

Load Forecast Manual Review

Arthur Maniaci
Principal Forecaster

Load Forecasting Task Force

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NYISO, Rensselaer, NY



Overview

- **Reasons for update**
 1. Include language for treatment of Behind-The-Meter Net Generation Resources (BTM:NG Resources)
 2. Change other sections of the Manual as needed or recommended by stakeholders
 3. As part of periodic Manual review process
- **Last discussed with LTF in August 2018 to describe the method used to adjust BTM:NG Resources for weather. Since then, additional changes to Manual were made to be consistent with this method.**
- **Next step: Discuss with LTF and request any additional comments by September 30, 2019**

Summary of Changes to the Load Forecast Manual

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- 1.2 Modify formula for the Regional Load Growth Factor (1+RLGF)
- 2.1 & 2.2 Add text for providing for notice of peaks after 9/1 and other schedule changes related to BTM:NG Resources
- 2.2.3 Add text to describe the “1-in-2” and “1-in-3” design criteria
- 2.2.6 Add language pertaining to BTM:NG Resources
- 2.2.8 Describe the formula for the Weather Normalization Factor
- 2.3.1 Describe how to adjust loads for NYISO SCR and EDRP impacts, while omitting adjustments for TO program impacts that are not part of NYISO programs

Summary of Changes to Load Forecasting Manual, continued

- 2.3.3 Describe how to adjust TO peak hour loads in the event a BTM:NG Resource obtains power from an LSE, MES or TO.
- 2.3.7 Clarifies how to ensure the consistency of Criteria 1& Criteria 2 used to evaluate the Regional Load Growth Factor for a TO.
- 2.3.8 Describes the exclusion of BTM:NG Resources from the NYCA peak load
- 2.3.9 Describes the determination of and adjustments to the peak load of a Locality
- 2.4 Describes whether to include or exclude the impacts of BTM:NG Resources from the ICAP Market Forecast and the forecast used for the Installed Reserve Margin Study

Method to Adjust BTM:NG Resources for Weather

(previously discussed at the LFTF in
August 2018)

Proposal for Weather Adjustment of BTM:NG Resources

1. Determine change in temperature from Actual to Design for Transmission District.

$$\text{Delta T} = (\text{T Design} - \text{T Actual})$$

2. For each BTM:NG Resource, find actual average load and weather response.

$$\text{MW}_{\text{BTM:NG, Avg}} = \text{Sum}(\text{top 20 loads}) / 20$$

B = MW per Degree, from linear regression of top 20 load hours
with hourly temperatures in TD

Proposal for Weather Adjustment of BTM:NG Resources

3. Weather Adjustment for each BTM:NG Resource: $\Delta MW = B * \Delta T$

Use ΔT from Transmission District & Weather Response of BTMNG:

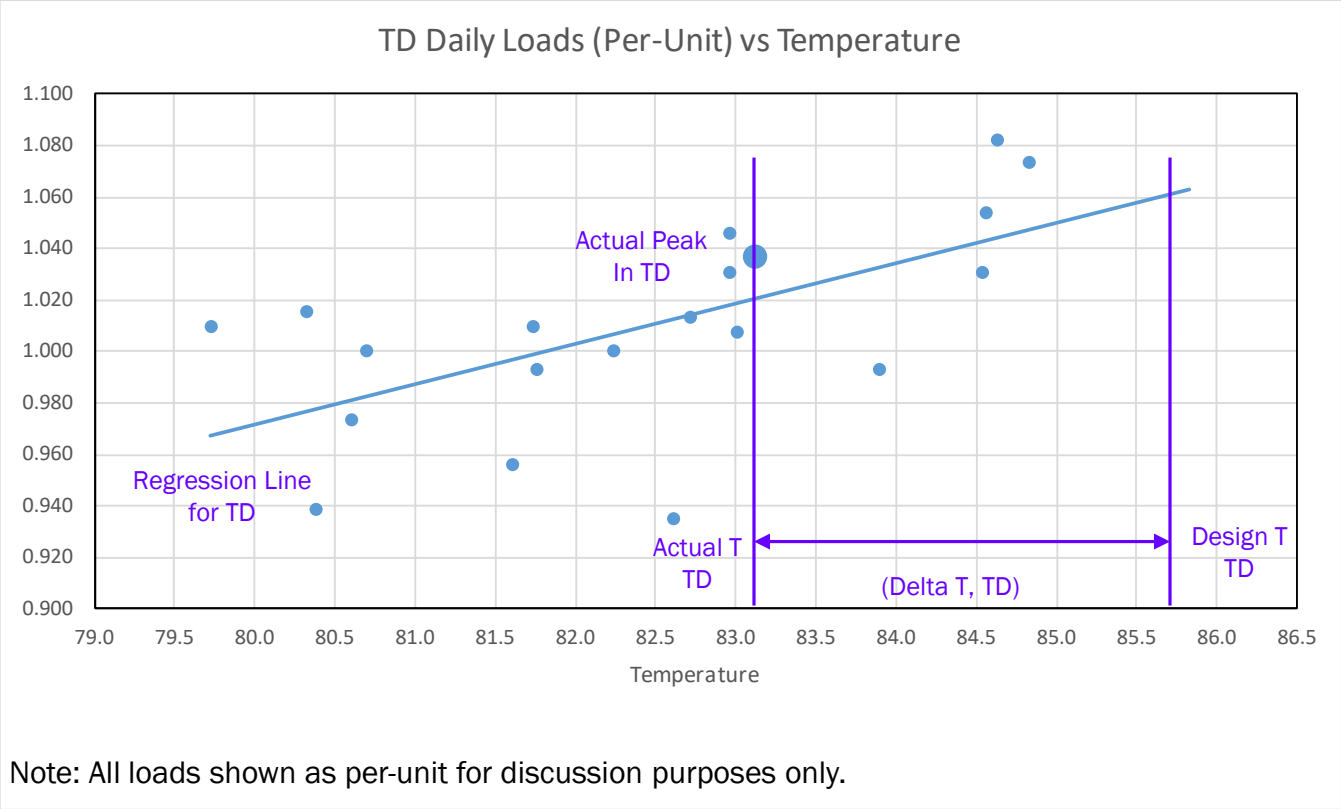
$$MW_{\text{Normal}} = MW_{\text{BTM:NG, Avg}} + \Delta MW$$

(Note: B must be greater than or equal to 0. If slope is negative, the weather adjustment is zero.)

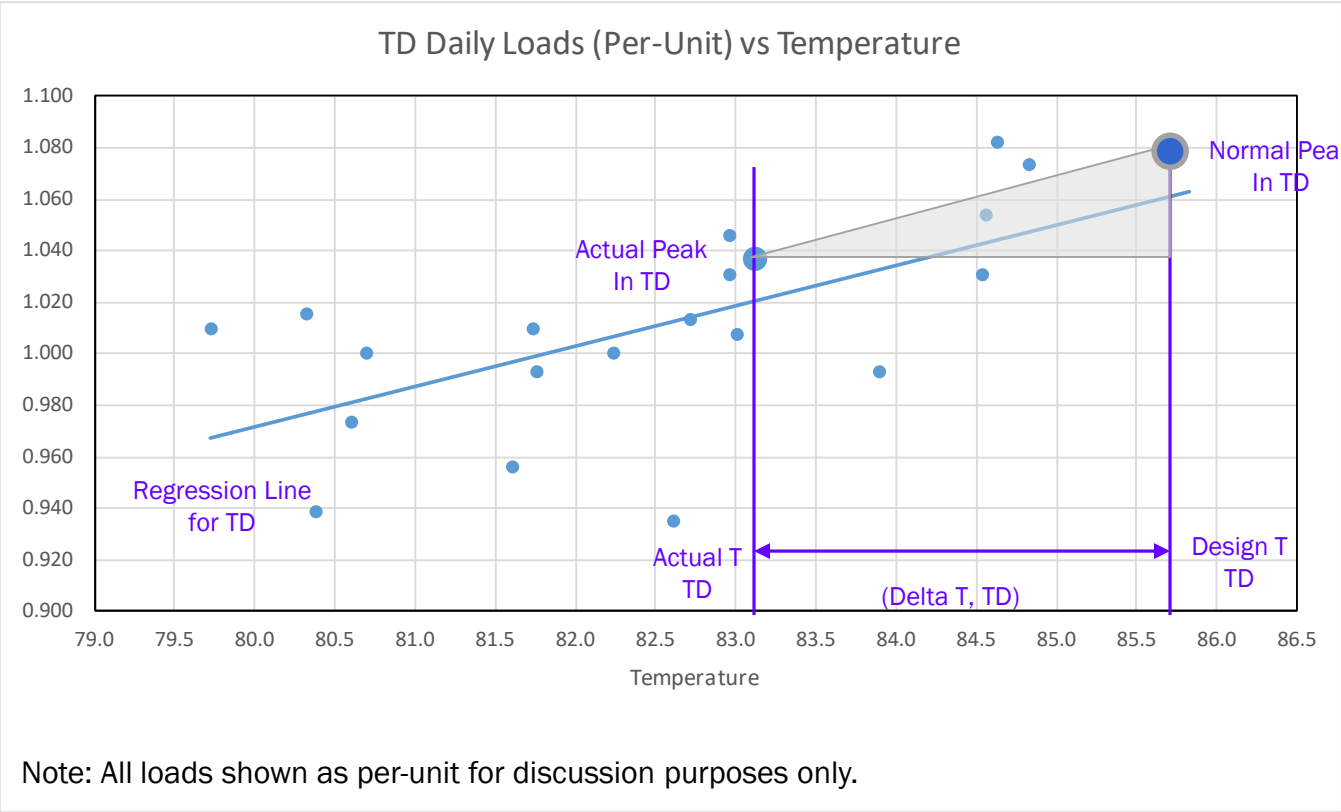
4. Determine $(1 + WNF)$ for each BTM:NG Resource as

$$(1 + WNF) = MW_{\text{Normal}} / MW_{\text{BTM:NG Avg}}$$

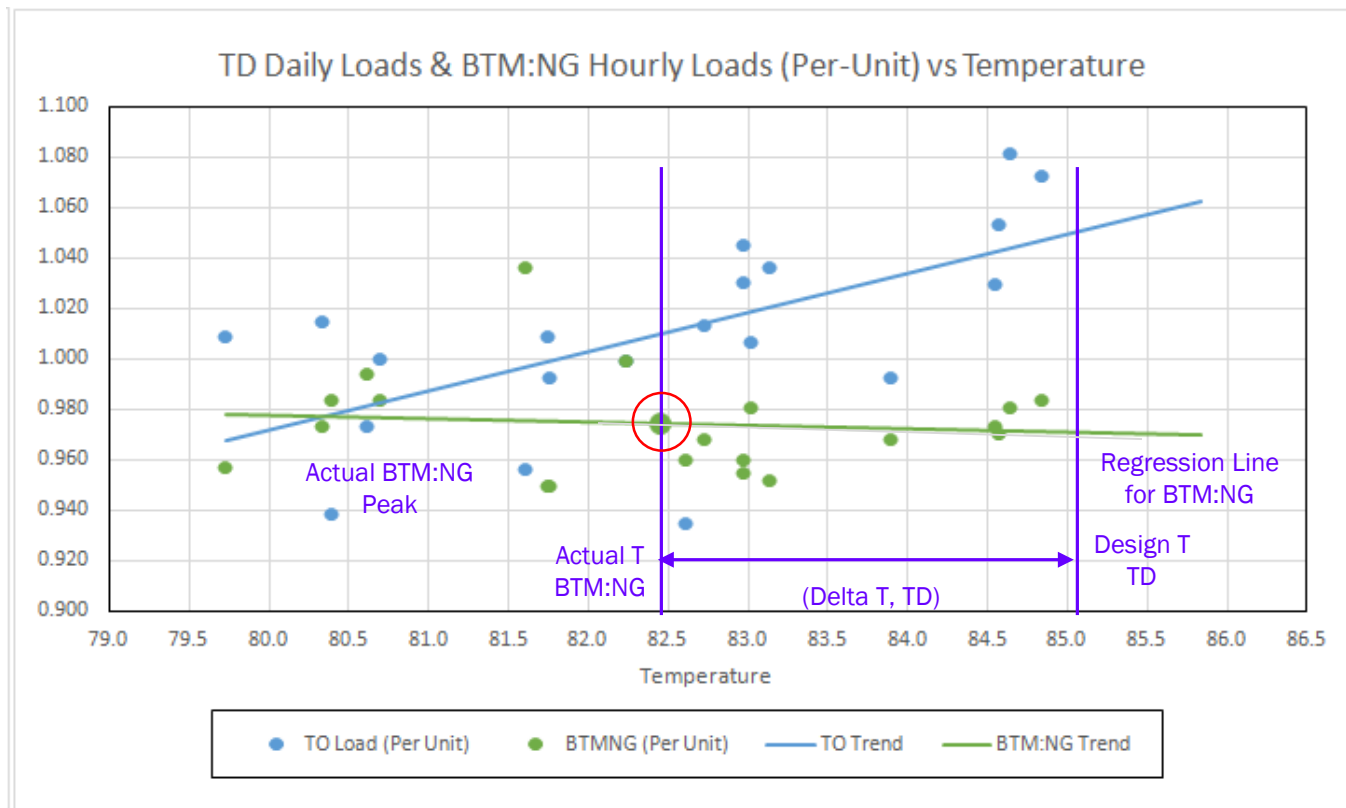
Current Method for Weather Adjustment of TD Peak



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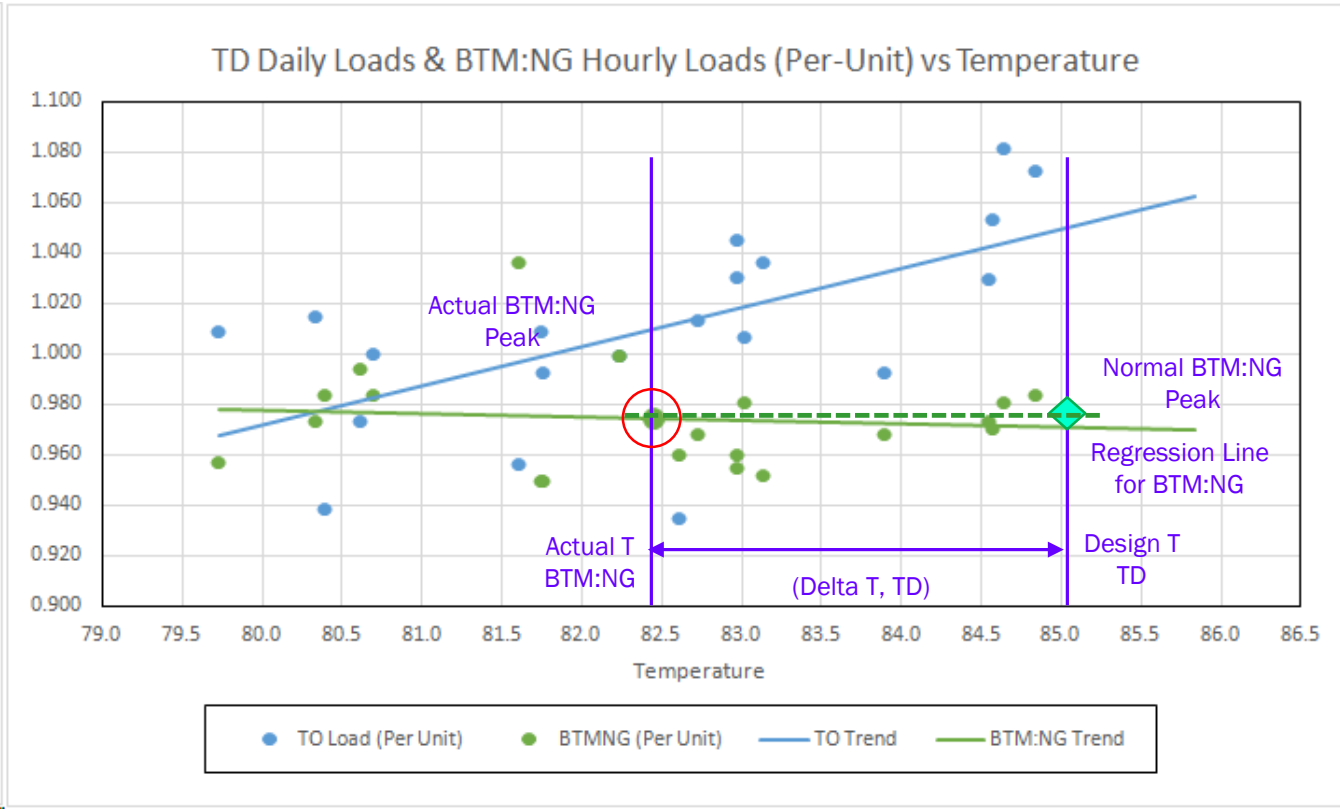


Proposed Method for Weather Adjustment of BTM:NG Resource



Note: All loads shown as per-unit for discussion purposes only.

Proposed Method for Weather Adjustment of BTM:NG Resource



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Discussion Points

- 1. Proposed method accounts for specific weather response of each resource, so that its net generation will be properly accounted for.**
- 2. Method is consistent with Tariff and ICAP Manual, since it uses top 20 hours of each resource, from within the top 40 NYCA hours.**
- 3. Method is consistent with current NYISO Demand Response Operation processes, which allow for a $(1+WNF)$ factor specific to each resource.**

Questions?

The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system



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