

# 2025 Long-Term Forecast Assumptions

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March 4, 2025

# Agenda

- Long-Term Forecast Methodology
- Energy Efficiency
- Energy Storage
- Behind-the-Meter (BTM) Non-Solar Distributed Generation (DG)
- Other Load Impacts

# Long-Term Forecast Methodology

**Base Load Forecast: Statistically Adjusted End-Use (SAE) models** account for:

- Economic and demographic trends
- Weather trends
- Appliance saturation and efficiency trends
- Recent load growth trends

## **Load reducing modifiers:**

- Additional energy efficiency savings
- BTM solar impacts
- BTM DG impacts
- BTM storage peak reductions

## **Load increasing modifiers:**

- Electric vehicle impacts
- Heating, cooling, and base load electrification
- Large load projects
- Storage net energy consumption

## **Final Peak and Energy Forecasts - Itron Metrix LT software:**

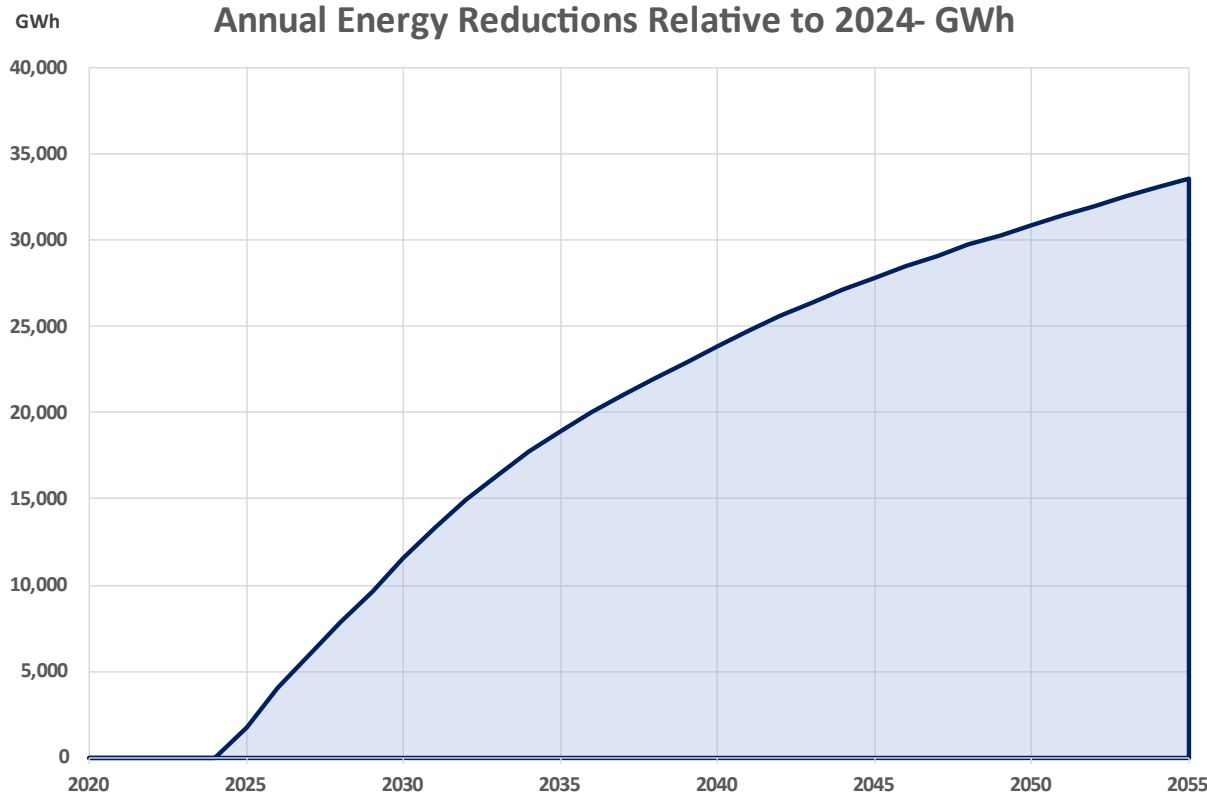
- Compilation of 8,760 hourly load shapes for base load and all technologies/load modifiers
- Dynamic calculation of peak load forecast based on the 8,760 shapes
- Additional information is considered, including forecasts from Transmission Owners

# Energy Efficiency

# Energy Efficiency and Codes & Standards Impacts

- **Primary data sources for historical energy savings estimates:**
  - Utility Energy Efficiency Transition Implementation and Clean Energy Dashboard scorecards
  - New York State Department of Public Service (DPS) and New York State Energy Research and Development Authority (NYSERDA) energy efficiency and building electrification reporting
  - U.S. Energy Information Administration (EIA) annual energy efficiency reporting data
- **Primary forecast considerations:**
  - Programmatic energy savings driven by New York State energy efficiency policy targets
  - Building codes and appliance energy efficiency standards
  - Future heating and cooling load reductions from building shell improvements
  - Transmission Owner information and forecasts

# Preliminary Energy Efficiency and Codes & Standards Forecast



**Seasonal Coincident Peak Reductions\* - MW**

Year	Summer Peak	Winter Peak
2025	300	200
2030	2,200	1,800
2035	3,700	3,100
2040	4,600	4,200
2045	5,300	5,200
2050	5,700	6,200
2055	6,100	7,200

\* Relative to 2024

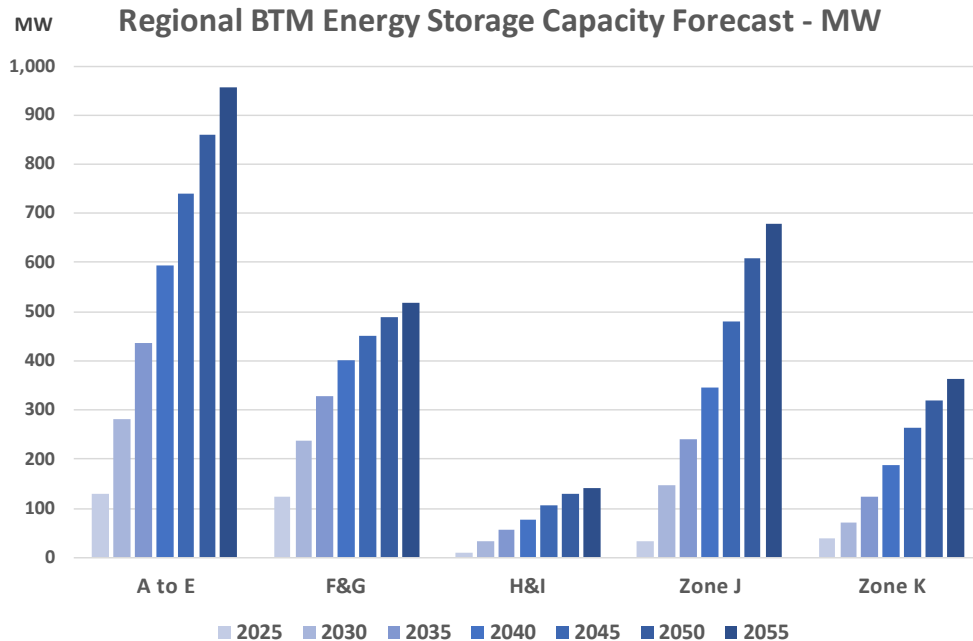
These are preliminary estimates and subject to revision prior to the 2025 Gold Book forecast

# Energy Storage

# Battery Energy Storage Forecast

- The Gold Book storage capacity forecast includes only BTM storage
- The BTM storage forecast considers storage resources included in the SIR database and Transmission Owner information
- A portion of installed BTM storage is expected to reduce system peak demand by injecting energy into the New York Control Area grid during the summer and winter peak hours
- Both wholesale and BTM storage resources have relatively small net annual electricity consumption due to less than 100% round trip efficiency of the charging/discharging cycle
- There is an underlying wholesale storage capacity projection used to estimate net electricity consumption, which considers storage resources listed on the NYISO Interconnection Queue
- In the long run, the majority of projected storage capacity is expected to be wholesale, based on the relative sizes of the NYISO wholesale and SIR BTM project pipelines
- The total (wholesale + BTM) underlying storage capacity projection is consistent with New York State energy storage targets

# Preliminary Energy Storage Forecast



These are preliminary estimates and subject to revision prior to the 2025 Gold Book forecast

## NYCA Preliminary Energy Storage Forecast

Year	<i>Behind-the-Meter Only</i>	<i>BTM + Wholesale</i>	
	Capacity (MW)	Peak Reductions (MW)	Net Energy Consumption (GWh)
2025	400	200	100
2030	1,000	500	900
2035	1,500	800	1,300
2040	2,100	1,200	1,800
2045	2,700	1,500	2,200
2050	3,200	1,800	2,700
2054	3,500	2,000	3,000

*Pipeline Storage in the Queue:*

**NYISO IQ: ~ 31,000 MW**

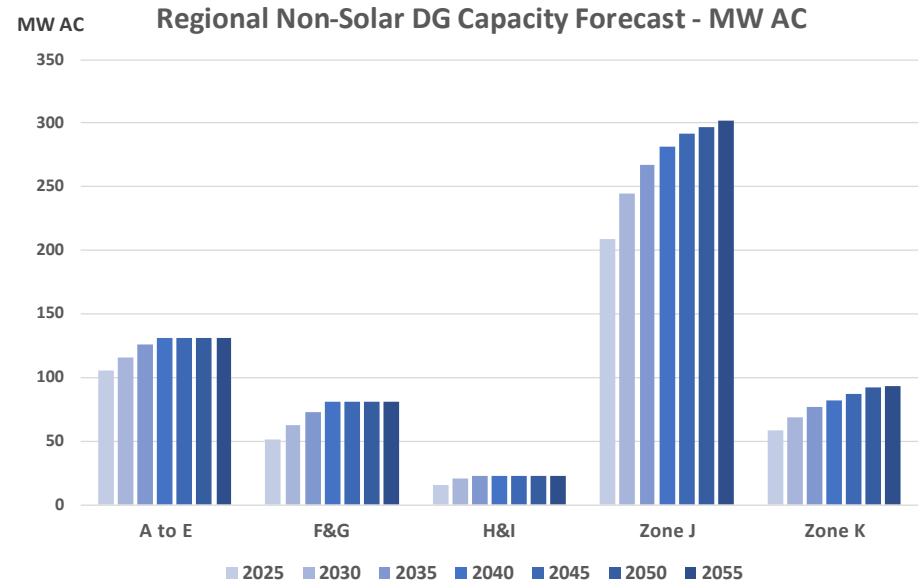
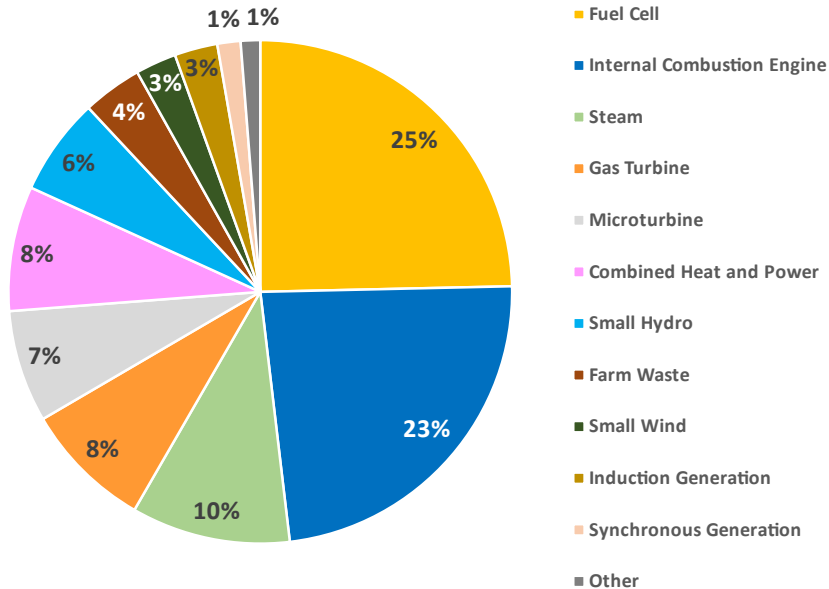
**SIR: ~ 2,400 MW**

# BTM Non-Solar DG

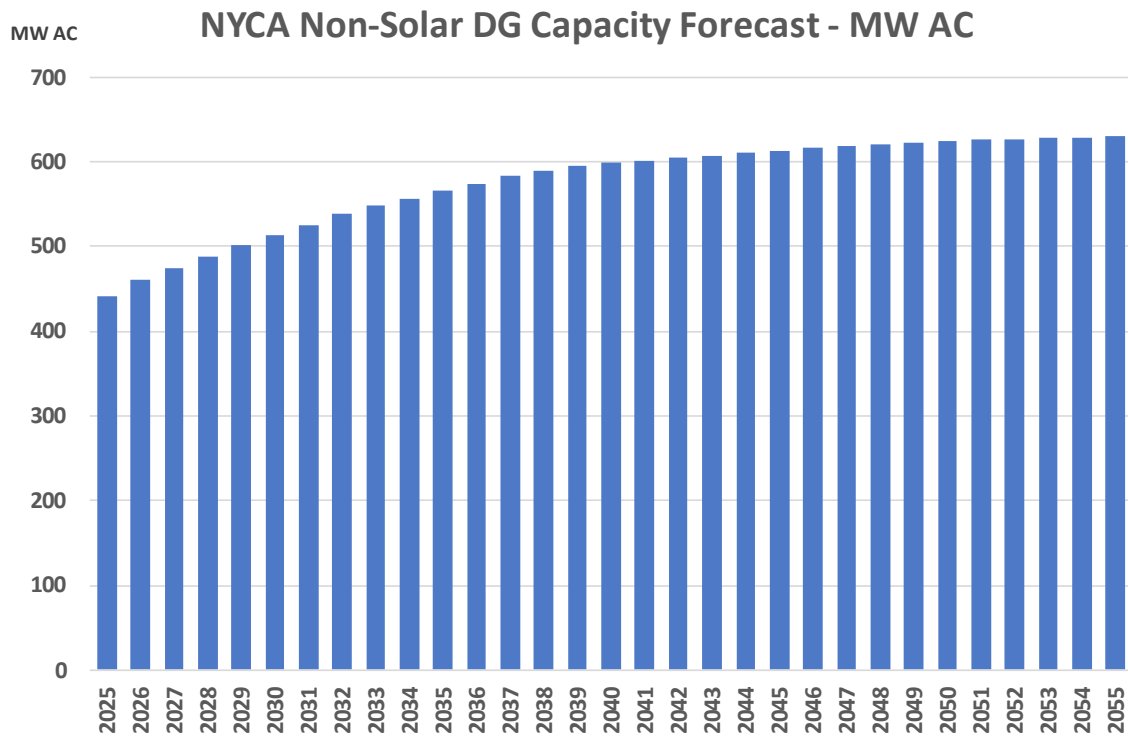
# BTM Non-Solar DG Forecast

The forecast considers BTM non-solar DG included in the SIR and NYSERDA databases and Transmission Owner information; it excludes battery storage resources.

Existing Non-Solar Distributed Generation (2024 SIR)



# BTM Non-Solar DG Forecast



**NYCA Preliminary Non-Solar DG Impacts**

Year	Annual Energy Reductions (GWh)	Peak Reductions (MW AC)
2025	1,990	330
2030	2,310	380
2035	2,550	410
2040	2,700	440
2045	2,750	450
2050	2,790	450
2055	2,810	450

These are preliminary estimates and subject to revision prior to the 2025 Gold Book forecast

# Other Load Impacts

# BTM Solar and Large Load Forecasts

- **The 2025 BTM solar forecast is expected to be similar to the 2024 Gold Book forecast because actual BTM solar installed capacity is tracking closely to the 2024 forecast. The 2025 forecast will include achievement of the 10 GW MW DC capacity target in 2030.**
- **The 2025 large load forecast will consider the most recent updates and information from Transmission Owners and project developers. There will be changes/additions/subtractions to specific load projects and the resulting zonal forecasts.**

# Questions?

# Our Mission and Vision



## Mission

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



## Vision

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

