Summer 2014 Weather Normal Peak Load

The weather normalized peak load for the summer of 2014 is 27,970 MW, 0.70% (197 MW) lower than the April 2014 forecast of 28,165 MW for the summer of 2014.

This value is analytically derived using the short-run forecast model methodology and historical data through the summer of 2014. It represents the summer peak load at a New England weighted temperature-humidity index (WTHI) of 79.9. This is considered to be the WTHI at which the summer peak load is most likely to occur. The 79.9 WTHI corresponds to the 50th percentile of our extreme weather distribution and is consistent with the average of the WTHI at the hour of the ISO New England Control Area summer peak load for the previous 20 years.

A methodology of daily peak load normalization is also used to verify the weather normalized value. The peak loads for each non-holiday weekday in the June - August cooling season (with a WTHI of 70 or greater) are adjusted to reflect the difference between the actual WTHI at the time of the daily peak and the expected peak WTHI of 79.9. 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.

Distribution of Summer 2014 Weather Adjusted Daily Peak Loads

Figure 1 shows the distribution of weather-adjusted daily peak loads and the range within which the summer 2014 weather normalized peak load would be expected to fall. The distribution has a median value of 28,010 MW, with an upper bound of 28,565 MW at the 75^{th} percentile, and a lower bound of 27,560 MW at the 25^{th} percentile. The range is equivalent to 24,790 MW – 29,790 MW. The daily peak load normalization methodology supports the summer 2014 weather normalized peak load estimate of 27,970 MW, which falls well within the upper and lower bounds of the distribution.

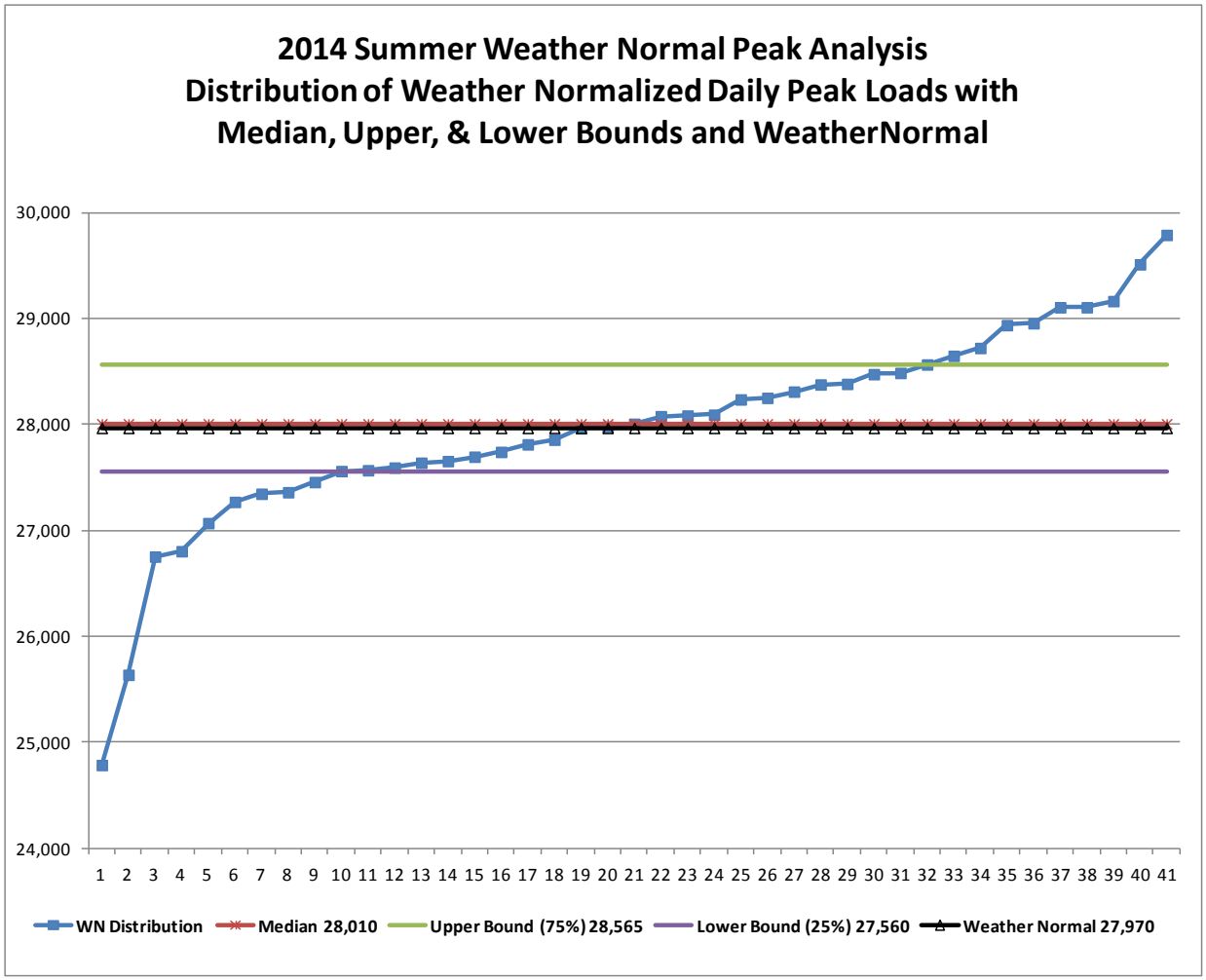

Figure 1

Summer 2014 Weather

Figure 2 shows the weighted temperature-humidity index (WTHI) at the hour of the daily peak. The summer of 2014 experienced two days near the expected WTHI of 79.9 which, in this sample, corresponds to a New England dry bulb temperature of about 88º - 95º and dew point temperatures in the upper 60s – low 70s range.

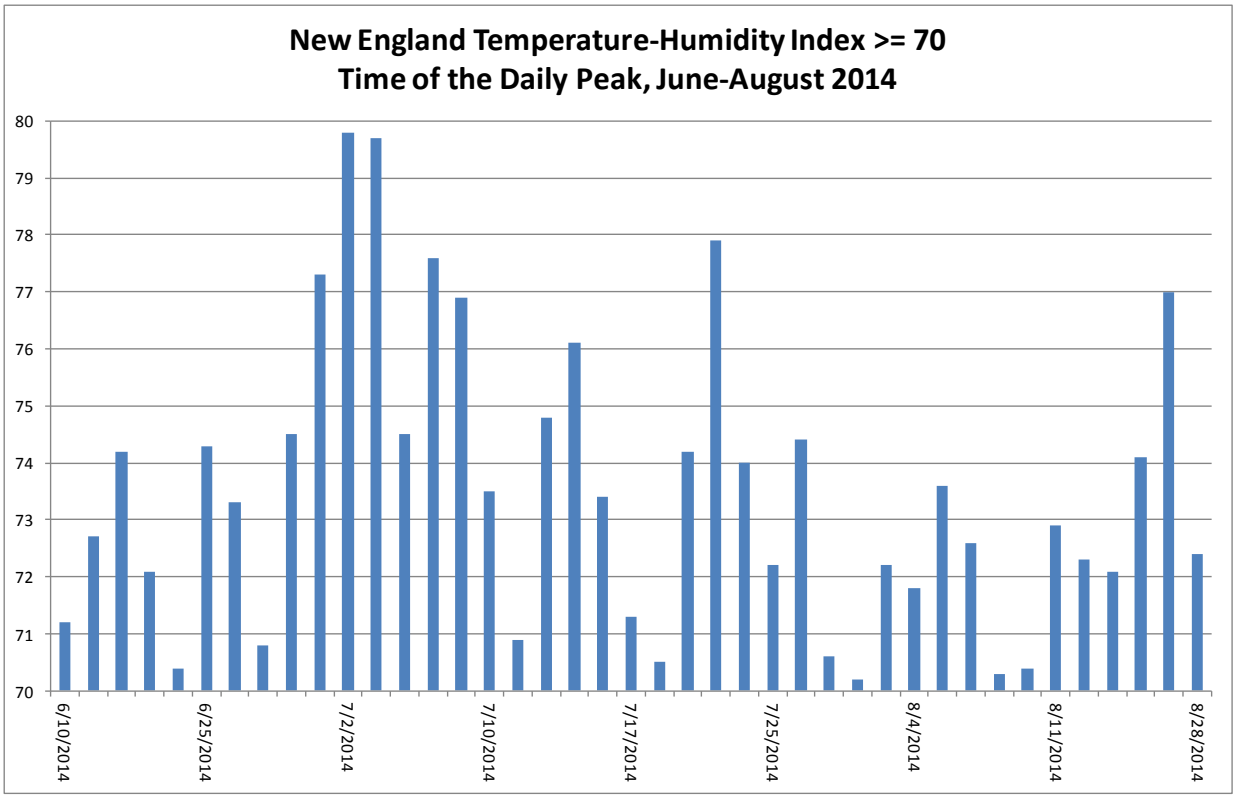

Figure 2

Actual and Weather Adjusted Daily Peak Loads

The actual daily peak loads used in the normalization and their weather-adjusted values are shown in figure 3. The ISO New England Control Area actual summer peak load of 24,409 MW (26,119 MW after reconstitution for OP4, passive demand resources, and price responsive demand) occurred on Wednesday, July 2 at a WTHI of 79.8. Note how the weather adjustment reduces the variation in the daily peaks.

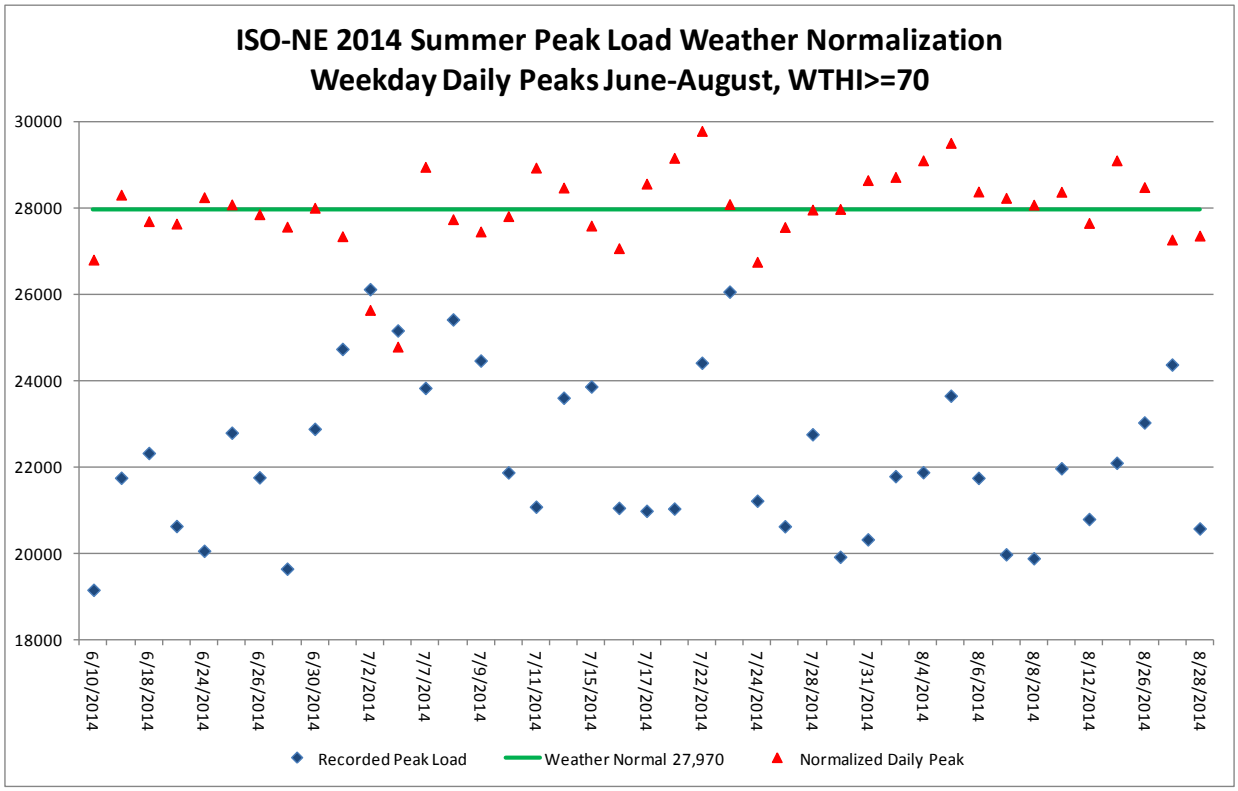
ISO-NE 2014 Summer Peak Load Weather Normalization
Weekday Daily Peaks June-August, WTHI>=70
30000
28000
26000
24000
22000
20000
18000
6/10/2014
6/18/2014
6/24/2014
6/26/2014
6/30/2014
7/2/2014
7/7/2014
7/9/2014
7/11/2014
7/15/2014
7/17/2014
7/22/2014
7/24/2014
7/28/2014
7/31/2014
8/4/2014
8/6/2014
8/8/2014
8/12/2014
8/26/2014
8/28/2014
Recorded Peak Load
Weather Normal 27,970
Normalized Daily Peak

Figure 3