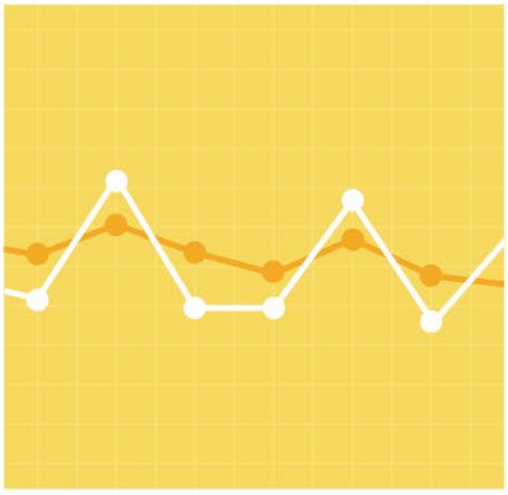
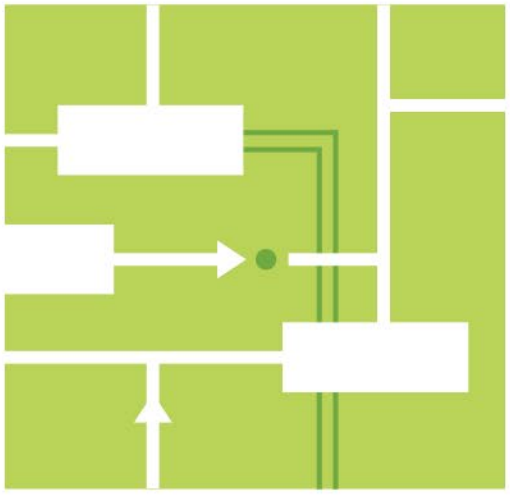
Summer 2021 Weather Normal Peak Load

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DECEMBER 2021

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Contents

Contents **2**

Section 1 Executive Summary **3**

Section 2 Summer 2021 Weather **4**

Section 3 Actual and Weather-Adjusted Daily Peak Loads **5**

Section 4 Summer 2021 Weather-Adjusted Daily Peak Loads **6**

Section 5 Summer 2021 Load Forecast Performance **7**

Section 1
Executive Summary

Daily gross peak loads used in ISO's demand forecast modeling include reconstitution (i.e., add-backs) for load reductions from behind-the-meter photovoltaics (BTM PV), passive demand resources (PDR)[1], and Demand Response Resources (DRR). Starting with the 2021 load forecast, the methodology used to reconstitute PDR resources is calibrated to the Capacity Supply Obligations (CSOs) acquired by PDR resources in the most recently completed Forward Capacity Auction (FCA)[2].

The weather normalized gross peak load for the summer of 2021 is 28,039 MW, 1.0% (285 MW) lower than the May 2021 forecast of 28,324 MW for the summer of 2021.

The weather normalized value is derived using the long-run forecast model methodology[3] and historical data through the summer of 2021. It represents the gross peak load expected to occur at a weighted temperature humidity index (WTHI) of approximately 79.8 and cooling degree days (CDD base 65) of 16.7.

Additionally, a methodology of daily peak load normalization is used to verify the weather-normalized value. The peak gross loads for each non-holiday weekday in the summer cooling season (with a WTHI of 75 or greater) are analyzed. The loads are adjusted to reflect the difference between the actual weather at the time of the daily peak and the expected peak weather of 79.8 WTHI and CDD of 16.7. Each weather adjusted daily peak load has an equal probability of occurring; therefore, the median value of the distribution of weather adjusted daily peak loads is considered to be representative of the seasonal weather normal peak load.

[1] Passive demand resources include energy efficiency measures, passive distributed generation, and load management measures.

[2] The prior reconstitution methodology used all installed EE measures as the basis of reconstitution, which included EE installations in excess of the amount of Capacity Supply Obligations acquired in the Forward Capacity Auction.

[3] Additional information regarding the ISO's forecast methodology for CELT 2021 can be found at: https://www.iso-ne.com/static-assets/documents/2021/09/lf2022_methodology.pdf

Section 2
Summer 2021 Weather

Figure 1 shows the weighted temperature-humidity index (WTHI) at the time of the gross daily peak for selected non-holiday weekdays with WTHI≥75 and daily cooling degree days (base 65) over 10. During the summer of 2021, New England experienced several days of peak-eliciting weather.

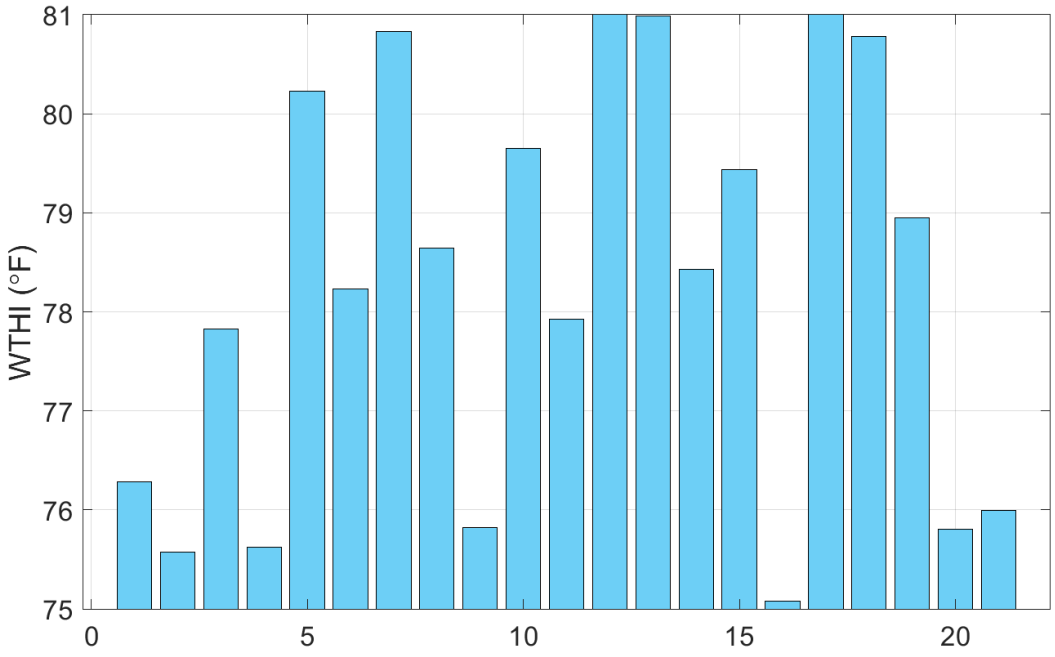


Figure 1. New England WTHI≥75 and CDD >10 at Time of the Daily Gross Peak for Selected Days

Section 3
Actual and Weather-Adjusted Daily Peak Loads

The daily gross peaks reconstituted for load reductions from BTM PV, PDR, and DRR, are shown in Figure 2. The gross loads are used in the normalization process, and their weather-adjusted values are also shown in Figure 3.

The ISO New England Control Area net summer peak load of 25,801 MW occurred on June 29, with a WTHI of 82.2. Note how the weather adjustment reduces the variation in the daily peaks.

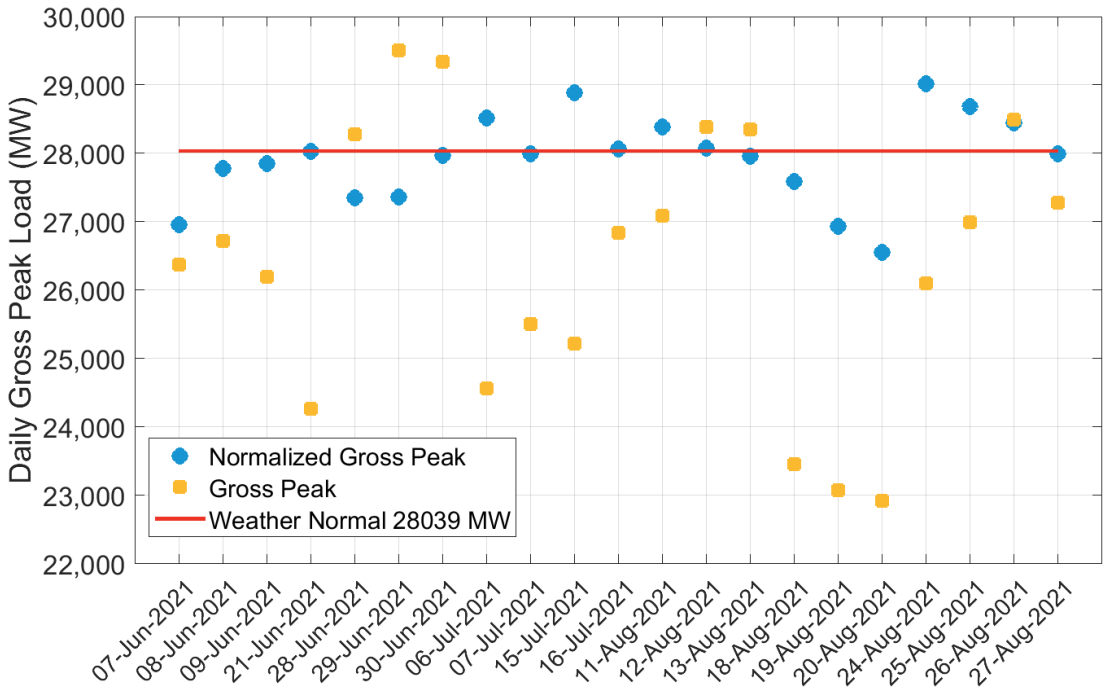


Figure 2: New England 2021 Summer Peak Load Weather Normalization: Weekday Daily Peaks, WTHI≥75 and CDD>10

Section 4
Summer 2021 Weather-Adjusted Daily Peak Loads

Figure 3 shows the distribution of weather-adjusted weekday gross peak loads where WTHI >= 75 and where CDD >10. This is the range within which the summer 2021 weather normalized peak load would be expected to fall. The distribution has a median value of 27,988 MW, with an upper bound of 28,399 MW at the 75th percentile, and a lower bound of 27,531 MW at the 25th percentile. The distribution of the weather adjusted daily peak loads ranges from 26,551 MW to 29,019 MW. The daily peak load normalization methodology supports the summer 2021 weather normalized gross peak load estimate of 28,039 MW, since it falls within the upper and lower bounds of the distribution.

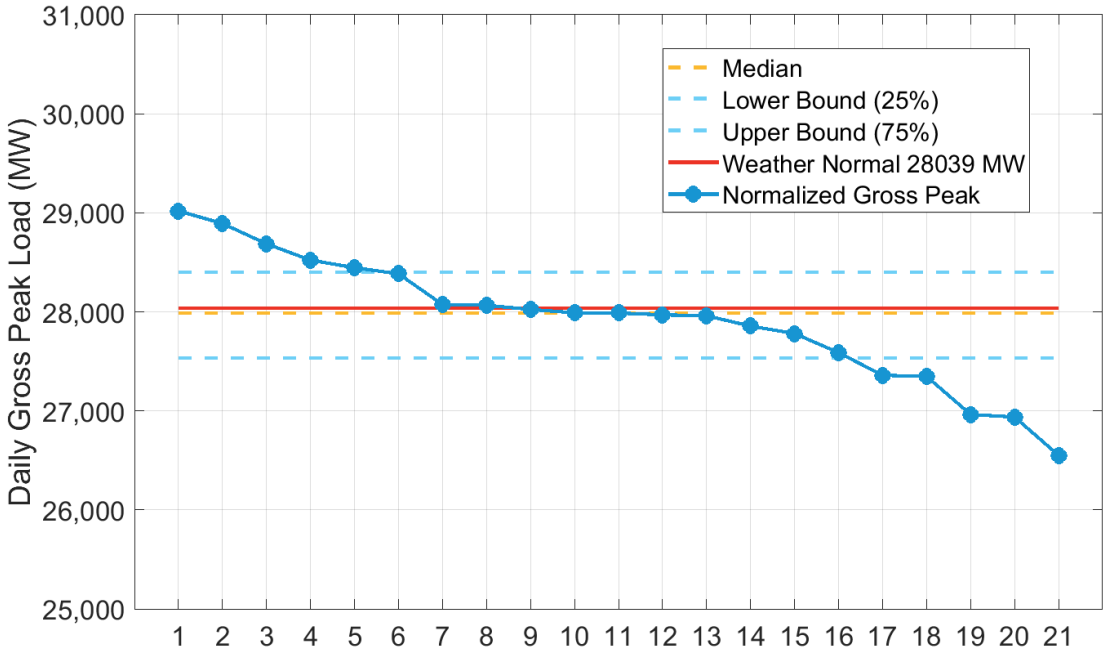


Figure 3. Summer 2021 Weather-Adjusted Daily Gross Peak Loads

Section 5
Summer 2021 Load Forecast Performance

This section reviews the performance of the CELT 2021 gross load forecast[4]. Figure 4 and figure 5 below summarize the "out-of-sample" performance of the CELT 2021 gross summer demand models during the recent period June 1, 2021 through August 31, 2021. Out-of-sample forecast performance is measured on test data that is not used in model estimation. Two metrics used to evaluate forecast performance are mean error (ME) and mean absolute percent error (MAPE). ME is a measure of, on average, how much a model is over/under-forecasting. Positive mean error values indicate actual load is higher than forecast load. Negative values indicate actual load is lower than forecast load. MAPE is a measure of the magnitude of the model errors irrespective of direction (i.e., over/under).

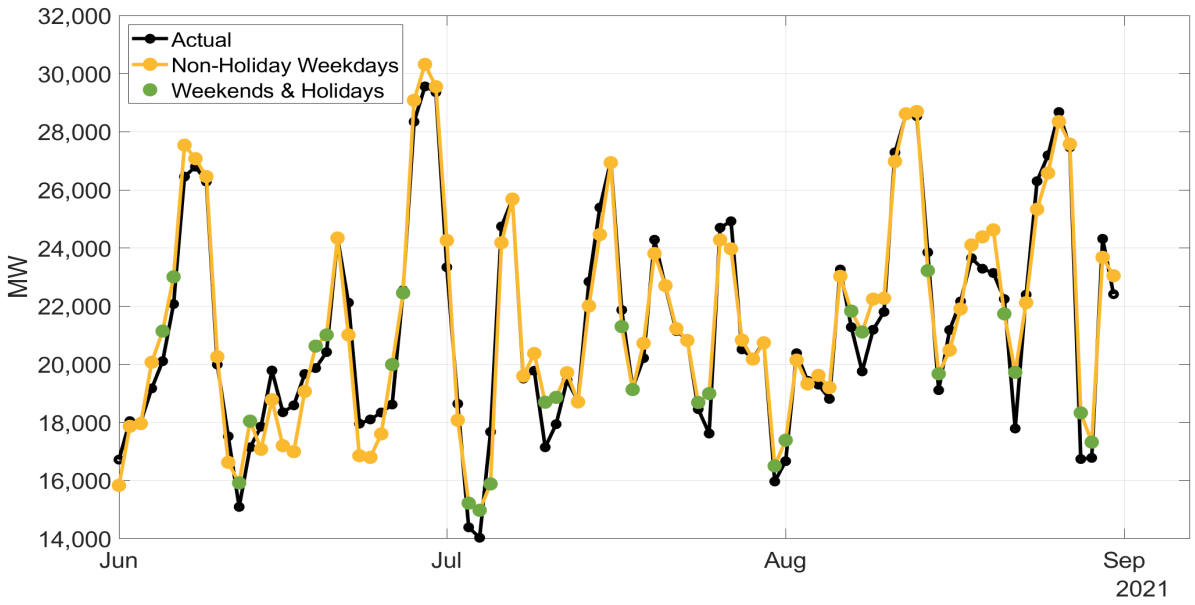
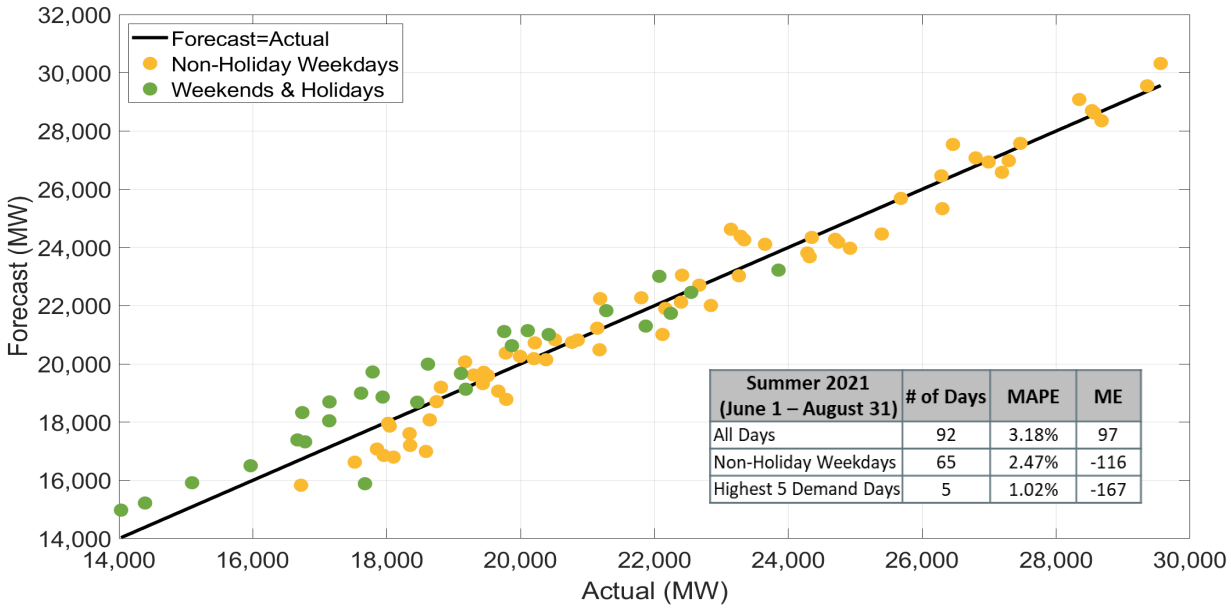


Figure 4. Time series plot of CELT 2021 gross summer demand forecast and actual values (June 1 – August 31)

[4] Note that peak load values are preliminary since the data reconciliation process (DRP) was not complete at the time of this publication.



Summer 2021 (June 1 – August 31)	# of Days	MAPE	ME
All Days	92	3.18%	97
Non-Holiday Weekdays	65	2.47%	-116
Highest 5 Demand Days	5	1.02%	-167

Figure 5. Scatter plot of CELT 2021 gross summer demand forecast and actual values (June 1 – August 31)