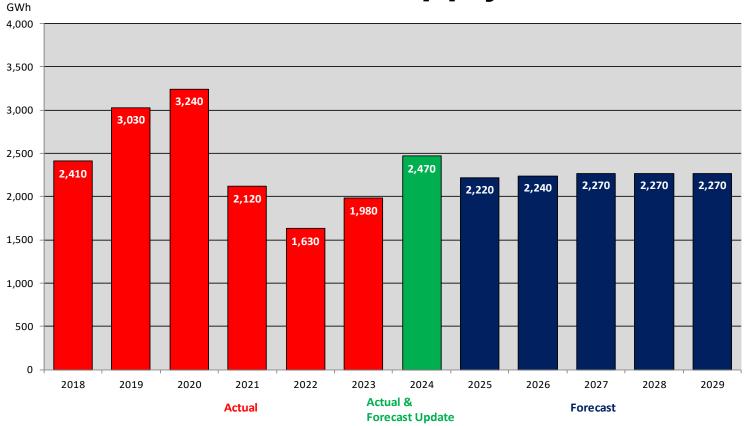


Incremental Supply Forecast

- Incremental supply quantifies the additional injections (relative to net load) needed to support transmission losses and RS-1 non-billable exports to New England
- Model-based forecast including:
 - Monthly net load
 - Winter weather variable
 - Calendar and lag terms



Incremental Supply - GWh



Note: 2024 includes 7 months actual and 5 months updated budget forecast

Transactions Forecasts



Transactions Forecasts

Billable Exports

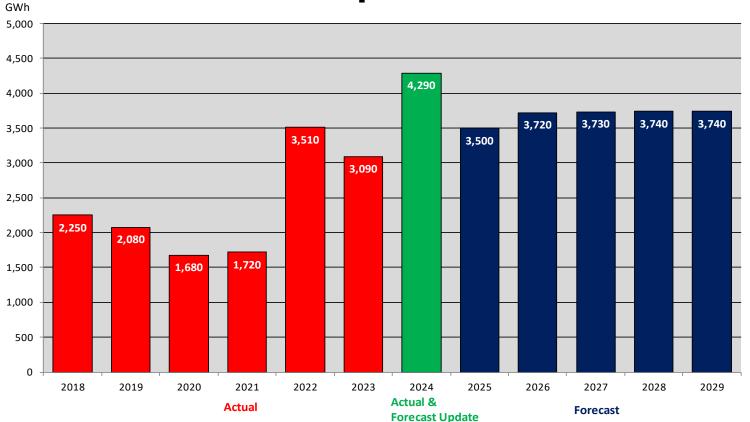
- RS-1 billable exports exclude exports to New England per the CTS agreement implemented in 2016
- > Due to the high variability of export trends and levels, models were developed by external control area
- Models include variables for natural gas price, winter weather, trend, calendar, and other variables as appropriate
- Exports have been generally elevated since 2022, with a jump during the 2023-24 winter months
- > Exports are projected to remain elevated in future years

Wheels

- > Forecast model including variables for natural gas price, weather, calendar, and trend terms
- Wheels are expected to rebound slightly toward the long-term average following recent deceases since mid-2023



Billable Exports - GWh

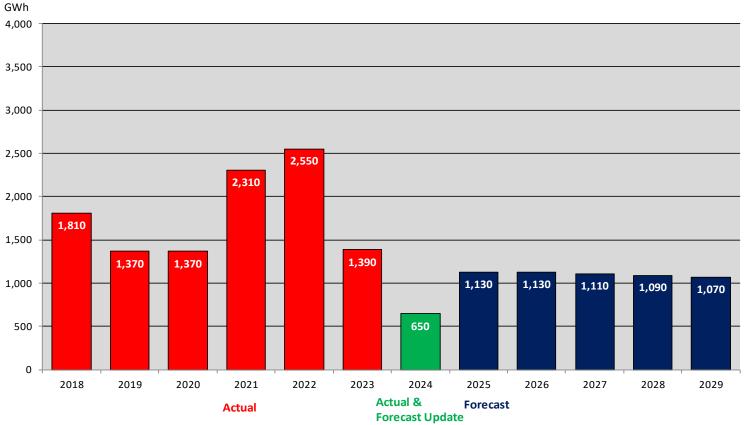


Note: 2024 includes 7 months of actual exports and 5 months of the updated budget forecast



New York ISO

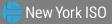
Wheels - GWh



Note: 2024 includes 7 months of actual wheels and 5 months of the updated budget forecast



Questions?



Our Mission & Vision

 \checkmark

Mission

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



Vision

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

