

# Manual 11 Changes - Order 745 Concerns

MRC Sept. 27, 2012  
DR Supporters

# Issue

- ▶ Proposed Manual Language appears to provide that the RRMSE score is the only criterion for selecting an alternate baseline in cases where the Standard baseline (high 4 or 5 with SAA) is less than 20%.
- ▶ Current language can mandate baseline methods that may *require* uneconomic operations to increase baselines in order to meet commitments – i.e., operations to manage the baseline.
- ▶ Manual language should clarify that alternate baseline selection should consider facility characteristics in addition to RRMSE scores.

# Manual 11 (page 128 – clean)

Manual language may improperly establish the RRMSE score as the only determinant of the preferred CBL:

CBL certification is performed by the CSP prior to registration submission. CSP should always calculate an RRMSE for the standard CBL defined in the tariff. An alternative CBL may be requested if the alternative CBL is more accurate than the standard CBL and has an RRMSE less than or equal to 20%. The primary purpose for the use of an alternative CBL is to create an accurate CBL for variable load customers that can be administered on a consistent basis across the PJM market.



# Tariff (Attach. K, 3.3A.2.01)

Tariff does not require that a potentially more accurate CBL alternative have an RRMSE better than that of a non-variable baseline (with SAA)- only that it have a RRMSE of less than 20%:

- a) During the Economic Load Response Participant registration process pursuant to Section 1.5A.3 of this Schedule, the relevant Economic Load Response Participant or the Office of the Interconnection (“Interested Parties”) may, in the case of such participant’s Non-Variable Load customers, and shall, in the case of its Variable Load customers, propose an alternative CBL calculation that more accurately reflects the relevant end-use customer’s consumption pattern relative to the CBL determined pursuant to Section 3.3A.2. In support of such proposal, the participant shall demonstrate that the alternative CBL method shall result in an hourly relative root mean square error of twenty percent or less compared to actual hourly values, as calculated in accordance with the technique specified in the PJM Manuals. Any proposal made pursuant to this section shall be provided to the other Interested Party.

# Tariff (Attach. K, 3.3A.2.01)

The Tariff strongly implies that PJM may reject a proposed alternative CBL only in cases where the alternative does not have an RRMSE less than 20%.

(c) If agreement is not reached pursuant to subsection (b) of this section, the Office of the Interconnection shall determine a CBL methodology *that shall result, as nearly as practicable, in an hourly relative root mean square error of twenty percent or less compared to actual hourly values* within 20 days from the expiration of the 30-day period established by subsection (b). A CBL established by the Office of the Interconnection pursuant to this subsection (c) shall be binding upon both Interested Parties unless the Interested Parties reach agreement on an alternative CBL methodology prior to the expiration of the 20-day period established by this subsection (c).

*Italics replicate the Tariff*

# Comment

- ▶ The proposed Manual Language's use of the word "accurate" implies a measurement score criteria that can be inconsistent with the Tariff requirement to allow an alternative CBL calculation that "more accurately reflects the relevant end-use customer's consumption."
  - ▶ The Manual may contradict the Tariff if it permits PJM to reject alternative CBLs based on relative RRMSE scores only.
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# Comment

- ▶ The proposed Manual language can be interpreted as *requiring* use of SAA if the RRSME with SAA has a better score than an alternative – even if the SAA use does not accurately reflect the customer’s *consumption pattern* as the tariff specifies.
- ▶ For some industrial processes, a requirement to use an SAA baseline may preclude economic curtailment in some circumstances due a requirement to re-establish a normal load following curtailment.
- ▶ For many industrial customers a requirement to use an SAA does not make sense – see example following.

# Question

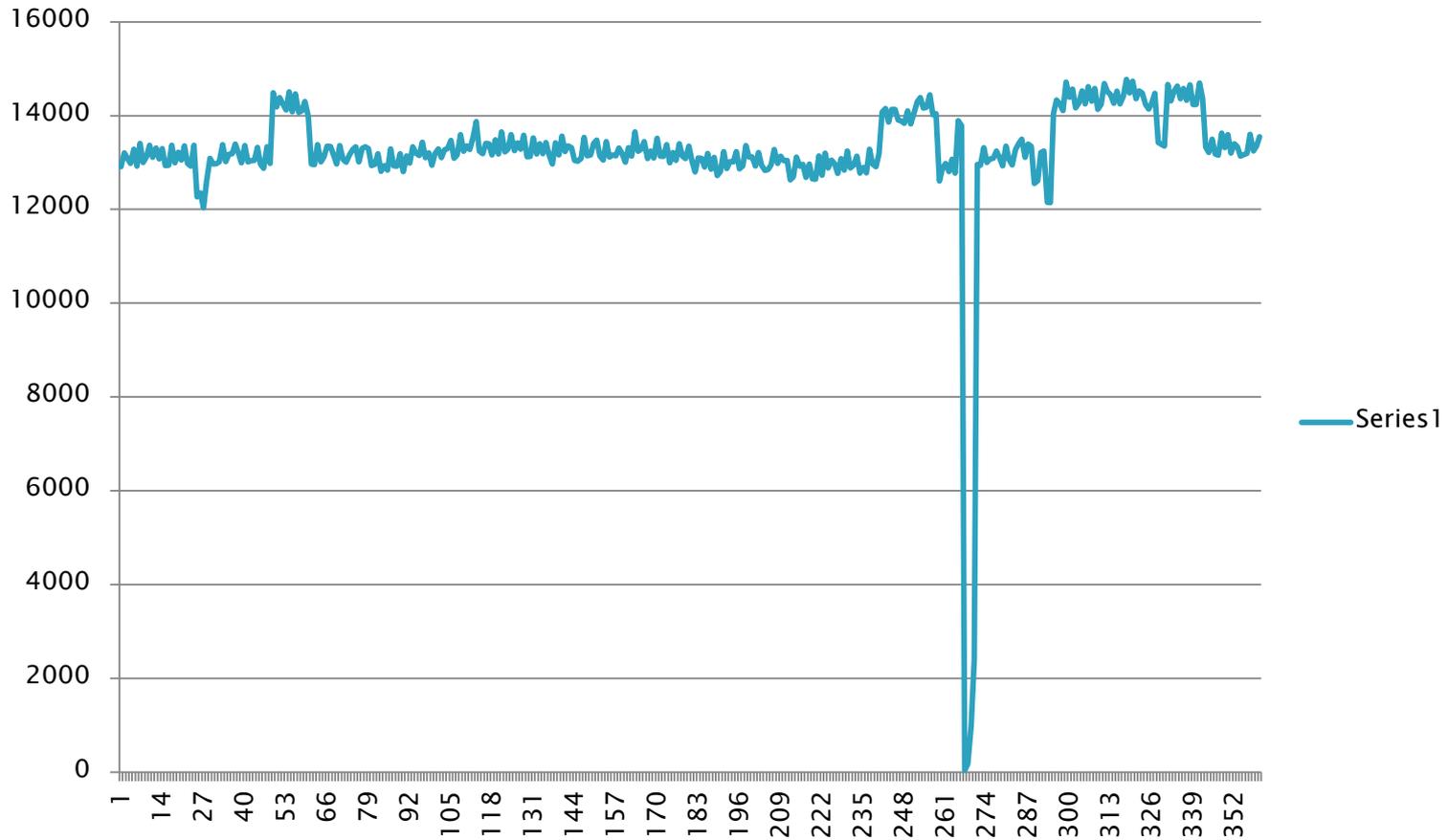
- ▶ Does the phrase “more accurately reflects the relevant end–use customer’s consumption pattern” mean:
  - Have the lowest RRMSE score? or
  - Reflect “the relevant end–use customer’s consumption pattern” *absent participation in Demand Response?*

# Example

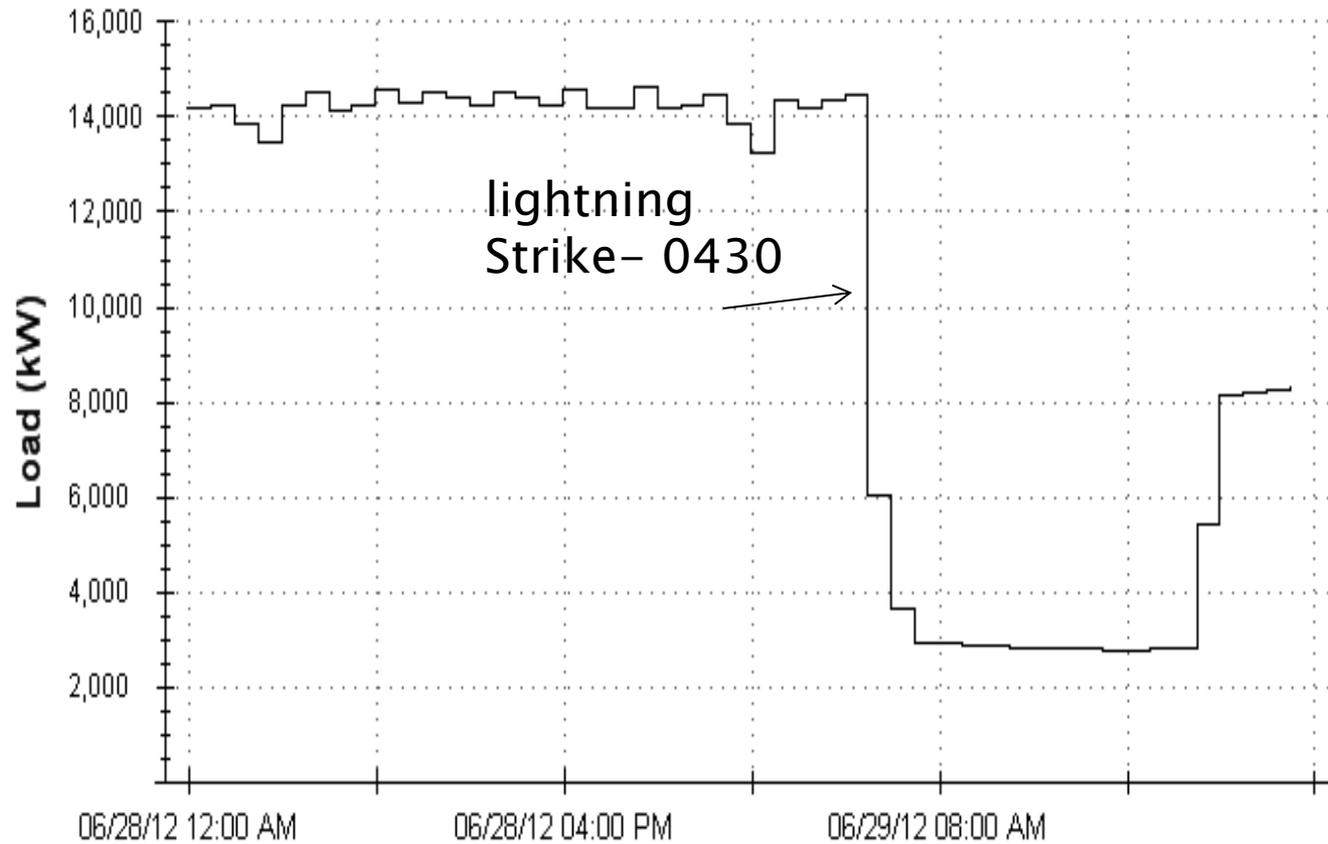
Scenario – an industrial facility with a normally level production cycle submits a DA schedule that is accepted.

- ▶ Process is either ON or OFF.
- ▶ Process does not show daily or even weekly cycles as RRMSE is designed to address.
- ▶ Process does not exhibit daily variation in load cycles as SAA is designed to capture
- ▶ Process takes multiple hours of full electric demand before production is resumed.

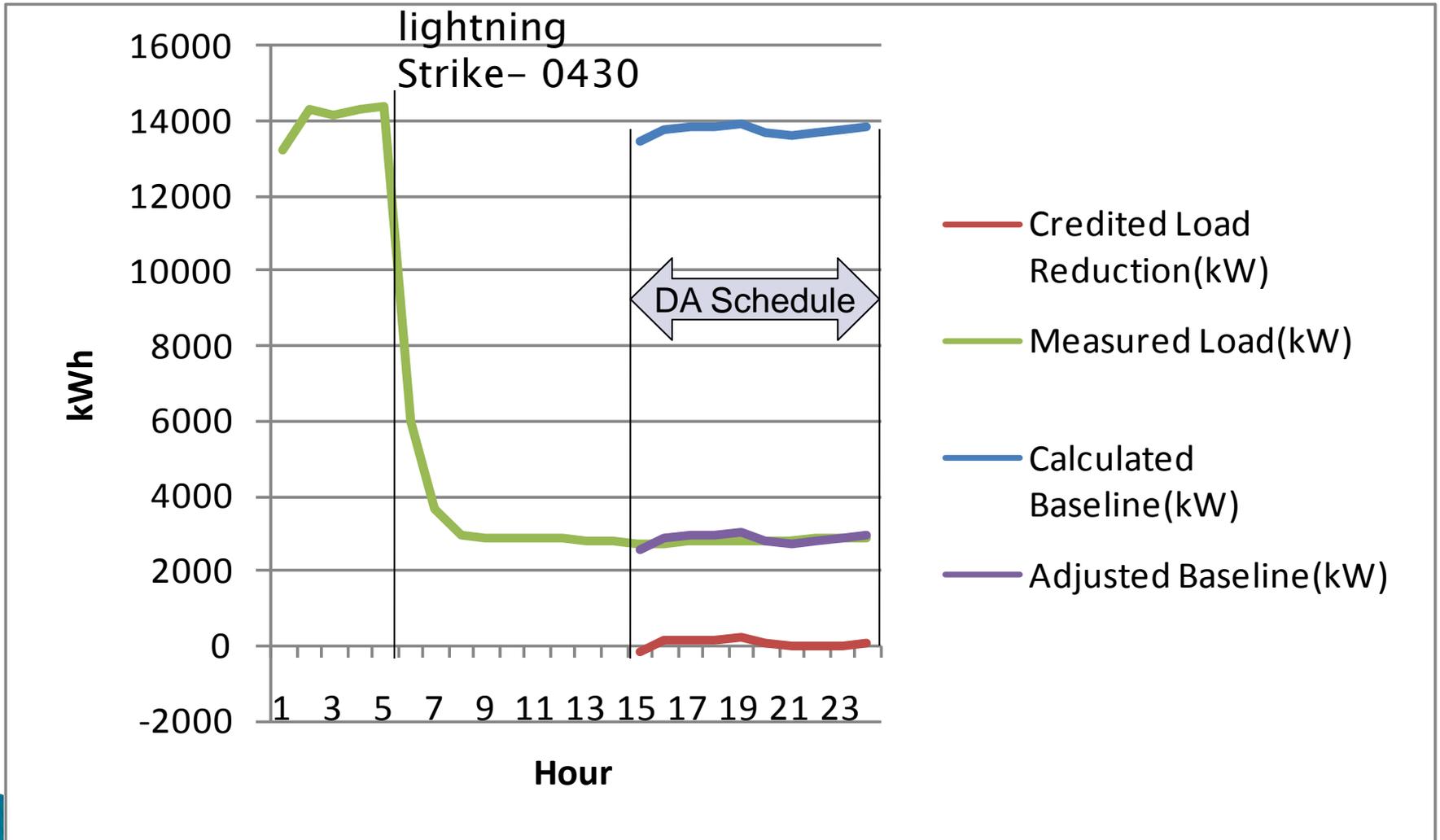
# Example - Normal 60 Days



# Example - 2 day span



# Example with SAA



# Comment

- ▶ For this customer, use of an SAA incents the customer to operate uneconomically in order to re-establish an appropriate baseline.
  - ▶ Depending on timing:
    - *Use of an SAA for this customer can incent the customer to NOT curtail – even when there is a DA commitment!*
    - SAA precludes credit for a curtailment – so why curtail?
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# Comment

- ▶ Application of SAA to non cycling and non-varying loads has the effect of fixing the baseline at whatever level the customer was at in the hours preceding the curtailment event.
  - Use of SAA does not reflect the customer's consumption pattern
  - Use of SAA is in effect a “backcast” based on prior 4 hours history and not a forecast based on high 4 of 5 days

# Question

- ▶ Does the Tariff require that PJM mandate baselines that result in CBLs based on *abnormal operations*?

# Proposed Change

## Proposed Manual change

- CBL certification is performed by the CSP prior to registration submission. CSP should always calculate an RRMSE for the standard CBL defined in the tariff. An alternative CBL may be requested if the alternative CBL is more accurate than the standard CBL and has an RRMSE less than or equal to 20%.
- Where an alternate CBL is requested, the lowest RRMSE score shall not be the sole criterion for determination of CBL method accuracy. Scores within 7% shall be considered to be equally accurate. Interested Parties may consider the customer's operational characteristics when selecting an alternative CBL. Operational characteristics include factors such as whether a use of particular baseline method is likely to influence customer behavior.
- The primary use of an alternative CBL is to allow for CBL methods that can more closely reflect what a customer's consumption pattern would have been if the customer had not participated in a demand response event.
- ~~The primary purpose for the use of an alternative CBL is to create an accurate a CBL for variable load customers that accurately reflects the end-use customer's consumption pattern can be administered on a consistent basis across the PJM market.~~

# DR Supporters

- ▶ EnergyConnect
  - ▶ ECS
  - ▶ ClearChoice
  - ▶ EnerNOC
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# Questions?

