

September 9, 2020

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

**Re: California Independent System Operator Corporation**

**Docket No. ER20-2838-000**

**Errata Filing of Rate Schedule No. 6270 and Request for  
Privileged Treatment**

Dear Secretary Bose:

On September 9, 2020, the California Independent System Operator Corporation (CAISO) filed a tariff amendment in this proceeding to request the Commission to accept the Transferred Frequency Response Agreement (Agreement) between the CAISO and Tucson Electric Power Company (Tucson Electric) for filing. The CAISO's transmittal letter included typographical errors. A clean and marked version of the corrected transmittal letter are included herewith. The CAISO has served this filing on the same entities that were served the original filing.

Honorable Kimberly D. Bose  
September 9, 2020  
Page 2

Please contact the undersigned if you have any questions regarding the foregoing.

Respectfully submitted,

**By: /s/ Andrew Ulmer**

Roger E. Collanton  
General Counsel  
Anthony Ivancovich  
Deputy General Counsel, Regulatory  
Andrew Ulmer  
Director, Federal Regulatory Affairs  
California Independent System  
Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630  
Tel. (916) 608-7209  
Fax. (916) 608-7222  
Email [aulmer@caiso.com](mailto:aulmer@caiso.com)

*Attorneys for the California Independent  
System Operator Corporation*

**Clean Transmittal Letter**

**Transferred Frequency Response Agreement between**

**Tucson Electric Power Company and**

**California Independent System Operator Corporation**

**September 9, 2020**

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The Honorable Kimberly D. Bose  
Secretary  
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888 First Street, NE  
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**Re: California Independent System Operator Corporation**

**Docket No. ER20-2838-000**

**Filing of Rate Schedule No. 6270 and Request for Privileged Treatment**

Dear Secretary Bose:

The California Independent System Operator Corporation (CAISO) requests that the Commission accept the attached Transferred Frequency Response Agreement (Agreement) between the CAISO and Tucson Electric Power Company (Tucson Electric) for filing.<sup>1</sup> The Agreement will secure 20 megawatts (MW) per 0.1 Hertz (Hz) in transferred frequency response from Tucson Electric for the period from December 1, 2020 through November 30, 2021, in order to help mitigate the risk that the CAISO may not have sufficient primary frequency response from its native resources to meet its obligations under North American Electric Reliability Corporation (NERC) Reliability Standard BAL-003. The CAISO respectfully requests that the Commission accept the Agreement effective December 1, 2020, and that the Commission grant privileged treatment to the materials contained in Attachment C to this filing.

## **I. Background**

On September 16, 2016, the Commission conditionally accepted tariff revisions submitted by the CAISO to facilitate the CAISO's compliance with the frequency response requirements of NERC Reliability Standard BAL-003, entitled

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<sup>1</sup> The CAISO submits this filing pursuant to section 205 of the Federal Power Act, 16 U.S.C. § 824d. The CAISO has designated the Agreement as Rate Schedule No. 6270.

*Frequency Response and Frequency Bias Setting.*<sup>2</sup> The Commission approved Reliability Standard BAL-003 to establish frequency response requirements for balancing authority areas.<sup>3</sup> Requirement 1 of Reliability Standard BAL-003 obligates each balancing authority to achieve an annual frequency response measure that equals or exceeds its frequency response obligation. A balancing authority's frequency response obligation is determined each year and reflects its proportionate share – based on annual generation and load – of the interconnection's frequency response obligation. Compliance with the annual frequency response obligation runs from December 1 through November 30 of the following year.

In the Frequency Response Compliance Orders, the Commission accepted tariff revisions that authorize the CAISO to procure transferred frequency response from other balancing authorities in the Western Interconnection as a means to ensure compliance with Requirement 1 of Reliability Standard BAL-003. In particular, section 42.2.1 of the CAISO tariff states:

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.<sup>4</sup>

The Commission has previously accepted agreements for the CAISO to procure transferred frequency responses for the 2016-2017, 2017-2018, 2018-2019, and 2019-2020 compliance years under Reliability Standard BAL-003.<sup>5</sup>

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<sup>2</sup> *Cal. Indep. Sys. Operator Corp.*, 156 FERC ¶ 61,182 (2016), *order on compliance, clarification, and reh'g*, *Cal. Indep. Sys. Operator Corp.*, 158 FERC ¶ 61,129 (2017) (collectively, Frequency Response Compliance Orders).

<sup>3</sup> *Frequency Response and Frequency Bias Setting Reliability Standard*, Order No. 794, 146 FERC ¶ 61,024 (2014).

<sup>4</sup> CAISO tariff sections 11.34 and 42.2.2 govern the allocation of costs to scheduling coordinators for any transferred frequency response contract into which the CAISO enters pursuant to tariff section 42.2.1.

<sup>5</sup> See Commission Letter Orders issued in docket nos. ER17-408 and ER17-411 on January 19, 2017, issued in docket nos. ER17-2387, *et al.* on October 27, 2017, issued in docket

Earlier this year, the CAISO initiated a competitive solicitation to request offers for transferred frequency response for the 2020-2021 compliance year. The CAISO stated that it intended to secure transferred frequency response in an amount not to exceed 100 MW per 0.1 Hz.

Based on an assessment of prior frequency events and the performance of resources during those events<sup>6</sup>, the CAISO determined it should procure 41 MW per 0.1 Hz for the 2020-2021 compliance year to help the CAISO meet its compliance obligations.<sup>7</sup> As part of its assessment, the CAISO examined its performance during prior frequency events in 2019 and 2020 as well as the performance of conventional resources scheduled to retire in 2020 and 2021.<sup>8</sup> The CAISO also considered the potential displacement of conventional generation by inverter-based resources. Some inverter-based resources will have frequency response capabilities, but most will not operate with available headroom to respond during a frequency disturbance. Finally, as part of its assessment, the CAISO considered potential frequency response capabilities of resources that will likely reach commercial operation during the 2020-2021 compliance year.

## **II. The CAISO Completed a Competitive Solicitation for Transferred Frequency Response for the 2020-2021 Compliance Year**

On April 1, 2020, pursuant to section 42.2.1 of the CAISO tariff, the CAISO issued a request for proposals to provide transferred frequency response to balancing authorities in the Western Interconnection. The CAISO also provided a draft version of the Agreement that reflected the product the CAISO was soliciting. The CAISO accepted bids in response to the request for proposals up to and including June 8, 2020. Copies of the CAISO's request and supporting documents are provided with this transmittal letter as Attachment B.<sup>9</sup>

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nos. ER19-179, *et al.* on December 11, 2018, and issued in docket nos. ER19-2686 *et al.* on November 12, 2019.

<sup>6</sup> The CAISO will not know which specific frequency disturbance events NERC will select under Reliability Standard BAL-003 for the 2019-2020 compliance year until the first quarter of 2021.

<sup>7</sup> The CAISO previously opened a stakeholder initiative intended to address long-term compliance with Reliability Standard BAL-003. The CAISO plans to restart this stakeholder initiative in 2021.

<sup>8</sup> The CAISO is undertaking efforts to assess why resources enabled with governors and frequency responsive devices may not have performed as expected during NERC-identified frequency disturbance events under Reliability Standard BAL-003 compliance period. This work will inform the CAISO's planned stakeholder initiative to examine primary frequency response market rules, which the CAISO plans to begin in 2021.

After the receipt of bids from balancing authorities or their authorized sellers, the CAISO evaluated those bids against prior frequency response performance by each bidder, as well as the frequency response needs estimated by the CAISO for the 2019-2020 compliance year. After this evaluation, the CAISO commenced negotiations with selected bidders to execute transferred frequency response contracts. As a result, the CAISO entered into an agreement with Tucson Electric.<sup>10</sup>

The competitive solicitation the CAISO conducted was consistent with the guidance the Commission has provided for competitive solicitation processes to ensure that affiliates do not receive undue preference.<sup>11</sup> In that regard, the Commission has ruled that competitive solicitation processes should follow four guidelines:

- a. *Transparency*: the competitive solicitation should be open and fair.
- b. *Definition*: the product or products sought through the competitive solicitation process should be precisely defined.
- c. *Evaluation*: evaluation criteria should be standardized and applied equally to all bids and bidders.
- d. *Oversight*: an independent third party should design the solicitation, administer bidding, and evaluate bids prior to selection.<sup>12</sup>

For purposes of securing transferred frequency response for the 2020-2021 compliance year, the CAISO's transferred frequency response competitive solicitation process satisfies these four principles and is also consistent with the CAISO's tariff. First, as reflected in the request for proposals, the competitive solicitation was open to all balancing authorities in the Western Interconnection, or their authorized sellers, that are able to provide transferred frequency response. Second, the CAISO defined transferred frequency response, which

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<sup>9</sup> The CAISO market notice announcing the request for proposals is available at <http://www.caiso.com/Documents/TransferredFrequencyResponseRequest-Proposal041520.html>.

<sup>10</sup> In addition to this filing of the Agreement with Tucson Electric, the CAISO will also file a Transferred Frequency Response Agreement with the City of Seattle for 15 MW per 0.1 Hz and with Grant County Public Utility District for 6 MW per 0.1 Hz.

<sup>11</sup> See *Allegheny Energy Supply Co., LLC*, 108 FERC ¶ 61,082, at P 22 (2004). Although the CAISO does not have an affiliate that could provide transferred frequency response, the Commission's guidance remains instructive.

<sup>12</sup> *Id.*

was the product subject to the solicitation.<sup>13</sup> The request for proposals identified the terms, timeline, bidding instructions for the solicitation, evaluation criteria, and terms of service reflected in a draft contract. Third, the CAISO selected bids, consistent with its tariff and evaluation criteria. These criteria include lowest cost and the bidders' ability to provide transferred frequency response.<sup>14</sup> The CAISO applied these criteria to all bids and bidders for transferred frequency response. Fourth, the CAISO, an independent entity, administered the competitive solicitation on behalf of the CAISO market and evaluated the bids.

### **III. Purpose of the Agreement**

The Agreement between the CAISO and Tucson Electric governs the terms and conditions under which Tucson Electric will provide transferred frequency response to the CAISO and the payment the CAISO will make to Tucson Electric for such service. Pursuant to the Agreement, Tucson Electric will provide transferred frequency response and document its performance on the appropriate NERC compliance forms for the 2020-2021 NERC Reliability Standard BAL-003 compliance year beginning on December 1, 2020. The CAISO has agreed to compensate Tucson Electric at the contract price for its performance. Under the Agreement, Tucson Electric and the CAISO will adjust their frequency response performance by the contract amount for each disturbance event selected by NERC to assess compliance under Reliability Standard BAL-003 between December 1, 2020 and November 30, 2021.

### **IV. The Commission Should Accept the Agreement for Filing**

The Commission should accept for filing the Agreement as just and reasonable. The CAISO considered its recent performance in its response to frequency disturbance events to develop a procurement target. Based on this

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<sup>13</sup> Appendix A to the CAISO tariff defines transferred frequency response as:

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.

<sup>14</sup> CAISO tariff section 42.2.1.

information, the CAISO identified 41 MW per 0.1 Hz quantity of transferred frequency response to procure in order to provide adequate insurance to meet its expected frequency response obligation for the 2020-2021 compliance year under NERC Reliability Standard BAL-003.

The CAISO developed an estimate of costs per MW to obtain 41 MW per 0.1 Hz from additional regulation up capacity. The CAISO compared the cost of the bids received to the anticipated cost of ensuring compliance with Reliability Standard BAL-003 through the procurement of additional regulation up. The CAISO's study used a two-part approach to estimate the costs of procuring additional regulation up capacity. The first step determined the quantity of regulation up capacity, which could provide desired frequency response without the procurement of transferred frequency response. The second step estimated annual increased market costs based on the increased hourly procurement requirements for regulation up and additional contributing variables such as seasonality and energy market prices. To derive this estimate, the CAISO employed a statistical learning model to perform a regression analysis, which accounted for variability and uncertainty of various contributing factors.

Section 42.2.1 of the CAISO tariff states that the CAISO will select the lowest cost bids consistent with the sellers' demonstrated ability to provide transferred frequency response. Tucson Electric demonstrated its ability to support its bid for transferred frequency response based on prior performance, and its bid reflected the lowest cost offer for the quantity selected. The CAISO evaluated the offers based on an estimate of costs the market might incur by procuring additional regulation up capacity in order to secure frequency response capability. The privileged version of Attachment C to this filing contains a comparison of bids received versus the potential cost to secure frequency response through the procurement of additional regulation up capacity. Tucson Electric's offer price for 20 MW per 0.1 Hz was below the CAISO's estimated cost to secure frequency response through procurement of additional regulation up capacity. Based on the bids received and consistent with the factors set forth in tariff section 42.2.1, the CAISO selected Tucson Electric's bid along with bids from two other entities to secure 41 MW per 0.1 Hz of transferred frequency response.

Beyond the contract amount and the contract prices, the Commission should accept the remaining terms and conditions of the Agreement between Tucson Electric and the CAISO. Of importance, the Agreement provides that transferred frequency response may not exceed the frequency response performance that the transferor balancing authority has produced as reflected in its annual frequency response measure under Reliability Standard BAL-003-1.1.<sup>15</sup> This term of the Agreement ensures that Tucson Electric can manage the

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<sup>15</sup> See Agreement, sections 1.6 – 1.7.

risk of having sufficient frequency response to transfer to the CAISO under the Agreement without having to provide the contract amount in response to each disturbance event identified by Reliability Standard.

With respect to payment terms, the CAISO's payment to Tucson reflects the provision of transferred frequency response during the entire 2020-2021 compliance period. The CAISO and Tucson Electric have agreed that Tucson Electric will invoice the CAISO for transferred frequency response and the CAISO shall pay the invoice electronically after collecting sufficient revenues from scheduling coordinators under section 11.34 of the CAISO tariff to pay Tucson Electric in a timely manner.

## **V. Effective Date**

The CAISO respectfully requests that the Commission accept the attached Agreement effective as of December 1, 2020.<sup>16</sup>

## **VI. Request for Privileged Treatment**

The CAISO is submitting both a privileged version and a public version of this filing. Pursuant to 18 C.F.R. § 388.112, the CAISO requests privileged treatment for information within a table included in Attachment C to this filing relating to bids submitted to provide transferred frequency response and the CAISO's cost comparison of these bids. The CAISO also requests privileged treatment of the potential costs of procuring additional regulation up capacity to meet its frequency response obligation identified on line 20 of page 3 of Attachment C as well as the equivalent regulation up capacity price of Tucson Electric's transferred frequency response bid identified on line 25 of page 3 of Attachment C. The CAISO has redacted this information from the public version of this filing. This information is confidential because it reflects sensitive commercial and financial information and its disclosure could harm CAISO market participants. The CAISO also submits a form of protective agreement as Attachment D to this filing.

## **VII. Service**

Copies of this filing have been served upon Tucson Electric, the California Public Utilities Commission, the California Energy Commission, all parties with effective scheduling coordinator service agreements under the CAISO tariff, and the Commission's service list for Docket No. ER16-1483 (the proceeding in which

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<sup>16</sup> Specifically, pursuant to section 35.11 of the Commission's regulations (18 C.F.R. § 35.11), the CAISO requests waiver of the 60-day notice requirement set forth in section 35.3(a)(1) of the Commission's regulations (18 C.F.R. § 35.3(a)(1)). The Agreement will continue in effect until April 1, 2022. Agreement, section 2.1.

the Commission issued the Frequency Response Compliance Orders). In addition, the CAISO is posting this transmittal letter and all public attachments on the CAISO website.

### **VIII. Attachments**

The following attachments, in addition to this transmittal letter, support the instant filing:

Attachment A	Executed Transferred Frequency Response Agreement;
Attachment B	Copies of the CAISO's Request for Proposals and attachments thereto;
Attachment C	Comparison of bids received versus the potential cost to procure additional regulation up capacity (public and privileged versions are attached); and
Attachment D	Form of Protective Agreement.

## IX. Communications

Pursuant to Rule 203(b) of the Commission's Rules of Practice and Procedure,<sup>17</sup> the CAISO requests that all correspondence, pleadings and other communications concerning this filing be served upon the following whose names should appear on the official service list established by the Commission with respect to this submittal:

Anthony Ivancovich  
Deputy General Counsel  
California Independent System  
Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630  
Tel: (916) 608-7135  
Fax: (916) 608-7222  
[aivancovich@caiso.com](mailto:aivancovich@caiso.com)

Andrew Ulmer  
Director, Federal Regulatory Affairs  
California Independent System  
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250 Outcropping Way  
Folsom, CA 95630  
Tel: (916) 608-7209  
Fax: (916) 608-7222  
[aulmer@caiso.com](mailto:aulmer@caiso.com)

## X. Conclusion

The Commission should accept the Agreement between the CAISO and Tucson Electric effective December 1, 2020 and should grant privileged treatment to Attachment C to this filing. The Agreement will help ensure the CAISO meets the requirements of Reliability Standard BAL-003 for the 2020-2021 compliance year.

Respectfully submitted,

**By: /s/ Andrew Ulmer**

Roger E. Collanton  
General Counsel  
Anthony Ivancovich  
Deputy General Counsel, Regulatory  
Andrew Ulmer  
Director, Federal Regulatory Affairs  
California Independent System  
Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630  
Tel. (916) 608-7209  
Fax. (916) 608-7222  
Email [aulmer@caiso.com](mailto:aulmer@caiso.com)

*Attorneys for the California Independent  
System Operator Corporation*

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<sup>17</sup> See 18 C.F.R. § 385.203(b).

**Marked Transmittal Letter**

**Transferred Frequency Response Agreement between**

**Tucson Electric Power Company and**

**California Independent System Operator Corporation**

**September 9, 2020**

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

**Re: California Independent System Operator Corporation**

**Docket No. ER20-2838-000**

**Filing of Rate Schedule No. 6270 and ~~Requests for Waiver of Notice Requirement~~ and Request for Privileged Treatment**

Dear Secretary Bose:

The California Independent System Operator Corporation (CAISO) requests that the Commission accept the attached Transferred Frequency Response Agreement (Agreement) between the CAISO and Tucson Electric Power Company (Tucson Electric) for filing.<sup>1</sup> The Agreement will secure 20 megawatts (MW) per 0.1 Hertz (Hz) in transferred frequency response from Tucson Electric for the period from December 1, 2020 through November 30, 2021, in order to help mitigate the risk that the CAISO may not have sufficient primary frequency response from its native resources to meet its obligations under North American Electric Reliability Corporation (NERC) Reliability Standard BAL-003. The CAISO respectfully requests that the Commission accept the Agreement effective December 1, 2020, and that the Commission grant privileged treatment to the materials contained in Attachment C to this filing.

## **I. Background**

On September 16, 2016, the Commission conditionally accepted tariff revisions submitted by the CAISO to facilitate the CAISO's compliance with the frequency response requirements of NERC Reliability Standard BAL-003, entitled

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*Frequency Response and Frequency Bias Setting.*<sup>2</sup> The Commission approved Reliability Standard BAL-003 to establish frequency response requirements for balancing authority areas.<sup>3</sup> Requirement 1 of Reliability Standard BAL-003 obligates each balancing authority to achieve an annual frequency response measure that equals or exceeds its frequency response obligation. A balancing authority's frequency response obligation is determined each year and reflects its proportionate share – based on annual generation and load – of the interconnection's frequency response obligation. Compliance with the annual frequency response obligation runs from December 1 through November 30 of the following year.

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The Commission has previously accepted agreements for the CAISO to procure transferred frequency responses for the 2016-2017, 2017-2018, 2018-2019, and 2019-2020 compliance years under Reliability Standard BAL-003.<sup>5</sup>

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Earlier this year, the CAISO initiated a competitive solicitation to request offers for transferred frequency response for the 2020-2021 compliance year. The CAISO stated that it intended to secure transferred frequency response in an amount not to exceed 100 MW per 0.1 Hz.

Based on an assessment of prior frequency events and the performance of resources during those events<sup>6</sup>, the CAISO determined it should procure 41 MW per 0.1 Hz for the 2020-2021 compliance year to help the CAISO meet its compliance obligations.<sup>7</sup> As part of its assessment, the CAISO examined its performance during prior frequency events in 2019 and 2020 as well as the performance of conventional resources scheduled to retire in 2020 and 2021.<sup>8</sup> The CAISO also considered the potential displacement of conventional generation by inverter-based resources. Some inverter-based resources will have frequency response capabilities, but most will not operate with available headroom to respond during a frequency disturbance. Finally, as part of its assessment, the CAISO considered potential frequency response capabilities of resources that will likely reach commercial operation during the 2020-2021 compliance year.

## **II. The CAISO Completed a Competitive Solicitation for Transferred Frequency Response for the 2020-2021 Compliance Year**

On April 1, 2020, pursuant to section 42.2.1 of the CAISO tariff, the CAISO issued a request for proposals to provide transferred frequency response to balancing authorities in the Western Interconnection. The CAISO also provided a draft version of the Agreement that reflected the product the CAISO was soliciting. The CAISO accepted bids in response to the request for proposals up to and including June 8, 2020. Copies of the CAISO's request and supporting documents are provided with this transmittal letter as Attachment B.<sup>9</sup>

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After the receipt of bids from balancing authorities or their authorized sellers, the CAISO evaluated those bids against prior frequency response performance by each bidder, as well as the frequency response needs estimated by the CAISO for the 2019-2020 compliance year. After this evaluation, the CAISO commenced negotiations with selected bidders to execute transferred frequency response contracts. As a result, the CAISO entered into an agreement with Tucson Electric.<sup>10</sup>

The competitive solicitation the CAISO conducted was consistent with the guidance the Commission has provided for competitive solicitation processes to ensure that affiliates do not receive undue preference.<sup>11</sup> In that regard, the Commission has ruled that competitive solicitation processes should follow four guidelines:

- a. *Transparency*: the competitive solicitation should be open and fair.
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- c. *Evaluation*: evaluation criteria should be standardized and applied equally to all bids and bidders.
- d. *Oversight*: an independent third party should design the solicitation, administer bidding, and evaluate bids prior to selection.<sup>12</sup>

For purposes of securing ~~additional~~ transferred frequency response for the ~~202019-20210 Reliability Standard BAL-003-1.1~~ compliance year, the CAISO's transferred frequency response competitive solicitation process satisfies these four principles and is also consistent with the CAISO's tariff. First, as reflected in the request for proposals, the competitive solicitation was open to all balancing authorities in the Western Interconnection, or their authorized sellers, that are able to provide transferred frequency response. Second, the CAISO defined transferred frequency response, which was the product subject to the

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solicitation.<sup>13</sup> The request for proposals identified the terms, timeline, bidding instructions for the solicitation, evaluation criteria, and terms of service reflected in a draft contract. Third, the CAISO selected bids, consistent with its tariff and evaluation criteria. These criteria include lowest cost and the bidders' ability to provide transferred frequency response.<sup>14</sup> The CAISO applied these criteria to all bids and bidders for transferred frequency response. Fourth, the CAISO, an independent entity, administered the competitive solicitation on behalf of the CAISO market and evaluated the bids.

### **III. Purpose of the Agreement**

The Agreement between the CAISO and Tucson Electric governs the terms and conditions under which Tucson Electric will provide transferred frequency response to the CAISO and the payment the CAISO will make to Tucson Electric for such service. Pursuant to the Agreement, Tucson Electric will provide transferred frequency response and document its performance on the appropriate NERC compliance forms for the 2020-2021 NERC Reliability Standard BAL-003 compliance year beginning on December 1, 2020. The CAISO has agreed to compensate Tucson Electric at the contract price for its performance. Under the Agreement, Tucson Electric and the CAISO will adjust their frequency response performance by the contract amount for each disturbance event selected by NERC to assess compliance under Reliability Standard BAL-003 between December 1, 2020 and November 30, 2021.

### **IV. The Commission Should Accept the Agreement for Filing**

The Commission should accept for filing the Agreement as just and reasonable. The CAISO considered its recent performance in its response to frequency disturbance events to develop a procurement target. Based on this

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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.

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<sup>14</sup> CAISO tariff section 42.2.1.

information, the CAISO identified 41 MW per 0.1 Hz quantity of transferred frequency response to procure in order to provide adequate insurance to meet its expected frequency response obligation for the 2020-2021 compliance year under NERC Reliability Standard BAL-003.

The CAISO developed an estimate of costs per MW to obtain 41 MW per 0.1 Hz from additional regulation up capacity. The CAISO compared the cost of the bids received to the anticipated cost of ensuring compliance with Reliability Standard BAL-003 through the procurement of additional regulation up. The CAISO's study used a two-part approach to estimate the costs of procuring additional regulation up capacity. The first step determined the quantity of regulation up capacity, which could provide desired frequency response without the procurement of transferred frequency response. The second step estimated annual increased market costs based on the increased hourly procurement requirements for regulation up and additional contributing variables such as seasonality and energy market prices. To derive this estimate, the CAISO employed a statistical learning model to perform a regression analysis, which accounted for variability and uncertainty of various contributing factors.

Section 42.2.1 of the CAISO tariff states that the CAISO will select the lowest cost bids consistent with the sellers' demonstrated ability to provide transferred frequency response. Tucson Electric demonstrated its ability to support its bid for transferred frequency response based on prior performance, and its bid reflected the lowest cost offer for the quantity selected. The CAISO evaluated the offers based on an estimate of costs the market might incur by procuring additional regulation up capacity in order to secure frequency response capability. The privileged version of Attachment C to this filing contains a comparison of bids received versus the potential cost to secure frequency response through the procurement of additional regulation up capacity. Tucson Electric's offer price for 20 MW per 0.1 Hz was below the CAISO's estimated cost to secure frequency response through procurement of additional regulation up capacity. Based on the bids received and consistent with the factors set forth in tariff section 42.2.1, the CAISO selected Tucson Electric's bid along with bids from two other entities to secure 41 MW per 0.1 Hz of transferred frequency response.

Beyond the contract amount and the contract prices, the Commission should accept the remaining terms and conditions of the Agreement between Tucson Electric and the CAISO. Of importance, the Agreement provides that transferred frequency response may not exceed the frequency response performance that the transferor balancing authority has produced as reflected in its annual frequency response measure under Reliability Standard BAL-003-1.1.<sup>15</sup> This term of the Agreement ensures that Tucson Electric can manage the

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<sup>15</sup> See Agreement, sections 1.6 – 1.7.

risk of having sufficient frequency response to transfer to the CAISO under the Agreement without having to provide the contract amount in response to each disturbance event identified by Reliability Standard.

With respect to payment terms, the CAISO's payment to Tucson reflects the provision of transferred frequency response during the entire 2020-2021 compliance period. The CAISO and Tucson Electric have agreed that Tucson Electric will invoice the CAISO for transferred frequency response and the CAISO shall pay the invoice electronically after collecting sufficient revenues from scheduling coordinators under section 11.34 of the CAISO tariff to pay Tucson Electric in a timely manner.

## **V. Effective Date**

The CAISO respectfully requests that the Commission accept the attached Agreement effective as of December 1, 2020.<sup>16</sup>

## **VI. Request for Privileged Treatment**

The CAISO is submitting both a privileged version and a public version of this filing. Pursuant to 18 C.F.R. § 388.112, the CAISO requests privileged treatment for information within a table included in Attachment C to this filing relating to bids submitted to provide transferred frequency response and the CAISO's cost comparison of these bids. The CAISO also requests privileged treatment of the potential costs of procuring additional regulation up capacity to meet its frequency response obligation identified on line 20 of page 3 of Attachment C as well as the equivalent regulation up capacity price of Tucson Electric's transferred frequency response bid identified on line 25 of page 3 of Attachment C. The CAISO has redacted this information from the public version of this filing. This information is confidential because it reflects sensitive commercial and financial information and its disclosure could harm CAISO market participants. The CAISO also submits a form of protective agreement as Attachment D to this filing.

## **VII. Service**

Copies of this filing have been served upon Tucson Electric, the California Public Utilities Commission, the California Energy Commission, all parties with effective scheduling coordinator service agreements under the CAISO tariff, and the Commission's service list for Docket No. ER16-1483 (the proceeding in which

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<sup>16</sup> Specifically, pursuant to section 35.11 of the Commission's regulations (18 C.F.R. § 35.11), the CAISO requests waiver of the 60-day notice requirement set forth in section 35.3(a)(1) of the Commission's regulations (18 C.F.R. § 35.3(a)(1)). The Agreement will continue in effect until April 1, 2022. Agreement, section 2.1.

the Commission issued the Frequency Response Compliance Orders). In addition, the CAISO is posting this transmittal letter and all public attachments on the CAISO website.

### **VIII. Attachments**

The following attachments, in addition to this transmittal letter, support the instant filing:

Attachment A	Executed Transferred Frequency Response Agreement;
Attachment B	Copies of the CAISO's Request for Proposals and attachments thereto;
Attachment C	Comparison of bids received versus the potential cost to procure additional regulation up capacity (public and privileged versions are attached); and
Attachment D	Form of Protective Agreement.

## IX. Communications

Pursuant to Rule 203(b) of the Commission's Rules of Practice and Procedure,<sup>17</sup> the CAISO requests that all correspondence, pleadings and other communications concerning this filing be served upon the following whose names should appear on the official service list established by the Commission with respect to this submittal:

Anthony Ivancovich  
Deputy General Counsel  
California Independent System  
Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630  
Tel: (916) 608-7135  
Fax: (916) 608-7222  
[aivancovich@caiso.com](mailto:aivancovich@caiso.com)

Andrew Ulmer  
Director, Federal Regulatory Affairs  
California Independent System  
Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630  
Tel: (916) 608-7209  
Fax: (916) 608-7222  
[aulmer@caiso.com](mailto:aulmer@caiso.com)

## X. Conclusion

The Commission should accept the Agreement between the CAISO and Tucson Electric effective December 1, 2020 and should grant privileged treatment to Attachment C to this filing. The Agreement will help ensure the CAISO meets the requirements of Reliability Standard BAL-003 for the 2020-2021 compliance year.

Respectfully submitted,

**By: /s/ Andrew Ulmer**

Roger E. Collanton  
General Counsel  
Anthony Ivancovich  
Deputy General Counsel, Regulatory  
Andrew Ulmer  
Director, Federal Regulatory Affairs  
California Independent System  
Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630  
Tel. (916) 608-7209  
Fax. (916) 608-7222  
Email [aulmer@caiso.com](mailto:aulmer@caiso.com)

*Attorneys for the California Independent  
System Operator Corporation*

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<sup>17</sup> See 18 C.F.R. § 385.203(b).