

## Memorandum

**To:** Energy Imbalance Market Governing Body

**From:** Keith Casey, Vice President, Market & Infrastructure Development

**Date:** July 11, 2017

**Re:** **Decision on Net Benefits Test inclusion of additional gas price indices**

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***This memorandum requires EIM Governing Body action.***

### EXECUTIVE SUMMARY

The ISO calculates a net benefits test price threshold to assess whether the market dispatch of demand response resources provides a net benefit to all purchasers in the wholesale market in terms of a price reduction. The net benefits test price threshold is used by the ISO to determine when an adjustment is required to the settlement of the load serving entity who procured the load the demand response resource curtailed.

Every month, the ISO calculates the price at which the net benefit is triggered. Management proposes to remove existing tariff language that ties specific gas price indices to the derivation of the net benefits test price threshold and, instead, incorporate all relevant gas price indices used to derive the net benefits test price threshold into the ISO's Business Practice Manual for Market Instruments. The reason for this requested change is as new Energy Imbalance Market participants are added to the real-time market, the net benefits test price threshold calculation should incorporate a greater number of gas price indices to reflect participation that occurs across the expanded real-time market footprint. Adding additional gas price indices through the business practice manual process versus through subsequent and repeated tariff amendments each time a new participant joins the ISO provides the flexibility needed to easily add new gas price indices and keep the calculated net benefits test price threshold current.

Management proposes the following motion:

***Moved, that the EIM Governing Body approves the proposal to include additional gas price indices to be used in calculating the price threshold estimate for the net benefits test; and***

***Moved, subject to Board of Governors' consent, that Management is authorized to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposed tariff change.***

## DISCUSSION

The demand response net benefits test<sup>1</sup>, the “net benefits test”, was established by FERC in Order No. 745. It requires ISOs and RTOs to pay demand response resources the full locational market prices as if they were generating resources, without any offset or reduction to reflect avoided fuel costs. When the system price of energy exceeds a certain price threshold, FERC ruled the decrease in demand from demand response energy reductions provides a net benefit, i.e., a lower cost to all purchasers in the wholesale market.

Every month, the ISO calculates the net benefits test price threshold, which is adjusted by current fuel prices. The net benefits test price threshold is used by the ISO to determine when an adjustment is required to the settlement of the load serving entity who procured the load the demand response resource curtailed. If a demand response resource’s energy reduction occurs when the market clearing price is below the calculated net benefits test price threshold, then that load reduction is deemed not net beneficial to the market. When this occurs, the load-serving entity’s uninstructed imbalance energy quantity is adjusted in settlements to avoid a non-beneficial settlement outcome. There is no adjustment to a load-serving entity’s settlement when a demand response resource’s energy reduction is paid at a price above the net benefits test price threshold since that energy reduction and the resulting settlement outcome is deemed net beneficial to the system.

Management, along with the Department of Market Monitoring (“DMM”), identified a gap in the existing formulation of the net benefits test price threshold. The existing net benefits test price threshold is derived using only California specific gas price indices, yet the real-time market has expanded beyond California. With a broadening real-time market footprint, the net benefits test price threshold calculation should incorporate a broader set of gas price indices to ensure the net benefits test price threshold remains relevant.

The net benefits test price threshold is calculated each month by taking the aggregate supply curve from the same month of the previous year, adjusting the curve using updated fuel prices, and then calculating the price threshold where demand response net benefits occur.<sup>2</sup> The existing ISO tariff explicitly states that fuel prices used to update the monthly net benefits test price threshold are determined by using a simple average of the Pacific Gas and Electric Company Citygate price and the Southern California Edison Company Citygate price.<sup>3</sup>

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<sup>1</sup> Refer to Demand Response Net Benefits Test final proposal:  
[http://www.caiso.com/Documents/FinalProposal\\_Appendix-DemandResponseNetBenefitsTest.pdf](http://www.caiso.com/Documents/FinalProposal_Appendix-DemandResponseNetBenefitsTest.pdf).

<sup>2</sup> Id. at p. 7. The price threshold calculation is based on techniques described in the Demand Response Net Benefits Test final proposal.

<sup>3</sup> Refer to ISO tariff section 30.6.3.1.

Management is proposing to expand the gas price indices available for use in the calculation of the net benefits test price threshold to represent gas prices relevant to all real-time market bids. Management is also proposing to remove existing tariff language that ties specific gas price indices to the derivation of the net benefits test price threshold and, instead, incorporate all relevant gas price indices used into the ISO's Business Practice Manual for Market Instruments. Moving the gas price indices out of the tariff and into the business practice manual provides the ISO the flexibility needed to easily add new gas price indices to the net benefits test price threshold calculation as new participants join the Energy Imbalance Market or the ISO.

## **POSITIONS OF THE PARTIES**

No EIM participant comments were received during the Energy Storage and Distributed Energy Resources Phase 2 stakeholder initiative in which the proposal was developed. All other stakeholder comments were supportive of the proposal and recognized the need for the incorporation of a wider range of fuel prices in developing a threshold price for demand response.

## **CONCLUSION**

Management requests the EIM Governing Body approve the proposal to flexibly incorporate additional gas prices indices into the net benefits test calculation.