

170 FERC ¶ 61,131
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Richard Glick and Bernard L. McNamee.

California Independent System Operator Corporation Docket No. ER19-538-001

ORDER DENYING REHEARING

(Issued February 20, 2020)

1. On February 21, 2019, the Commission accepted revisions to California Independent System Operator Corporation's (CAISO) electric transmission tariff that describe CAISO's load conformance practices, including its use of a load conformance limiter tool.¹ NRG Power Marketing, LLC (NRG) requested rehearing, which we deny in this order.

I. Background

2. As described in the Initial Order, CAISO administers day-ahead and real-time wholesale electricity markets, with the real-time market extending to balancing authorities outside of CAISO that participate in the Energy Imbalance Market. These markets must balance supply and demand in order to (among other things) maintain system reliability and comply with mandatory North American Electric Reliability Corporation (NERC) Reliability Standards. The markets use an automatically-generated load forecast to clear supply bids against anticipated demand. For various reasons, the forecast may not match actual system conditions. If it does not, grid operators may make an adjustment to the load forecast (called a "load conformance") so that the forecast better approximates actual conditions on CAISO's system. Grid operators may conform the load in the residual unit commitment process that occurs after the close of the day-ahead market, and in the real-time energy market.

3. If a grid operator makes a load conformance decision that will affect more than one market interval, the conformance instruction may not precisely match the ramping capability of the affected generation resources. In that circumstance, software called the load conformance limiter refines the conformance instructions to ensure that they do not exceed the system's ramping capability, and thereby violate NERC reliability standards.²

¹ *Cal. Indep. Sys. Operator Corp.*, 166 FERC ¶ 61,138 (2019) (Initial Order).

² Transmittal Letter at 8-9.

Use of the load conformance limiter also limits the application of shortage pricing during intervals where an apparent shortage is due to a load conformance instruction, and actual supply is not needed.³

4. In the Initial Order, the Commission accepted revisions to CAISO's tariff that describe, for the first time, the load conforming practices in the real-time market and residual unit commitment processes, and the load conformance limiter tool. As relevant here, the Commission found that the load conformance limiter "is a reasonable mechanism to ensure that shortage pricing is not triggered when there is no actual shortage condition on the system."⁴

II. Request for Rehearing

5. In its request for rehearing, NRG claims that operator adjustments to CAISO's automated load forecasts that are above the level of supply available in that market interval are ignored for pricing purposes.⁵ It argues that load conformance decisions should be factored into real-time pricing, and that the load conformance limiter artificially prevents most load adjustments from triggering shortage pricing.⁶

6. NRG disagrees with CAISO's explanation that the load conformance limiter is designed to avoid triggering shortage pricing in times when there actually is no shortage in the market, arguing that by definition, shortage pricing signals are based on expectations of forthcoming system conditions.⁷ It claims that the Commission failed to recognize that shortage price signals are, by definition, *ex ante*, and that the Commission should have found that conditions that actually materialize in real time cannot result in revisions to real-time prices.⁸ NRG contends that instead of calculating prices based on anticipated demand and available supply, the load conformance limiter overrides the system operator's revised load forecast any time the revised forecast would result in the new load forecast exceeding available supply. It argues that locational marginal prices

³ Initial Order, 166 FERC ¶ 61,138 at P 44.

⁴ *Id.*

⁵ NRG Request for Rehearing at 2.

⁶ *Id.*

⁷ *Id.* at 3.

⁸ *Id.* at 3-4.

should reflect the fact that the system cannot balance; therefore, according to NRG, it is more appropriate to trigger shortage pricing when supply and demand do not match.⁹

7. NRG further claims that the load conformance limiter permits CAISO to ignore the system operator's best guess about what is about to happen, and that this error underlies the flawed conclusions of the Initial Order.¹⁰

8. NRG advocates that the system operator's conformance instruction, and not the load conformance limiter's subsequent refinements to that instruction, should be the last word in estimating demand and setting prices for a given interval.¹¹ NRG focuses on the Commission's explanation that the load conformance limiter "will act to limit the application of shortage pricing during intervals where CAISO's market run indicates a shortage resulting from load conformance where actual supply is not needed."¹² It contends that whether the revised load forecast actually materializes is irrelevant, so the system operator's prediction should determine prices.¹³

9. CAISO filed a motion for leave to answer NRG's request for rehearing, and an answer.

III. Discussion

10. Rule 713(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.713(d)(1) (2019), prohibits an answer to a request for rehearing. Accordingly, we deny CAISO's motion to answer.

11. We deny rehearing. First, we disagree with NRG's characterization of both the purpose of the load conformance limiter and how it operates. The load conformance limiter considers the physical reality of adjusting generation levels between the time a conformance instruction is given and the time that a different level of output is necessary – which may be more than one interval away.¹⁴ It assumes that if a system operator making a load conformance knew the system's precise ramping capability, then the operator would have refined the conformances to rely only on an amount of ramping

⁹ *Id.* at 4.

¹⁰ *Id.* at 5.

¹¹ *Id.* at 3-6.

¹² *Id.* at 5 (quoting Initial Order, 166 FERC ¶ 61,138 at P 44).

¹³ *Id.* at 4.

¹⁴ Transmittal Letter at 8-9.

capability necessary to meet the actual system conditions.¹⁵ The limiter makes adjustments to ensure that a conformance instruction does not cause a power balance constraint violation in a given interval in which the coarse instruction exceeds the system ramping capability, but the supply is not needed in that interval.¹⁶ As the Commission explained in the Initial Order, this functionality “is intended to detect intervals in which a shortage would be indicated due to an imprecise load conformance, but[] in which supply is not actually needed.”¹⁷ In this way, the load conformance limiter will prevent the inappropriate use of shortage pricing.

12. NRG next claims that the load conformance limiter makes *ex post* pricing adjustments,¹⁸ when prices should properly be based on the load forecast.¹⁹ The record does not support this allegation. CAISO explained that the limiter is meant to “enable the market to solve” without violating NERC reliability standards when a system operator did not intend to indicate an actual increase in load forecast for a particular interval.²⁰ CAISO’s examples of how the load conformance limiter operates show that it functions on a forward-looking basis.²¹ The Initial Order properly acknowledged that the limiter fine-tunes the load forecast, and the load forecast is used to determine prices.²² NRG therefore does not persuade us that the Commission misunderstood the load conformance limiter or otherwise erred in the Initial Order.

¹⁵ *Id.*

¹⁶ Initial Order, 166 FERC ¶ 61,138 at PP 11, 44, 46.

¹⁷ *Id.* P 45.

¹⁸ NRG Request for Rehearing at 4-6.

¹⁹ *Id.* at 4 (alleging that CAISO fails to “calculat[e] prices based on anticipated demand and available supply”), 6 (alleging that CAISO is “allowed to revise prices based on whether expectations of real-time scarcity prove out”).

²⁰ Transmittal Letter at 10.

²¹ *Id.* at Attachment C, pp. 3-5 (providing examples of how the load conformance limiter works over five intervals).

²² Initial Order, 166 FERC ¶ 61,138 at PP 44-46.

13. Finally, NRG contends that the Initial Order conflicts with Commission precedent, including Order No. 825,²³ because it does not require the use of shortage pricing in all instances in which a shortage is indicated.²⁴ NRG's argument is premised on the assertion that the load conformance limiter makes retroactive pricing adjustments based on what occurred in real time.²⁵ Contrary to NRG's contention, the limiter's adjustments to the load forecast take place *before* actual real-time supply and demand materialize.²⁶ CAISO employs the limiter before calculating prices and does not adjust prices after publication to account for the limiter's effect. Since the limiter's effects occur *before* the market clears (i.e., before prices and dispatch instructions are published), it indicates an absence of shortage conditions in the affected interval.²⁷ So rather than preventing the application of shortage pricing in an instance where a shortage is indicated, the limiter, when triggered, informs the market that shortage conditions do not exist.

14. As discussed in the Initial Order, "Order No. 825 did not specifically address the scenario at issue here, where the coarse nature of load conformance may inaccurately indicate a shortage."²⁸ Given that Order No. 825 requires Regional Transmission Organizations and Independent System Operators to trigger shortage pricing "for any interval in which a shortage of energy or operating reserves is indicated during the

²³ *Settlement Intervals and Shortage Pricing in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Order No. 825, 155 FERC ¶ 61,276 (2016).

²⁴ NRG Request for Rehearing at 6-7.

²⁵ *Id.*

²⁶ CAISO explains that even when a system operator knows that a load conformance does not need to occur immediately, but could take place gradually over several market intervals, the system operator typically will input the conformance just once because it is too time-intensive to calculate the system ramp capability over the affected time period. *See* Transmittal Letter at 10. The load conformance limiter prevents the market from attempting to make the entire load conformance during the first interval after the load conformance is entered, when that was not the operator's intent. *Id.*

²⁷ *See* CAISO January 17, 2019 Answer at 8 ("The load conformance limiter is configured to size the conformance to the available system capacity *prior to clearing the market* in those intervals, where it is likely that the system operator would not precisely make the conformance.") (emphasis added).

²⁸ Initial Order, 166 FERC ¶ 61,138 at P 45.

pricing of resources for that interval,”²⁹ we continue to find that CAISO need not trigger shortage pricing for intervals where no shortage of energy or operating reserves is indicated, or where a shortage is falsely indicated by the coarse nature of load conformance over multiple intervals.³⁰ Specifically, we reiterate that “the limiter is a reasonable mechanism to utilize, given that operators cannot fine tune their conformances to the precise amount of adjustment needed interval to interval.”³¹ We therefore affirm the Commission’s finding that CAISO’s use of the limiter does not violate the requirements of Order No. 825.³² NRG does not persuade us that CAISO’s use of the load conformance limiter inappropriately suppresses market prices or is otherwise unjust and unreasonable.

The Commission orders:

NRG’s request for rehearing is hereby denied, as discussed in the body of this order.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

²⁹ Order No. 825, 155 FERC ¶ 61,267 at P 1.

³⁰ Transmittal Letter at 8-10.

³¹ Initial Order, 166 FERC ¶ 61,138 at P 46.

³² *Id.* P 45.