



August 17, 2022

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. ER22-___-000

Filing of Rate Schedule No. 7160 and Request for Privileged Treatment

Dear Secretary Bose:

The California Independent System Operator Corporation (CAISO) requests that the Commission accept the Transferred Frequency Response Agreement (Agreement) between the CAISO and Tucson Electric Power Company (Tucson Electric) as a rate schedule included as Attachment A.¹ The Agreement will secure 1 megawatt (MW) per 0.1 Hertz (Hz) in transferred frequency response from Tucson Electric for the period from December 1, 2022 through November 30, 2023, 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, 2022, 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 *Frequency*

¹ 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: 7160.

*Response and Frequency Bias Setting.*² The Commission approved Reliability Standard BAL-003 to establish frequency response requirements for balancing authority areas.³ 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.⁴

The Commission has previously accepted agreements for the CAISO to procure transferred frequency response under Reliability Standard BAL-003.⁵

Earlier this year, the CAISO initiated a competitive solicitation to request offers for transferred frequency response for the 2022-2023 compliance year. The CAISO

² *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).

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

⁴ 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.

⁵ 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 nos. ER19-179, *et al.* on December 11, 2018, issued in docket nos. ER19-2686 *et al.* on November 12, 2019, and issued in docket nos. ER20-2850, ER20-2853, ER20-2838 issued on November 18, 2020.

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 events⁶, the CAISO determined it should procure 20 MW per 0.1 Hz for the 2022-2023 compliance year to help the CAISO meet its compliance obligations. As part of its assessment, the CAISO examined its performance during prior frequency events in 2021 and 2022. The CAISO also considered the potential displacement of conventional generation by inverter-based resources. Some inverter-based resources will have frequency response capabilities, but some 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 2022-2023 compliance year, including battery energy storage additions.

II. The CAISO Completed a Competitive Solicitation for Transferred Frequency Response for the 2022-2023 Compliance Year

On April 27, 2022, 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 7, 2022. Copies of the CAISO's request and supporting documents are provided with this transmittal letter as Attachment B.⁷

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 2022-2023 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.⁸

The competitive solicitation the CAISO conducted was consistent with the guidance the Commission has provided for competitive solicitation processes to ensure

⁶ The CAISO will not know which specific frequency disturbance events NERC will select under Reliability Standard BAL-003 for the 2021-2022 compliance year until the first quarter of 2023.

⁷ The CAISO market notice announcing the request for proposals is available at <http://www.caiso.com/Documents/Transferred-Frequency-Response-Request-Proposal.html#search=transferred%20frequency%20response>.

⁸ In addition to this filing, the CAISO will file a Transferred Frequency Response Agreement with the City of Seattle for 10 MW per 0.1 Hz.

that affiliates do not receive undue preference.⁹ 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.¹⁰

For purposes of securing transferred frequency response for the 2022-2023 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 solicitation.¹¹ 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.¹² The CAISO applied these criteria to all bids and bidders for transferred frequency

⁹ 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.

¹⁰ *Id.*

¹¹ 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.

¹² CAISO tariff section 42.2.1.

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 the 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 2022-2023 NERC Reliability Standard BAL-003 compliance year beginning on December 1, 2022. 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, 2022 and November 30, 2023.

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 information, the CAISO identified 20 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 2022-2023 compliance year under NERC Reliability Standard BAL-003.

The CAISO developed an estimate of costs per MW to obtain 20 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 10 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 one other entity to secure 20 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 the Tucson Electric and the CAISO. 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-003.¹³ This term of the Agreement ensures Tucson Electric can manage the 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 Electric reflects the provision of transferred frequency response during the entire 2022-2023 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.

V. Effective Date

The CAISO respectfully requests that the Commission accept this Agreement effective as of December 1, 2022.

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 17 of page 2 of Attachment C as well as the equivalent regulation up capacity price of Tucson Electric's transferred frequency response bid identified on line 22 of page 2 of Attachment C. The CAISO has redacted this information from the public version of this filing. This information is confidential because it reflects sensitive

¹³ See Agreement, sections 1.6 – 1.7.

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 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 this 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,¹⁴ 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

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

X. Conclusion

The Commission should accept the Agreement between the CAISO and Tucson Electric effective December 1, 2022 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 2022-2023 compliance year.

Respectfully submitted,

By: /s/ Andrew Ulmer

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Anthony Ivancovich
Deputy General Counsel, Regulatory
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*Attorneys for the California Independent
System Operator Corporation*

¹⁴ See 18 C.F.R. § 385.203(b).

Attachment A – Executed Agreement
Transferred Frequency Response Agreement between
Tucson Electric Power Company and
California Independent System Operator Corporation
August 17, 2022

**CALIFORNIA INDEPENDENT SYSTEM
OPERATOR CORPORATION**

AND

TUCSON ELECTRIC POWER COMPANY

**TRANSFERRED FREQUENCY
RESPONSE AGREEMENT**



THIS TRANSFERRED FREQUENCY RESPONSE AGREEMENT

(“**AGREEMENT**”) is established this 20th day of July, 2022, and is accepted by and between:

Tucson Electric Power Company (“Transferor Balancing Authority”), having its registered and principal executive office at 88 East Broadway Blvd., Tucson, Arizona, 85701.

and

California Independent System Operator Corporation (“CAISO or Transferee Balancing Authority”), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The Transferor Balancing Authority and the CAISO are hereinafter referred to as the “Parties” or individually as “Party.”

Whereas:

- A.** The Parties named above operate Balancing Authority Areas.
- B.** On January 16, 2014, the Federal Energy Regulatory Commission (“FERC”) adopted Order No. 794, approving the North American Electric Reliability Corporation (“NERC”) reliability standard BAL-003-1.1.
- C.** The NERC Reliability Standard BAL-003-2 was issued by FERC with an effective date of December 1, 2020 to replace reliability standard BAL-003-1.1.
- D.** NERC implements reliability standards in coordination with regional reliability entities and the entity for the western region is the Western Electricity Coordinating Council (“WECC”).
- E.** NERC will determine on an annual basis the Frequency Response Obligation for each Balancing Authority in the Western Interconnection.
- F.** On September 16, 2016, FERC accepted, subject to condition, CAISO tariff revisions that authorize the CAISO to procure Transferred Frequency Response to comply with NERC reliability standard BAL-003-1.1.

- G.** The Parties wish to enter into this Agreement to establish the terms and conditions for Transferred Frequency Response.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

1 Definitions

- 1.1 BAL-003-1.1** A NERC reliability standard, as it may be amended from time to time.
- 1.2 BAL-003-2** A NERC reliability standard, effective from December 1, 2020 as it may be amended from time to time
- 1.3 Balancing Authority.** The responsible entity that integrates resource plans ahead of time, maintains demand and resource balance within a Balancing Authority Area, and supports Interconnection frequency in real time.
- 1.4 Balancing Authority Area.** The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.
- 1.5 Frequency Response Obligation.** The Balancing Authority's share of the required Interconnection Frequency Response Obligation as defined by NERC. This obligation will be expressed in megawatts per 0.1 Hertz (MW/0.1Hz).
- 1.6 Frequency Response.** The sum of the change in demand, plus the change in generation, divided by the change in frequency, expressed in MW/0.1 Hz.
- 1.7 Frequency Response Measure.** The median of all of the Frequency Response observations reported annually by Balancing Authorities or Frequency Response Sharing Groups for frequency events as specified by NERC under BAL-003-2. This measure will be calculated as MW/0.1HZ
- 1.8 Transferred Frequency Response.** Frequency response performance adjustment under BAL-003-2 expressed in MW/0.1 Hz that a Transferee Balancing Authority may acquire under an arrangement whereby a Transferor Balancing Authority adjusts its reported Frequency Response by the same amount transferred and added to the Transferee Balancing

Authority. Transferred Frequency Response does not change NERC-designated Frequency Response Obligation of any entity. Transferred Frequency Response is reported on applicable NERC/WECC forms, and applied consistently to each reported frequency disturbance event. The Transferor Balancing Authority adjusts its reported performance downward and the Transferee Balancing Authority adjusts its reported Frequency Response performance upward by the same amount. Transferred Frequency Response may reflect an aggregate amount from multiple contracts. Any reported 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.

2. Term and Termination

2.1 Effective Date and Term

This Agreement shall be effective as of December 1, 2022, unless this Agreement is accepted for filing and made effective by the FERC on some other date, and shall continue in effect until April 1, 2024 (“Contract Term”) notwithstanding those terms that survive the Contract Term.

2.2 Conditional Pending FERC Acceptance

CAISO has stated its intent to file this Agreement for approval by the FERC. In the event that FERC does not accept this Agreement, or conditions its acceptance on terms that are unacceptable to either Party, either Party may terminate the Agreement by providing written notice within thirty (30) days of the FERC order. In the event of termination prior to the start of the Contract Term, any and all payments made under this Agreement will be returned to the payee.

3. Transferor Balancing Authority Obligations

3.1 Transferor Balancing Authority shall adjust its Transferred Frequency Response column of the Applicable NERC/WECC forms by 10 MW/0.1 Hz (the “Contract Amount”) in accordance with the terms of BAL-003-2 from December 1, 2022 to November 30, 2023 the “Compliance Year.”

3.2 Transferor Balancing Authority shall produce sufficient Frequency Response such that the Frequency Response Measure is greater than or equal to the Contract Amount.

3.3 Transferor Balancing Authority shall reasonably cooperate with the CAISO in the event that either Party is subject to NERC or WECC regulatory inquiry or audit in connection with the Transferred Frequency Response that is the subject of this Agreement.

4 CAISO Obligations

4.1 As full consideration to Transferor Balancing Authority for its performance under this Agreement the CAISO shall compensate Transferor Balancing Authority \$550,000 (“Contract Price”). The Contract Price shall compensate Transferor Balancing Authority for any and all costs in connection with such performance, including but not limited to, any fines or reliability based penalties assessed against Transferor Balancing Authority under BAL-003-2 that result from the failure to supply the Contract Amount Transferred Frequency Response.

4.2 The CAISO shall reasonably cooperate with the Transferor Balancing Authority in the event that either Party is subject to NERC or WECC regulatory inquiry or audit in connection with the Transferred Frequency Response that is the subject of this Agreement.

5. Performance Obligations

If Transferor Balancing Authority fails to perform its obligations under Section 3, and such failure directly causes the CAISO to incur fines or penalties imposed by FERC, WECC or NERC for non-compliance with BAL-003-2, Transferor Balancing Authority shall be liable for the portions of the imposed fines or penalties applied against CAISO that are a direct consequence of such failure.

6 REPRESENTATIONS AND WARRANTIES

6.1 The CAISO is a California nonprofit public benefit corporation and that has the full power and authority to execute, deliver and perform its obligations under this Agreement.

6.2 Transferor Balancing Authority is a Balancing Authority and has the full power and authority to contract for, execute, deliver and perform obligations under this Agreement.

6.3 Both the CAISO and Transferor Balancing Authority mutually represent and warrant on behalf of their respective entity that this Agreement has been duly authorized, executed and delivered by or on behalf of such entity and is, upon execution and delivery, the legal, valid and binding

obligation of such Party, enforceable against it in accordance with its terms.

7 Liability

7.1 Liability to Third Parties

Except as otherwise expressly provided herein, nothing in this Agreement shall be construed or deemed to confer any right or benefit on, or to create any duty to, or standard of care with reference to any third party, or any liability or obligation, contractual or otherwise, on the part of CAISO or the Transferor Balancing Authority.

7.2 Liability Between the Parties

The Parties' duties and standard of care with respect to each other, and the benefits and rights conferred on each other, shall be no greater than as explicitly stated herein. Except as otherwise expressly provided herein, neither Party, its directors, officers, employees, or agents, shall be liable to the other Party for any loss, damage, claim, cost, charge, or expense, whether direct, indirect, or consequential, arising from the Party's performance or nonperformance under this Agreement, except for a Party's gross negligence, or willful misconduct.

Nothing contained in this Agreement shall be construed as creating a corporation, company, partnership, association, joint venture or other entity with the other Party, nor shall anything contained in this Agreement be construed as creating or requiring any fiduciary relationship between the Parties. No Party shall be responsible hereunder for the acts or omissions of the other Party.

8. Miscellaneous

8.1 Notices

Any notice, demand, or request which may be given to or made upon either Party regarding this Agreement shall be made in writing and unless otherwise stated or agreed upon by the Parties shall be made to the representative of the other Party indicated in Schedule 1 and shall be deemed properly served, given, or made: (a) upon delivery if delivered in person, (b) five (5) days after deposit in the mail if sent by first class United States mail, postage prepaid, (c) upon receipt of confirmation by return facsimile if sent by facsimile, (d) upon receipt of confirmation by return e-mail if sent by e-mail or (e) upon delivery if delivered by prepaid

commercial courier service. A Party must update the information in Schedule 1 relating to its address as that information changes. Such changes shall not constitute an amendment to this Agreement.

8.2 Waivers

Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or matter arising in connection with this Agreement. Any delay short of the statutory period of limitations, in asserting or enforcing any right under this Agreement, shall not constitute or be deemed a waiver of such right.

8.3 Governing Law and Forum

This Agreement shall be deemed to be a contract made under and for all purposes shall be governed by and construed in accordance with Federal Law. No provision of this Agreement shall be deemed to waive the right of any Party to protest, or challenge in any manner, whether this Agreement, or any action or proceeding arising under or relating to this Agreement, is subject to the jurisdiction of the Federal Energy Regulatory Commission.

8.4. Uncontrollable Forces

8.4.1 An Uncontrollable Force means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm, flood, earthquake, explosion, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond the reasonable control of the Parties which could not be avoided through compliance with mandatory NERC Reliability Standards and WECC Regional Reliability Standards.

8.4.2 Neither Party will be considered in breach of any obligation under this Agreement or liable to the other for direct, indirect, and consequential damages if prevented from fulfilling that obligation due to the occurrence of an Uncontrollable Force requiring the Party to suspend performance of its obligations. Each Party shall each use its best efforts to mitigate the effects of an Uncontrollable Force, remedy its inability to perform, and resume full performance of its obligations hereunder in a timely manner.

8.5 Severability

If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

8.6 Section Headings

Section headings provided in this Agreement are for ease of reading and are not meant to interpret the text in each Section.

8.7 Amendments

This Agreement and the schedule attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA, if applicable, and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

8.8 Counterparts

This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

9 Payment and Billing Disputes

9.1 Payment

CAISO shall act in good faith and use its best efforts to submit payment to Transferor Balancing Authority as soon as possible. CAISO shall pay Transferor Balancing Authority the entire Contract Price no later than March 31, 2023.



All invoices must be submitted to the attention of Dennis Estrada
DEstrada@caiso.com with a copy to Channa Hasegawa
chasegawa@caiso.com

Payments to Tucson Electric Power Company shall be sent via wire transfer to:

Bank Name: Wells Fargo Bank
ABA: 121000248
Account: 4950029116

9.2 Billing Disputes

- 9.2.1** If the CAISO disputes any portion of an invoice the CAISO shall, within thirty (30) days after receipt of an invoice, provide written notice to Transferor Balancing Authority with a copy of the invoice noting the disputed amount and reason for the dispute. Notwithstanding whether any portion of the bill is in dispute, the CAISO shall pay the entire bill by the due date.
- 9.2.2** If the Parties agree, or if after a final determination of a dispute, the CAISO is entitled to a refund of any portion of the disputed amount, then Transferor Balancing Authority shall make such refund with simple interest computed from the date of receipt of the disputed payment to the date the refund is made. The daily interest rate shall equal the Prime Rate (as reported in the Wall Street Journal or successor publication in the first issue published during the month in which payment was due) divided by 365.



IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date first written above.

California Independent System Operator Corporation

By: DocuSigned by:
Neil Millar
9236FA183EA64FB...

Name: Neil Millar

Title: Vice President Infrastructure and Ops Planning

Date: 7/20/2022

Tucson Electric Power Company

By: DocuSigned by:
Erik Bakken
78C042D50A6C453...

Name: Erik Bakken

Title: VP, System Operations and Energy Resources

Date: 7/19/2022



SCHEDULE 1

NOTICES

[Section 8.1]

Transferor Balancing Authority

Name of Primary

Representative: Lauren Briggs
Title: Manager, Balancing Authority Function
Company: Tucson Electric Power Company
Address (U.S. Mail): Mail Stop OC200, PO Box 711
City/State/Zip Code: Tucson, AZ 85702
Email Address: LBriggs@tep.com
Phone: (520) 745-7157

Name of Alternative

Representative: Sam Rugel
Title: Director, System Control & Reliability
Company: Tucson Electric Power Company
Address (Overnight): Mail Stop OC200. P.O. Box 711
City/State/Zip Code: Tucson, AZ 85702
Email Address: SRugel@tep.com
Phone: (520) 745-3265



CAISO

Name of Primary Representative: Regulatory Contracts
Title: N/A
Address: 250 Outcropping Way
City/State/Zip Code: Folsom, CA 95630
Email address: RegulatoryContracts@caiso.com
Phone: (916) 351-4400
Fax: (916) 608-5063

Name of Alternative Representative: Christopher J. Sibley
Title: Sr. Manager, Regulatory Contracts
Address: 250 Outcropping Way
City/State/Zip Code: Folsom, CA 95630
Email address: csibley@caiso.com
Phone: (916) 608-7030
Fax: (916) 608-5063

Attachment B – Proposals Request
Transferred Frequency Response Agreement between
Tucson Electric Power Company and
California Independent System Operator Corporation
August 17, 2022

**CALIFORNIA INDEPENDENT SYSTEM
OPERATOR CORPORATION**

AND

Name

**TRANSFERRED FREQUENCY
RESPONSE AGREEMENT**

THIS TRANSFERRED FREQUENCY RESPONSE AGREEMENT

(“**AGREEMENT**”) is established this ____ day of _____, 2022, and is accepted by and between:

Name (“Transferor Balancing Authority”), having its registered and principal executive office at address.

and

California Independent System Operator Corporation (“CAISO or Transferee Balancing Authority”), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The Transferor Balancing Authority and the CAISO are hereinafter referred to as the “Parties” or individually as “Party.”

Whereas:

- A.** The Parties named above operate Balancing Authority Areas.
- B.** On January 16, 2014, the Federal Energy Regulatory Commission (“FERC”) adopted Order No. 794, approving the North American Electric Reliability Corporation (“NERC”) reliability standard BAL-003-1.1.
- C.** The NERC Reliability Standard BAL-003-2 was issued by FERC with an effective date of December 1, 2020 to replace reliability standard BAL-003-1.1.
- D.** NERC implements reliability standards in coordination with regional reliability entities and the entity for the western region is the Western Electricity Coordinating Council (“WECC”).
- E.** NERC will determine on an annual basis the Frequency Response Obligation for each Balancing Authority in the Western Interconnection.
- F.** On September 16, 2016, FERC accepted, subject to condition, CAISO tariff revisions that authorize the CAISO to procure Transferred Frequency Response to comply with NERC reliability standard BAL003-1.1.

- G.** The Parties wish to enter into this Agreement to establish the terms and conditions for Transferred Frequency Response.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

1 Definitions

- 1.1 BAL-003-1.1** A NERC reliability standard, as it may be amended from time to time.
- 1.2 BAL-003-2** A NERC reliability standard, effective from December 1, 2020 as it may be amended from time to time
- 1.3 Balancing Authority.** The responsible entity that integrates resource plans ahead of time, maintains demand and resource balance within a Balancing Authority Area, and supports Interconnection frequency in real time.
- 1.4 Balancing Authority Area.** The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.
- 1.5 Frequency Response Obligation.** The Balancing Authority's share of the required Interconnection Frequency Response Obligation as defined by NERC. This obligation will be expressed in megawatts per 0.1 Hertz (MW/0.1Hz).
- 1.6 Frequency Response.** The sum of the change in demand, plus the change in generation, divided by the change in frequency, expressed in MW/0.1 Hz.
- 1.7 Frequency Response Measure.** The median of all of the Frequency Response observations reported annually by Balancing Authorities or Frequency Response Sharing Groups for frequency events as specified by NERC under BAL-003-2. This measure will be calculated as MW/0.1HZ
- 1.8 Transferred Frequency Response.** Frequency response performance adjustment under BAL-003-2 expressed in MW/0.1 Hz that a Transferee Balancing Authority may acquire under an arrangement whereby a Transferor Balancing Authority adjusts its reported Frequency Response by the same amount transferred and added to the Transferee Balancing Authority. Transferred Frequency Response does not change NERC-

designated Frequency Response Obligation of any entity. Transferred Frequency Response is reported on applicable NERC/WECC forms, and applied consistently to each reported frequency disturbance event. The Transferor Balancing Authority adjusts its reported performance downward and the Transferee Balancing Authority adjusts its reported Frequency Response performance upward by the same amount. Transferred Frequency Response may reflect an aggregate amount from multiple contracts. Any reported 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.

2. Term and Termination

2.1 Effective Date and Term

This Agreement shall be effective as of December 1, 2022, unless this Agreement is accepted for filing and made effective by the FERC on some other date, and shall continue in effect until April 1, 2024 (“Contract Term”) notwithstanding those terms that survive the Contract Term.

2.2 Conditional Pending FERC Acceptance

CAISO has stated its intent to file this Agreement for approval by the FERC. In the event that FERC does not accept this Agreement, or conditions its acceptance on terms that are unacceptable to either Party, either Party may terminate the Agreement by providing written notice within thirty (30) days of the FERC order. In the event of termination prior to the start of the Contract Term, any and all payments made under this Agreement will be returned to the payee.

3. Transferor Balancing Authority Obligations

3.1 Transferor Balancing Authority shall adjust its Transferred Frequency Response column of the Applicable NERC/WECC forms by ## MW/0.1 Hz (the “Contract Amount”) in accordance with the terms of BAL-003-2 from December 1, 2022 to November 30, 2023 the “Compliance Year.”

3.2 Transferor Balancing Authority shall produce sufficient Frequency Response such that the Frequency Response Measure is greater than or equal to the Contract Amount.

3.3 Transferor Balancing Authority shall reasonably cooperate with the CAISO in the event that either Party is subject to NERC or WECC regulatory inquiry or audit in connection with the Transferred Frequency Response that is the subject of this Agreement.

4 CAISO Obligations

4.1 As full consideration to Transferor Balancing Authority for its performance under this Agreement the CAISO shall compensate Transferor Balancing Authority \$##### (“Contract Price”). The Contract Price shall compensate Transferor Balancing Authority for any and all costs in connection with such performance, including but not limited to, any fines or reliability based penalties assessed against Transferor Balancing Authority under BAL-003-2 that result from the failure to supply the Contract Amount Transferred Frequency Response.

4.2 The CAISO shall reasonably cooperate with the Transferor Balancing Authority in the event that either Party is subject to NERC or WECC regulatory inquiry or audit in connection with the Transferred Frequency Response that is the subject of this Agreement.

5. Performance Obligations

If Transferor Balancing Authority fails to perform its obligations under Section 3, and such failure directly causes the CAISO to incur fines or penalties imposed by FERC, WECC or NERC for non-compliance with BAL-003-2, Transferor Balancing Authority shall be liable for the imposed fines or penalties applied against CAISO for such failure.

6 REPRESENTATIONS AND WARRANTIES

6.1 The CAISO is a California nonprofit public benefit corporation and that has the full power and authority to execute, deliver and perform its obligations under this Agreement.

6.2 Transferor Balancing Authority is a Balancing Authority and has the full power and authority to contract for, execute, deliver and perform obligations under this Agreement.

6.3 Both the CAISO and Transferor Balancing Authority mutually represent and warrant on behalf of their respective entity that this Agreement has

been duly authorized, executed and delivered by or on behalf of such entity and is, upon execution and delivery, the legal, valid and binding obligation of such Party, enforceable against it in accordance with its terms.

7 Liability

7.1 Liability to Third Parties

Except as otherwise expressly provided herein, nothing in this Agreement shall be construed or deemed to confer any right or benefit on, or to create any duty to, or standard of care with reference to any third party, or any liability or obligation, contractual or otherwise, on the part of CAISO or the Transferor Balancing Authority.

7.2 Liability Between the Parties

The Parties' duties and standard of care with respect to each other, and the benefits and rights conferred on each other, shall be no greater than as explicitly stated herein. Except as otherwise expressly provided herein, neither Party, its directors, officers, employees, or agents, shall be liable to the other Party for any loss, damage, claim, cost, charge, or expense, whether direct, indirect, or consequential, arising from the Party's performance or nonperformance under this Agreement, except for a Party's gross negligence, or willful misconduct.

Nothing contained in this Agreement shall be construed as creating a corporation, company, partnership, association, joint venture or other entity with the other Party, nor shall anything contained in this Agreement be construed as creating or requiring any fiduciary relationship between the Parties. No Party shall be responsible hereunder for the acts or omissions of the other Party.

8. Miscellaneous

8.1 Notices

Any notice, demand, or request which may be given to or made upon either Party regarding this Agreement shall be made in writing and unless otherwise stated or agreed upon by the Parties shall be made to the representative of the other Party indicated in Schedule 1 and shall be

deemed properly served, given, or made: (a) upon delivery if delivered in person, (b) five (5) days after deposit in the mail if sent by first class United States mail, postage prepaid, (c) upon receipt of confirmation by return facsimile if sent by facsimile, (d) upon receipt of confirmation by return e-mail if sent by e-mail or (e) upon delivery if delivered by prepaid commercial courier service. A Party must update the information in Schedule 1 relating to its address as that information changes. Such changes shall not constitute an amendment to this Agreement.

8.2 Waivers

Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or matter arising in connection with this Agreement. Any delay short of the statutory period of limitations, in asserting or enforcing any right under this Agreement, shall not constitute or be deemed a waiver of such right.

8.3 Governing Law and Forum

This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

8.4. Uncontrollable Forces

8.4.1 An Uncontrollable Force means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm, flood, earthquake, explosion, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond the reasonable control of the Parties which could not be avoided through compliance with mandatory NERC Reliability Standards and WECC Regional

Reliability Standards.

8.4.2 Neither Party will be considered in breach of any obligation under this Agreement or liable to the other for direct, indirect, and consequential damages if prevented from fulfilling that obligation due to the occurrence of an Uncontrollable Force requiring the Party to suspend performance of its obligations. Each Party shall each use its best efforts to mitigate the effects of an Uncontrollable Force, remedy its inability to perform, and resume full performance of its obligations hereunder in a timely manner.

8.5 Severability

If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

8.6 Section Headings

Section headings provided in this Agreement are for ease of reading and are not meant to interpret the text in each Section.

8.7 Amendments

This Agreement and the schedule attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA, if applicable, and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

8.8 Counterparts

This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

9 Payment and Billing Disputes

9.1 Payment

CAISO shall act in good faith and use its best efforts to submit payment to Transferor Balancing Authority as soon as possible. CAISO shall pay Transferor Balancing Authority the entire Contract Price no later than March 31, 2023.

All invoices must be submitted to the attention of Dennis Estrada DEstrada@caiso.com with a copy to Chhanna Hasegawa chasegawa@caiso.com

Payments to name shall be sent via wire transfer to:

Bank Name:
ABA:
Account:

9.2 Billing Disputes

9.2.1 If the CAISO disputes any portion of an invoice the CAISO shall, within thirty (30) days after receipt of an invoice, provide written notice to Transferor Balancing Authority with a copy of the invoice noting the disputed amount and reason for the dispute. Notwithstanding whether any portion of the bill is in dispute, the CAISO shall pay the entire bill by the due date.

9.2.2 If the Parties agree, or if after a final determination of a dispute, the CAISO is entitled to a refund of any portion of the disputed amount, then Transferor Balancing Authority shall make such refund with simple interest computed from the date of receipt of the disputed payment to the date the refund is made. The daily interest rate shall equal the Prime Rate (as reported in the Wall Street Journal or successor publication in the first

issue published during the month in which payment was due) divided by 365.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date first written above.

California Independent System Operator Corporation

By: _____

Name: _____

Title: _____

Date: _____

Name

By: _____

Name: _____

Title: _____

Date: _____

SCHEDULE 1**NOTICES****[Section 8.1]****Transferor Balancing Authority**

Name of Primary
Representative:

Title:

Company:

Address (U.S. Mail):

City/State/Zip Code

Email Address:

Phone:

Fax No:

Name of Alternative
Representative:

Title:

Company:

Address (Overnight):

City/State/Zip Code

Email Address:

Phone:

Fax No:

CAISO

Name of Primary Representative: Regulatory Contracts
Title: N/A
Address: 250 Outcropping Way
City/State/Zip Code: Folsom, CA 95630
Email address: RegulatoryContracts@caiso.com
Phone: (916) 351-4400
Fax: (916) 608-5063

Name of Alternative Representative: Christopher J. Sibley
Title: Sr. Manager, Regulatory Contracts
Address: 250 Outcropping Way
City/State/Zip Code: Folsom, CA 95630
Email address: csibley@caiso.com
Phone: (916) 608-7030
Fax: (916) 608-5063



California Independent System Operator Corporation

Request for Proposal Transferred Frequency Response

Submittal Deadlines:
Tuesday June 7, 2022
Time: 11:59 p.m. Pacific Daylight Time

Submit Proposals via:

kiteworks

A secure collaboration site will be set up for each bidder.
Send an email request for a kiteworks site by May 30, 2022 to

Shoukat Ansari
sansari@caiso.com
916-608-5913 (O)
916-597-7751(C)
California ISO
250 Outcropping Way,
Folsom, CA 95630

Introduction

The California Independent System Operator Corporation (“CAISO”) is seeking to purchase up to 100 MW per 0.1 Hz Transferred Frequency Response capability to meet its frequency response obligation for the compliance period starting on December 1, 2022 and continuing up to and including November 30, 2023.

The CAISO is defining Transferred Frequency Response as a frequency response performance obligation adjustment expressed in MW per 0.1 Hz that the CAISO may acquire from another Balancing Authority pursuant to a contract. The CAISO is proposing to report Transferred Frequency Response annually on applicable NERC/WECC forms. CAISO’s Transferred Frequency Response adjustment reported on its forms may reflect an aggregate amount of frequency response from contracts with multiple Balancing Authorities. The CAISO expects its frequency response performance rate reported for each frequency disturbance event expressed in MW per 0.1 Hz will be evaluated for compliance with the Applicable Reliability Criteria including the Transferred Frequency Response adjustment.

Terms:

- Product - Transferred Frequency Response
- Eligible Provider – Balancing Authority in the WECC or its authorized seller, as discussed further in the Transferred Frequency Response Agreement
- Quantity – up to 100 MW/0.1Hz (Total amount which can be procured through multiple contracts)
- Term (compliance period) – December 1, 2022 – November 30, 2023
- Price - \$/compliance period

Timeline:

- June 7, 2022 – Request For Proposal responses are due to CAISO
- July 12, 2022 – CAISO notifies successful bidder(s)
- July 12, 2022 – Begin negotiation of Transferred Frequency Response Agreement with successful bidder(s)
- September 16, 2022 - file executed agreement(s) with FERC for a December 1, 2022 effective date.

Bidding Instructions:

- A bidding template is provided as Attachment A to this Request for Proposal and bids must be submitted using this template.
- In addition to the bidding template, submission of Proof of Capability for the past two years is required through submitting the prior two years of NERC forms, Frequency Response Standard Form 1 and 2.
 - CAISO agrees to treat submitted data as Covered Data in accordance with the WECC Universal Data Sharing Agreement (“UDSA”) and will return or destroy the data after the assessment.

- Submit Bids and Proof of Capability by 11:59 p.m. Pacific Daylight Time on June 7, 2022 through:
 - The **kiteworks** secure collaboration Workspace set up for each bidder.
 - Send an email request to Shoukat Ansari, sansari@caiso.com, by May 30, 2022 so that the Workspace through which bids will be submitted can be set up.

Eligibility:

- Bids will not be considered from single generator Balancing Authorities

Evaluation Criteria:

- Demonstration of ability to provide the amount of Frequency Response Transfer
- Least Cost

Terms and Conditions of Service:

- A draft agreement is provided along with this RFP and the bidder must be willing to execute the agreement as drafted. If the bidder does not agree with the terms and conditions in the draft agreement, then the bidder must address in their bid the following:
 - What term or condition bidder disagrees with?
 - Why does the bidder disagree with the term or condition?
 - What does the bidder propose as an alternative?
 - Are there other terms and conditions the bidder would need in the agreement if selected? If yes, please provide those terms and conditions.

Attachment A

Transferred Frequency Response Bidding Template

Please submit this form to the CAISO along with proof of capability for the past two years through the **kiteworks** secure collaboration site set up for each bidder by 11:59 p.m. Pacific Daylight Time on June 7, 2022. For any questions, please contact Shoukat Ansari at 916-608-5913 (office) or 916-597-7751 (cell) or sansari@caiso.com.

Company Name: _____

Contact Name: _____

Contact Title: _____

Phone Number: _____

Alternative Phone Number (optional): _____

E-mail Address: _____

Bid Quantity MW/0.1Hz	Bid Unit Price \$/MW/0.1Hz	Bid Price \$/year (Nov-Dec)

Comments on draft Transferred Frequency Response Agreement:

Other Information: _____



California Independent System Operator Corporation

Request for Proposal Transferred Frequency Response

Submittal Deadlines:
Tuesday June 7, 2022
Time: 11:59 p.m. Pacific Daylight Time

Submit Proposals via:

kiteworks

A secure collaboration site will be set up for each bidder.
Send an email request for a kiteworks site by May 30, 2022 to

Shoukat Ansari
sansari@caiso.com
916-608-5913 (O)
916-597-7751(C)
California ISO
250 Outcropping Way,
Folsom, CA 95630

Introduction

The California Independent System Operator Corporation (“CAISO”) is seeking to purchase up to 100 MW per 0.1 Hz Transferred Frequency Response capability to meet its frequency response obligation for the compliance period starting on December 1, 2022 and continuing up to and including November 30, 2023.

The CAISO is defining Transferred Frequency Response as a frequency response performance obligation adjustment expressed in MW per 0.1 Hz that the CAISO may acquire from another Balancing Authority pursuant to a contract. The CAISO is proposing to report Transferred Frequency Response annually on applicable NERC/WECC forms. CAISO’s Transferred Frequency Response adjustment reported on its forms may reflect an aggregate amount of frequency response from contracts with multiple Balancing Authorities. The CAISO expects its frequency response performance rate reported for each frequency disturbance event expressed in MW per 0.1 Hz will be evaluated for compliance with the Applicable Reliability Criteria including the Transferred Frequency Response adjustment.

Terms:

- Product - Transferred Frequency Response
- Eligible Provider – Balancing Authority in the WECC or its authorized seller, as discussed further in the Transferred Frequency Response Agreement
- Quantity – up to 100 MW/0.1Hz (Total amount which can be procured through multiple contracts)
- Term (compliance period) – December 1, 2022 – November 30, 2023
- Price - \$/compliance period

Timeline:

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- July 12, 2022 – CAISO notifies successful bidder(s)
- July 12, 2022 – Begin negotiation of Transferred Frequency Response Agreement with successful bidder(s)
- September 16, 2022 - file executed agreement(s) with FERC for a December 1, 2022 effective date.

Bidding Instructions:

- A bidding template is provided as Attachment A to this Request for Proposal and bids must be submitted using this template.
- In addition to the bidding template, submission of Proof of Capability for the past two years is required through submitting the prior two years of NERC forms, Frequency Response Standard Form 1 and 2.
 - CAISO agrees to treat submitted data as Covered Data in accordance with the WECC Universal Data Sharing Agreement (“UDSA”) and will return or destroy the data after the assessment.

- Submit Bids and Proof of Capability by 11:59 p.m. Pacific Daylight Time on June 7, 2022 through:
 - The **kiteworks** secure collaboration Workspace set up for each bidder.
 - Send an email request to Shoukat Ansari, sansari@caiso.com, by May 30, 2022 so that the Workspace through which bids will be submitted can be set up.

Eligibility:

- Bids will not be considered from single generator Balancing Authorities

Evaluation Criteria:

- Demonstration of ability to provide the amount of Frequency Response Transfer
- Least Cost

Terms and Conditions of Service:

- A draft agreement is provided along with this RFP and the bidder must be willing to execute the agreement as drafted. If the bidder does not agree with the terms and conditions in the draft agreement, then the bidder must address in their bid the following:
 - What term or condition bidder disagrees with?
 - Why does the bidder disagree with the term or condition?
 - What does the bidder propose as an alternative?
 - Are there other terms and conditions the bidder would need in the agreement if selected? If yes, please provide those terms and conditions.

Attachment A

Transferred Frequency Response Bidding Template

Please submit this form to the CAISO along with proof of capability for the past two years through the **kiteworks** secure collaboration site set up for each bidder by 11:59 p.m. Pacific Daylight Time on June 7, 2022. For any questions, please contact Shoukat Ansari at 916-608-5913 (office) or 916-597-7751 (cell) or sansari@caiso.com.

Company Name: _____

Contact Name: _____

Contact Title: _____

Phone Number: _____

Alternative Phone Number (optional): _____

E-mail Address: _____

Bid Quantity MW/0.1Hz	Bid Unit Price \$/MW/0.1Hz	Bid Price \$/year (Nov-Dec)

Comments on draft Transferred Frequency Response Agreement:

Other Information: _____



Notice

April 27, 2022

REQUESTED ACTION

Action Date

CATEGORIES

Markets

Operations

Transferred Frequency Response Request for Proposal

MESSAGE

In January 2014, the Federal Energy Regulatory Commission (FERC) approved Reliability Standard BAL-003-01 that was submitted by the North American Electric Reliability Corporation (NERC). Among other things, this standard requires Balancing Authorities (BA) to meet an annual frequency response measure. Since then the reliability standard has been revised to BAL-003-2 and made effective on Dec. 1, 2020.

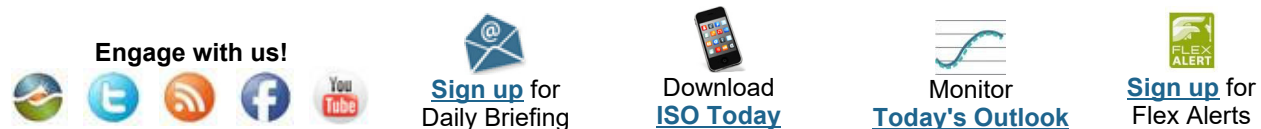
This standard requires each BA or frequency response sharing group to demonstrate that it meets the required measure through the submission of a compliance form each year after the conclusion of the compliance year to NERC/Western Electricity Coordinating Council (WECC). These NERC/WECC forms reflect that compliance with the obligation can be met through Transferred Frequency Response, which is a compliance instrument that allows one BA to transfer its frequency response obligation partially to another BA for purposes of reporting compliance with the standard.

The California ISO is seeking to purchase up to 100 MW per 0.1 Hz of transferred frequency response to meet its frequency response obligation for the compliance period, beginning Dec. 1, 2022 and ending Nov. 30, 2023.

The submittal deadline for transferred frequency response bids and proof of capability is midnight Pacific Time on Tuesday, June 7, 2022.

CONTACT INFORMATION

Please contact Shoukat Ansari at sansari@caiso.com with any questions.



[Glossary of terms and acronyms](#)

[Subscribe](#)

California Independent System Operator | P.O. Box 639014 | Folsom, CA 95630 | United States

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Privileged and Confidential Information Redacted Pursuant to 18 C.F.R § 388.112

**Attachment C – Bid Comparison
Transferred Frequency Response Agreement between
Tucson Electric Power Company and
California Independent System Operator Corporation
August 17, 2022**

**Public Version
Privileged and Confidential Information Redacted**

Comparison of Transferred Frequency Response Bids¹

COMPANY	MW/0.1HZ	COST PER MW/0.1HZ	TOTAL COST	Equivalent Regulation Up price (\$ per MW)
Tucson				
Tucson				
Tucson				
Tucson				
Tucson				
Seattle				
Tucson				
Tucson				
Tucson				
Tucson				
Seattle				
Grant				
Tucson				
Tucson				
Tucson				
Tucson				
Tucson				
BANC				
Tucson				
Tucson				
Tucson				
Tucson				
Tucson				
Bonneville				
Bonneville				
Seattle				
Bonneville				
Bonneville				
Bonneville				
Bonneville				
Bonneville				
Bonneville				
Chelan				
Bonneville				
Bonneville				

¹ Bidders submitted multiple offers reflecting different quantities of transferred frequency response.

COMPANY	MW/0.1HZ	COST PER MW/0.1HZ	TOTAL COST	Equivalent Regulation Up price (\$ per MW)
Tucson				
Tucson				
Tucson				
Tucson				
Tucson				

The CAISO compared the cost of the bids received to the anticipated cost of ensuring compliance with 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 determines the quantity of regulation up capacity, which could provide desired frequency response without the procurement of transferred frequency response. The second step estimates 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. The CAISO employed a statistical learning model to perform a regression analysis, which accounts for variability and uncertainty of various contributing factors. The results provided a conservative estimated hourly cost of \$ [REDACTED] per MW for increased regulation procurement to secure 20 MW/0.1 Hz.

For purposes of the 2020-2021 compliance year under Reliability Standard BAL-003, the CAISO selected bids that were below its estimated cost of increased regulation up. For transferred frequency response subject to the agreement with the Tucson Electric, its equivalent regulation up capacity price is \$ [REDACTED] per MW. The CAISO selected the Tucson Electric's bid of 10 MW/0.1 Hz bid as part of a least cost award to multiple bidders to meet a target requirement of 20 MW/0.1 Hz. The CAISO also selected 10 MW/0.1 Hz from the City of Seattle. These bids reflected the least cost means to meet the CAISO's procurement target requirement of 20 MW/0.1 Hz.

**Attachment D – Form of Protective Agreement
Transferred Frequency Response Agreement between
Tucson Electric Power Company and
California Independent System Operator Corporation
August 17, 2022**

PROTECTIVE AGREEMENT

This Protective Agreement (“Agreement”) is entered into this ____ day of _____, 2019 by and between the California Independent System Operator Corporation (“CAISO”) and _____ (“Intervenor”), or *vice versa*, in connection with the proceeding before the Federal Energy Regulatory Commission (the “Commission”) in Docket No. _____. The CAISO and Intervenor are sometimes referred to as herein individually as a “Party” or jointly as the “Parties.”

1. The CAISO filed Protected Materials in the above-referenced Commission proceeding and Intervenor is a Participant in such proceeding, as the term Participant is defined in 18 C.F.R. Section 385.102(b), or has filed a motion to intervene or a notice of intervention in such proceeding. The CAISO and Intervenor enter into this Agreement in accordance with their respective rights and obligations set forth in 18 C.F.R. Section 388.112(b)(2). Notwithstanding any order terminating such proceeding, this Agreement shall remain in effect until specifically modified or terminated by the Commission or court of competent jurisdiction.

2. This Agreement applies to the following two categories of Protected Materials: (A) a Party may designate as protected those materials which customarily are treated by that Party as sensitive or proprietary, which are not available to the public, and which, if disclosed freely, would subject that Party or its customers to risk of competitive disadvantage or other business injury; and (B) a Party shall designate as protected those materials which contain privileged trade secret, commercial and financial information, as defined in 18 C.F.R. Section 388.107.

3. Definitions – For purposes of this Agreement:

(a) (1) The term “Protected Materials” means (A) materials provided by a Party in association with this proceeding and designated by such Party as protected; (B) any information contained in or obtained from such designated materials; (C) notes of Protected Materials; and (D) copies of Protected Materials. The Party producing the Protected Materials shall physically mark them on each page as “PROTECTED MATERIALS” or with words of similar import as long as the term “Protected Materials” is included in that designation to indicate that they are Protected Materials. If the Protected Materials contain Critical Energy Infrastructure Information, the Party producing such information shall additionally mark on each page containing such information the words “Contains Critical Energy Infrastructure Information – Do Not Release.”

(2) The term “Notes of Protected Materials” means memoranda, handwritten notes, or any other form of information (including electronic form) which copies or discloses materials described in Paragraph 3(a)(1). Notes of Protected Materials are subject to the same restrictions provided in this Agreement for Protected Materials except as specifically provided in this Agreement.

(3) Protected Materials shall not include (A) any information or document contained in the publicly-available files of the Commission or of any other federal or state agency, or any federal or state court, unless the information or document has been determined to be protected by such agency or court, or (B) information that is public knowledge, or which

becomes public knowledge, other than through disclosure in violation of this Agreement, or (C) any information or document labeled as “Non-Internet Public” by a Party, in accordance with Paragraph 30 of FERC Order No. 630, FERC Stats. & Regs. ¶ 31,140 (2003). Protected Materials do include any information or documents contained in the files of the Commission that has been designated as Critical Energy Infrastructure Information.

(b) The term “Non-Disclosure Certificate” shall mean the certificate annexed hereto by which Reviewing Representatives who have been granted access to Protected Materials shall certify their understanding that such access to Protected Materials is provided pursuant to the terms and restrictions of this Agreement, and that they have read the Agreement and agree to be bound by it. Each Party shall provide a copy of the Non-Disclosure Certificate(s) executed by its Reviewing Representative(s) to the other Party prior to such Reviewing Representative(s) receiving access to any Protected Materials.

(c) The term “Reviewing Representative” shall mean a person who has signed a Non-Disclosure Certificate and who is:

- (1) an attorney retained by a Party for purposes of this proceeding;
- (2) attorneys, paralegals, and other employees associated for purposes of this proceeding with an attorney described in Paragraph (3)(c)(1);
- (3) an expert or employee of an expert retained by a Party for the purpose of advising, preparing or testifying in this proceeding;
- (4) a person designated as a Reviewing Representative by order of the Commission; or
- (5) employees or other representatives of a Party with significant responsibility for matters involving this proceeding.

4. Protected Materials shall be made available under the terms of this Agreement only to Parties and only through their Reviewing Representative(s) as provided in Paragraphs 7-9.

5. Protected Materials shall remain available to a Party until the later of the date that an order terminating this proceeding becomes no longer subject to judicial review, or the date that any other Commission proceeding relating to the Protected Material is concluded and no longer subject to judicial review. If requested to do so in writing after that date, the Party shall, within fifteen days of such request, return the Protected Materials (excluding Notes of Protected Materials) to the Party that produced them, or shall destroy the materials, except that copies of filings, official transcripts and exhibits in this proceeding that contain Protected Materials, and Notes of Protected Materials may be retained, if they are maintained in accordance with Paragraph 6, below. Within such time period the Party, if requested to do so, shall also submit to the producing Party an affidavit stating that, to the best of its knowledge, all Protected Materials and all Notes of Protected Materials have been returned or have been destroyed or will be

maintained in accordance with Paragraph 6. To the extent Protected Materials are not returned or destroyed, they shall remain subject to this Agreement.

6. All Protected Materials shall be maintained by the Party in a secure place. Access to those materials shall be limited to those Reviewing Representatives specifically authorized pursuant to Paragraphs 8-9.

7. Protected Materials shall be treated as confidential by the Party and its Reviewing Representative(s) in accordance with the certificate executed pursuant to Paragraph 9. Protected Materials shall not be used except as necessary for the conduct of this proceeding, nor shall they be disclosed in any manner to any person except a Reviewing Representative who is engaged in the conduct of this proceeding and who needs to know the information in order to carry out that person's responsibilities in this proceeding. Reviewing Representatives may make copies of Protected Materials, but such copies become Protected Materials. Reviewing Representatives may make notes of Protected Materials, which shall be treated as Notes of Protected Materials if they disclose the contents of Protected Materials.

8. (a) If a Reviewing Representative's scope of employment includes the marketing of energy or the buying or selling of generating assets, the direct supervision of any employee or employees whose duties include the foregoing, the provision of consulting services to any person whose duties include the foregoing, or the direct supervision of any employee or employees whose duties include the foregoing, such Reviewing Representative may not use information contained in any Protected Materials obtained through this proceeding to give any Party or any competitor of any Party a commercial advantage.

(b) In the event that a Party wishes to designate as a Reviewing Representative a person not described in Paragraph 3(c) above, the Party shall seek agreement from the Party providing the Protected Materials. If an agreement is reached that person shall be a Reviewing Representative pursuant to Paragraphs 3(c) above with respect to those materials. If no agreement is reached, the Party shall submit the disputed designation to the Commission for resolution.

9. (a) A Reviewing Representative shall not be permitted to inspect, participate in discussions regarding, or otherwise be permitted access to Protected Materials pursuant to this Agreement unless that Reviewing Representative has first executed a Non-Disclosure Certificate; provided, that if an attorney qualified as a Reviewing Representative has executed such a certificate, the paralegals, secretarial and clerical personnel under the attorney's instruction, supervision or control need not do so. A copy of each Non-Disclosure Certificate shall be provided to counsel for the Party asserting confidentiality prior to disclosure of any Protected Material to that Reviewing Representative.

(b) Attorneys qualified as Reviewing Representatives are responsible for ensuring that persons under their supervision or control comply with this Agreement.

10. Any Reviewing Representative may disclose Protected Materials to any other Reviewing Representative as long as the disclosing Reviewing Representative and the receiving Reviewing Representative both have executed a Non-Disclosure Certificate. In the event that any Reviewing

Representative to whom the Protected Materials are disclosed ceases to be engaged in these proceedings, or is employed or retained for a position whose occupant is not qualified to be a Reviewing Representative under Paragraph 3(c), access to Protected Materials by that person shall be terminated. Even if no longer engaged in this proceeding, every person who has executed a Non-Disclosure Certificate shall continue to be bound by the provisions of this Agreement and the certification.

11. Subject to Paragraph 17, the Commission shall resolve any disputes arising under this Agreement. Prior to presenting any dispute under this Agreement to the Commission, the Parties shall use their best efforts to resolve it. If a Party contests the designation of materials as protected, it shall notify the Party that provided the Protected Materials by specifying in writing the materials whose designation is contested. This Agreement shall automatically cease to apply to such materials five (5) business days after the notification is made unless the Party, within said 5-day period, files a motion with the Commission, with supporting affidavits, demonstrating that the materials should continue to be protected. In any challenge to the designation of materials as protected, the burden of proof shall be on the Party seeking protection. If the Commission finds that the materials at issue are not entitled to protection, the procedures of Paragraph 17 shall apply. The procedures described above shall not apply to Protected Materials designated by a Party as Critical Energy Infrastructure Information. Materials so designated shall remain protected and subject to the provisions of this Agreement unless a Party requests and obtains a determination from the Commission's Critical Energy Infrastructure Information Coordinator that such materials need not remain protected.

12. All copies of all documents reflecting Protected Materials, including the portion of any hearing testimony, exhibits, transcripts, briefs and other documents which refer to Protected Materials, shall be filed and served in sealed envelopes or by other appropriate means endorsed to the effect that they are protected pursuant to this Agreement. Such documents shall be marked "PROTECTED MATERIALS" and shall be filed under seal and served under seal upon the Commission and all Reviewing Representatives who are on the service list. Such documents containing Critical Energy Infrastructure Information shall be additionally marked "Contains Critical Energy Infrastructure Information – Do Not Release." For anything filed under seal, redacted versions or, where an entire document is protected, a letter indicating such, will also be filed with the Commission and served on all parties on the service list. Counsel for the producing Party shall, upon the request of a Party, provide a list of Reviewing Representatives who are entitled to receive such material. Counsel shall take all reasonable precautions necessary to assure that Protected Materials are not distributed to unauthorized persons. If any Party desires to include, utilize or refer to any Protected Materials or information derived therefrom in pleadings, testimony or exhibits to these proceedings in such a manner that might require disclosure of such material to persons other than Reviewing Representatives, such Party shall first notify both counsel for the disclosing Party and the Commission of such desire, identifying with particularity each of the Protected Materials. Thereafter, use of such Protected Materials will be governed by procedures determined by the Commission.

13. Nothing in this Agreement shall be construed as precluding any Party from objecting to the use of Protected Materials on any legal grounds.

14. Nothing in this Agreement shall preclude any Party from requesting the Commission or any other body having appropriate authority to find that this Agreement should not apply to all or any materials previously designated as Protected Materials pursuant to this Agreement. The Commission may alter or amend this Agreement as circumstances warrant at any time during the course of this proceeding.

15. The Parties may amend this Agreement only by mutual consent and in writing, provided, however, that a Party has the right to seek changes to this Agreement as appropriate from the Commission.

16. All Protected Materials filed with the Commission, or any other judicial or administrative body, in support of, or as a part of, a motion, other pleading, brief, or other document, shall be filed and served in sealed envelopes or by other appropriate means bearing prominent markings indicating that the contents include Protected Materials subject to this Agreement. Such documents containing Critical Energy Infrastructure Information shall be additionally marked "Contains Critical Energy Infrastructure Information – Do Not Release."

17. If the Commission finds at any time in the course of this proceeding that all or part of the Protected Materials need not be protected, those materials shall, nevertheless, be subject to the protection afforded by this Agreement for three (3) business days from the date of issuance of the Commission's decision, and if the Party seeking protection files an interlocutory appeal or requests that the issue be certified to the Commission, for an additional seven (7) business days. No Party waives its rights to seek additional administrative or judicial remedies after the Commission's decision respecting Protected Materials or Reviewing Representatives, or the Commission's denial of any appeal thereof. The provisions of 18 C.F.R. Sections 388.112 and 388.113 shall apply to any requests for Protected Materials in the files of the Commission under the Freedom of Information Act (5 U.S.C. § 552).

18. Nothing in this Agreement shall be deemed to preclude either Party from independently seeking through discovery in any other administrative or judicial proceeding information or materials produced in this proceeding under this Agreement.

19. Neither Party waives the right to pursue any other legal or equitable remedies that may be available in the event of actual anticipated disclosure of Protected Materials.

20. The contents of Protected Materials or any other form of information that copies or discloses Protected Materials shall not be disclosed to anyone other than in accordance with this Agreement and shall be used only in connection with this proceeding. Any violation of this Agreement and of any Non-Disclosure Certificate executed hereunder shall constitute a violation of an order of the Commission.

IN WITNESS WHEREOF, the Parties each have caused this Protective Agreement to be signed by their respective duly authorized representatives as of the date first set forth above.

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Representing CAISO

Representing Intervenor

NON-DISCLOSURE CERTIFICATE

I hereby certify my understanding that access to Protected Materials is provided to me pursuant to the terms and restrictions of the Protective Agreement dated _____, 20____ by and between the CAISO and _____ concerning materials in Federal Energy Regulatory Commission Docket No. _____, that I have been given a copy of and have read the Protective Agreement, and that I agree to be bound by it. I understand that the contents of the Protected Materials, any notes or other memoranda, or any other form of information that copies or discloses Protected Materials shall not be disclosed to anyone other than in accordance with the Protective Agreement. I acknowledge that a violation of this certificate constitutes a violation of an order of the Federal Energy Regulatory Commission.

By: _____

Name: _____

Title: _____

Representing: _____