

October 17, 2016

The Honorable Kimberly D. Bose  
Secretary  
Federal Regulatory Energy Commission  
888 First Street, NE  
Washington, DC 20426

**Re: California Independent System Operator Corporation  
Docket No. ER16-1483-\_\_\_\_\_  
Frequency Response Compliance Filing**

Dear Secretary Bose:

The California Independent System Operator Corporation (CAISO) submits this filing to comply with the Commission's order accepting, subject to condition, tariff revisions to meet requirement 1 of North American Electric Reliability Corporation (NERC) Reliability Standard BAL-003-1.1 – *Frequency Response and Frequency Bias Setting*.<sup>1</sup> The CAISO requests that the Commission accept this filing in compliance with the Commission's *September 16 Order*.

## **I. Background**

On April 21, 2016, the CAISO submitted tariff revisions to facilitate compliance with NERC Reliability Standard BAL-003-1.1. Requirement 1 of Reliability Standard BAL-003-1.1 requires each balancing authority to achieve an annual frequency response measure that equals or exceeds its frequency response obligation as determined by NERC. A balancing authority's frequency response obligation is determined each year and reflects its proportionate share – based on generation and load of the interconnection's frequency response obligation. NERC calculates the Western Interconnection frequency response obligation as a whole based on an event involving the loss of two units at the Palo Verde Nuclear Generating Station.

Under Reliability Standard BAL-003-1.1, a balancing authority's annual frequency response measure serves to determine if it meets its frequency response obligation. This measure is the median value of a balancing authority's frequency response performance during selected events over the course of a year.<sup>2</sup> In the case of the CAISO, NERC will

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<sup>1</sup> *Cal. Indep. Sys Operator Corp.*, 156 FERC ¶ 61,182 (2016) (*September 16 Order*). The CAISO submits this filing pursuant to Section 205 of the Federal Power Act, 16 U.S.C. § 824d, and Section 35.13 of the Commission's regulations, 18 C.F.R. § 35.13.

<sup>2</sup> *See Essential Reliability Services and the Evolving Bulk-Power System—Primary Frequency Response*, Notice of Inquiry in Docket RM16-6, 154 FERC ¶ 61,117 (2016) at PP 27-28.

evaluate the CAISO's performance and compliance with requirement 1 of BAL-003-1.1 by selecting the median value of the CAISO's performance over these sampled events.

Reliability Standard BAL-003-1.1 does not require a balancing authority area to achieve a specified level of performance with respect to any single disturbance event within a compliance year. Rather, the standard only requires a balancing authority area to demonstrate that its median measurement of performance over all NERC-identified events in a compliance year is equal to or more negative than its individual frequency response obligation. In the case of the CAISO, NERC will evaluate the CAISO's performance and compliance with requirement 1 of BAL-003-1.1 by selecting the median value of the CAISO's performance during these sampled events over the course of the compliance year.<sup>3</sup>

Based on an observed deterioration of frequency response performance from within its own balancing authority, the CAISO proposed tariff revisions allow it to procure transferred frequency response from other balancing authority areas in the Western Interconnection. This procurement will permit to the CAISO to claim credit for frequency response that a counterparty balancing authority area supplies to the Western Interconnection as measured by the requirements of BAL-003-1.1.

## **II. The Commission's *September 16 Order***

In its *September 16 Order*, the Commission accepted, subject to condition, the CAISO's proposal to explore procuring transferred frequency response. During the course of this proceeding, the CAISO agreed to make changes to its tariff to reflect the fact that it would assess bids for transferred frequency cost in comparison to the cost to the market of procuring additional regulation up. The CAISO proposed such language as part of its response to the Commission's request for additional information dated June 17, 2016. Even though the *September 16 Order* does not specifically direct the CAISO to do so, the CAISO is submitting these tariff revisions as part of this compliance filing.<sup>4</sup>

In approving the CAISO's proposal, however, the Commission expressed a concern that the CAISO's tariff language was unclear regarding whether a contract that the CAISO's tariff language was unclear for transferred frequency response would permit the CAISO and counterparties to adjust their obligations or their performance under BAL-003-1.1.<sup>5</sup> In addition, the Commission emphasized that transferred frequency response must include

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<sup>3</sup> NERC measures performance based on changes in a balancing authority area's net actual interchange, which fluctuates based on many factors such as supply and load changes. In fact, after a disturbance event, a balancing authority's performance may reflect a negative MW/0.1Hz number even though resources within that balancing authority are actually providing frequency response to the interconnection.

<sup>4</sup> See proposed tariff sections 42.2.1 and 42.2.2 submitted herewith.

<sup>5</sup> *September 16 Order* at P 48.

the provision of actual physical frequency response.<sup>6</sup> The Commission stated it expects “that a counterparty BA will have available frequency response in excess of its NERC-designated frequency response obligation to offset a portion of the CAISO’s NERC-designated frequency response obligation.”<sup>7</sup> The Commission directed that the CAISO revise its tariff as follows:

- Revise the definition of transferred frequency response in Appendix A of the CAISO tariff such that it cannot be interpreted as means to modify NERC-designated obligations;<sup>8</sup> and
- State in Appendix A of the CAISO tariff that the CAISO cannot claim on a compliance form that it has received, or that the counterparty has transferred more frequency response than the counterparty has produced.<sup>9</sup>

### III. Tariff revisions to comply with the Commission’s *September 16 Order*

In Appendix A of the CAISO tariff, the CAISO has proposed a definition for transferred frequency response. On compliance, the CAISO is submitting the following changes to this definition to address the directives of the *September 16 Order* (underline text reflects additions; strikethrough text reflects deletions).<sup>10</sup>

#### Transferred Frequency Response

A frequency response performance adjustment ~~obligation~~ under Applicable Reliability Criteria expressed in MW/0.1Hz that a receiving Balancing Authority may acquire under an arrangement whereby another Balancing Authority adjusts ~~increases~~ its frequency response performance downward ~~obligation~~ by the same amount it has provided to the receiving Balancing Authority ~~or that a delivering Balancing Authority may provide under an arrangement whereby another Balancing Authority reduces its performance obligation by the same amount.~~ Transferred Frequency Response is a compliance instrument and there is no exchange of physical services between Balancing Authorities.

Transferred Frequency Response is reported on applicable NERC/WECC forms, and applied consistently to each reported frequency disturbance

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<sup>6</sup> *Id.* at PP 45-46.

<sup>7</sup> *Id.* at P 49.

<sup>8</sup> *Id.* PP 48 and 51.

<sup>9</sup> *Id.* at PP 49 and 51.

<sup>10</sup> In Attachments A and B to this filing, the CAISO has provided its proposed tariff changes in both clean and redline formats.

event. On these forms, the delivering Balancing Authority ~~decreases~~increases its performance obligation and the receiving Balancing Authority ~~increases~~decreases its performance obligation by the same amount.

Transferred Frequency Response may reflect an aggregate amount from multiple contracts. Any reported Transferred Frequency Response will not exceed the frequency response performance that the delivering Balancing Authority has produced as reflected in its annual frequency response measure.

These revisions comply with the Commission's directives. First, the revised definition of transferred frequency response clarifies that it allows balancing authorities to adjust their performance under Reliability Standard BAL-003-1.1. The provision of transferred frequency response from one balancing authority to another will not modify the balancing authorities' frequency response obligations as designated by NERC.

Second, the revised definition clarifies that transferred frequency response may not exceed the frequency response performance that the delivering balancing authority has produced as reflected in its annual frequency response measure. Accordingly, a balancing authority providing transferred frequency response must have at least sufficient frequency response as reflected in its annual measure or median score to support the transferred frequency response it provides to the CAISO. Under Reliability Standard, BAL-003-1.1, NERC assesses the actual frequency response provided to the interconnection through this measure. NERC does not calculate an average performance of a balancing authority's response to disturbances across all reportable events, but instead selects the median score. Under the CAISO's tariff, this annual frequency response measure will determine whether a balancing authority area has sufficient frequency response capability to support a contract for transferred frequency response.

The Commission's *September 16 Order* expresses concern that the CAISO's tariff revisions could allow the CAISO to receive a fixed amount of transferred frequency response without regard to how a counterparty balancing authority has performed for a given disturbance event.<sup>11</sup> The Commission also recognizes the metric to determine whether a balancing authority has provided frequency response service that underpins their compliance representations to NERC.<sup>12</sup>

The CAISO has proposed that a balancing authority providing transferred frequency response must have at least sufficient frequency response as reflected in its annual frequency response measure, *i.e.* median score, to support the transferred frequency response it provides to the CAISO. Under Reliability Standard, BAL-003-1.1, NERC assesses the actual frequency response provided to the interconnection through this measure. NERC does not calculate an average performance of a balancing authority's response to disturbances across all reportable

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<sup>11</sup> *September 16 Order* at P 49.

<sup>12</sup> *Id.* at P 46.

events, but instead selects the median score. Importantly, in response to individual disturbance events, a balancing authority's performance may vary dramatically based on grid conditions at the time. A balancing authority's performance – based on net actual interchange values - may even be negative in terms of MW/0.1 Hz provided to the interconnection. This performance does not mean the balancing authority is not providing actual frequency response service to the interconnection, just that it is providing less than its frequency response obligation as measured under Reliability Standard BAL-003-1.1 for that specific disturbance event. Various grid conditions could result in a net actual interchange measure separate from the frequency response service that a particular balancing authority is providing to the interconnection. This fact underscores why, under Reliability Standard BAL-003-1.1, NERC selects the median score from a list of reportable disturbance events to assess compliance.

A balancing authority cannot predict its measured performance in advance of any specific disturbance event it but can gain assurance that its median performance will be above a certain level based on its median score across all reportable disturbance events that occur within a given compliance year. If a balancing authority had to commit to meet NERC's measure of performance for each disturbance event in order to support a contract for transferred frequency response, this requirement would effectively eliminate the commercial ability of a balancing authority to provide transferred frequency response. On September 28, 2016, Powerex Corp. filed a request for clarification and expedited consideration of this issue in ER16-1483. Separately, the CAISO has filed a similar motion for clarification, or in the alternative, rehearing of the Commission's *September 16 Order*. If the Commission accepts this compliance filing, the Commission can dismiss the CAISO's request for clarification as moot.

#### IV. Conclusion

The CAISO requests that the Commission accept the tariff revisions contained in this filing without modification and in full compliance with the Commission's *September 16 Order*.

Dated: October 17, 2016

Respectfully submitted,

/s/ Andrew Ulmer

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## CERTIFICATE OF SERVICE

I certify that I have served the foregoing document upon the parties listed on the official service list in the captioned proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California this 17<sup>th</sup> day of October, 2016.

*/s/ Grace Clark*

Grace Clark

**Attachment A – Clean Tariff Records**  
**Frequency Response Compliance Filing**  
**California Independent System Operator Corporation**

#### **42.2.1 Procurement of Transferred Frequency Response**

If the CAISO concludes that it may be unable to provide sufficient frequency response consistent with Applicable Reliability Criteria, the CAISO may, acting in accordance with Good Utility Practice, negotiate contracts for Transferred Frequency Response. The CAISO will solicit bids for contracts for Transferred Frequency Response. The CAISO shall select the bids that permit the CAISO to satisfy Applicable Reliability Criteria at lowest cost consistent with the seller's capability to provide Transferred Frequency Response and not to exceed the estimated cost of satisfying Applicable Reliability Criteria using additional procurement of Regulation Up.

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#### **42.2.2 Allocation of Transferred Frequency Response Costs Incurred by CAISO**

The costs incurred by the CAISO for any contract for Transferred Frequency Response entered into under Section 42.2.1 are recovered from Scheduling Coordinators pursuant to Section 11.34.

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#### **Transferred Frequency Response**

A frequency response performance adjustment under Applicable Reliability Criteria expressed in MW/0.1 Hz that a receiving Balancing Authority may acquire under an arrangement whereby another Balancing Authority adjusts its frequency response performance downward by the same amount it has provided to the receiving Balancing Authority.

Transferred Frequency Response is reported on applicable NERC/WECC forms, and applied consistently to each reported frequency disturbance event. On these forms, the delivering Balancing Authority decreases its performance and the receiving Balancing Authority increases its performance by the same amount.

Transferred Frequency Response may reflect an aggregate amount from multiple contracts. Any reported Transferred Frequency Response will not exceed the frequency response performance that the delivering Balancing Authority has produced as reflected in its annual frequency response measure.



**Attachment B – Marked Tariff Records**  
**Frequency Response Compliance Filing**  
**California Independent System Operator Corporation**

#### 42.2.1 Procurement of Transferred Frequency Response

If the CAISO concludes that it may be unable to provide sufficient frequency response consistent with Applicable Reliability Criteria, the CAISO may, acting in accordance with Good Utility Practice, negotiate contracts for Transferred Frequency Response. The CAISO will solicit bids for contracts for Transferred Frequency Response. The CAISO shall select the bids that permit the CAISO to satisfy Applicable Reliability Criteria at lowest cost consistent with the seller's capability to provide Transferred Frequency Response and not to exceed the estimated cost of satisfying Applicable Reliability Criteria using additional procurement of Regulation Up.

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#### 42.2.2 Allocation of Transferred Frequency Response Costs Incurred by CAISO

The costs incurred by the CAISO for any contract for Transferred Frequency Response entered into under Section 42.2.1 are recovered from Scheduling Coordinators pursuant to Section 11.34.

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#### **Transferred Frequency Response**

A frequency response performance ~~adjustment obligation~~ under Applicable Reliability Criteria expressed in MW/0.1 Hz that a receiving Balancing Authority may acquire under an arrangement whereby another Balancing Authority ~~adjusts~~~~increases~~ its frequency response performance ~~downward obligation~~ by the same amount ~~it has provided to the receiving Balancing Authority, or that a delivering Balancing Authority may provide under an arrangement whereby another Balancing Authority reduces its performance obligation by the same amount. Transferred Frequency Response is a compliance instrument and there is no exchange of physical services between Balancing Authorities.~~

Transferred Frequency Response is reported on applicable NERC/WECC forms, and applied consistently to each reported frequency disturbance event. On these forms, the delivering Balancing Authority ~~decreases~~~~increases~~ its performance ~~obligation~~ and the receiving Balancing Authority ~~increases~~~~decreases~~ its performance ~~obligation~~ by the same amount.

Transferred Frequency Response may reflect an aggregate amount from multiple contracts. Any reported Transferred Frequency Response will not exceed the frequency response performance that the delivering Balancing Authority has produced as reflected in its annual frequency response measure.