New York ISO
Independent System Operator

2025 Gold Book Forecast Graphs

April 2025

2025 Gold Book Forecast Graphs

1. **Load Shape Projections**

   Projected load shapes on high load January and July days in future years

2. **10-Year NYCA Baseline Forecast Summaries**

   Including energy and peak demand forecasts before large load growth

3. **NYCA Forecast Scenarios**

   NYCA scenario summary, NYCA forecast graphs, and baseline and policy scenario forecast impacts

4. **Area Forecast Summaries**

   Annual energy and summer and winter peak forecasts for Zones A to E, Zones F&G, Zones H&I, Zone J, and Zone K

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Load Shape Projections

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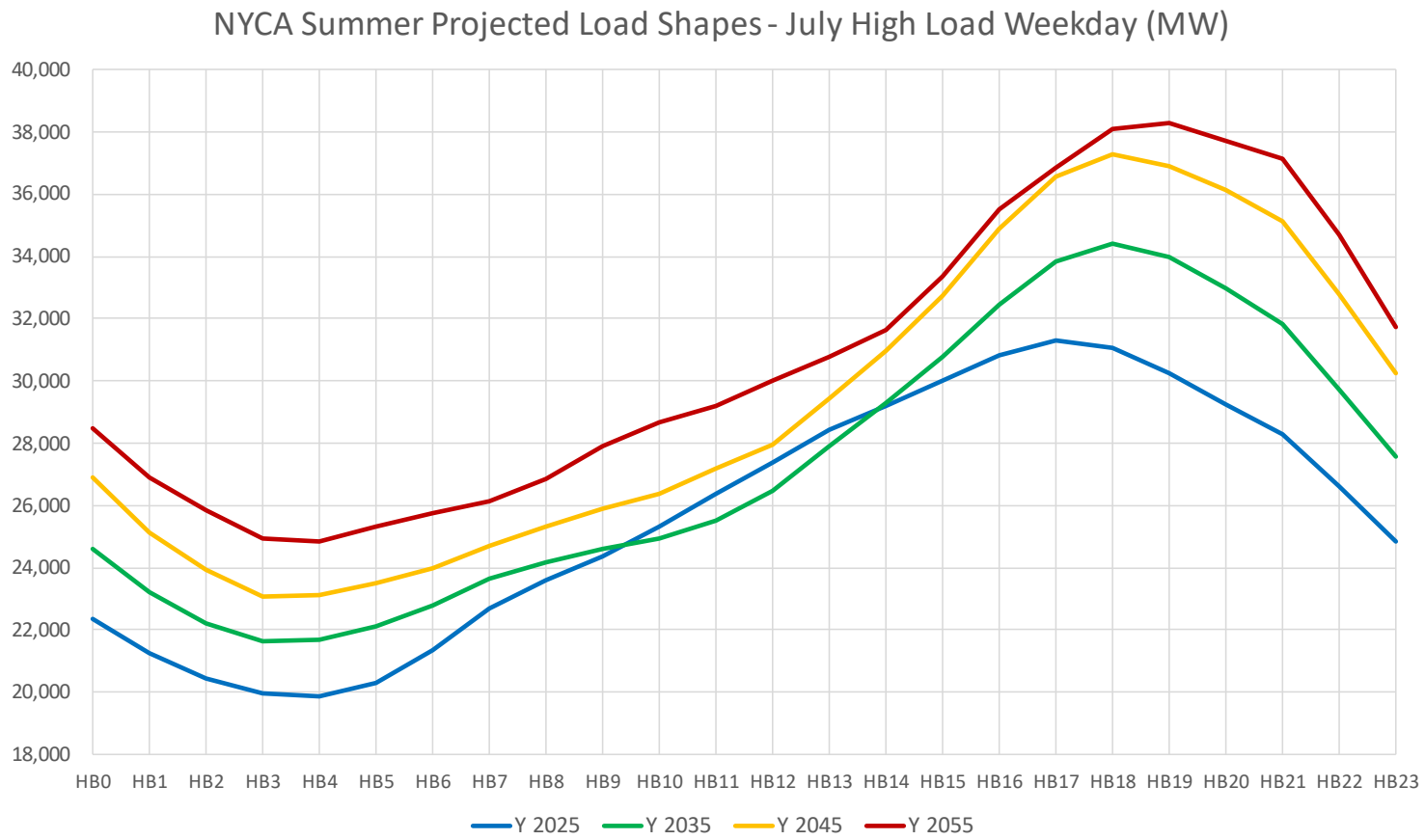
Projected Summer Load Shapes



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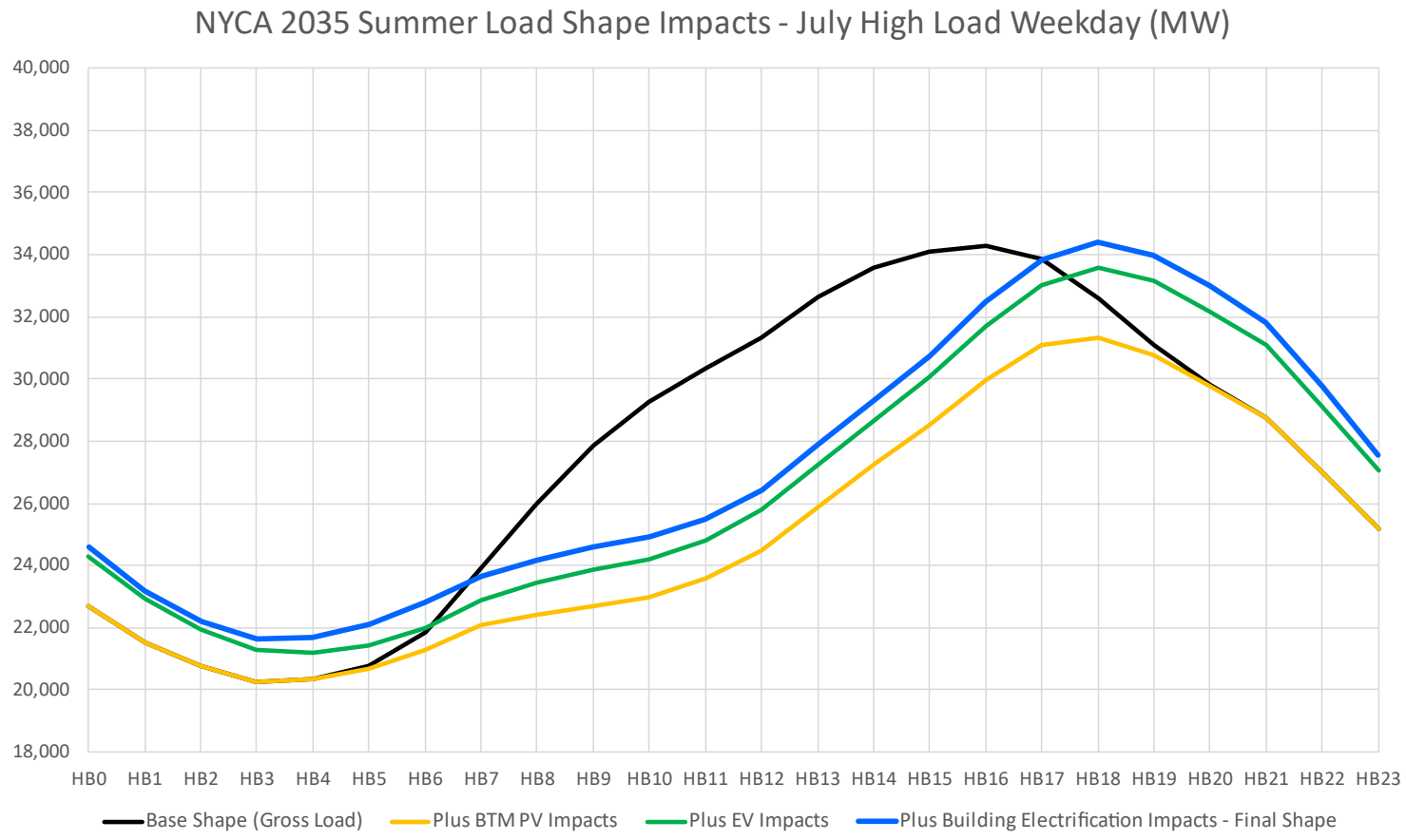
2035 Summer Load Shape Impacts



Black line shows projected base load shape (gross load).

Yellow line shows base load shape plus BTM solar reductions.

Green line shows base load shape plus BTM solar reductions and EV charging impacts.

Blue line shows final projected load shape – base shape plus BTM PV, EV, and building electrification impacts.

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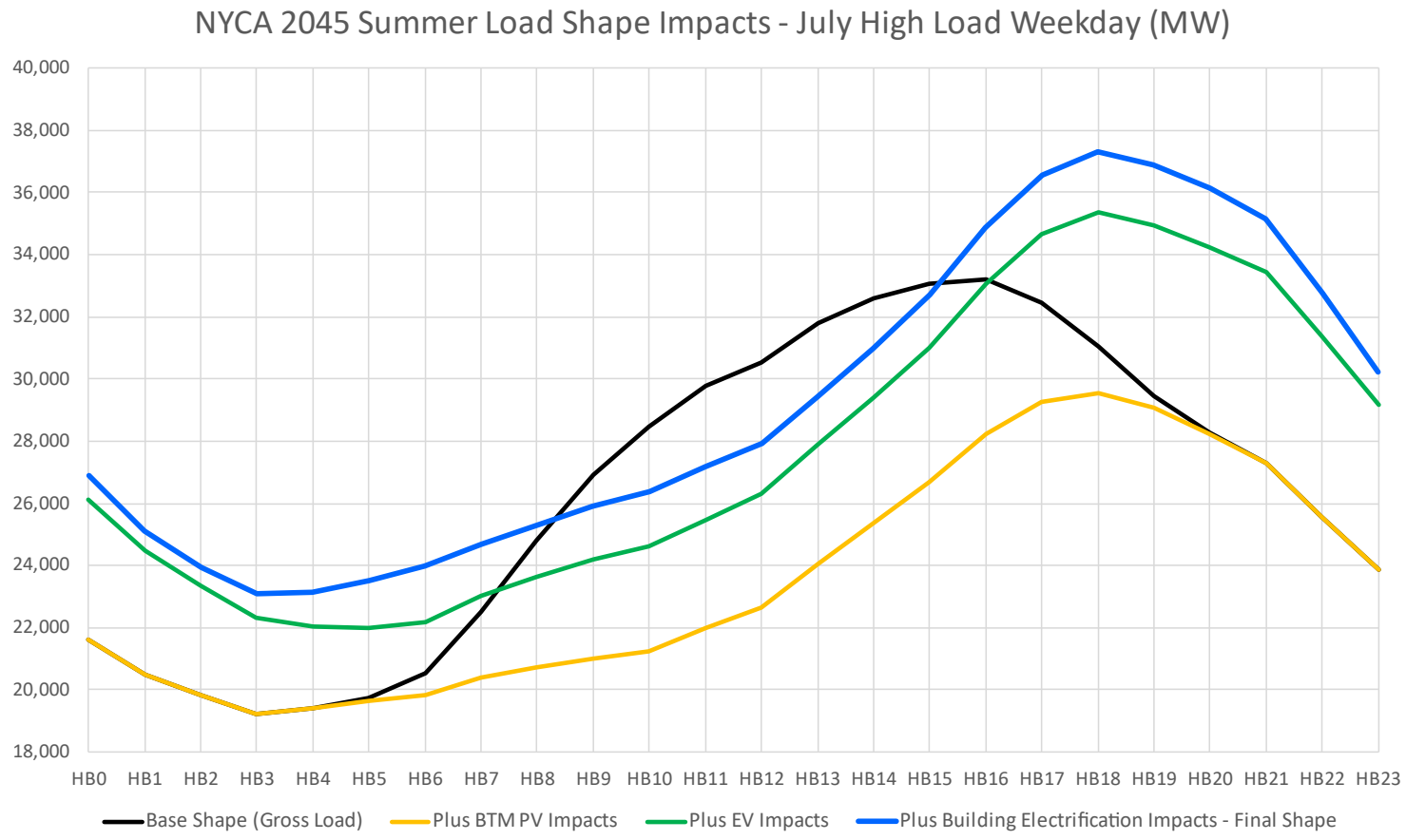
2045 Summer Load Shape Impacts



Black line shows projected base load shape (gross load).

Yellow line shows base load shape plus BTM solar reductions.

Green line shows base load shape plus BTM solar reductions and EV charging impacts.

Blue line shows final projected load shape – base shape plus BTM PV, EV, and building electrification impacts.

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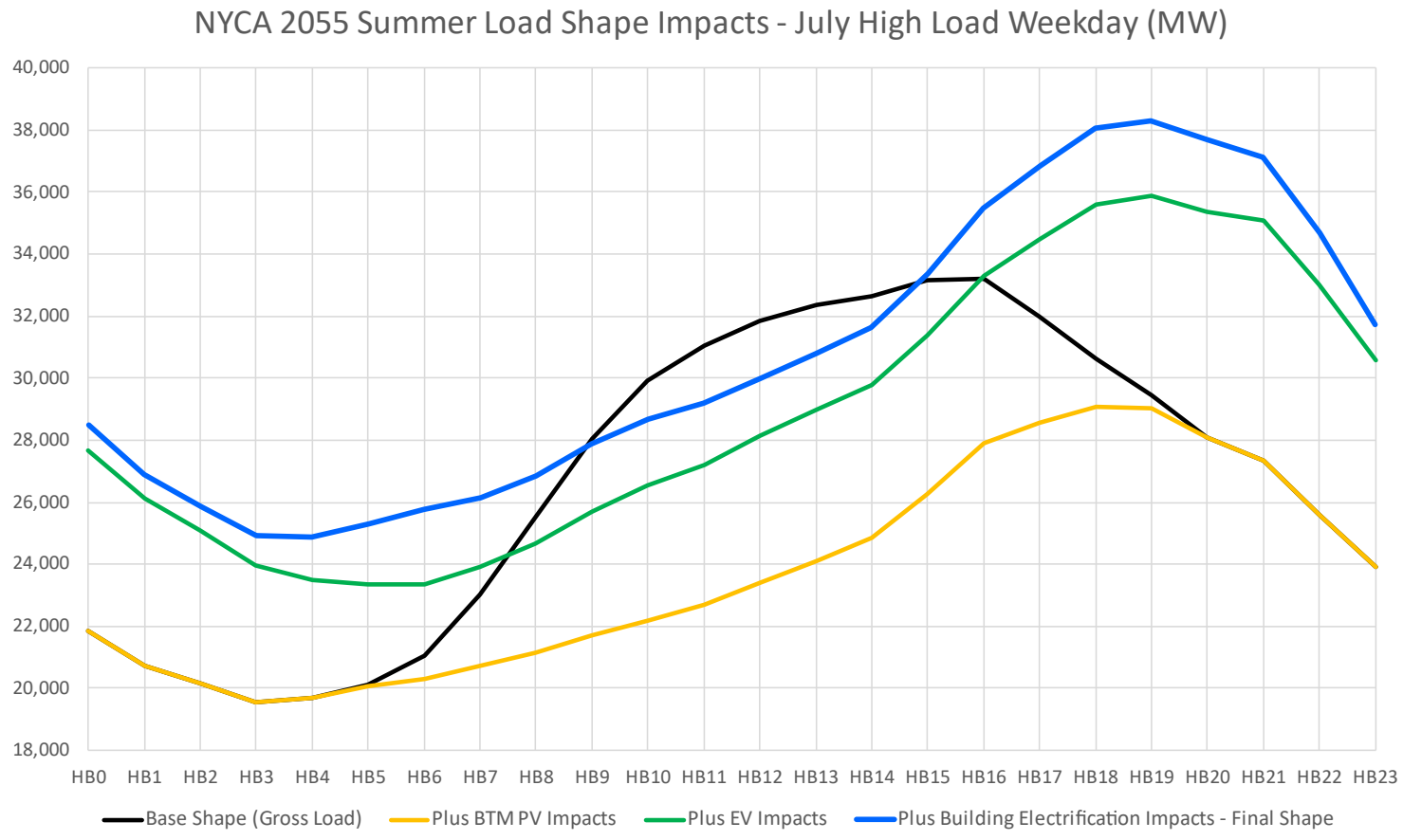
2055 Summer Load Shape Impacts



Black line shows projected base load shape (gross load).

Yellow line shows base load shape plus BTM solar reductions.

Green line shows base load shape plus BTM solar reductions and EV charging impacts.

Blue line shows final projected load shape – base shape plus BTM PV, EV, and building electrification impacts.

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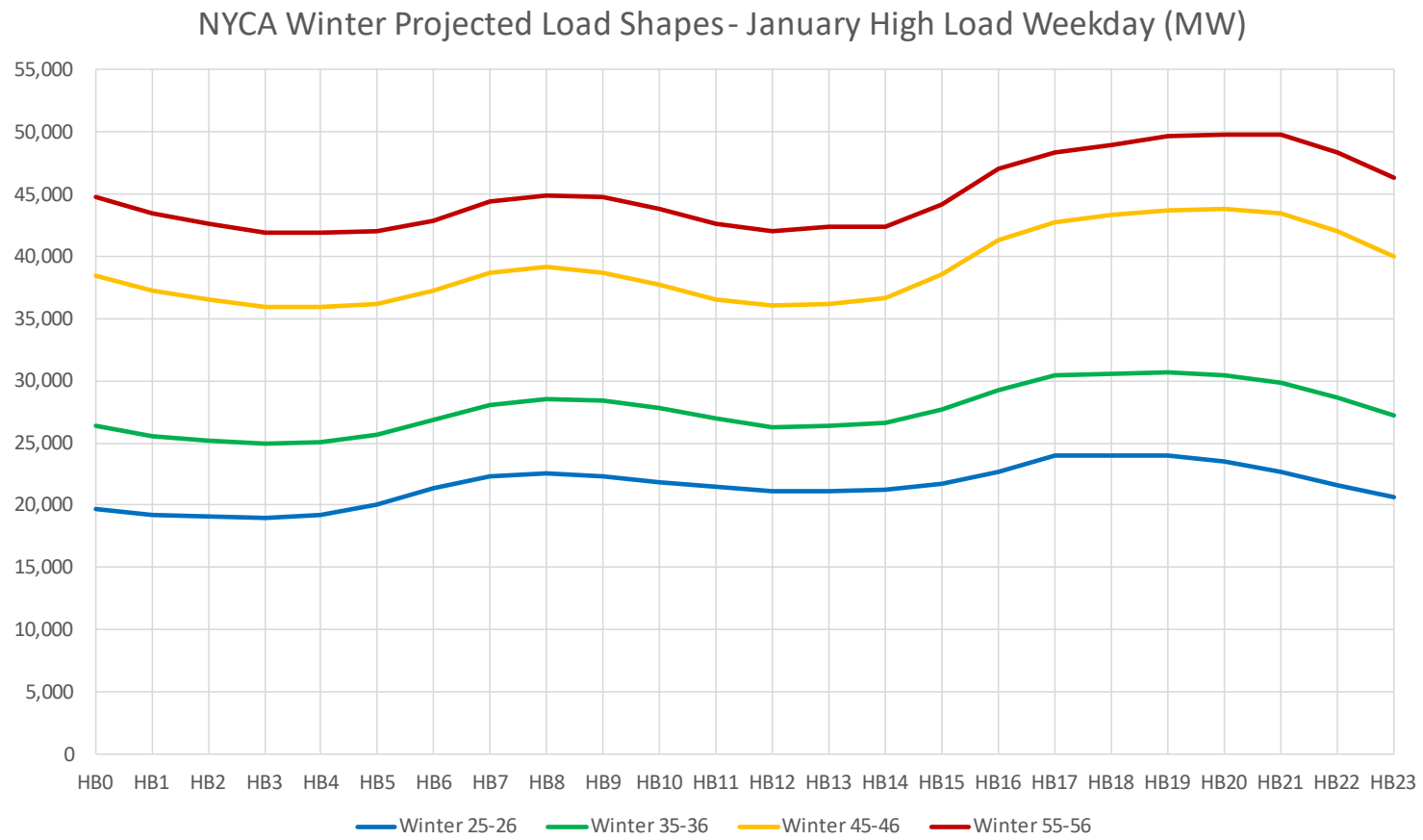
Projected Winter Load Shapes



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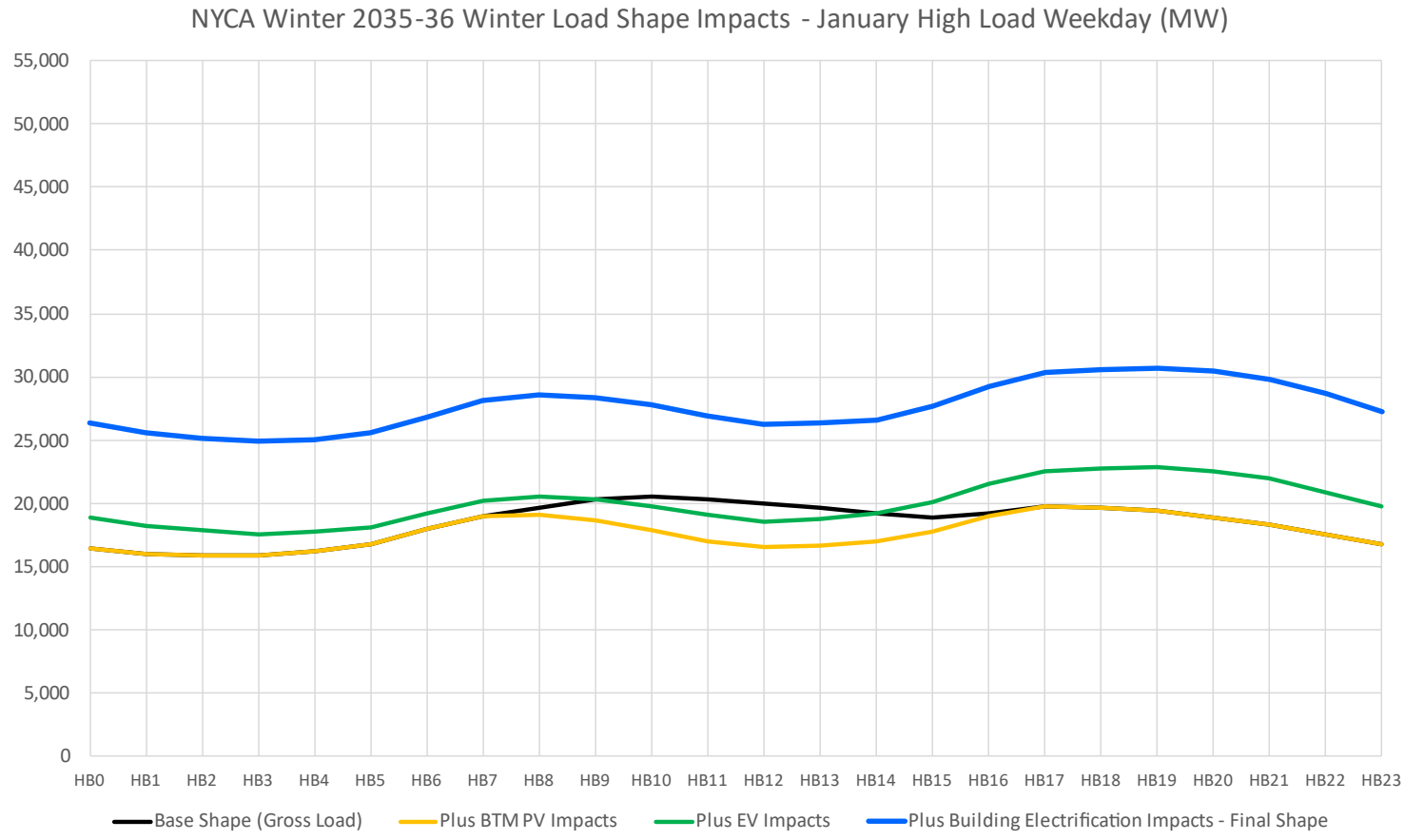
2035-36 Winter Load Shape Impacts



Black line shows projected base load shape (gross load).

Yellow line shows base load shape plus BTM solar reductions.

Green line shows base load shape plus BTM solar reductions and EV charging impacts.

Blue line shows final projected load shape – base shape plus BTM PV, EV, and building electrification impacts.

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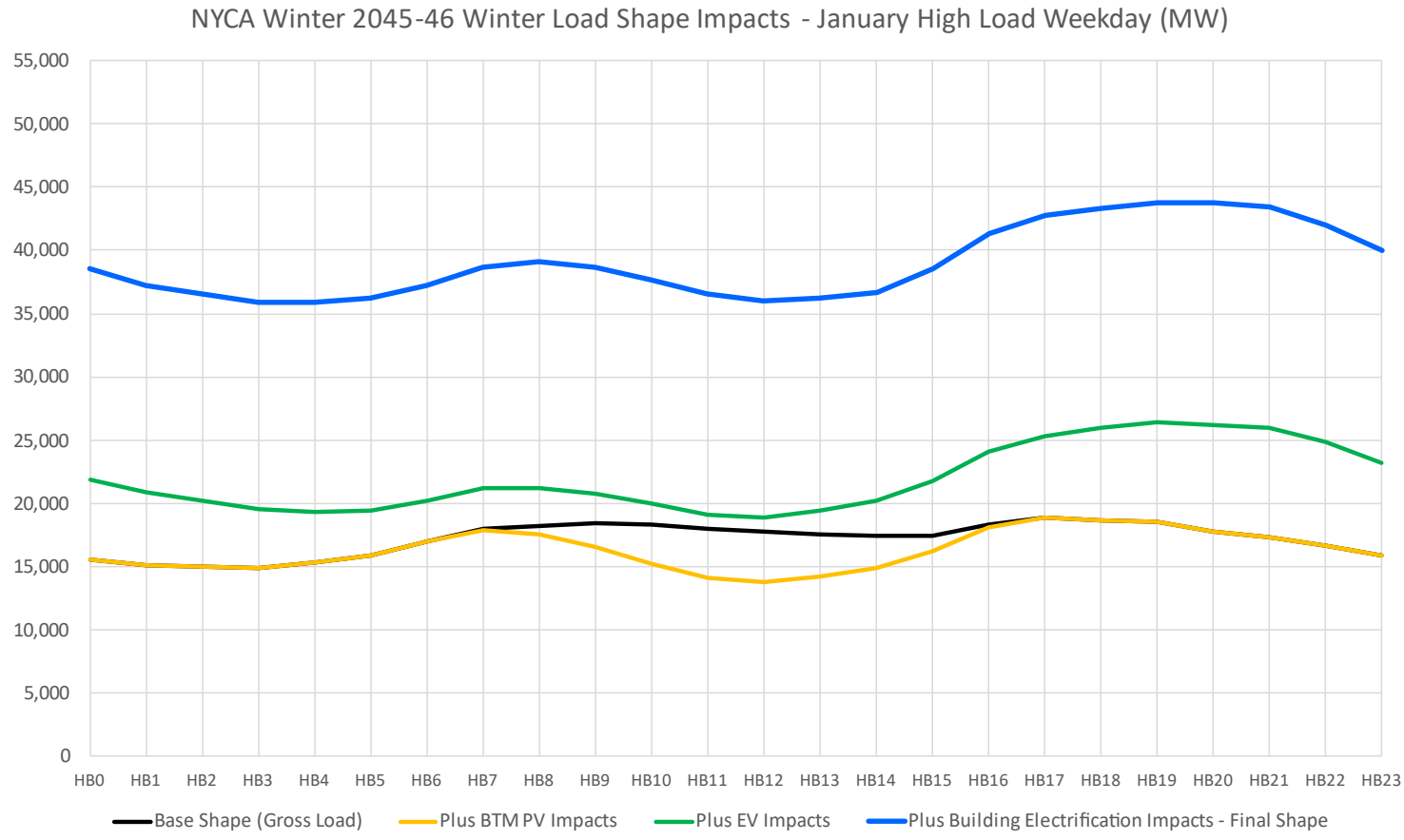
2045-46 Winter Load Shape Impacts



Black line shows projected base load shape (gross load).

Yellow line shows base load shape plus BTM solar reductions.

Green line shows base load shape plus BTM solar reductions and EV charging impacts.

Blue line shows final projected load shape – base shape plus BTM PV, EV, and building electrification impacts.

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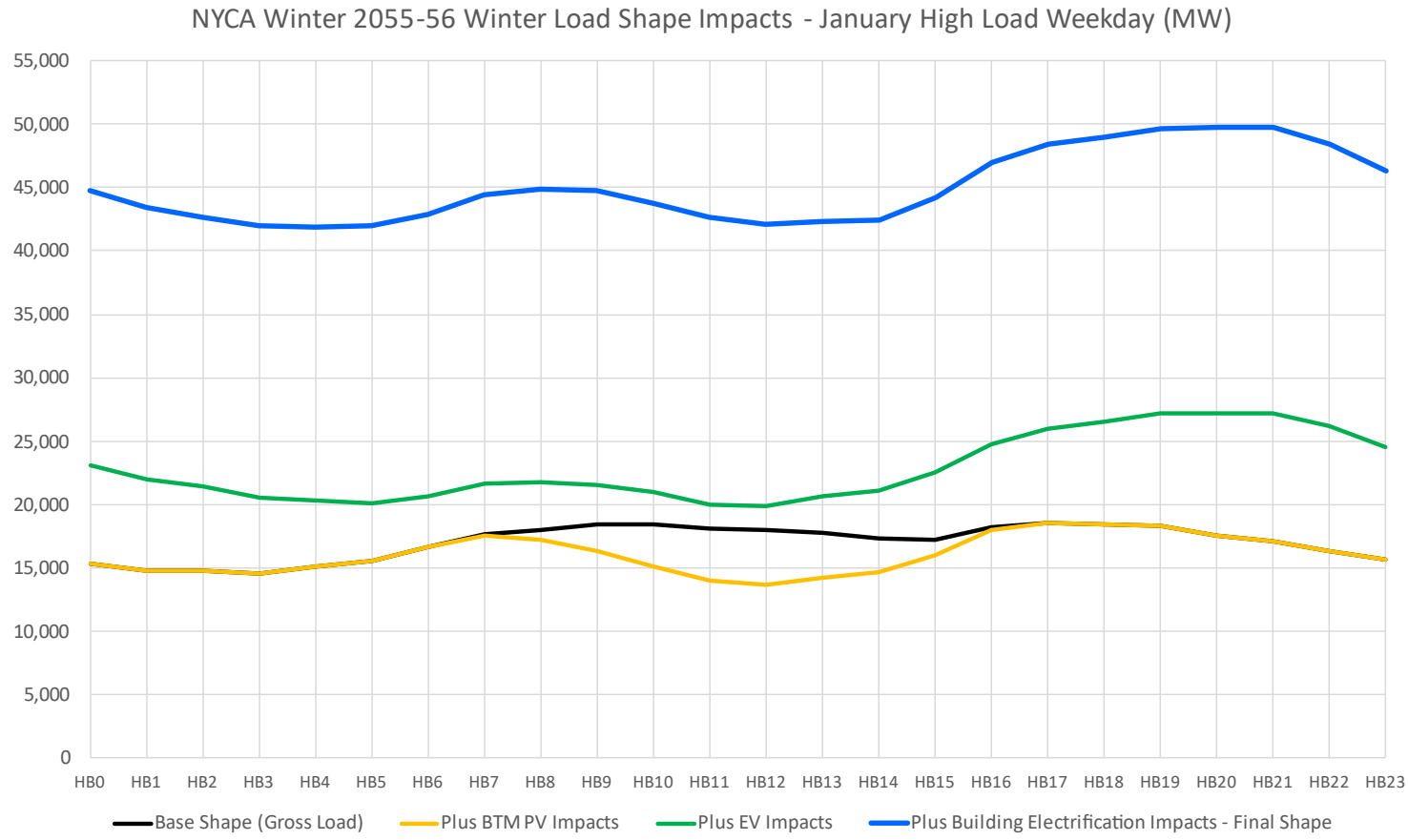
2055-56 Winter Load Shape Impacts



Black line shows projected base load shape (gross load).

Yellow line shows base load shape plus BTM solar reductions.

Green line shows base load shape plus BTM solar reductions and EV charging impacts.

Blue line shows final projected load shape – base shape plus BTM PV, EV, and building electrification impacts.

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10-Year NYCA Baseline Forecast Summaries

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Notes for Forecast Summary Graphs

- Historical energy and peak values reflect actual experienced weather conditions.
- Weather normalized summer peak values include estimated demand response added back.
- The weather normalized winter peak is calculated at the NYCA level. Therefore, weather normalized winter peaks are not included in the Zonal winter charts.
- Forecasted energy and peak values reflect expected trended weather conditions.
- Expected weather conditions include an increasing temperature trend from the NYISO *Climate Impact Study Phase I* report.
- Historical peak values include demand response reductions when called. Forecast peak values assume no demand response reductions.
- Con Edison and Orange & Rockland design their peak forecasts at the 67th percentile. Other Transmission Owners design their peak forecasts at the 50th percentile. As a result, the aggregate statewide peak forecast is designed at 57th percentile weather conditions.

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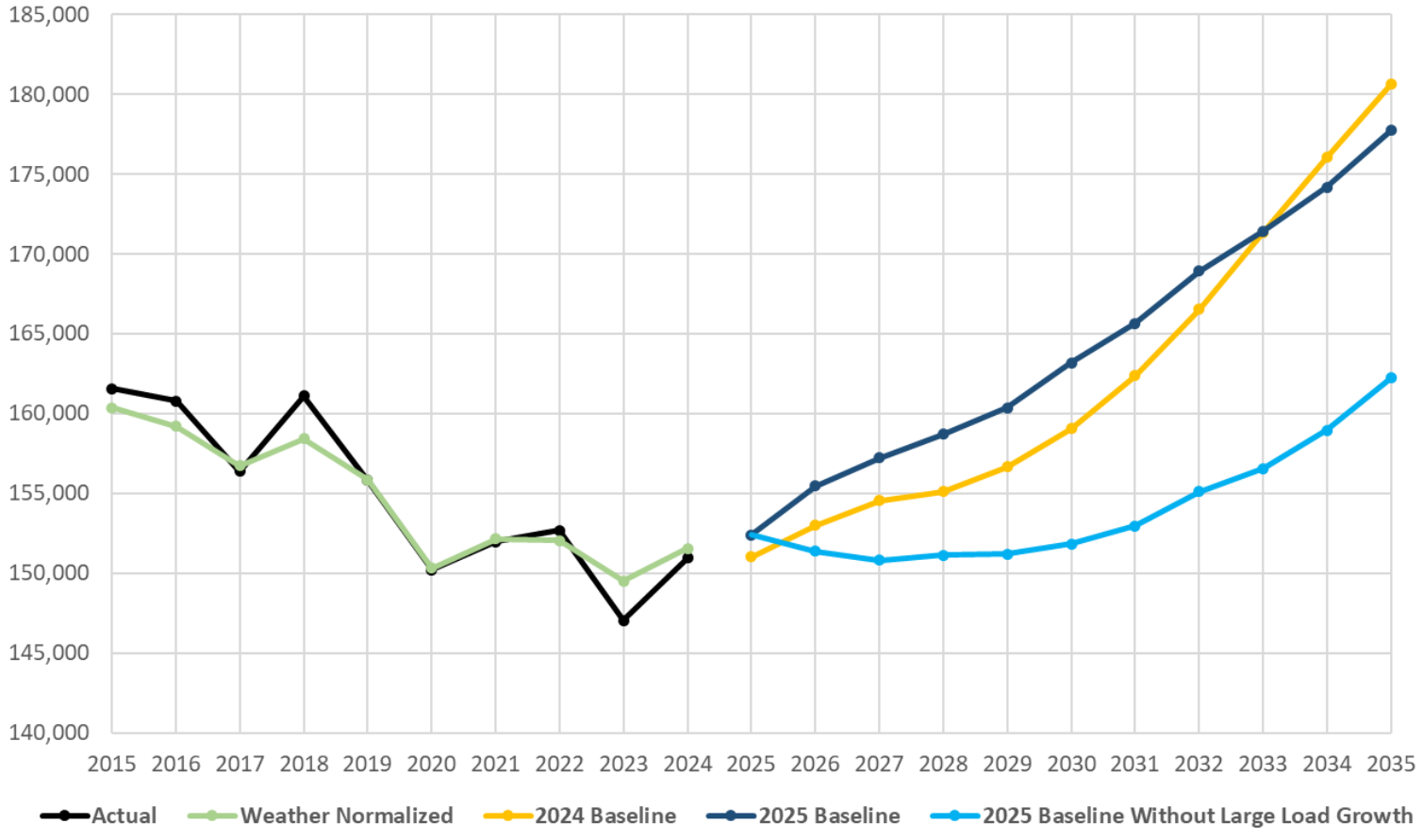
Historical NYCA Annual Energy and 10-Year Forecasts - GWh



(No additional large load growth beyond 2025)

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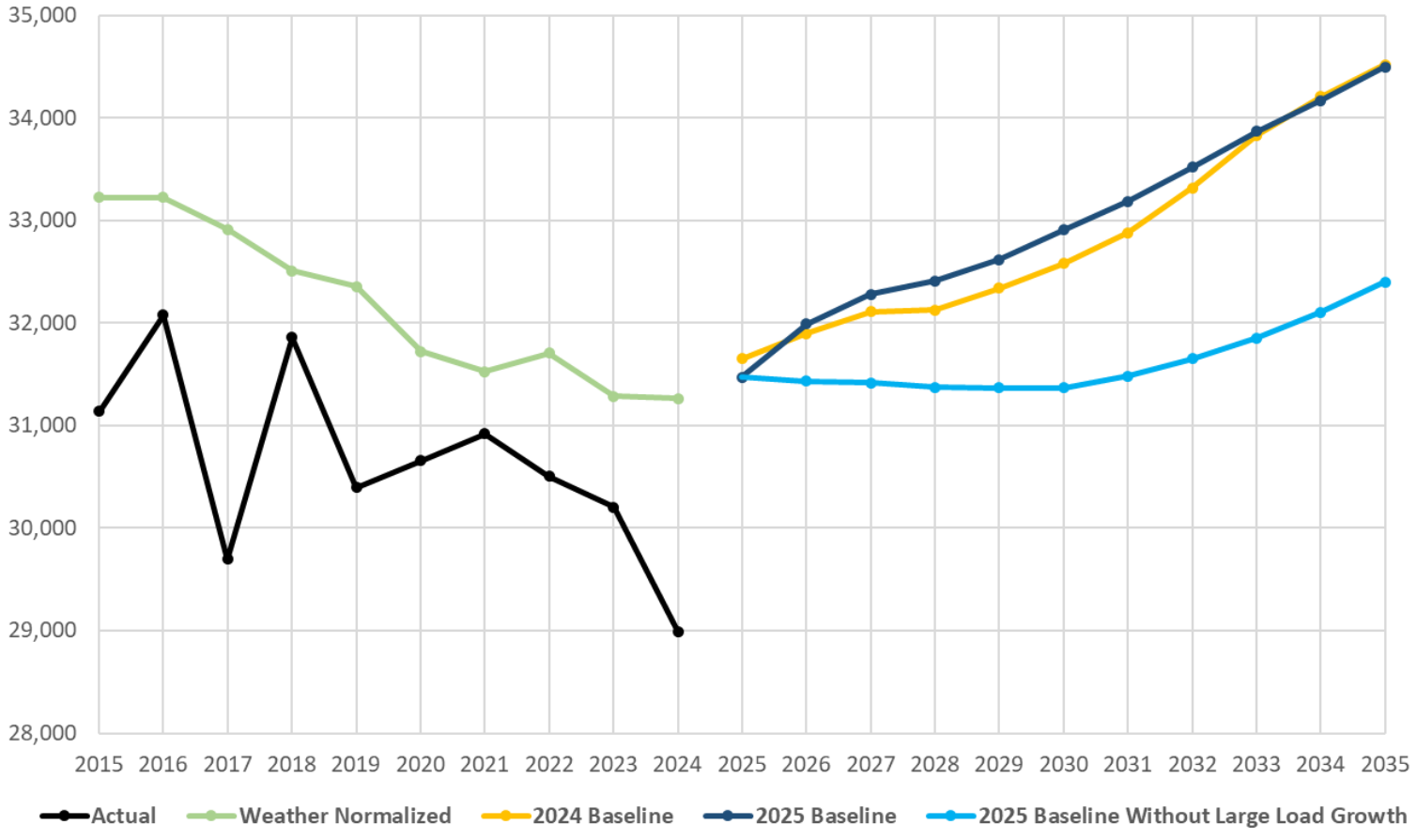
Historical NYCA Summer Peak Demand and 10-Year Forecasts - MW



(No additional large load growth beyond 2025)

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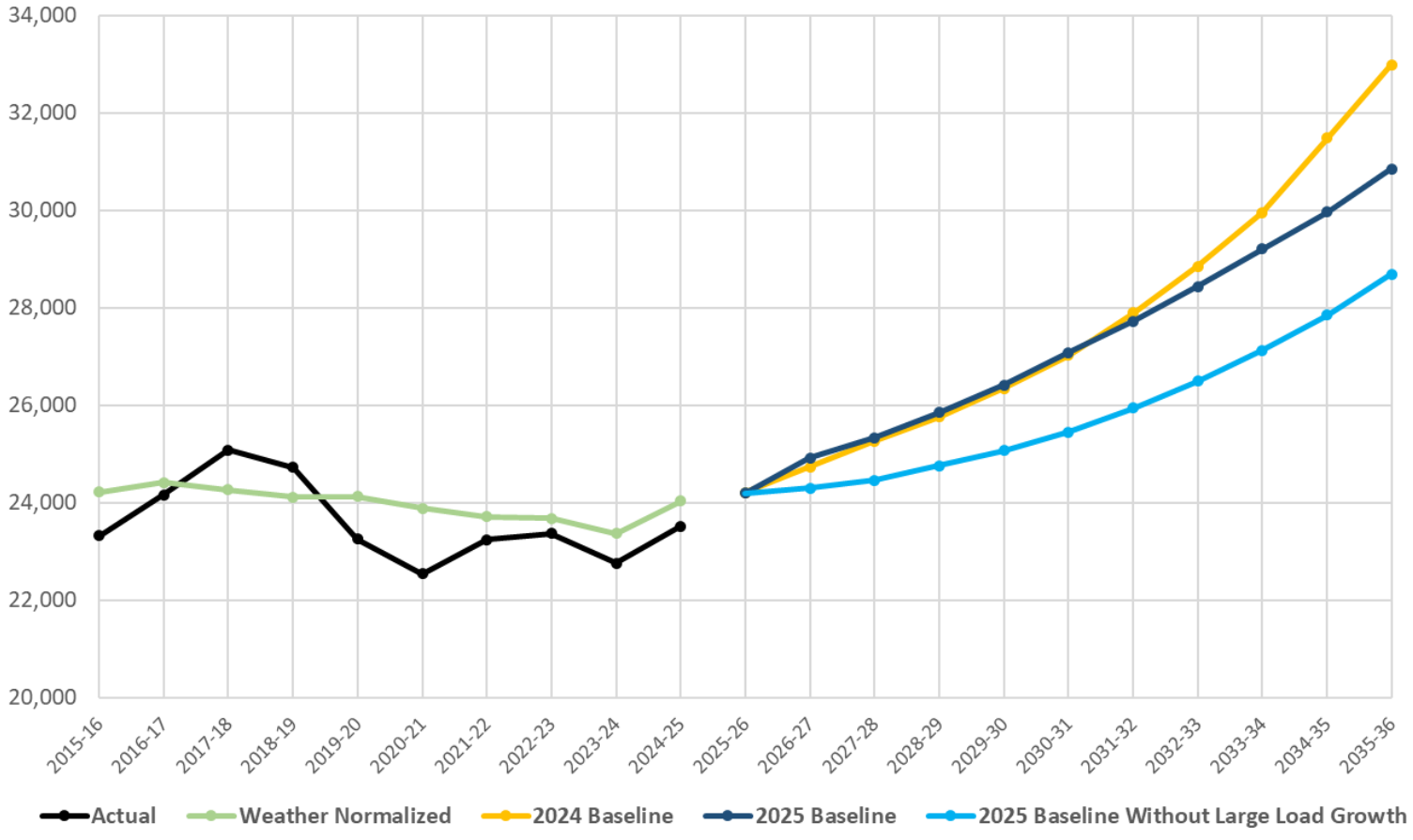
Historical NYCA Winter Peak Demand and 10-Year Forecasts - MW



(No additional large load growth beyond 2025-26)

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NYCA Forecast Scenarios

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Load Scenario Summary

Forecast Component	Baseline Forecast	Lower Demand Scenario	Higher Demand Scenario
Weather Trends	Trended weather from NYISO Climate Change Impact Study - average NYCA temperature gain of approximately 0.7 degrees Fahrenheit per decade	Same as Baseline Forecast	Same as Baseline Forecast
Economic Assumptions	Baseline economic forecast - expected economic growth in the long run. Declining population and households in later forecast years - statewide population of about 18 million in 2050	Slower than baseline economic growth.	Faster than baseline economic growth. Increase in population and households over the forecast horizon - statewide population of nearly 21 million in the 2050s
Energy Efficiency (Table I-8)	Significant energy savings and peak reductions due to energy efficiency programs, codes & standards improvements, and building shell upgrades	Same as Baseline Forecast	Same as Baseline Forecast
BTM Solar PV (Table I-9)	Over 10,000 MW DC installed by 2029, and over 15,000 MW DC installed in 2050	Same as Baseline Forecast	Same as Baseline Forecast
BTM Non-Solar DG (Table I-10)	Approximately 600 MW installed non-solar BTM DG nameplate capacity by 2040. No assumption of future entry of resources into the wholesale DER market	Same as Baseline Forecast	Same as Baseline Forecast

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Forecast Component	Baseline Forecast	Lower Demand Scenario	Higher Demand Scenario
Electric Vehicles (Table I-11)	75% LDV EV sales saturation in 2035. Over 6 million EVs (passenger vehicles, trucks and buses) on the road by 2040. Increasing share of managed charging over time	Slower EV sales saturation than baseline. Over 4 million EVs on the road by 2040. Reduced peak load impact due to increased managed charging	100% LDV EV sales saturation by 2035. Nearly 8 million EVs on the road in 2040. Increased peak load impact due to reduced managed charging
BTM Energy Storage (Table I-12)	Nearly 1,000 MW installed BTM nameplate capacity by 2030, and over 3,000 MW installed by 2050. Does not include wholesale storage resources which are expected to contribute significantly to State policy targets	Same as Baseline Forecast	Same as Baseline Forecast
Building Electrification (Table I-13)	Significant electrification of space heating and other end uses. Roughly 75% saturation of primary residential electric heating by 2050, including air source and ground source heat pumps, and electric resistance heating. As of 2024, estimated 86% fossil, 14% existing primary electric heat. As of 2050, 60% additional growth in primary electric heating to reach 74% saturation: * 35% full capacity ASHP * 15% ASHP with supplemental heat * 5% primary electric resistance heat * 5% Ground Source Heat Pumps ("GSHP") * 26% primary fossil fuel heating	Slower saturation of electric space heating and other end uses. Roughly 55% saturation of residential electric heating by 2050. As of 2024, estimated 86% fossil, 14% existing primary electric heat. As of 2050, 40% additional growth in primary electric heating to reach 54% saturation: * 24% full capacity ASHP * 10% ASHP with supplemental electric heat * 3% primary electric resistance heat * 3% GSHP * 46% primary fossil fuel heating	Very high saturation of electric space heating and other end uses. Nearly 95% saturation of residential electric heating by 2050. As of 2024, estimated 86% fossil, 14% existing primary electric heat. As of 2050, 80% additional growth in primary electric heating to reach 94% saturation: * 46% full capacity ASHP * 20% ASHP with supplemental electric heat * 7% primary electric resistance heat * 7% GSHP * 6% primary fossil fuel heating
Large Loads (Table I-14)	Expected load growth from certain large load projects in the NYISO IQ, along with impacts from projects not in the queue	Slower large load growth than the baseline forecast	Additional load growth from large load projects beyond that included in the baseline forecast
Electrolysis (Hydrogen Production)	No electrolysis	No electrolysis	Over 25,000 GWh annual energy impact in 2050. No peak load impact

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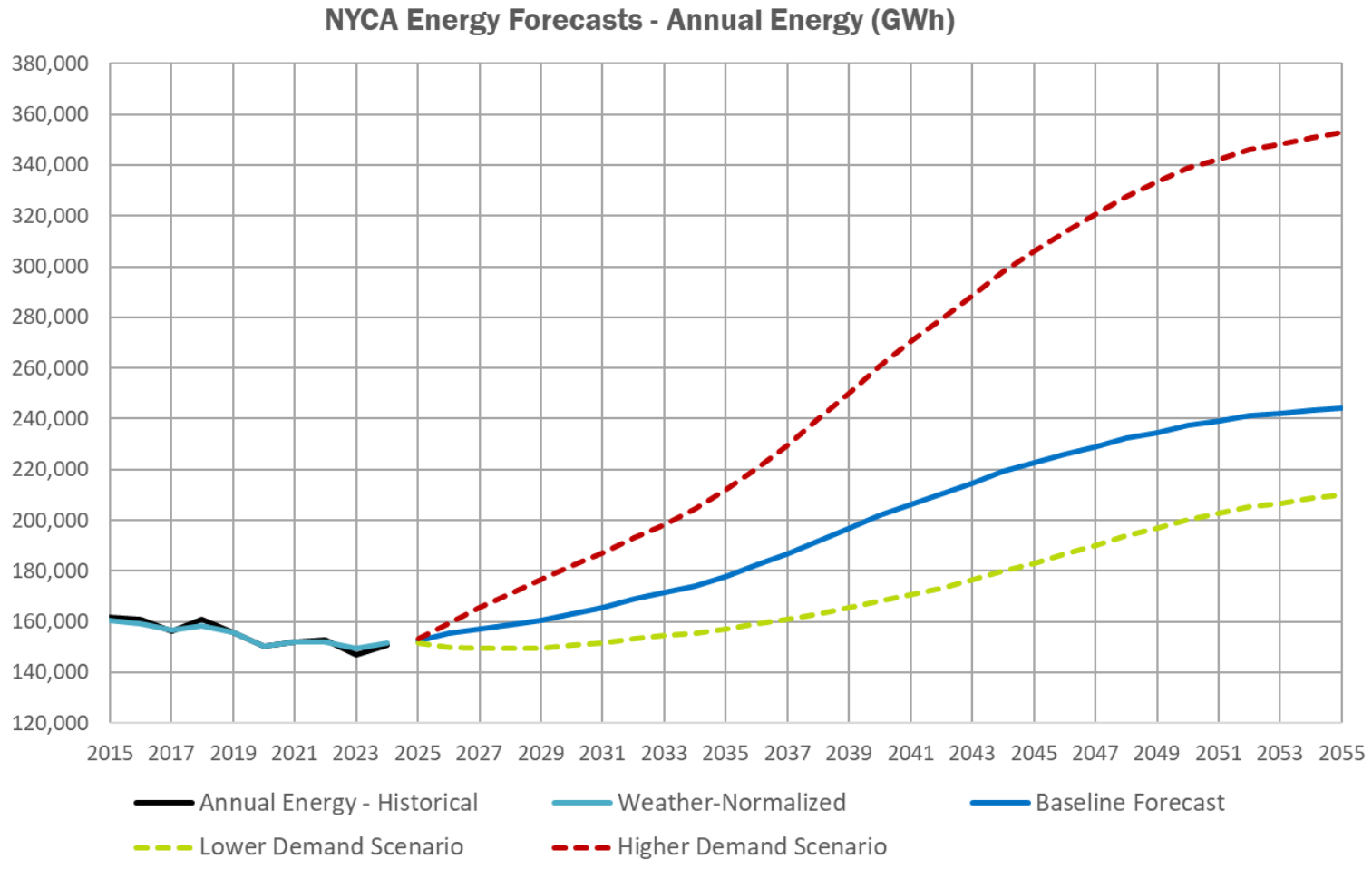

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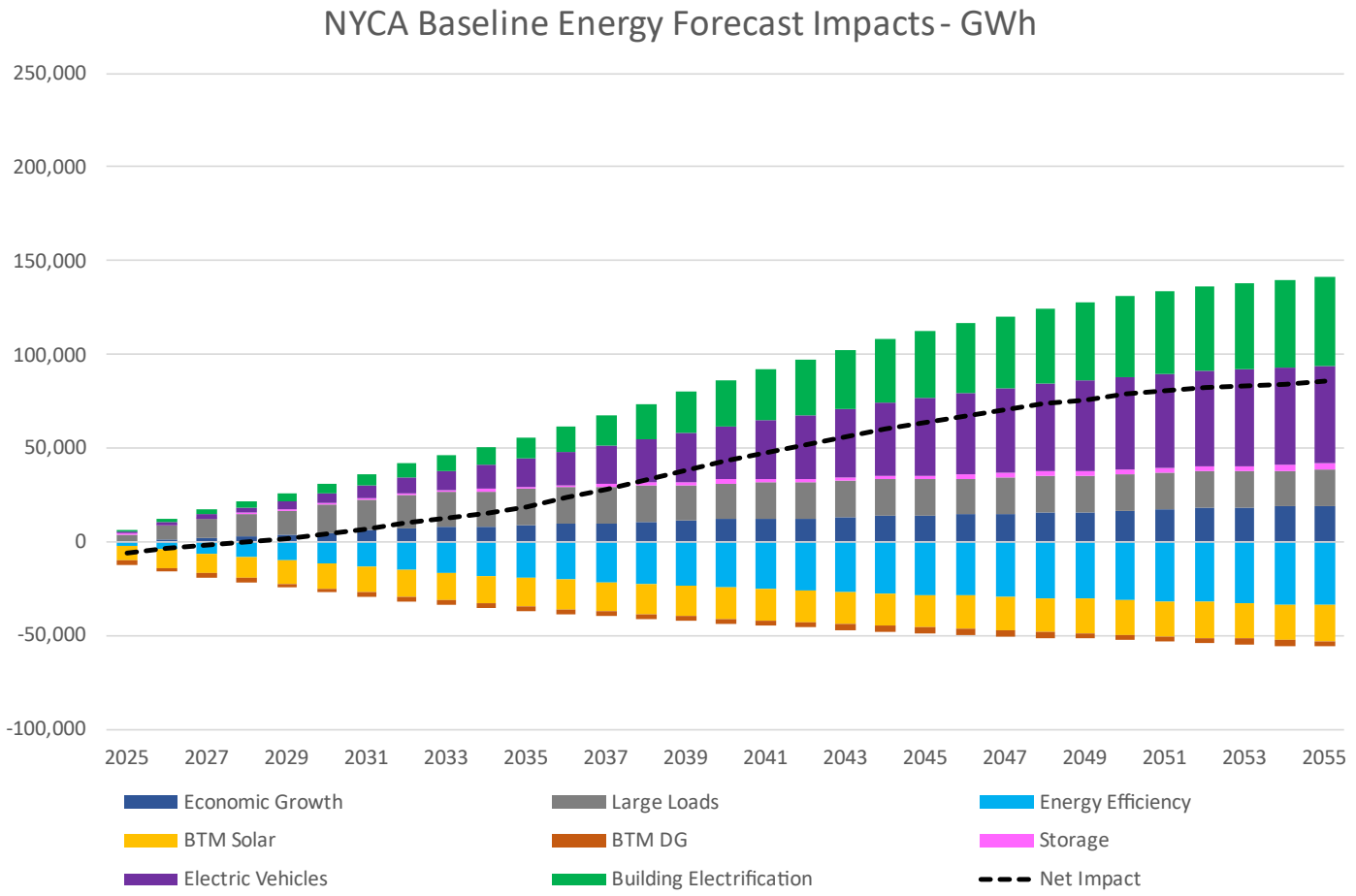

Note: Economic growth is endogenous to the end-use models and includes impacts due to economic variables, end-use saturations, and projected weather trends.

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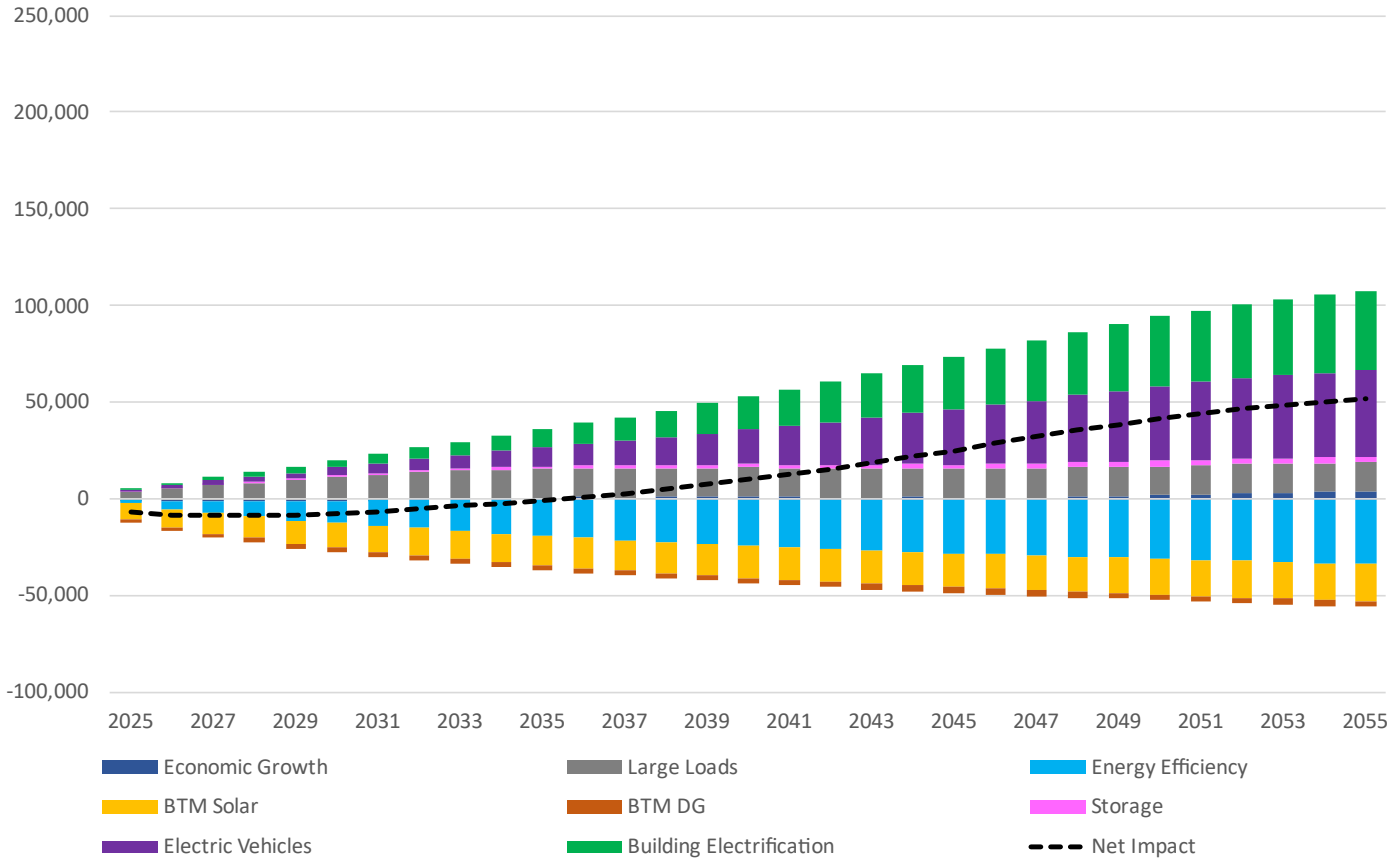
NYCA Lower Demand Scenario Energy Forecast Impacts - GWh



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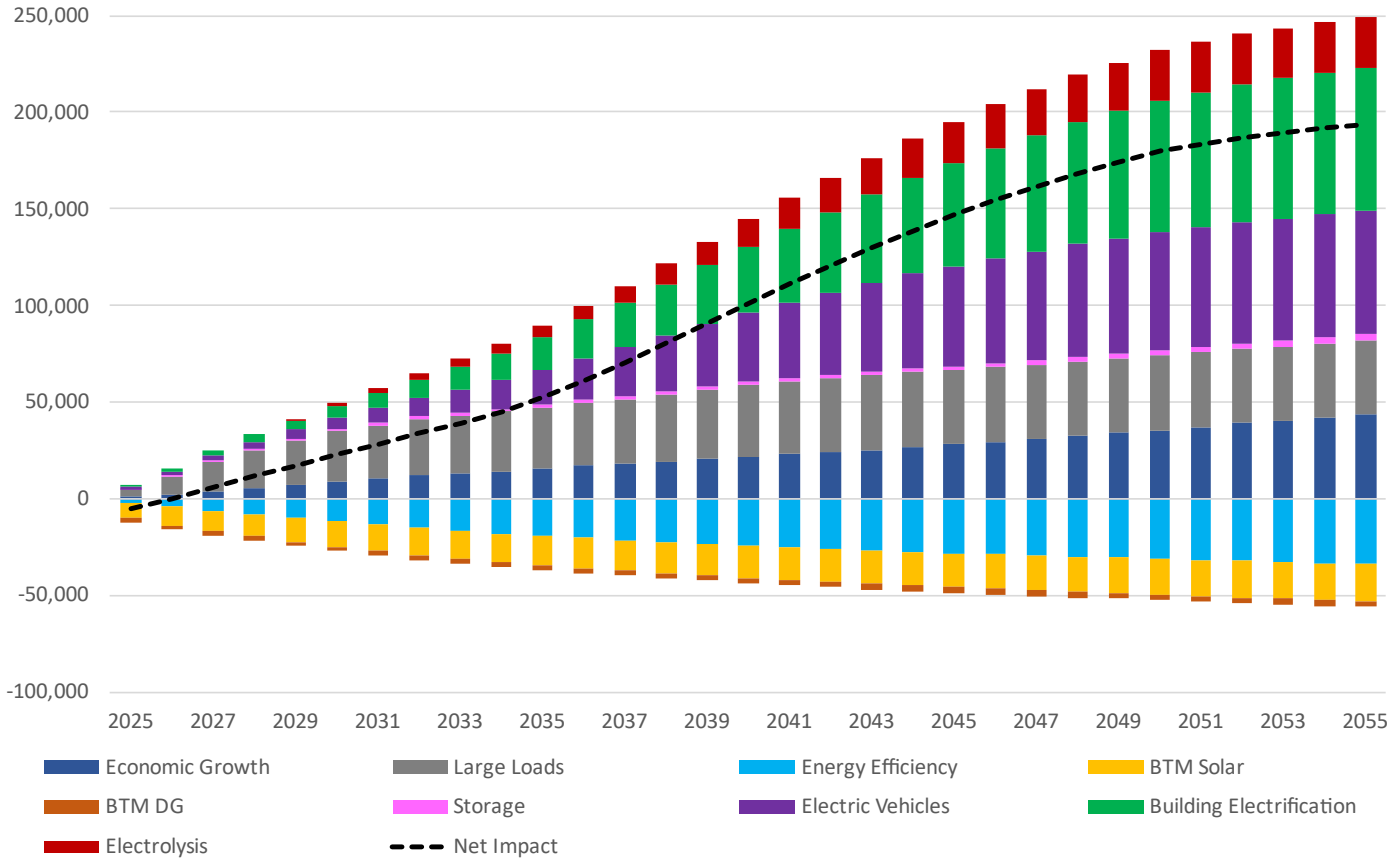
NYCA Higher Demand Scenario Energy Forecast Impacts - GWh



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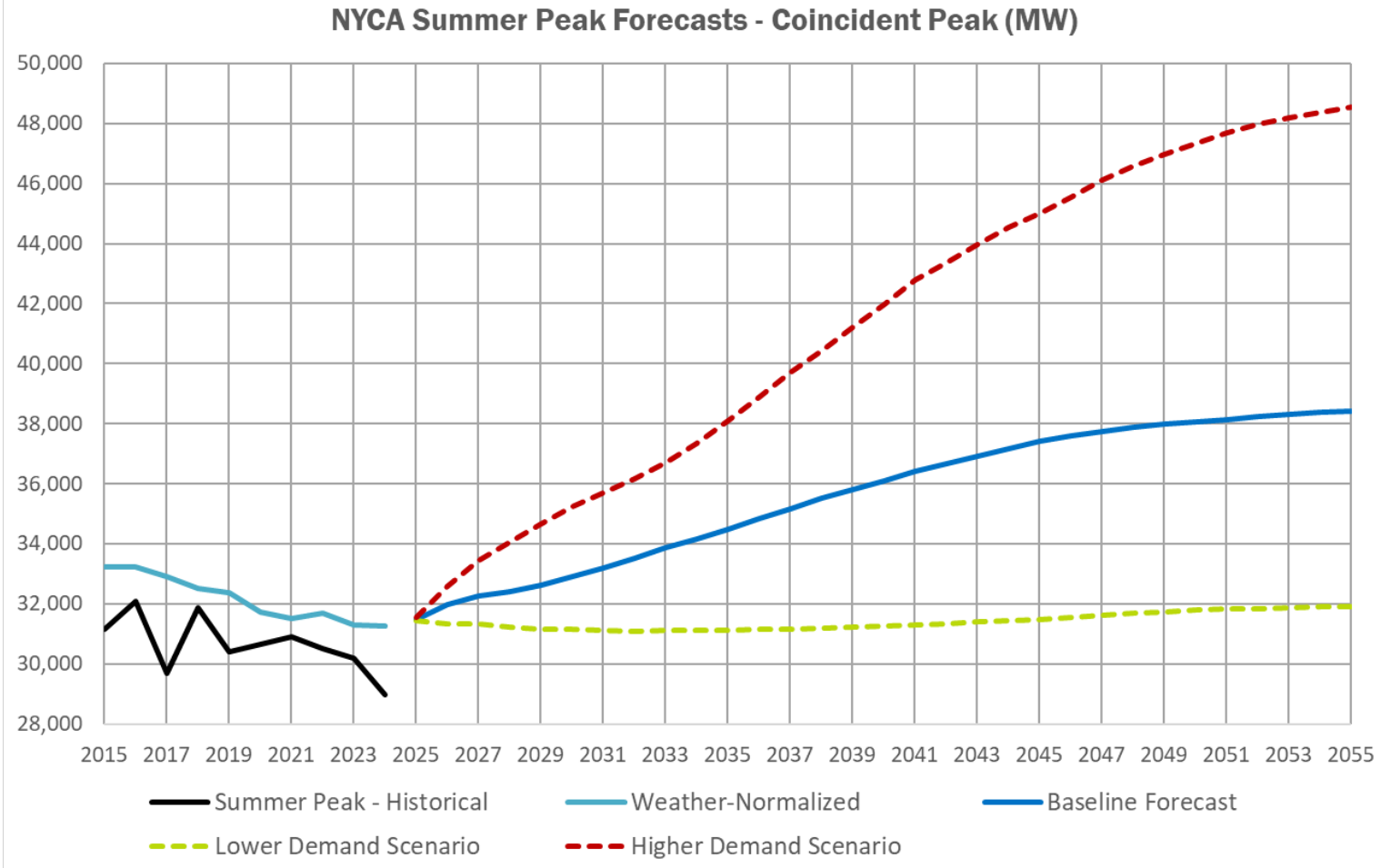

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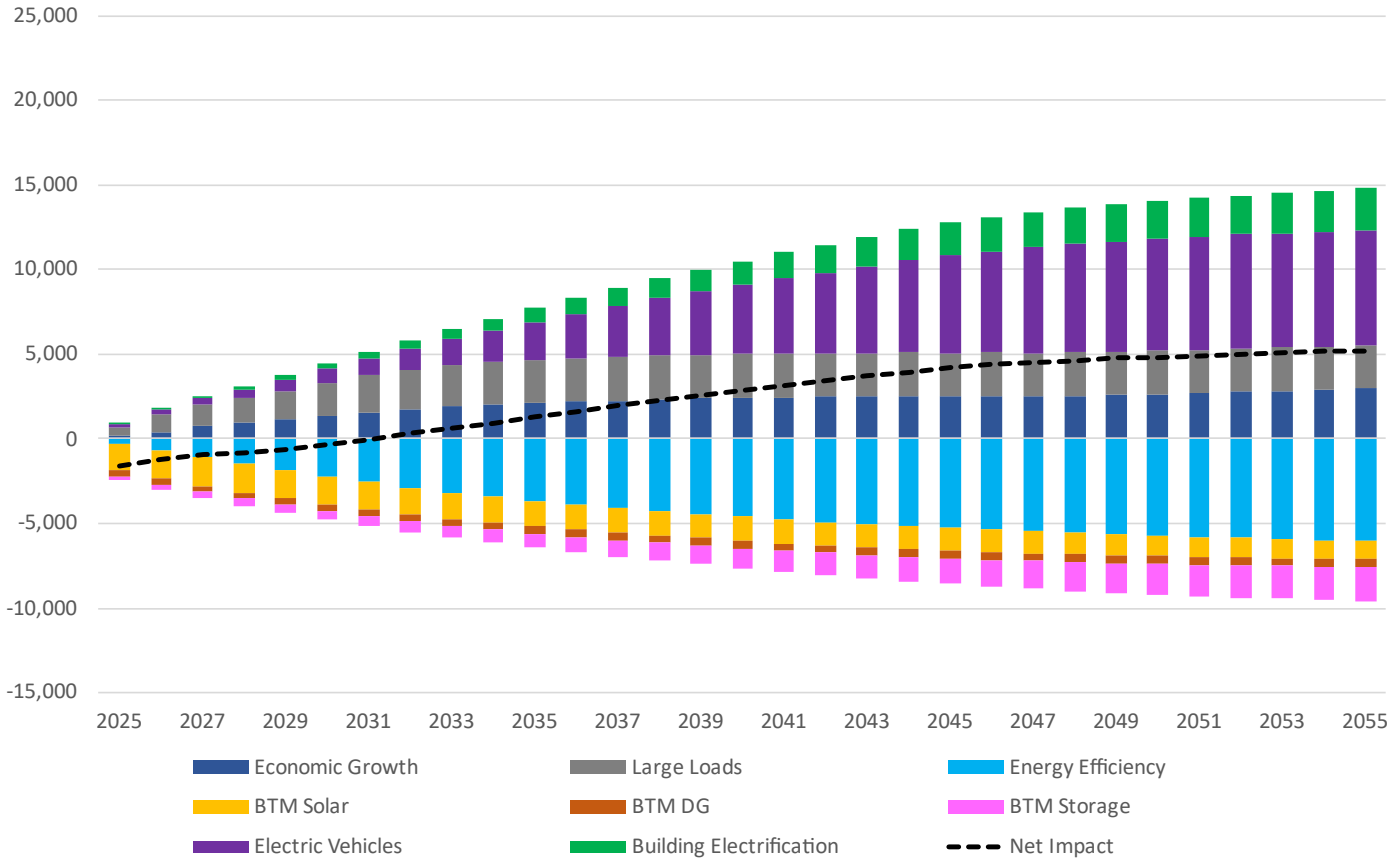
NYCA Baseline Summer Peak Forecast Impacts - MW



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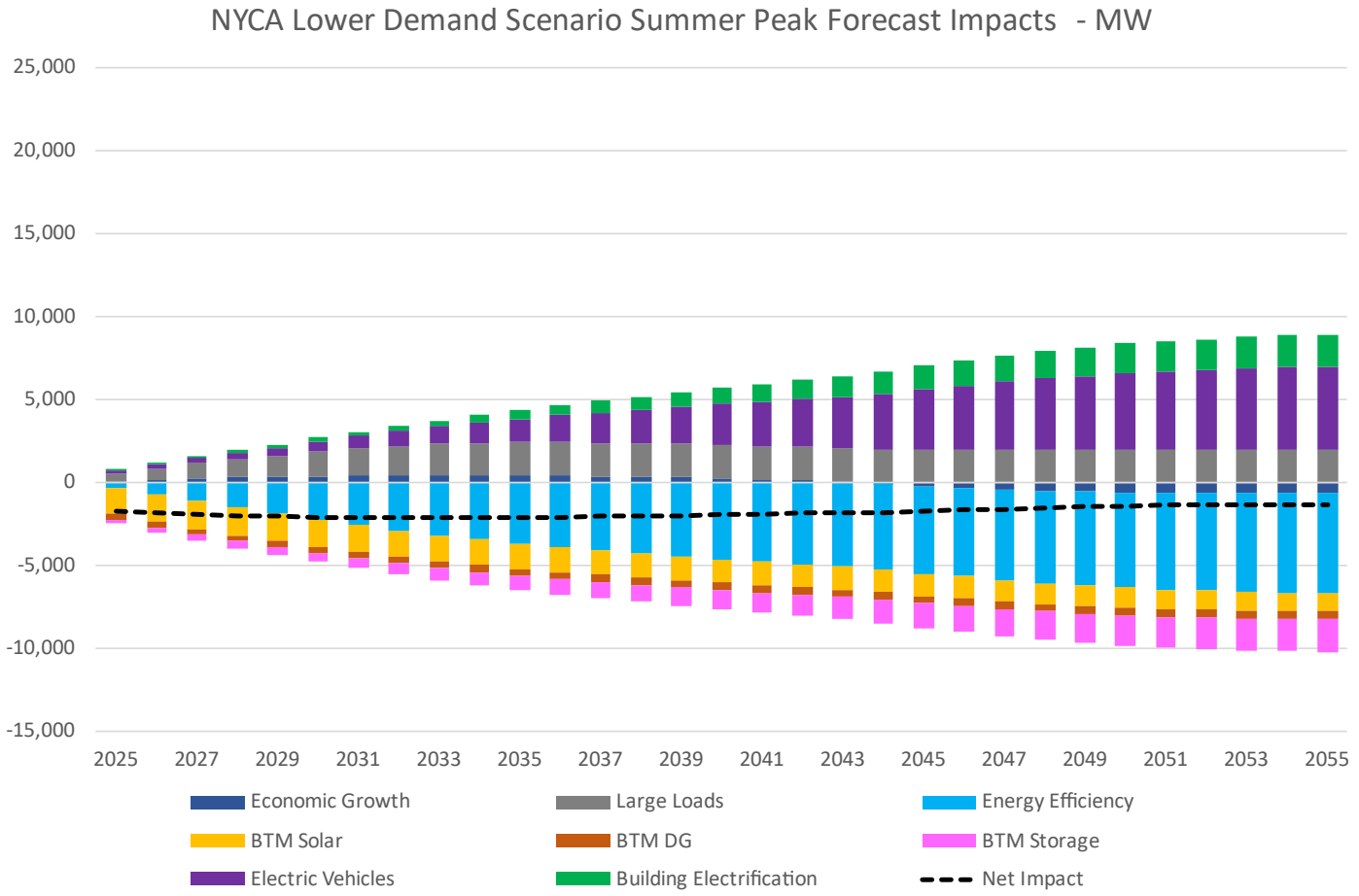

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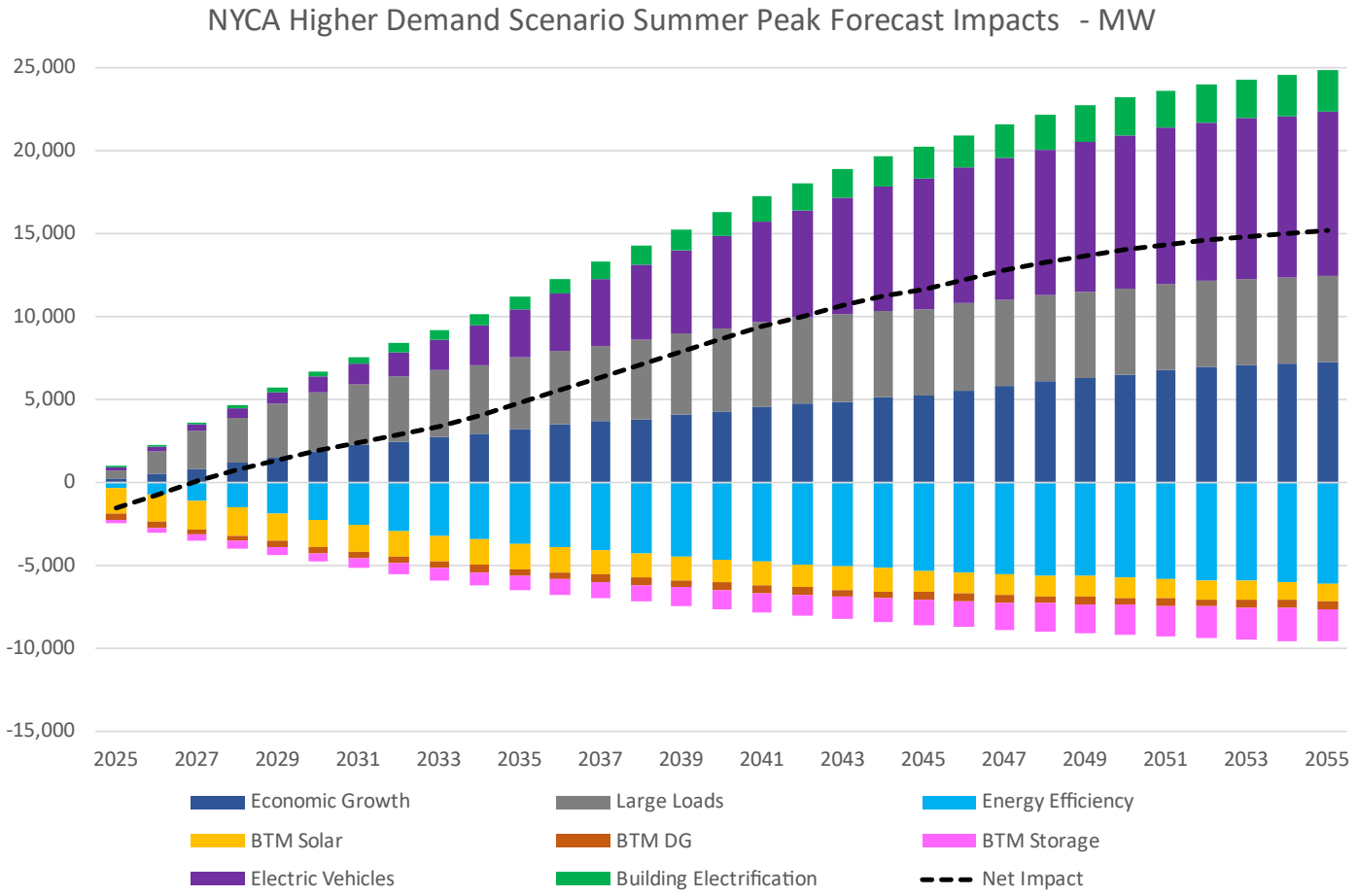

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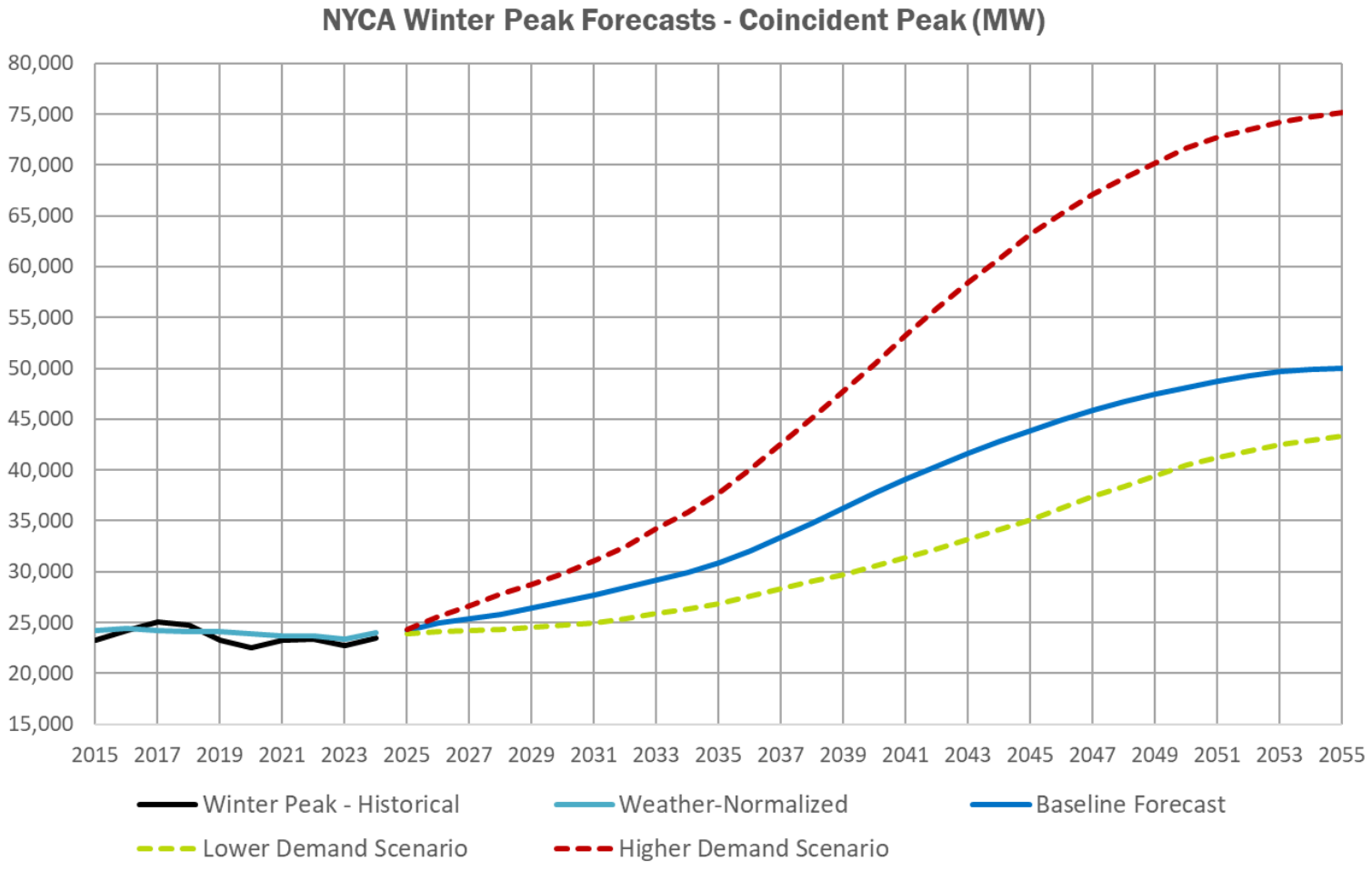

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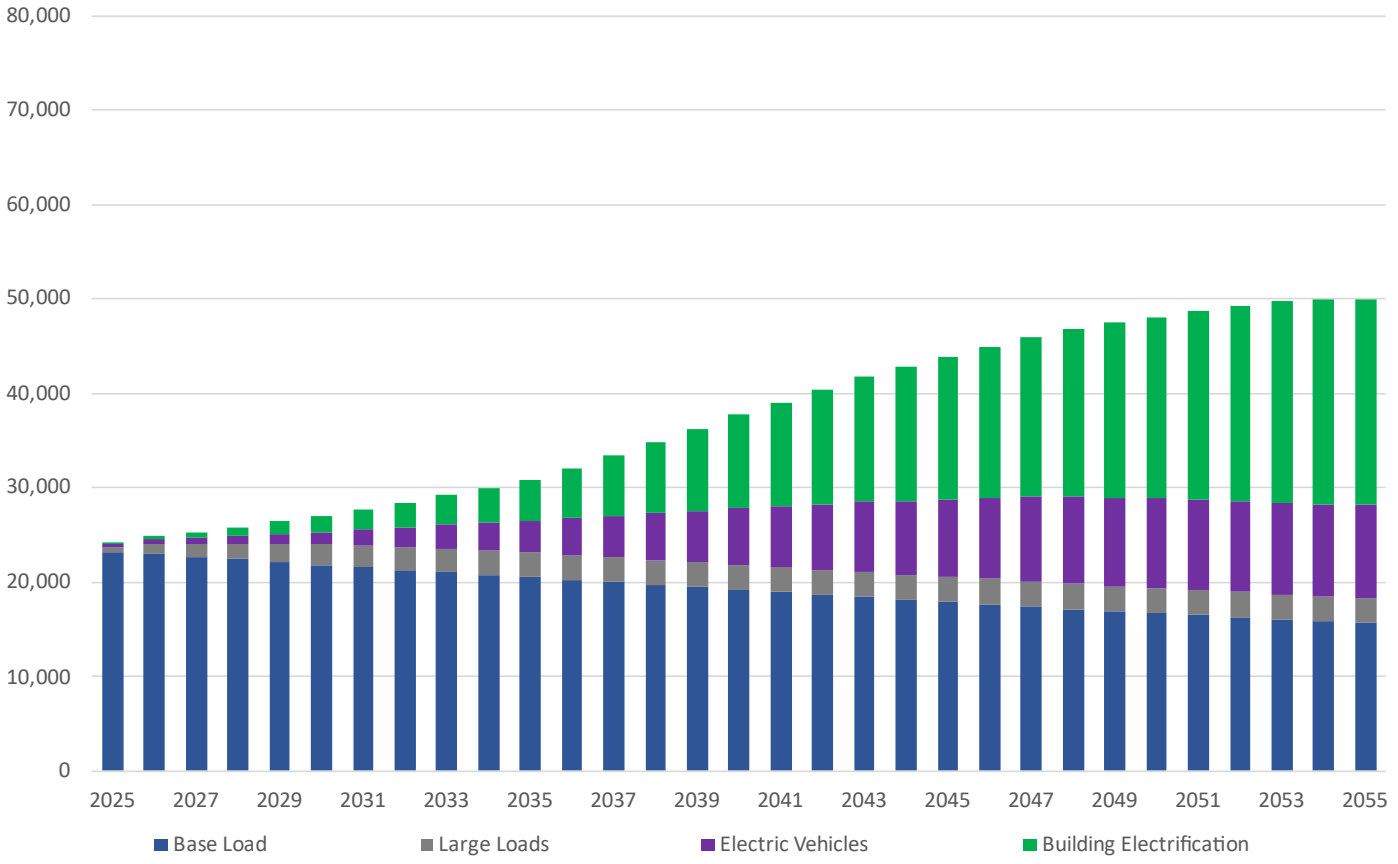
NYCA Baseline Winter Peak Forecast Components- MW



Note: Base load growth includes reductions due to BTM distributed generation, BTM energy storage, energy efficiency, and temperature trends.

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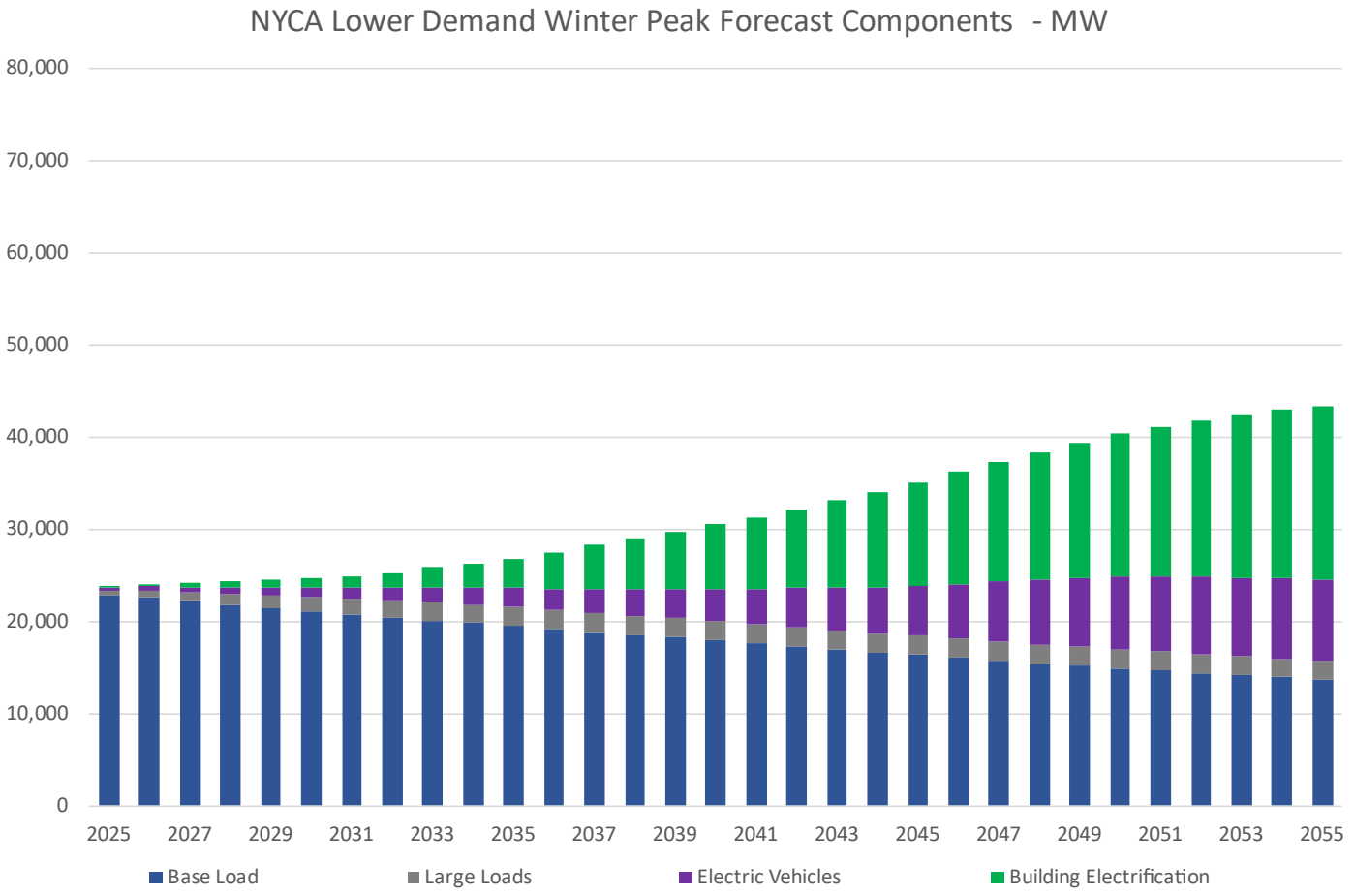

Note: Base load growth includes reductions due to BTM distributed generation, BTM energy storage, energy efficiency, and temperature trends.

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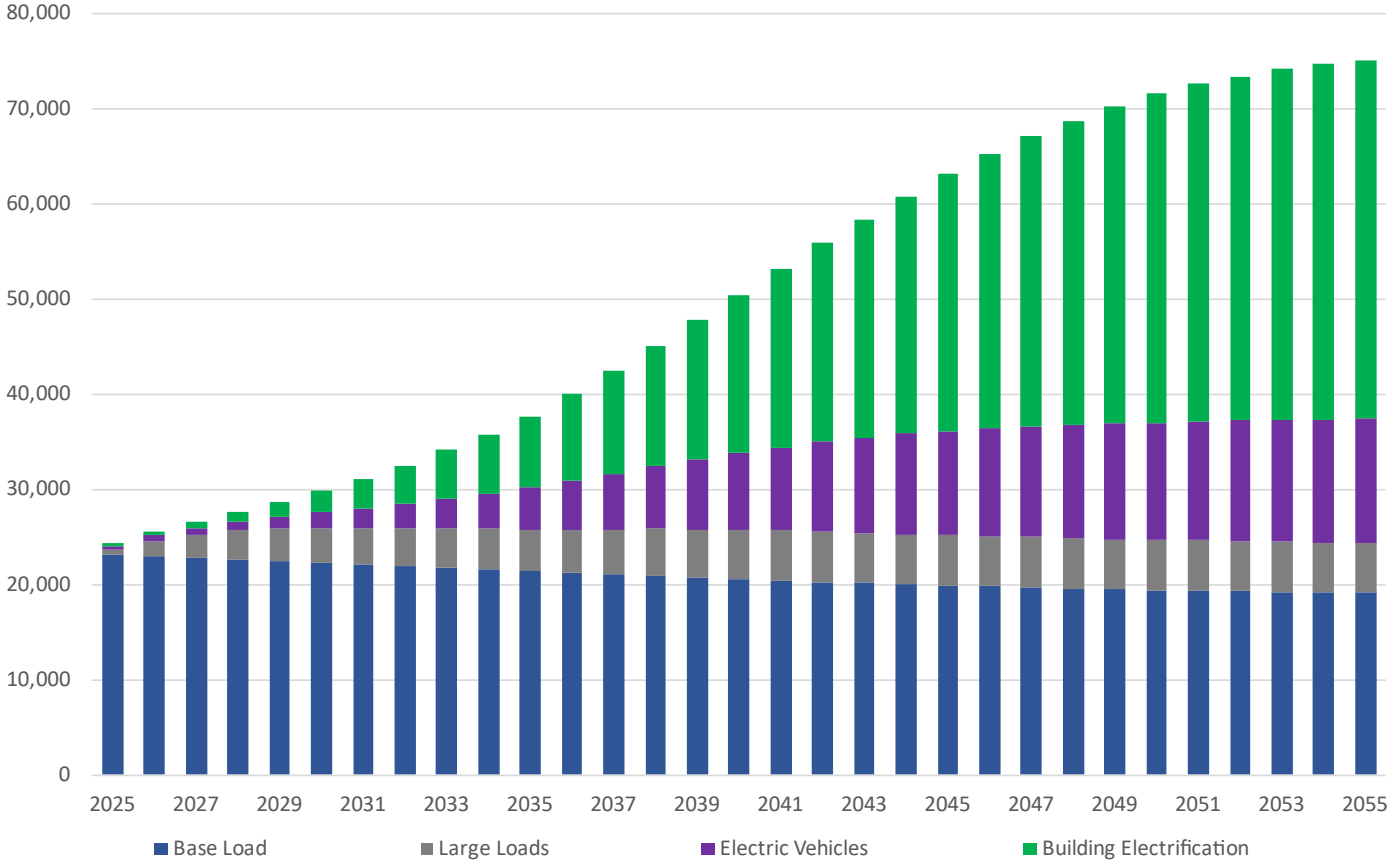
NYCA Higher Demand Scenario Winter Peak Forecast Components - MW



Note: Base load growth includes reductions due to BTM distributed generation, BTM energy storage, energy efficiency, and temperature trends.

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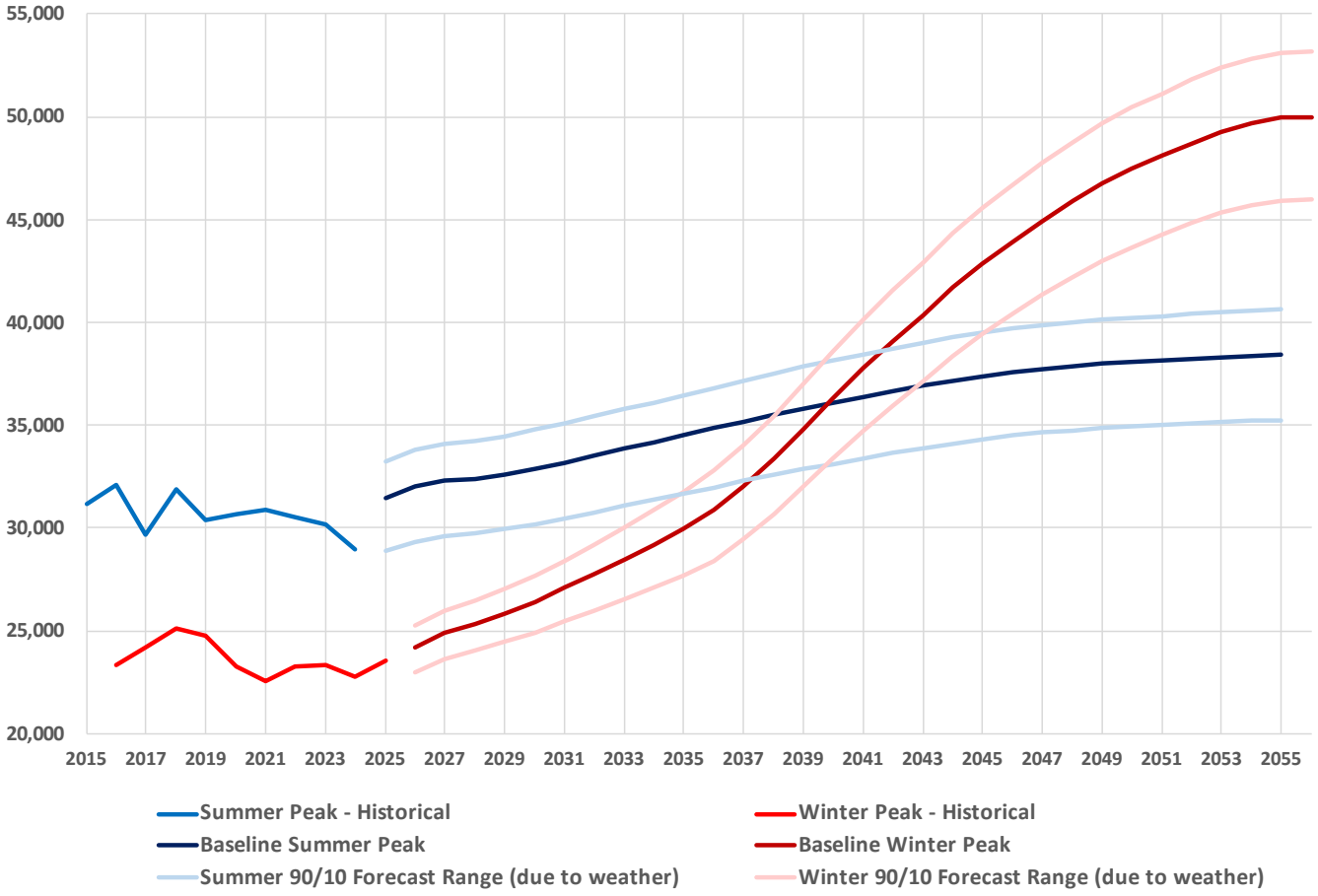
NYCA Peak Forecast Comparison- Coincident Peak (MW)



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2025 Gold Book
Area Forecast Summaries

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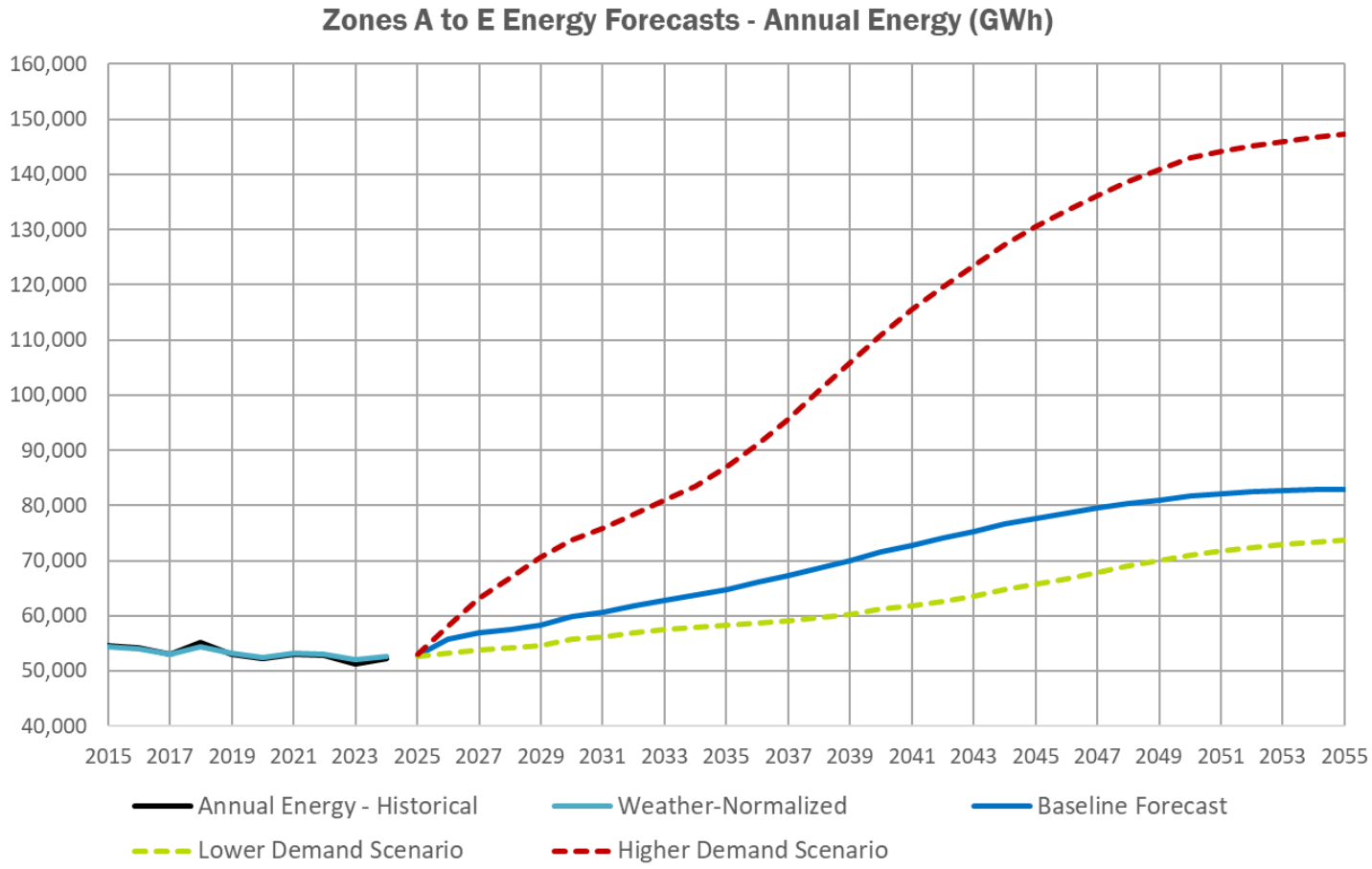

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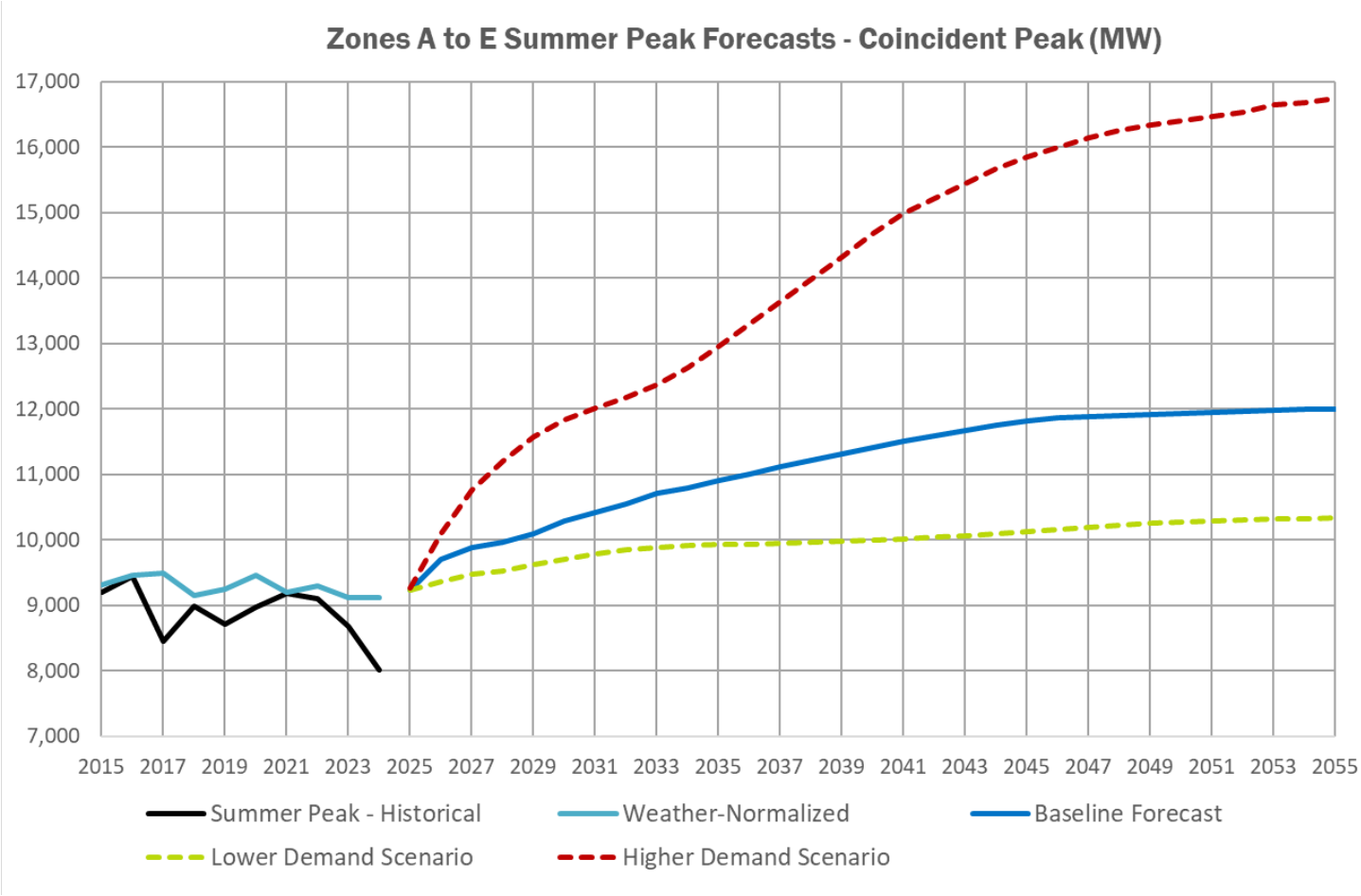

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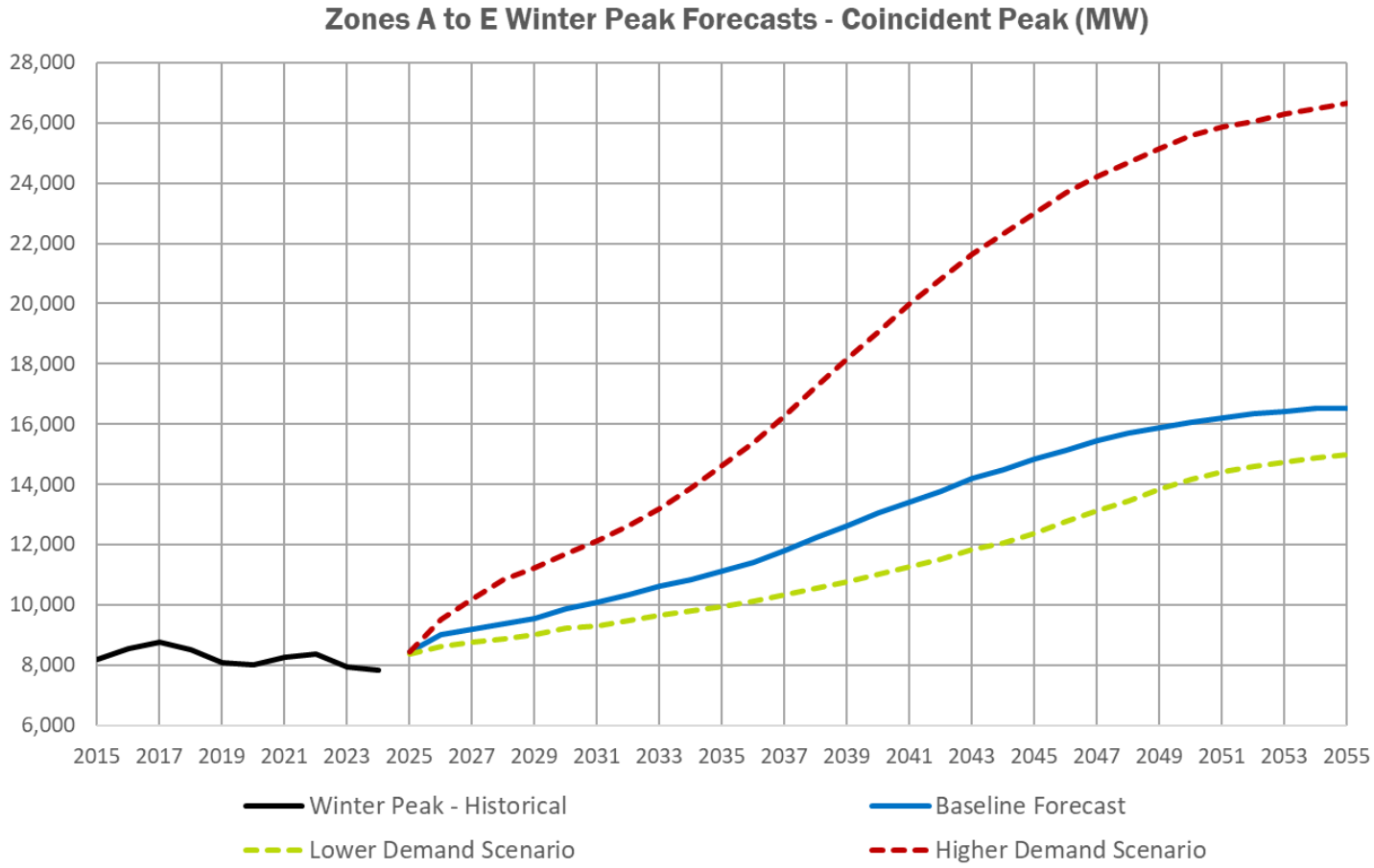

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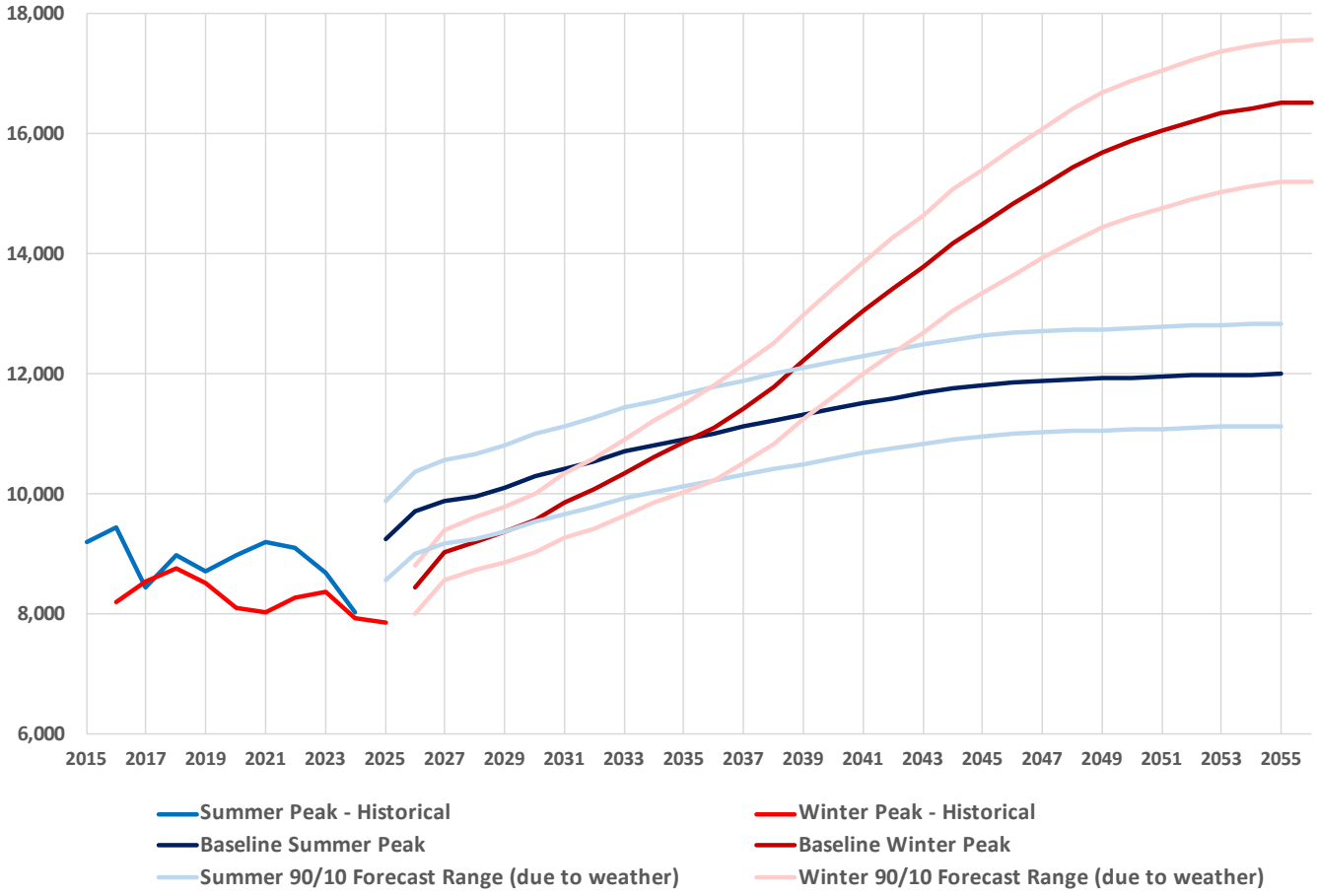
Zones A to E Peak Forecast Comparison- Coincident Peak (MW)



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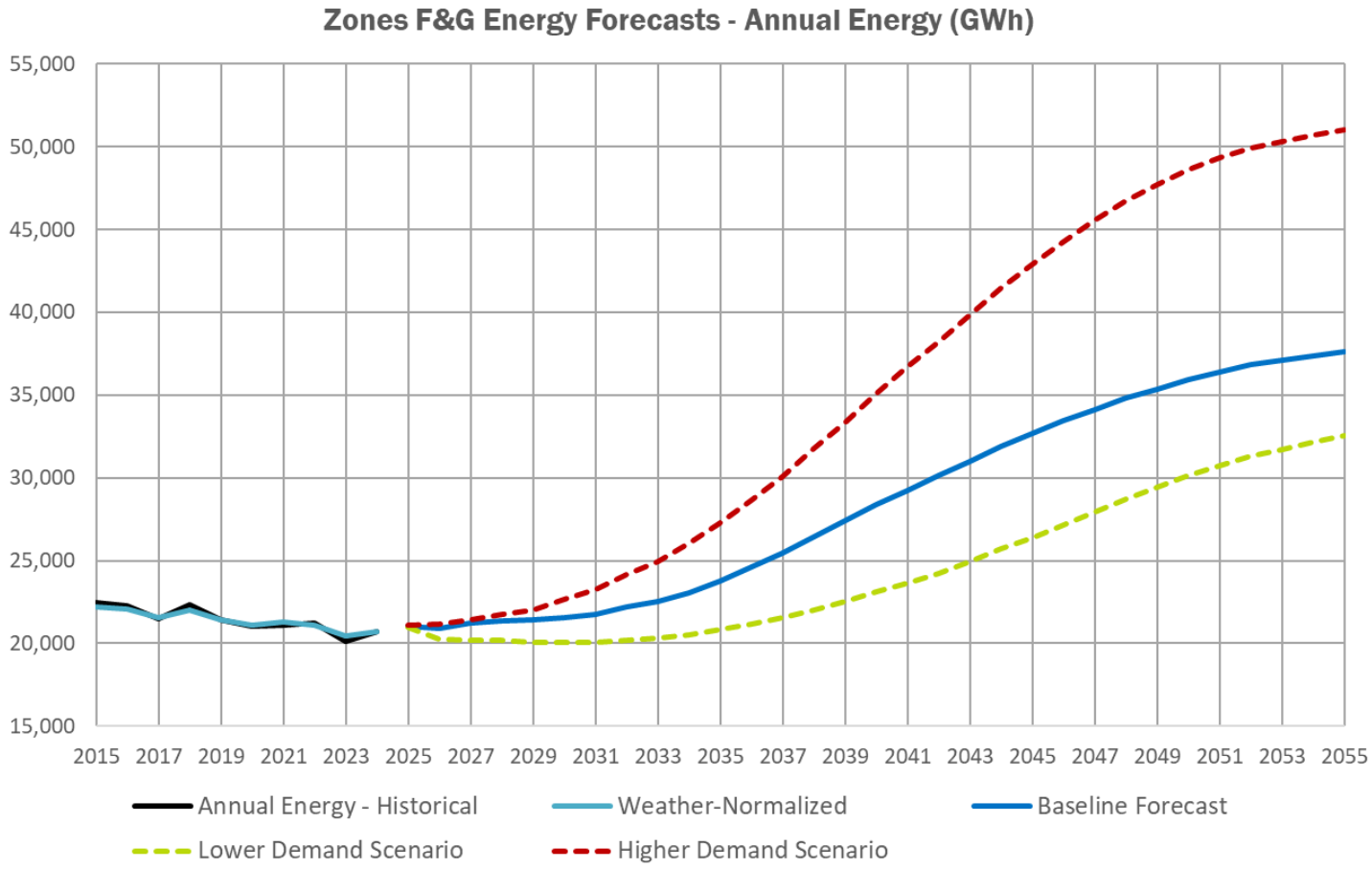

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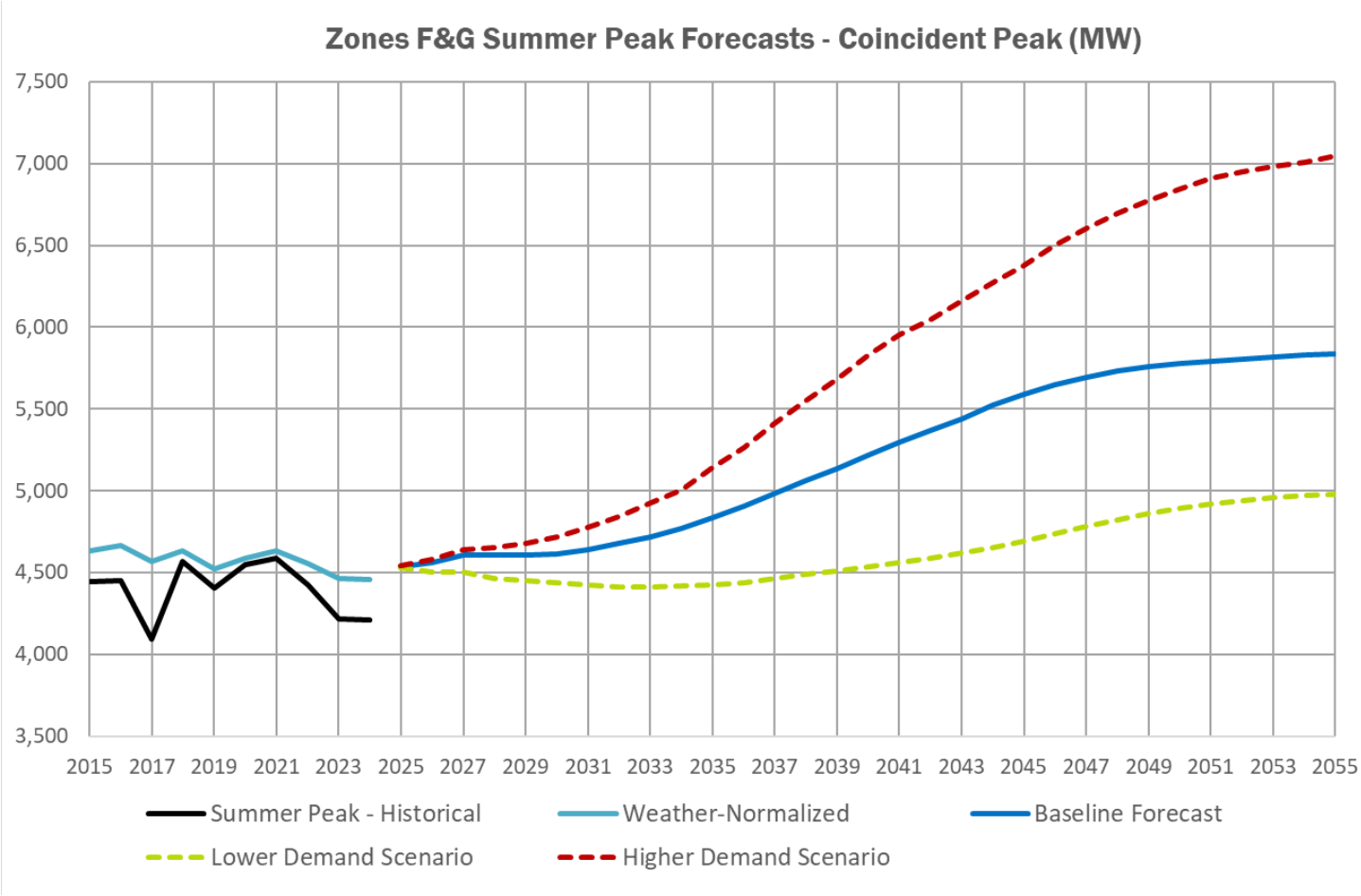

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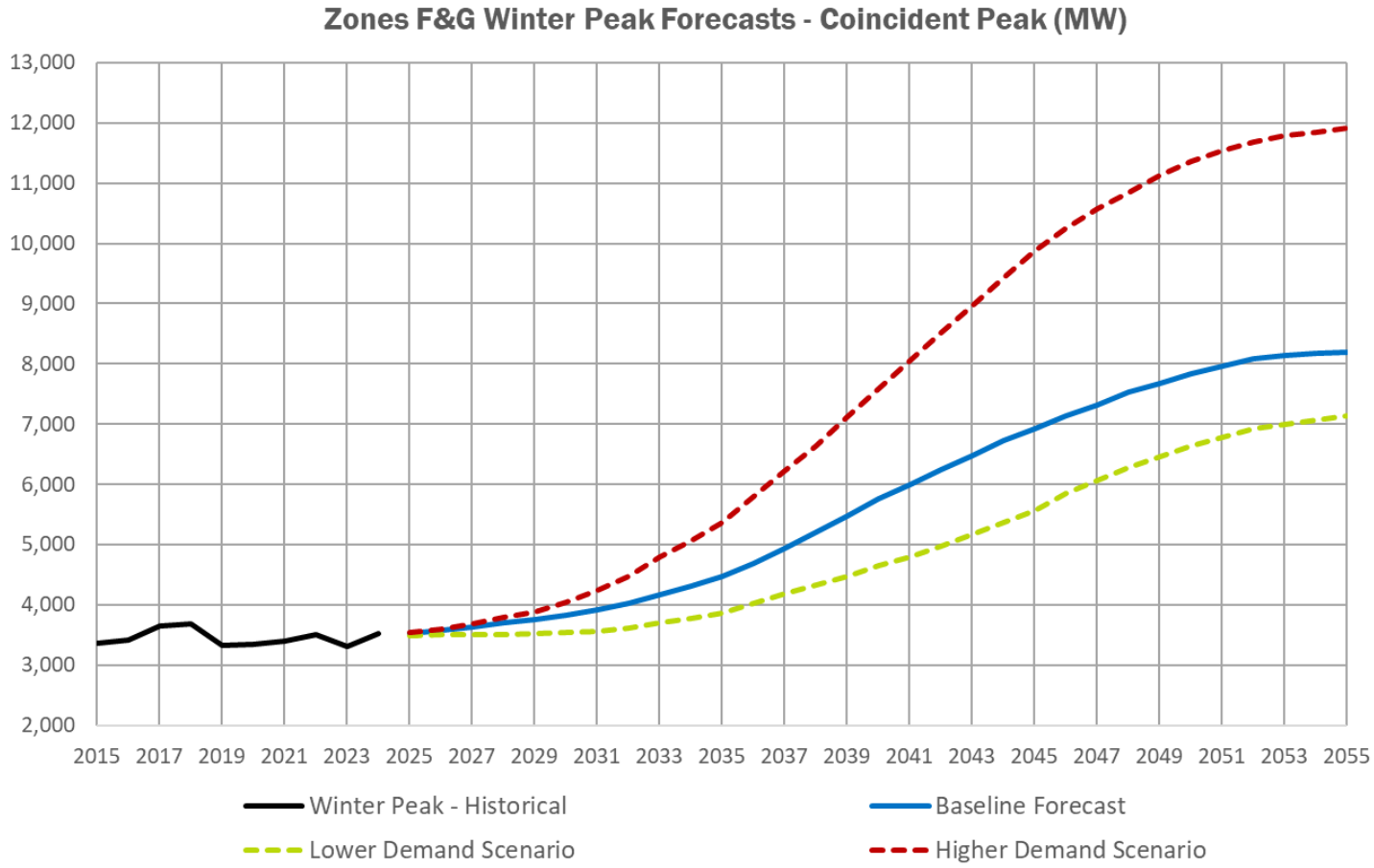

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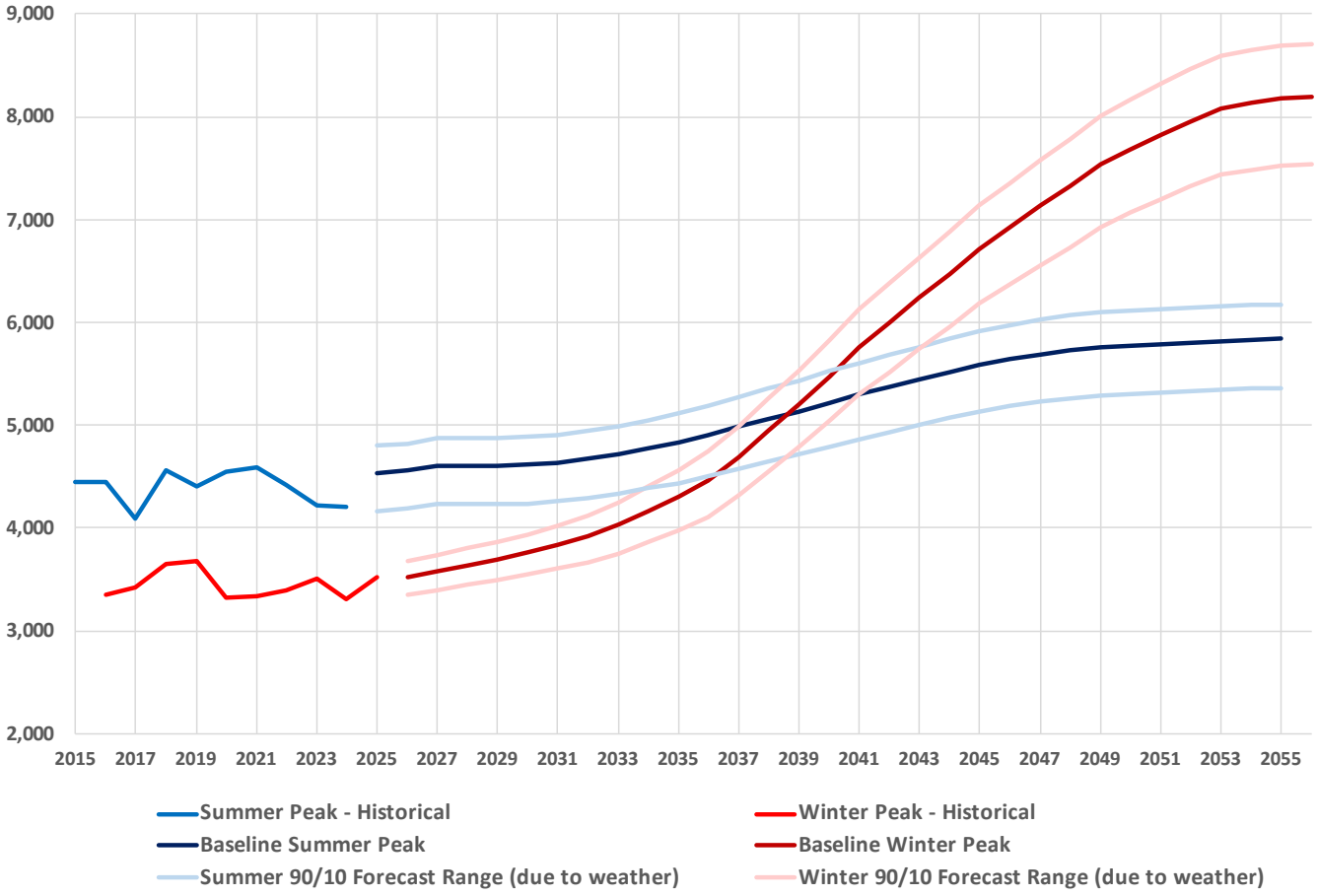
Zones F&G Peak Forecast Comparison - Coincident Peak (MW)



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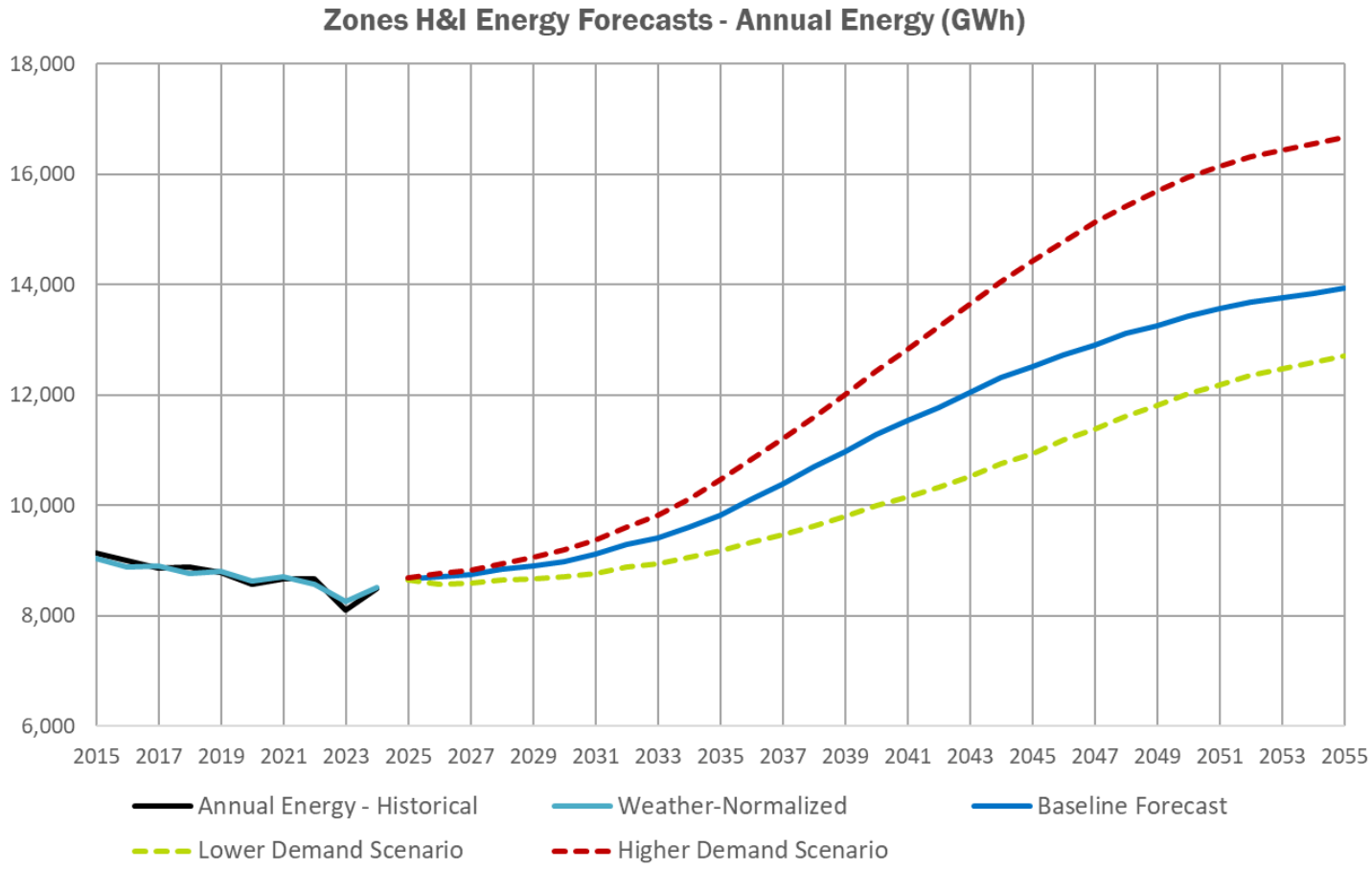

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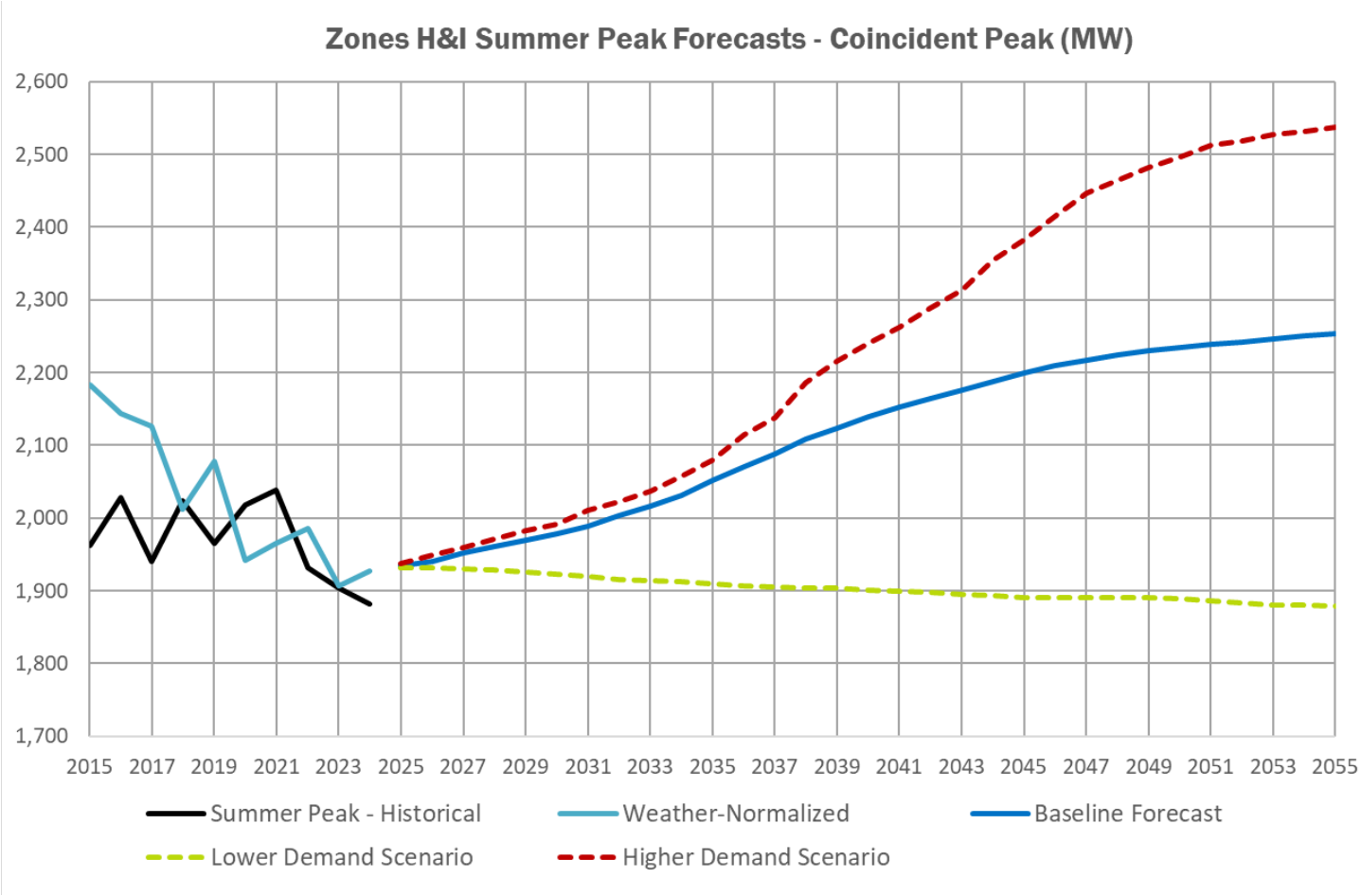

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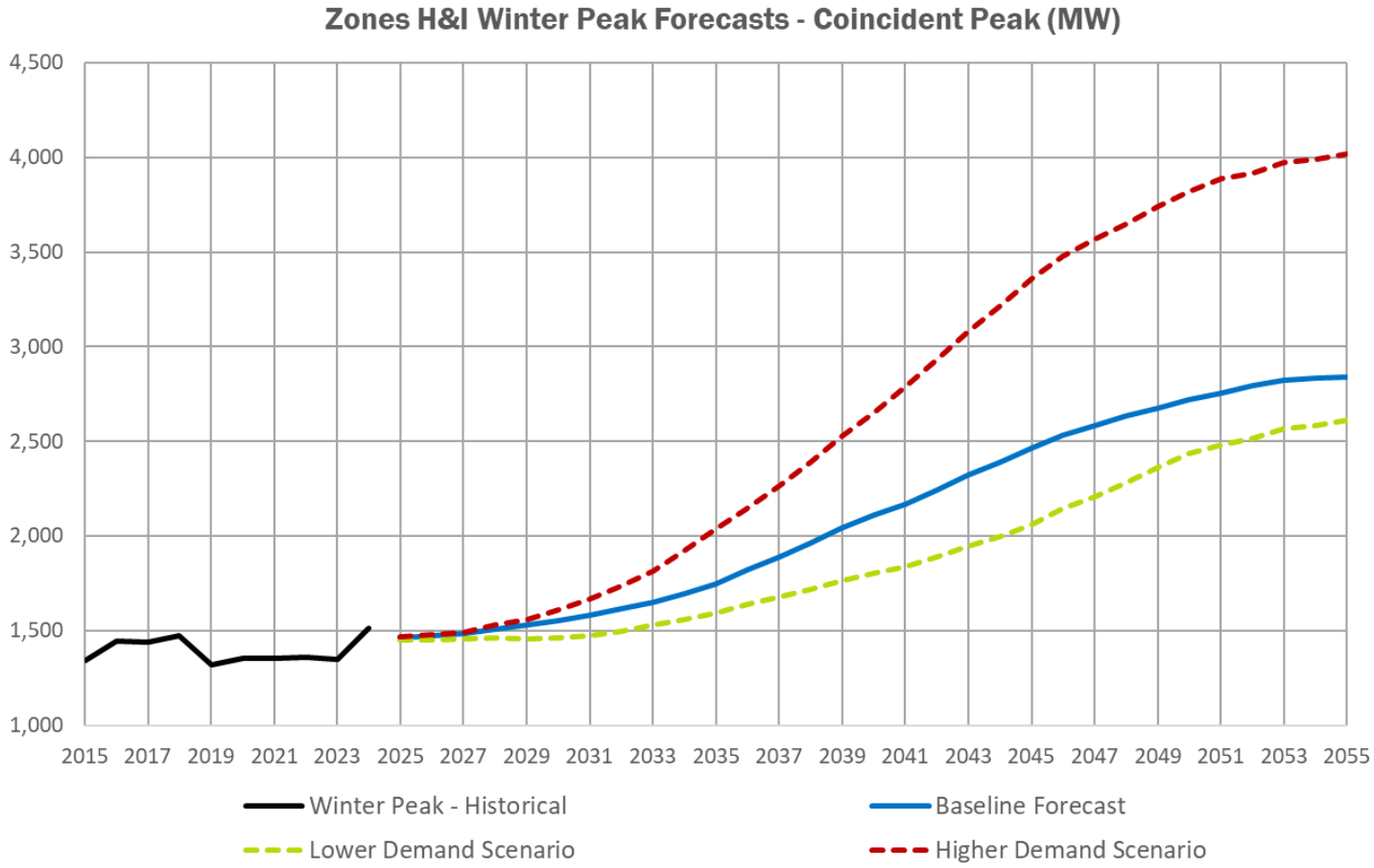
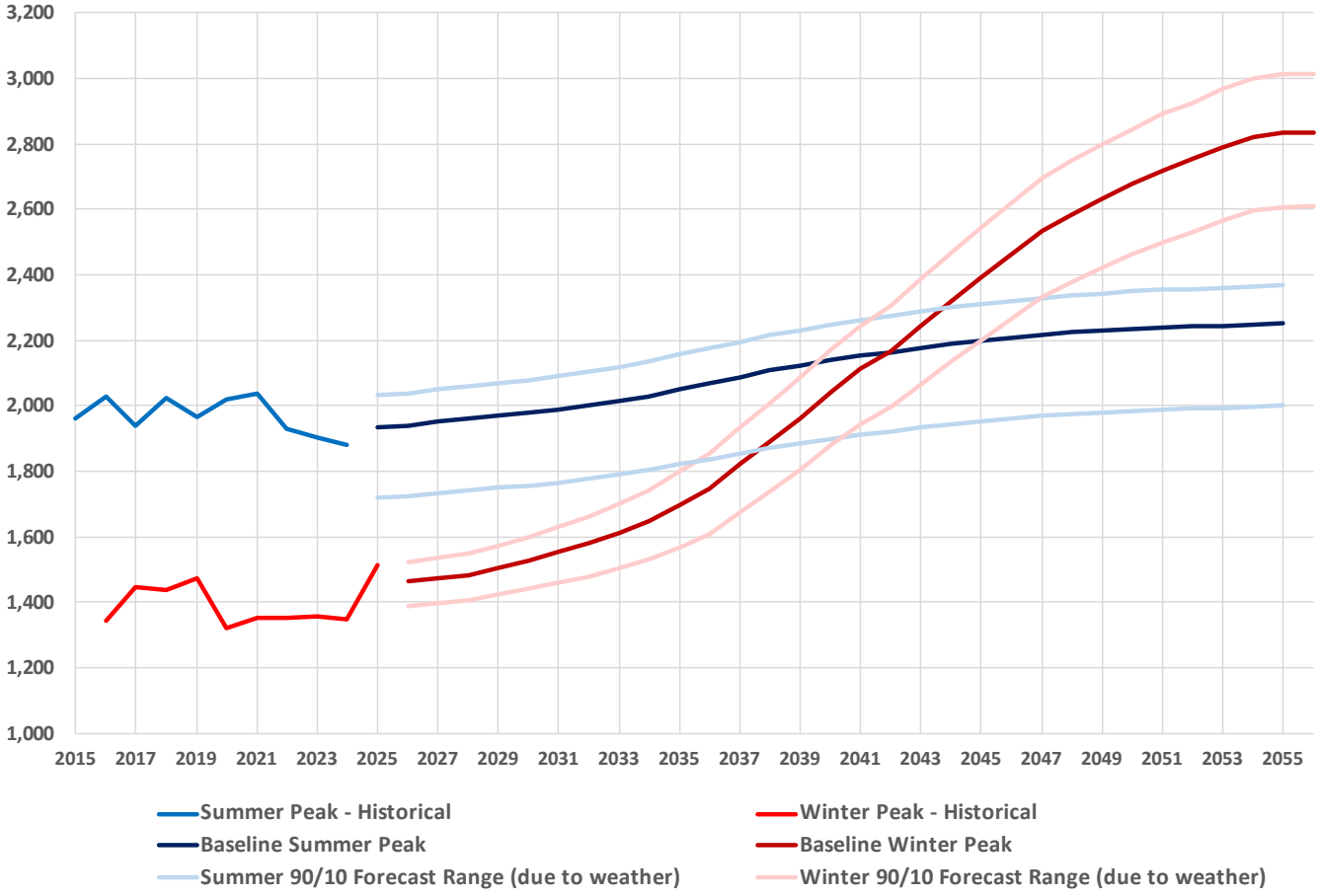


New York ISO

Zones H&I Peak Forecast Comparison - Coincident Peak (MW)



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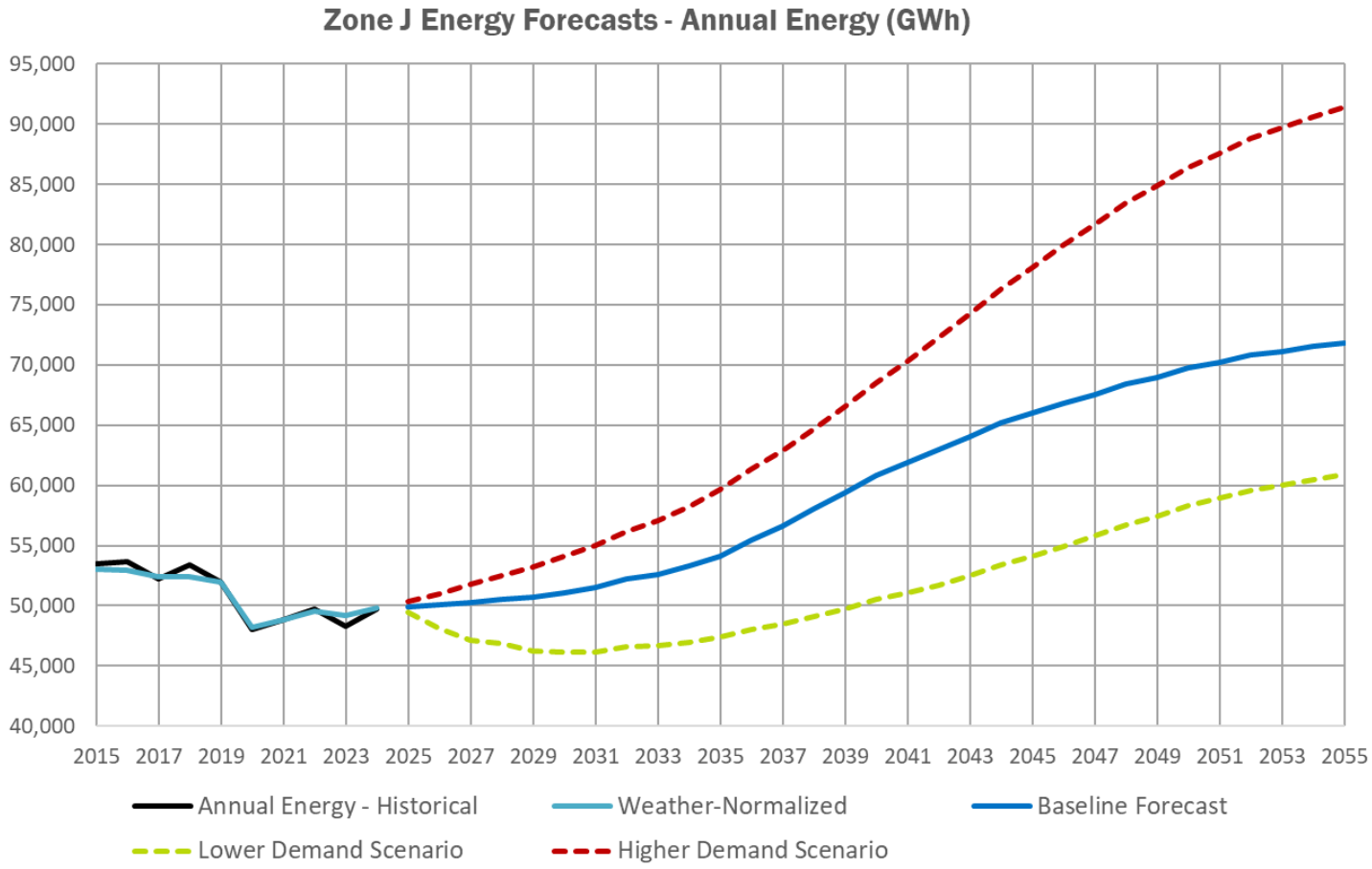

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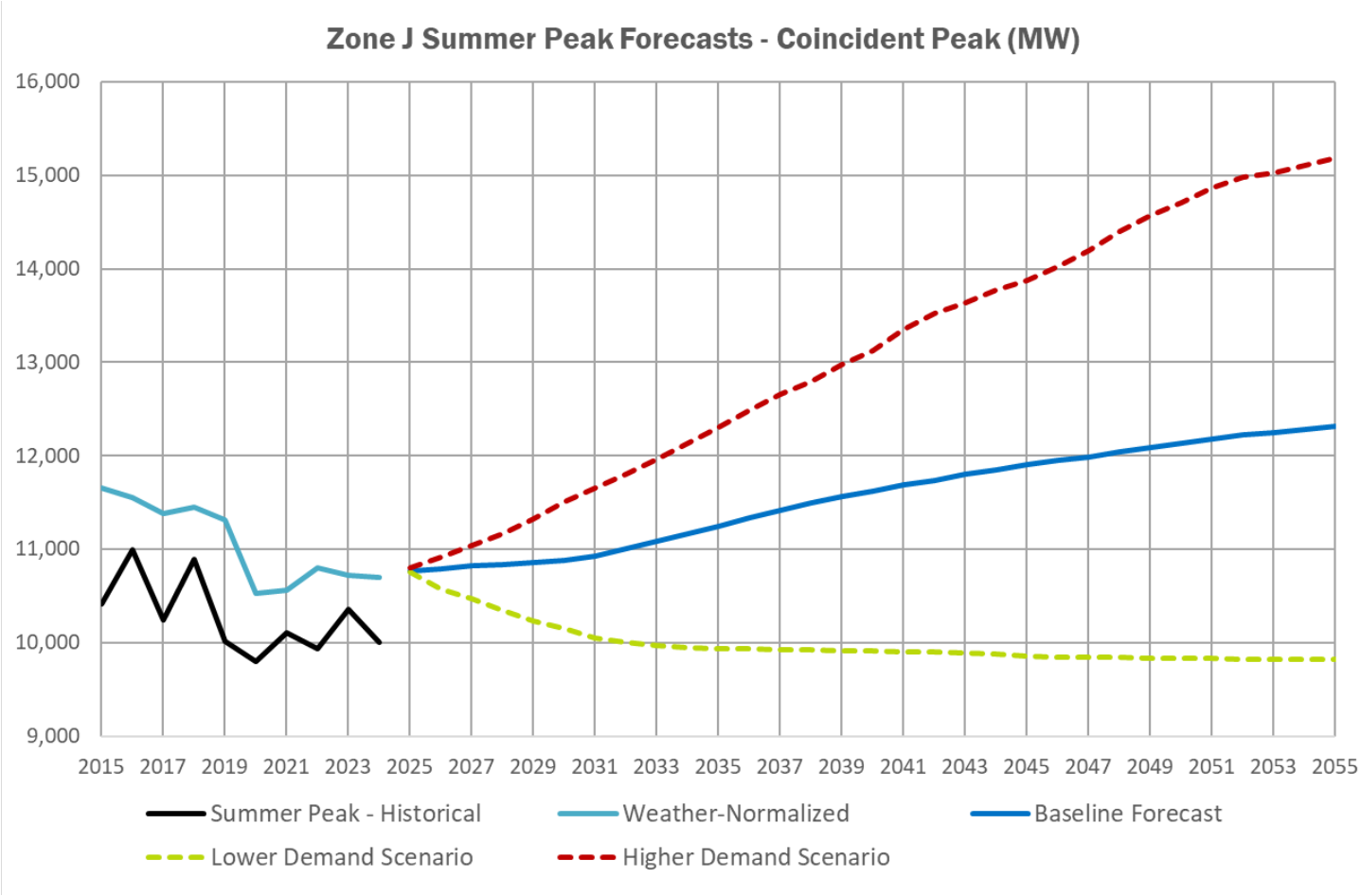

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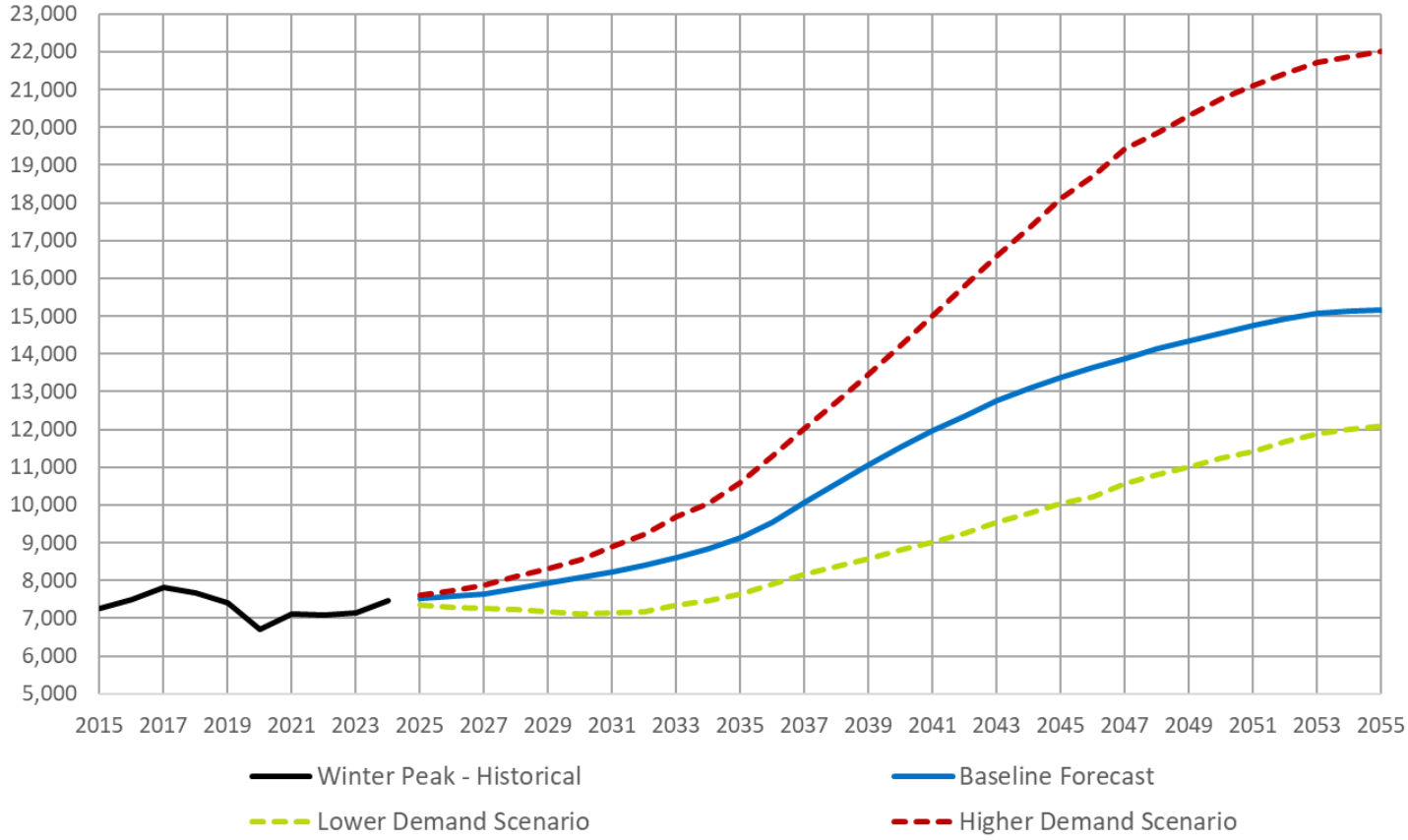
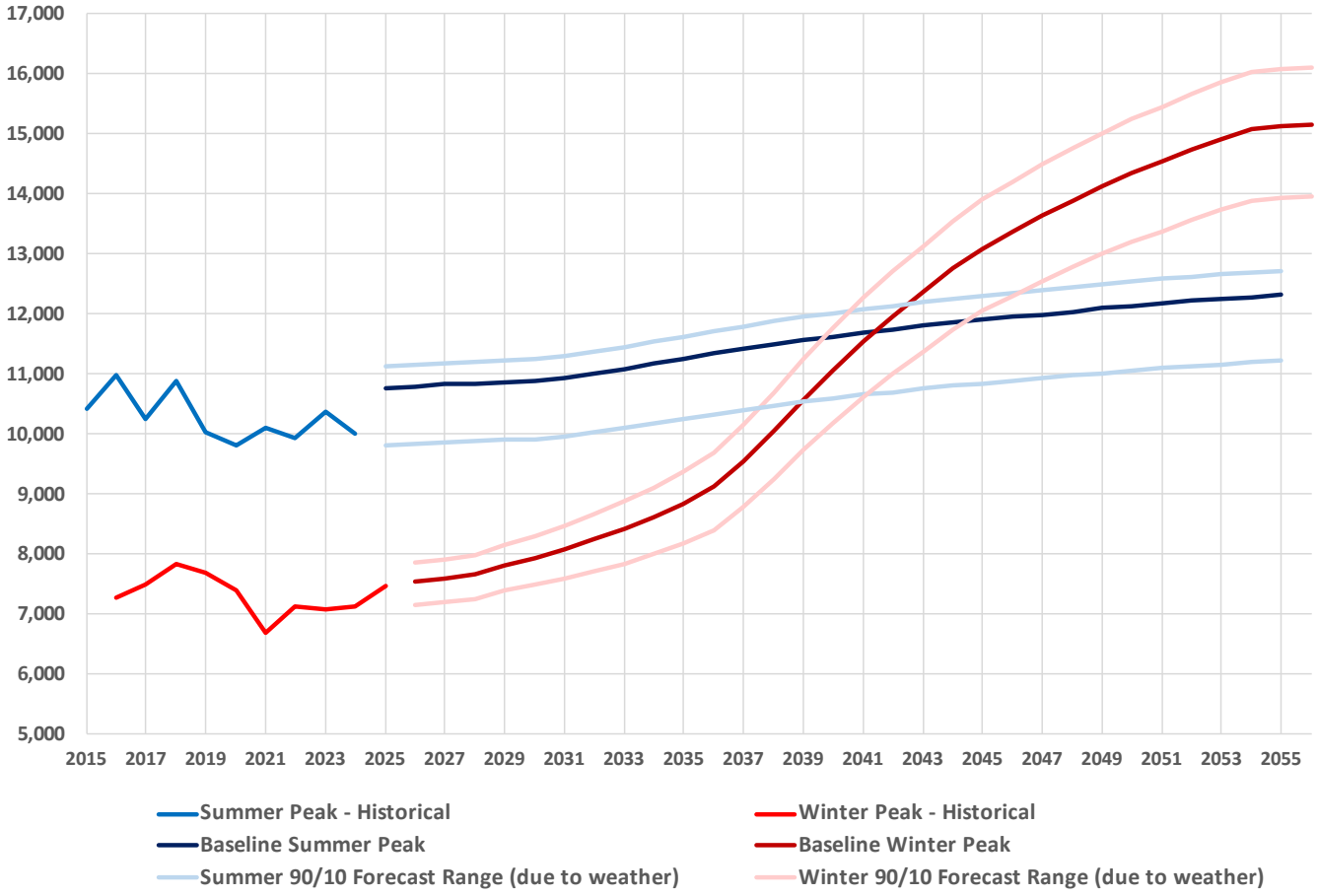
Zone J Winter Peak Forecasts - Coincident Peak (MW)



New York ISO

Zone J Peak Forecast Comparison - Coincident Peak (MW)



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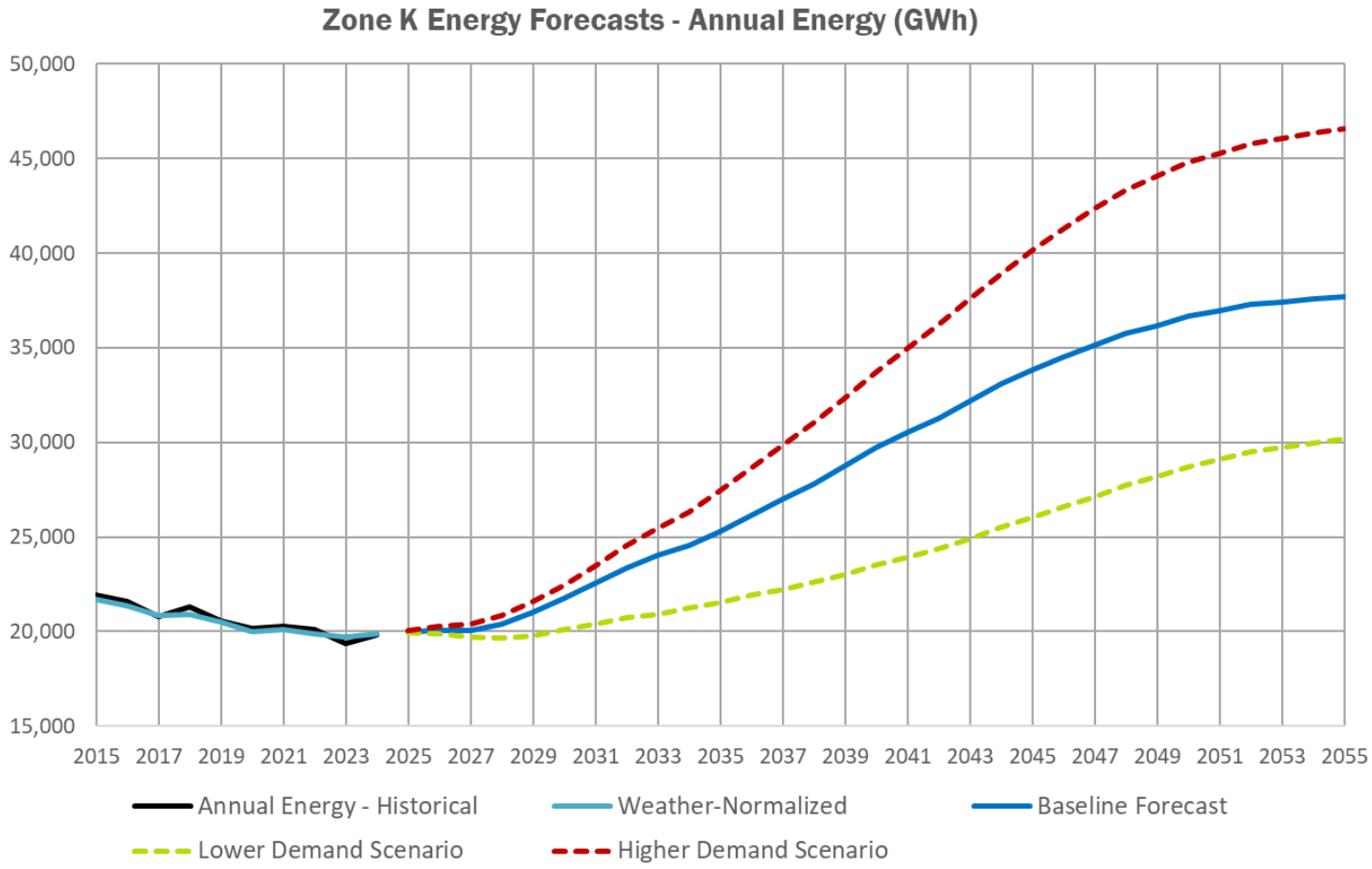

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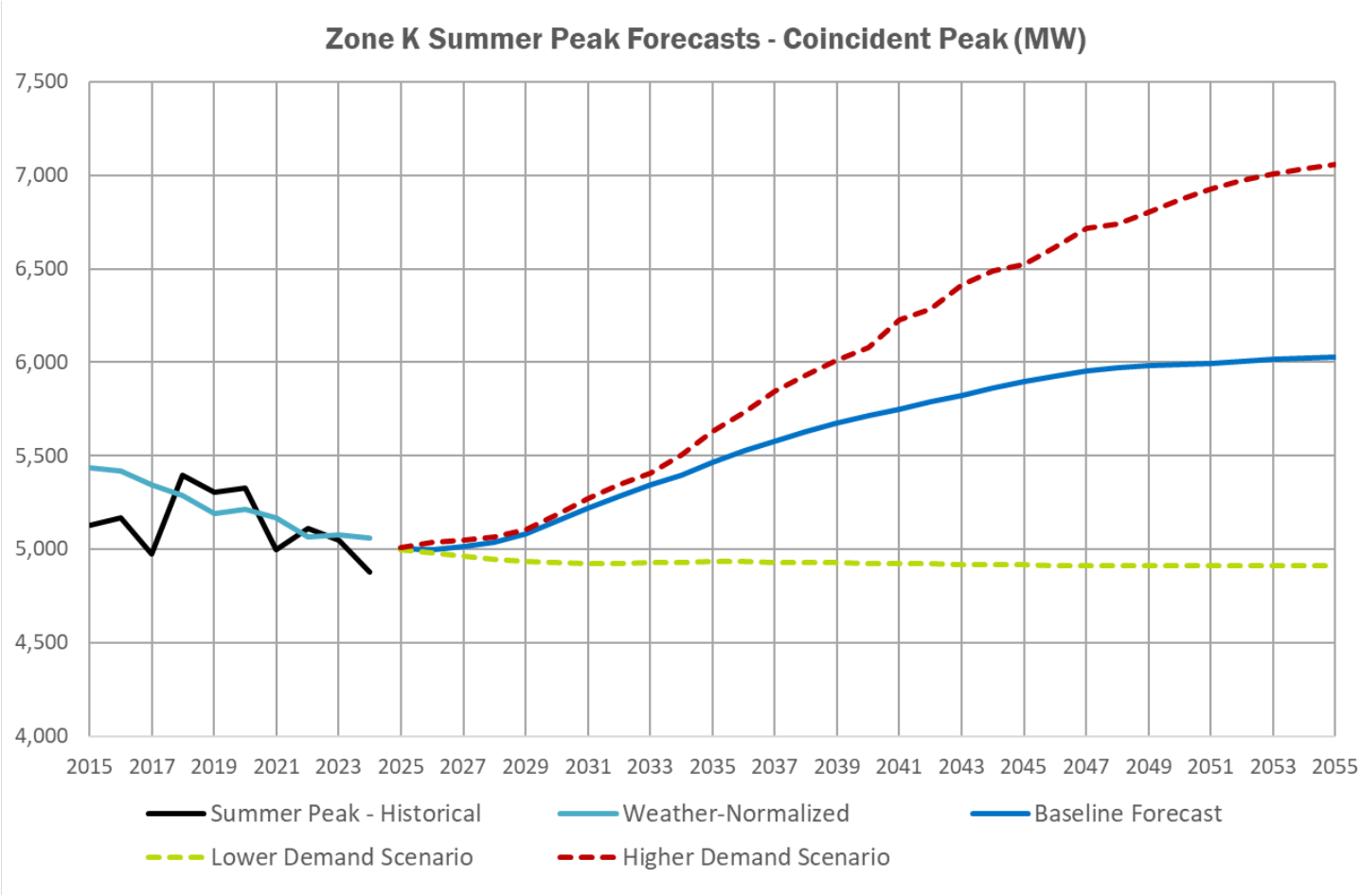

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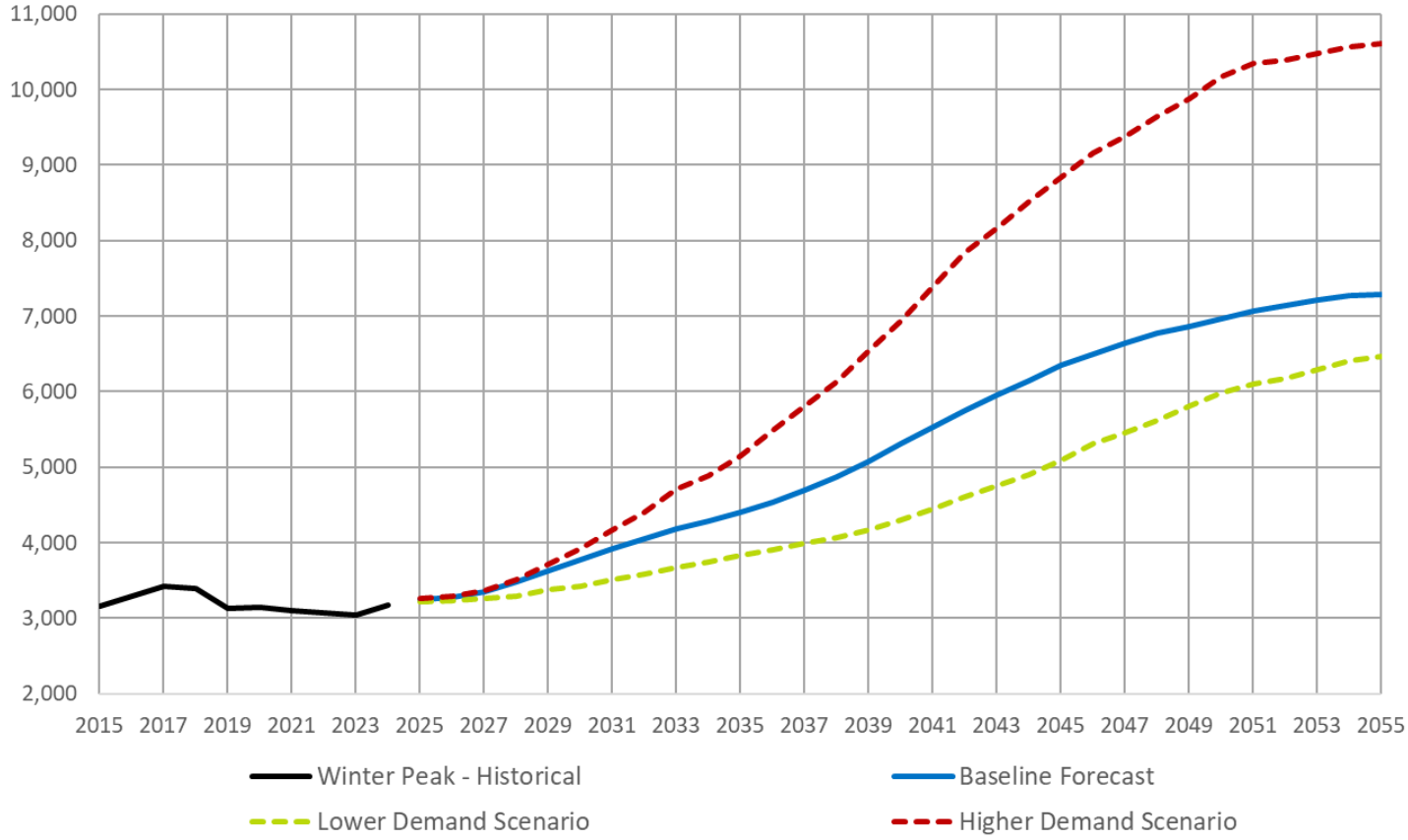
Zone K Winter Peak Forecasts - Coincident Peak (MW)



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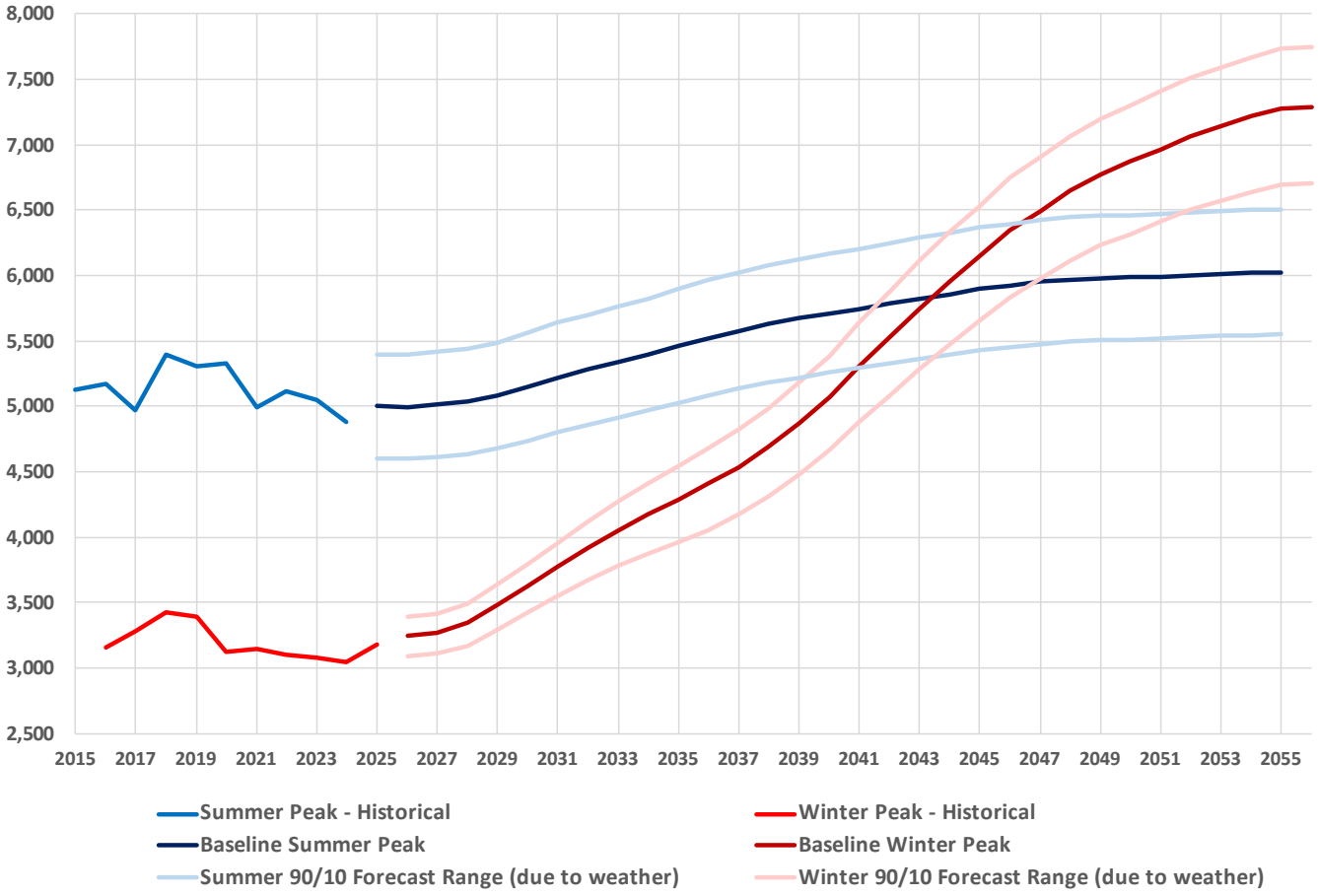
Zone K Peak Forecast Comparison - Coincident Peak (MW)



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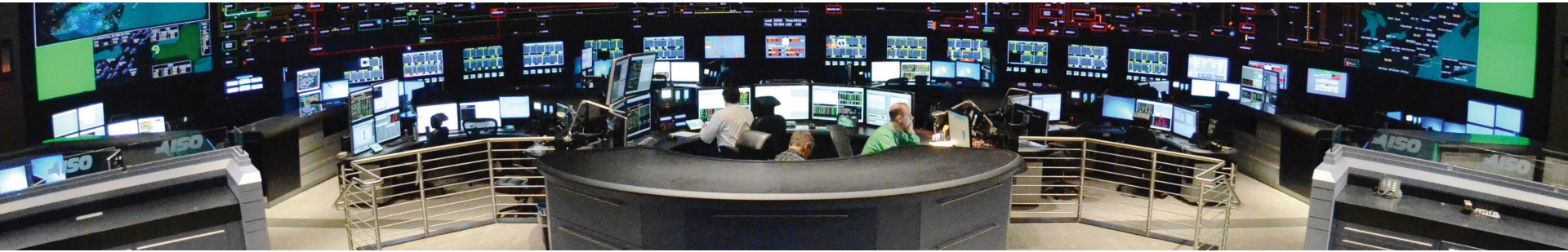
Our Mission and Vision

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



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