

November 22, 2016

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

**Re: California Independent System Operator Corporation
Filing of Rate Schedule No. 86
Docket No. ER17-_____ -000**

Dear Secretary Bose:

The California Independent System Operator Corporation (CAISO) requests the Federal Energy Regulatory Commission accept the attached Transferred Frequency Response Agreement between the CAISO and the City of Seattle, by and through its City of Light Department (Seattle), as a rate schedule.¹ The CAISO has designated this agreement as Rate Schedule No. 86. The CAISO requests that the Commission waive the requirement to provide 60 days' prior notice of a rate schedule, so that this agreement may take effect December 1, 2016.²

I. Background

On September 16, 2016, the Commission conditionally accepted tariff revisions submitted by the CAISO to facilitate the CAISO's compliance with the new frequency response requirements of North American Electric Reliability Corporation (NERC) Reliability Standard BAL-003-1.1 – *Frequency Response and Frequency Bias Setting*.³ Reliability Standard BAL-003-1.1 establishes new frequency response requirements for balancing authority areas.⁴ Requirement 1 of Reliability Standard BAL-003-1.1 requires each balancing authority to achieve an annual frequency response measure that equals or exceeds its frequency response obligation. A balancing authority's frequency response

¹ The CAISO submits this filing pursuant to Section 205 of the Federal Power Act, 16 U.S.C. § 824d. Capitalized terms not otherwise defined herein have the meanings set forth in the Master Definitions Supplement, Appendix A to the CAISO tariff and the attached agreement.

² Pursuant to Section 35.11 of the Commission's regulations, 18 C.F.R. § 35.11, the CAISO requests waiver of Section 35.3(a)(1) of the Commission's regulations, 18 C.F.R. § 35.3(a)(1), to permit the agreement subject to this filing to take effect December 1, 2016.

³ *Cal. Indep. Sys Operator Corp.*, 156 FERC ¶ 61,182 (2016) (*September Order*).

⁴ *Frequency Response and Frequency Bias Setting Reliability Standard*, Order No. 794, 146 FERC ¶ 61,024 (2014).

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 begins December 1, 2016.

In its *September Order*, the Commission authorized the CAISO to procure transferred frequency response from other balancing authorities in the Western Interconnection as a means to comply with Requirement 1 of Reliability Standard BAL-003-1.1. However, the Commission directed the CAISO to revise its tariff to state that the CAISO cannot claim on a compliance form that it has received, or that the counterparty has transferred more frequency response than the counterparty has produced.⁵ The CAISO has submitted a compliance filing to make this change.⁶

Since issuance of the Commission’s *September Order*, the CAISO has completed a competitive solicitation for transferred frequency response. Seattle participated in that solicitation and the CAISO selected Seattle’s bid, which forms the basis of the parties’ agreement.⁷ Consistent with the tariff provisions accepted by the Commission in the *September Order* and as explained in the testimony of Warren Katzenstein, the contract price for Seattle to provide transferred frequency response is less than the estimated cost the CAISO market would incur to secure additional frequency response capability through the procurement of additional regulation up.

II. The CAISO completed a competitive solicitation for transferred frequency response

To secure transferred frequency response, the CAISO conducted a competitive solicitation pursuant to tariff section 42.2 of the CAISO tariff. On September 19, 2016, the CAISO issued a market notice requesting proposals to provide transferred frequency response on September 19, 2016.⁸ The notice contained links to Transferred Frequency Response Final Request for Proposal that explained the solicitation. The notice also

⁵ *Id.* at PP 49 and 51.

⁶ See CAISO compliance filing dated October 17, 2016 in ER16-1483.
<http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14378033>

On October 17, 2016, the CAISO also submitted a motion for clarification or, in the alternative, request of rehearing asking the Commission to clarify the *September Order* that a balancing authority may support a contract to provide transferred frequency response to the CAISO during a specific compliance year based on the balancing authority’s annual frequency response measure under Reliability Standard BAL-003-1.1. This motion remains pending before the Commission.

⁷ The CAISO also accepted the bids of other participants in the competitive solicitation.

⁸ See Market Notice issued September 19, 2016 regarding Final Request for Proposals:
http://www.caiso.com/Documents/TransferredFrequencyResponseRequestforProposal-BidsDueSeptember30_2016.html

included a draft Transferred Frequency Response Agreement that reflected the product the CAISO was soliciting. The CAISO accepted bids up to, and including, September 30, 2016, and issued another market notice on September 29, 2016 as a bid reminder and clarification.⁹ Copies of these markets notices and supporting documents are attached to this transmittal letter (Attachment B).

After the receipt of bids from balancing authorities or their authorized sellers, the CAISO assessed those bids against prior frequency response performance by each bidder as well as cost against the estimated cost of procuring regulation up capacity to ensure the CAISO has sufficient primary frequency response to meet the requirements of BAL-003-1.1. After this evaluation, the CAISO informed bidders of the results of the competitive solicitation and commenced negotiations with selected bidders to execute transferred frequency response contracts.

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.¹⁰ In that regard, the Commission has ruled that competitive solicitation processes:

- *Transparency* – The competitive solicitation should be open and fair.
- *Definition* – The product or products sought through the competitive solicitation process should be precisely defined.
- *Evaluation* – Evaluation criteria should be standardized and applied equally to all bids and bidders.
- *Oversight* – An independent third party should design the solicitation, administer bidding, and evaluate bids prior to selection.

The CAISO's transferred frequency response competitive solicitation process satisfied these four principles and was also consistent with the CAISO's proposal as reflected in the *September Order*.¹¹ First, as reflected in the request for proposal, the competitive solicitation was open to all balancing authorities in the Western Interconnection, or their authorized sellers, that can provide transferred frequency response. Second, the CAISO defined transferred frequency response, which was the

⁹ See Market Notice issued September 29, 2016
http://www.caiso.com/Documents/TransferredFrequencyResponseRequest_Proposal-BidReminder_Clarification.html

¹⁰ See generally *Allegheny Energy Supply Co., LLC*, 108 FERC ¶ 61,082, P 22 (2004). Although the CAISO does not have an affiliate that could provide transferred frequency response, the Commission's guidance remains instructive.

¹¹ *September Order* at P 47.

product subject to the solicitation.¹² 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.¹³ 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.

As discussed in the testimony of Mr. Katzenstein, 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 CAISO's proposed tariff provisions specify that consistent with its tariff, the CAISO selected the lowest cost bids consistent with sellers' demonstrated ability to provide transferred frequency response. Seattle demonstrated its ability to support its bid for transferred frequency response based on prior performance, and its bid reflected the lowest cost offer. Seattle's offer price was below the CAISO's estimated cost to secure frequency response through procurement of additional regulation up capacity.

III. Purpose of the Transferred Frequency Response Agreement

The agreement between the CAISO and Seattle governs the terms and conditions under which Seattle will provide transferred frequency response to the CAISO and the payment the CAISO will make to Seattle. Under the agreement, Seattle will provide transferred frequency response and document its performance on the appropriate NERC compliance forms for the compliance year beginning December 1, 2016. The CAISO has agreed to compensate Seattle at the contract price for its performance. Under the agreement, Seattle 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-003-1.1.

IV. The Commission should accept the rate schedule.

Consistent with tariff revision accepted by the Commission, the CAISO has assessed bids to provide transferred frequency response with the cost of procuring additional regulation up service.¹⁴ As explained in the prepared testimony of Warren Katzenstein submitted herewith, the CAISO developed a procurement target for transferred frequency response based on its actual frequency response performance during the two

¹² The CAISO has defined transferred frequency response in Appendix A to the CAISO tariff, Master Definitions Supplement.

¹³ CAISO tariff section 42.2.1.

¹⁴ *September Order* at P 44.

years prior to the compliance period starting December 1, 2016.¹⁵ The CAISO included the shortfall between its actual performance and its estimated frequency response obligation in its procurement target. The CAISO also reflected its recent year-over-year performance deterioration in its procurement target. The CAISO then translated its procurement target into an hourly regulation up capacity requirement for the compliance year starting December 1, 2016.¹⁶

The CAISO developed an estimate of the MWh cost to procure this additional regulation up capacity based on the increased hourly procurement requirements for regulation up and additional contributing variables such as seasonality and natural gas prices.¹⁷ The CAISO validated its estimate through day-ahead market reruns for a subset of operating days. The results provided a range of costs to allow the CAISO to estimate the cost of procuring additional regulation up to comply with BAL-003.1.1 as opposed to securing transferred frequency response from other balancing authorities. Based on the bids received and consistent with CAISO tariff section 42.2.1, the CAISO selected Seattle's bid for transferred frequency response.¹⁸

Beyond the contract amount and the contract prices, the Commission should accept the remaining terms and conditions of the transferred frequency response agreement between Seattle 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 BAL-003-1.1.¹⁹ This term of the agreement ensures that Seattle 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 and every disturbance event identified by NERC under BAL-003-1.1. This term of the agreement is also consistent with the CAISO's filing to comply with the *September Order*²⁰ and the CAISO's pending motion for clarification or, in the alternative, request of rehearing of the *September Order*.²¹

With respect to payment terms, the CAISO and Seattle have agreed that Seattle will invoice the CAISO for transferred frequency response and the CAISO shall pay the invoice

¹⁵ Prepared Testimony of Warren Katzenstein at p. 3:16-26.

¹⁶ Prepared Testimony of Warren Katzenstein at pp. 3:26-4:6.

¹⁷ Prepared Testimony of Warren Katzenstein at p.4:7-25.

¹⁸ Prepared Testimony of Warren Katzenstein at pp 5:1-17 and 6:1-20.

¹⁹ Transferred Frequency Response Agreement, Articles 1.6 and 1.7.

²⁰ <http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14378033>

²¹ <http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14377945>

electronically in April 2017. These payment terms allows sufficient time for the Commission to review and approve this agreement prior to the issuance of an invoice and for the CAISO to collect sufficient revenues from scheduling coordinators under CAISO tariff section 11.34 to pay Seattle in a timely manner.

V. Effective Date and Request for Waiver

The CAISO respectfully requests that the Commission accept the attached agreement, effective as of December 1, 2016. The CAISO requests waiver of the notice requirements set forth in the Commission's regulations to permit this effective date.²² Since the Commission issued its *September Order*, the CAISO has diligently worked to complete its solicitation for transferred frequency response and negotiated this agreement with Seattle. Waiver is appropriate in this instance because December 1, 2016 is the first day of the initial compliance year under Reliability Standard BAL-003-1.1.

VI. Request for Confidential Treatment

The CAISO is submitting both a confidential version and a public version of the prepared testimony of Warren Katzenstein with this filing. Pursuant to 18 C.F.R. § 388.112, the CAISO requests privileged treatment for information redacted from the public version of Mr. Katzenstein's prepared testimony. This information reflects sensitive commercial and financial information and its disclosure could harm CAISO market participants. The CAISO has submitted a form of protective agreement as Attachment E to this filing.

VII. Service

Copies of this filing have been served upon Seattle, 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 ER16-1483. In addition, the CAISO is posting this transmittal letter and all public attachments on its public 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 Market Notices and attachments thereto regarding the Final Request for Proposals

²² Pursuant to Section 35.11 of the Commission's regulations (18 C.F.R. § 35.11), the CAISO requests waiver of the notice requirements.

Attachment C	Prepared Testimony of Warren Katzenstein (Confidential Version submitted under seal)
Attachment D	Prepared Testimony of Warren Katzenstein (Public Version)
Attachment E	Form of Protective Agreement

IX. Communications

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

* Individuals designated for service pursuant to Rule 203(b)(3), 18 C.F.R. § 203(b)(3).

X. Conclusion

The Commission should accept the transferred frequency response agreement between the CAISO and Seattle. The agreement is consistent with the CAISO's tariff provision regarding procurement of transferred frequency response. The agreement will help ensure the CAISO meets the requirements of Reliability Standard BAL-003-01.1 for the compliance year beginning December 1, 2016.

Dated: November 22, 2016

Respectfully submitted,

/s/ Andrew Ulmer

Roger E. Collanton

General Counsel

Anthony Ivancovich

Deputy General Counsel

Andrew Ulmer

Director, Federal Regulatory Affairs

California Independent System

Operator Corporation

250 Outcropping Way

Folsom, CA 95630

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Attorneys for the California Independent System

Operator Corporation

Attachment A – Clean Tariff Records
Transferred Frequency Response Agreement between
City of Seattle, by and through its City of Light Department and
California Independent System Operator Corporation

**CALIFORNIA INDEPENDENT SYSTEM
OPERATOR CORPORATION**

AND

**THE CITY OF SEATTLE,
BY AND THROUGH ITS CITY LIGHT
DEPARTMENT**

**TRANSFERRED FREQUENCY
RESPONSE AGREEMENT**

THIS TRANSFERRED FREQUENCY RESPONSE AGREEMENT

(“**AGREEMENT**”) is established this 14th day of November, 2016, and is accepted by and between:

The City of Seattle, by and through its City Light Department (“Transferor Balancing Authority” or “Seattle”), having its registered and principal executive office at 700 5th Avenue in Seattle, Washington.

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.** NERC implements reliability standards in coordination with regional reliability entities and the entity for the western region is the Western Electricity Coordinating Council (“WECC”).
- D.** NERC will determine on an annual basis the Frequency Response Obligation for each Balancing Authority in the Western Interconnection.
- E.** 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.
- F.** 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 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.
- 1.3 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.
- 1.4 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).
- 1.5 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.
- 1.6 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-003-1.1. This measure will be calculated as MW/0.1HZ
- 1.7 Transferred Frequency Response.** Frequency response performance adjustment under BAL-003-1.1 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, 2016, 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, 2018 (“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. CAISO acknowledges that Seattle is a non-jurisdictional entity described in section 201(f) of the Federal Power Act, 16 U.S.C. 824(f) and respects Seattle’s interest in remaining so. Consequently, nothing in this Agreement is intended to create additional FERC jurisdiction for Seattle, nor shall it be construed or interpreted in a manner that creates additional FERC jurisdiction for Seattle and Seattle shall have no obligations with respect to CAISO’s request for approval of this Agreement by FERC. The CAISO will at all times make commercially reasonable efforts to avoid actions that would cause Seattle to become subject to FERC jurisdiction that does not already exist with respect to Seattle’s non-jurisdictional status or its operations or assets. 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 15 MW/0.1 Hz (the “Contract Amount”) in accordance with the terms of BAL-003-1.1 from December 1, 2016 to November 30, 2017 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 \$1,225,000 ("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-003-1.1 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-003-1.1, 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.

8.9 Credit Worthiness

CAISO agrees to make immediate payment of the entire Contract Price if its credit rating falls below BBB- by Standard & Poors or Baa3 by Moody's Investor's Service, or neither of the foregoing rating agencies provides a credit rating for CAISO.

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, 2017.

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 Seattle City Light shall be sent via wire transfer to:

Bank Name: Wells Fargo Bank
ABA: 121 000248
Account: 4758359921

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 Transferee 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 Transferee 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:
Eric Schmitt
0971A84CB55B4B8...
Name: Eric Schmitt
Title: VP, Operations
Date: 11/14/2016

The City of Seattle, by and through its City Light Department

By: DocuSigned by:
Wayne Morter
0E92A607C12A44E...
Name: Wayne Morter
Title: Director- Power Management
Date: 11/14/2016



SCHEDULE 1

NOTICES

[Section 8.1]

Transferor Balancing Authority

Name of Primary Representative: Regional Affairs and Contracts
 Title: Attn: Manager, Wholesale Contracts
 Company: Seattle City Light
 Address (U.S. Mail): P.O. Box 34023
 City/State/Zip Code: Seattle, WA 98124-4023
 Email Address: SCLPowerAccounts@seattle.gov
 Phone: (206) 684-3392
 Fax No: (206) 386-4555

Name of Alternative Representative: Yochi Zakai
 Title: Senior Power Analyst
 Company: Seattle City Light
 Address (Overnight): 700 Fifth Avenue, Suite 2822
 City/State/Zip Code: Seattle, WA 98104
 Email Address: yochanan.zakai@seattle.gov
 Phone: (206) 684-3534
 Fax No: (206) 386-4555



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: 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 – Copies of Market Notices Re Final Request for Proposals
Transferred Frequency Response Agreement between
City of Seattle, by and through its City of Light Department and
California Independent System Operator Corporation

Market Notice



California ISO

[View The Online Version](#)

September 19, 2016

Categories

Legal and Regulatory
Market Rules and Market Design

Requested Client Action

Action Date

Transferred Frequency Response Request for Proposal - Bids Due September 30, 2016

Summary

The California ISO has received a FERC order accepting tariff revisions associated with transferred frequency response. The submittal deadline for the transferred frequency response Request For Proposal (RFP) bids and proof of capability is Friday, September 30, 2016.

Main Text

As part of the Frequency Response initiative, the ISO requested tariff modifications that would allow for the procurement of transferred frequency response to meet the North American Electric Reliability Corporation (NERC) Reliability Standard BAL-003-01 for the compliance period starting on December 1, 2016. On September 16, 2016 the Federal Energy Regulatory Commission (FERC) issued an order accepting the tariff revisions.

The submittal deadline for transferred frequency response bids and proof of capability is midnight on Friday, September 30, 2016. The finalized RFP has been updated to reflect this deadline. Aside from the submittal deadline, the only other change to the agreement as a result of the order is to the definition of Transferred Frequency Response.

The following information is available on the ISO website:

Transferred Frequency Response Final Request for Proposal -

<http://www.caiso.com/Documents/TransferredFrequencyResponseFinalRequestForProposal.pdf>

Draft Transferred Frequency Response Agreement -

<http://www.caiso.com/Documents/TransferredFrequencyResponseDraftAgreement.pdf>

Transferred Frequency Response FERC filings and orders -

<http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=8A199743-B37E-4948-9D5A-732F7E7CE4B7>

More information on the initiative -

<http://www.caiso.com/informed/Pages/StakeholderProcesses/FrequencyResponse.aspx>

For More Information Contact

Joanne Bradley at jbradley@caiso.com

For the benefit of our customers, we:
Attract, develop and retain a highly skilled workforce • Operate the grid reliably and efficiently • Provide fair and open transmission access
Promote environmental stewardship • Facilitate effective markets and promote infrastructure development • Provide timely and accurate information

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

Market Notice



California ISO

[View The Online Version](#)

September 29, 2016

Categories

Legal and Regulatory
Market Rules and Market Design

Requested Client Action

Action Date

Transferred Frequency Response Request for Proposal: Bid Reminder and Clarification

Summary

On September 16, 2016, the Federal Energy Regulatory Commission (FERC) issued an order on proposed tariff revisions associated with transferred frequency response finding in part that the amount of frequency response being transferred cannot be more than the counterparty has produced. The California ISO understands this directive means that the ISO may not claim and a counterparty balancing authority may not transfer more frequency response than the counterparty balancing authority produced as calculated by the annual frequency response measure under NERC Reliability Standard BAL-003-1.1 during an applicable compliance year. The ISO reminds stakeholders that the submittal deadline for the transferred frequency response Request for Proposal (RFP) bids and proof of capability is midnight, Friday, September 30, 2016.

Main Text

On September 16, 2016, FERC issued an order on proposed tariff revisions to address the ISO's compliance with North American Electric Reliability Corporation Reliability Standard (NERC) BAL-003-1.1: <http://www.ferc.gov/CalendarFiles/20160916183725-ER16-1483-000.pdf>. The order accepts tariff revisions, subject to condition, that permit the ISO to contract for transferred frequency response from other balancing authorities in the Western Interconnection as a means to comply with NERC Reliability Standard BAL-003-1.1.

FERC's order directs the ISO to clarify that the ISO cannot claim and the counterparty cannot transfer more frequency response than the counterparty has produced. The ISO understands this directive means that the ISO may not claim and a counterparty balancing authority may not transfer more frequency response than the counterparty balancing authority produced as calculated by the annual frequency response measure under NERC Reliability Standard BAL-003-1.1 during an applicable compliance year. This annual measure is based on the median measure of the events chosen by NERC in accordance with the NERC standard and not on each identified disturbance event. The ISO expects that any bids it receives for transferred frequency response will reflect this annual frequency response measure.

The ISO intends to clarify its understanding of FERC's order as part of a compliance filing it will make on or before October 17, 2016 as well as in any contract it enters for transferred frequency response with a counterparty balancing authority or its authorized seller. In addition, the ISO intends to add a clause in agreements for transferred frequency response that would allow counterparty balancing authorities to revoke their bid and terminate their contract for providing transferred frequency response if FERC does not accept the contract between the ISO and the counterparty or its authorized seller.

The submittal deadline for transferred frequency response bids and proof of capability is midnight on Friday, September 30, 2016.

The following is available on the ISO website:

[Transferred Frequency Response Final Request for Proposal](#)
[Draft Transferred Frequency Response Agreement](#)

More information on the stakeholder initiative is available at

<http://www.caiso.com/informed/Pages/StakeholderProcesses/FrequencyResponse.aspx>.

For More Information Contact

Joanne Bradley at jbradley@caiso.com

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Promote environmental stewardship • Facilitate effective markets and promote infrastructure development • Provide timely and accurate information

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**California Independent System Operator
Corporation**

Request for Proposal
Transferred Frequency Response

Submittal Deadlines:
Friday September 30, 2016
Time: 11:59pm Pacific Daylight Time

Submit Proposals to:

Joanne Bradley
JBradley@caiso.com
916-608-1060
California ISO
250 Outcropping Way,
Folsom, CA 95630

Introduction

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 to meet an annual frequency response measure, compliance with this requirement begins December 1, 2016. This standard requires each Balancing Authority or reserve 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 Balancing Authority to increase its frequency response obligation and another Balancing Authority to reduce its frequency response obligation for purposes of reporting compliance with the standard. 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, 2016 and continuing up to and including November 30, 2017.

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.

Under the standard, NERC will determine in October the frequency response obligation of each Balancing Authority in the WECC. Based on the CAISO’s obligation which is anticipated to be approximately 258 MW/0.1 Hz the CAISO intends to transfer, pursuant to a contract or contracts, up to 100 MW/0.1 Hz frequency response performance obligation to another one or more Balancing Authorities.

The following table illustrates an example of the CAISO’s expectations for performance in varying frequency disturbance events.

	CAISO Obligation	BA 1 Obligation
NERC - assigned Frequency Response Obligation (FRO)	250 MW/0.1 Hz	100 MW/ 0.1 Hz
Transferred Frequency Response (TFR)	- 100 MW/0.1 Hz	+ 100 MW/0.1 Hz
<u>Median BA Frequency Response Measure necessary to meet FRO</u>	<u>150 MW/ 0.1 Hz</u>	<u>200 MW/ 0.1 Hz</u>
Examples of Disturbance Event Obligation		
0.1 Hz Frequency Drop	150 MW	200 MW
0.2 Hz Frequency Drop	300 MW	400 MW

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 – 100 MW/0.1Hz (Total amount which can be procured through multiple contracts)
- Term (compliance period) – December 1, 2016 – November 30, 2017
- Price - \$/compliance period

Timeline: (the following timeline is conditional based on FERC approval)

- September 30, 2016 – Request For Proposal responses are due to CAISO
- Mid October 2016 – CAISO notifies successful bidder(s)
- Mid October 2016 – Transferred Frequency Response Agreement tendered to successful bidder(s)
- As soon as practical - file executed agreement with FERC for a December 1, 2016 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 midnight on September 30, 2016 to:
Joanne Bradley
jbradley@caiso.com

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 on the CAISO website 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 along with proof of capability for the past two years to Joanne Bradley at JBradley@caiso.com by 11:59 pm Pacific Daylight Time on September 30, 2016. For any questions please contact Joanne Bradley at 916-608-1060.

Company Name: _____

Contact Name: _____

Contact Title: _____

Phone Number: _____

Alternative Phone Number (optional): _____

E-mail Address: _____

Bid Quantity (MW/0.1 Hz): _____

Bid Price (\$/compliance period): _____

Comments on draft Transferred Frequency Response Agreement:

Other Information: _____

**CALIFORNIA INDEPENDENT SYSTEM
OPERATOR CORPORATION**

AND

**[TRANSFEREE BALANCING AUTHORITY
or AUTHORIZED AGENT]**

**TRANSFERRED FREQUENCY
RESPONSE AGREEMENT**

THIS TRANSFERRED FREQUENCY RESPONSE AGREEMENT

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

[Full legal name] (“Transferee Balancing Authority”), having its registered and principal executive office at [address],

and

California Independent System Operator Corporation (“CAISO or Transferor 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 Transferee 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”) approved Order No. 794, for the North American Electric Reliability Corporation (“NERC”) reliability standard BAL-003-1.
- C.** NERC uses regional coordinators to implement reliability standards and the entity for the west is the Western Electricity Coordinating Council (“WECC”).
- D.** The Electric Reliability Organization (ERO) will determine on an annual basis the Frequency Response Obligation for each Balancing Authority in the Western Interconnection.
- E.** 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.** A NERC reliability standard, as it may be amended from time to time, for the purpose of ensuring each Frequency Response Sharing Group (FRSG) or Balancing Authority (BA) that is not a member of an FRSG shall achieve an annual Frequency Response Measure (FRM) that is equal to or more negative than its Frequency Response Obligation (FRO) to ensure that sufficient Frequency Response is provided by each FRSG or BA that is not a member of an FRSG to maintain Interconnection Frequency Response equal to or more negative than the Interconnection Frequency Response Obligation.
- 1.2 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.
- 1.3 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.
- 1.4 Frequency Response Obligation.** The Balancing Authority's share of the required Frequency Response needed for the reliable operation of the Interconnection. This will be calculated as MW/0.1Hz.
- 1.5 Frequency Response.** The sum of the change in demand, plus the change in generation, divided by the change in frequency, expressed in megawatts per 0.1 Hertz (MW/0.1 Hz).
- 1.6 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 specified by the Electric Reliability Organization. This will be calculated as MW/0.1HZ
- 1.7 Interconnection.** The Western major electric system network in North America.
- 1.8 Transferred Frequency Response.** 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 performance downward by the same amount sold to the receiving Balancing Authority. Transferred Frequency Response does not change NERC-designated frequency response obligations of any entity. 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 adjusts its performance downward and the receiving Balancing Authority adjusts its 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 delivering Balancing Authority has produced.

2. Term and Termination

2.1 Effective Date and Term

This Agreement shall be effective as of December 1, 2016, unless this Agreement is accepted for filing and made effective by the Federal Energy Regulatory Commission (“FERC”) on some other date, and shall continue in effect until April 1, 2018 (“Contract Term”) notwithstanding those terms that survive the Contract Term.

3. Transferee Balancing Authority Obligations

- 3.1** Transferee Balancing Authority shall adjust its Transferred Frequency Response column of the NERC FRS Form 1 and Form 2 by _____ MW/0.1 Hz (the “Contract Amount”) in accordance with the terms of BAL-003-1 from December 1, 2016 to November 30, 2017 the “Compliance Year.”
- 3.2** During the Compliance Year, Transferee Balancing Authority shall include the Contract Amount during the Compliance Year in Transferee Balancing Authority’s NERC FRS Form 1 and Form 2 event-by-event evaluations and reporting as required by BAL-003-1 or equivalent under the Transferred Frequency Response column or equivalent. As the Transferee Balancing Authority, the Contract Amount will be reflected as a positive value.
- 3.3** The CAISO and Transferee Balancing Authority shall notify WECC and NERC of its obligations under this Transferred Frequency Response Agreement.
- 3.4** Transferee Balancing Authority and the CAISO agree to reasonably cooperate with one another in the event that either Party is subject to NERC regulatory inquiry or audit in connection with the Transferred Frequency Response that is the subject of this Agreement.

3.5 Transferee Balancing Authority shall be responsible for all fines or penalties assessed by NERC or FERC for Transferee Balancing Authority's non-compliance with BAL-003-1 during the Compliance Year including the obligations of this Agreement. Such fines or penalties shall survive the Contract Term.

4 CAISO Obligations

4.1 The CAISO shall include the Contract Amount during the Compliance Year in its NERC FRS Form 1 and Form 2 under the Transferred Frequency Response data column. As the Transferor Balancing Authority, the Contract Amount will be reflected as a negative value in the CAISO's annual NERC FRS Form 1 and Form 2 during the performance measurement period associated with the Compliance Year.

4.2 As full consideration to Transferee Balancing Authority for its performance under this Agreement and all costs in connection with such performance, including if applicable any fines or penalties assessed, the CAISO shall compensate Transferee Balancing Authority <insert compensation price> ("Contract Price"). Payment shall be made according to the terms described in Section 3.

5 Payment Terms

The CAISO shall pay the Transferee Balancing Authority the Contract Price no later than December 2, 2016.

6 REPRESENTATIONS AND WARRANTIES

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

6.2 Transferee 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 Transferee Balancing Authority mutually represent and warrant that this Agreement has been duly authorized, executed and delivered by or on behalf of Transferee Balancing Authority and the CAISO, respectively, and is, upon execution and delivery, the legal, valid

and binding obligation of each Party, enforceable against it in accordance with its terms.

7 Liability

7.1 Transferee Balancing Authority's Indemnity

The Transferee Balancing Authority, to the extent permitted by law, shall indemnify the CAISO and hold it harmless against all losses, damages, claims, liabilities, costs or expenses (including legal expenses) arising from any act or omission of the Transferee Balancing Authority except to the extent that they result from the CAISO's default under this Agreement or gross negligence or intentional wrongdoing on the part of the CAISO or of its officers, directors or employees.

7.2 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 Transferee Balancing Authority.

7.3 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. 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.

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 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

Subject to Section 8.4, 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. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement shall be brought in any of the following forums, as appropriate: a court of the State of California or 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. 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 Consistency with Federal Laws and Regulations

8.4.1 Nothing in this Agreement shall compel any person or federal entity to: (1) violate federal statutes or regulations; or (2) in the case of a federal agency, to exceed its statutory authority, as defined by any applicable federal statutes, regulations, or orders lawfully promulgated thereunder. If

any provision of this Agreement is inconsistent with any obligation imposed on any person or federal entity by federal law or regulation to that extent, it shall be inapplicable to that person or federal entity. No person or federal entity shall incur any liability by failing to comply with any provision of this Agreement that is inapplicable to it by reason of being inconsistent with any federal statutes, regulations, or orders lawfully promulgated thereunder; provided, however, that such person or federal entity shall use its best efforts to comply with the CAISO Tariff to the extent that applicable federal laws, regulations, and orders lawfully promulgated thereunder permit it to do so.

- 8.4.2** If any provision of this Agreement requiring any person or federal entity to give an indemnity or impose a sanction on any person is unenforceable against a federal entity, the CAISO shall submit to the Secretary of Energy or other appropriate Departmental Secretary a report of any circumstances that would, but for this provision, have rendered a federal entity liable to indemnify any person or incur a sanction and may request the Secretary of Energy or other appropriate Departmental Secretary to take such steps as are necessary to give effect to any provisions of this Agreement that are not enforceable against the federal entity.

8.5 Dispute Resolution

All disputes arising out of or in connection with this Agreement whereby relief is sought by or from the CAISO shall be settled in accordance with the provisions of Article 13 of the CAISO Tariff, except that references to the CAISO Tariff in such Article 13 of the CAISO Tariff shall be read as references to this Agreement.

8.6 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.

8.7 Section Headings

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

8.8 Amendments

This Agreement and the schedule attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that are subject to FERC approval shall not take effect until FERC has accepted such amendments for filing and has made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO or the Transferee Balancing Authority to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

8.9 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.

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: _____

[Full legal name of Transferee Balancing Authority]

By: _____

Name: _____

Title: _____

Date: _____

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

Name of Primary
Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative
Representative: _____

Title: _____

Company: _____

Address: _____

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: 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

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

**Attachment D – Testimony of Warren Katzenstein
Transferred Frequency Response Agreement between
City of Seattle, by and through its City of Light Department and
California Independent System Operator Corporation**

Public Version

Privileged and Confidential Information Redacted

**REDACTED PURSUANT TO 18 C.F.R. § 388.112
PUBLIC VERSION**

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

California Independent System Operator)
Corporation)

Docket No. ER17-_____

**Prepared Testimony of Warren Katzenstein on behalf of the California
Independent System Operator Corporation**

Q. Please state your name, title, and business address.

A. My name is Warren Katzenstein. I am employed as a Lead Engineering Specialist for Market Quality and Renewable Integration for the California Independent System Operator Corporation (CAISO). My business address is 250 Outcropping Way, Folsom, CA 95630.

Q. Please describe your educational background.

A. I have a Bachelor of Science in Engineering from Harvey Mudd College and a Doctorate of Philosophy in Engineering and Public Policy from Carnegie Mellon University.

Q. What are your primary responsibilities as Lead Engineering Specialist for Market Quality and Renewable Integration?

A. I am primarily responsible for analyzing CAISO's demand and supply forecasts and how they affect the need for regulation capacity and flexible ramping capacity in CAISO's markets.

Q. Please briefly describe your previous experience?

A. I have served as a consultant for DNV GL, KEMA, and prior to KEMA, The Brattle Group. In these roles, I specialized in modeling inertial, frequency response, and regulation performance for balancing authorities with significant penetrations of variable renewable energy resources. I modeled the performance of ancillary services as well as inertial and frequency response under a wide range of system conditions and renewable energy penetration levels. I performed these analyses for CAISO, ERCOT,

1 PJM Interconnection, ISO-New England, and National Grid (United Kingdom).

2 **Q. What is the purpose of your testimony?**

3 A. My testimony describes the CAISO's assessment of transferred frequency
4 response bids submitted by other balancing authorities compared to the cost of
5 procuring additional regulation up to obtain a similar capability.

6 **Q. Can you please explain why the CAISO proposed to use additional
7 procurement of regulation up as the metric to assess bids for transferred
8 frequency response?**

9 A. Frequency response, as measured by BAL-003-1.1, reflects net actual
10 interchange one minute after a reportable disturbance event. The CAISO identified two
11 potential methods that could increase its frequency response capability in response to
12 disturbance events. The first method would use exceptional dispatches to ensure there
13 is adequate headroom on an appropriate number of generators that are governor
14 enabled and have a good performance of providing frequency response. However,
15 exceptional dispatches are manually intensive and modify the optimal market dispatch.
16 Furthermore, the CAISO's review determined that the CAISO's current tariff may not
17 allow it to use and settle exceptional dispatch for the purpose of frequency response.
18 The second approach is to procure regulation up capacity. In contrast to exceptional
19 dispatches, regulation up capacity responds on a four-second basis, and the capacity
20 can clear through the CAISO's market processes. As a result, the CAISO proposed to
21 assess transferred frequency response bids against the cost of procuring additional
22 regulation up capacity.

23 **Q. Can regulation up provide frequency response?**

24 A. Yes. Although resources with primary frequency capability should respond
25 autonomously to frequency disturbance events, regulation up capacity can also provide
26 frequency response given the measurement of frequency response under BAL-003.1.1.
27 The standard measures the balancing authority's net actual interchange one minute
28 after a reportable disturbance event. The CAISO controls regulation capacity on a four-

1 second basis, and it is technically feasible to obtain performance from a percentage of
2 regulation capacity within a one-minute timeframe. The CAISO estimates it can obtain
3 a level of performance from regulation capacity within one minute of issuing a dispatch
4 instruction based on the portfolio of the resources that generally provide regulation as
5 well as the operational ramp rate capabilities of units that provide regulation as reported
6 in the CAISO's master file data. In addition, the CAISO could modify its automatic
7 generation control (AGC) algorithm to improve performance. The AGC algorithm
8 controls Area Control Error. Area Control Error includes system frequency as a primary
9 component of its calculation. By making the AGC algorithm control ACE at a more
10 aggressive level, the CAISO can increase its measured frequency response under BAL-
11 003-1.1. Moreover, operators are able to issue an instruction for all units providing
12 regulation up in any interval to increase their operating level to their maximum
13 regulating capacity. The AGC algorithm instructions and the operator regulation
14 instructions may result in an increase in generation (and frequency response) within the
15 one minute time period to respond to disturbance events under BAL-003-1.1.

16 **Q. How did the CAISO determine how much regulation capacity would be**
17 **sufficient to ensure compliance in the absence of procuring transferred**
18 **frequency response?**

19 A. The CAISO compared actual frequency response performance after disturbance
20 events in the two-year period prior to its estimated frequency response obligation for the
21 upcoming compliance period (December 1, 2016 through November 30, 2017). The
22 CAISO then estimated the additional required frequency response needed, subject to a
23 25 percent margin of error, to address the year-over-year observed deterioration of the
24 CAISO's frequency response performance. The CAISO included the 25 percent margin
25 of error to account for the variance in CAISO's observed frequency response
26 performance in response to individual disturbance events. The CAISO then translated
27 the estimated procurement target into an hourly regulation capacity requirement through
28 a two-step process. First, the CAISO multiplied the estimated procurement target by

1 the average frequency deviation of qualified events in order to transform the
2 procurement target from a MW per 0.1 Hz value to a MW value for regulation up
3 capacity. Second, the CAISO multiplied the procurement target by five to account for
4 the estimated performance of regulation up capacity in providing frequency response.
5 Again, the CAISO estimates it can obtain a certain level performance from regulation
6 capacity within one minute of issuing a dispatch instruction.

7 **Q. What, if any, additional variables did the CAISO consider?**

8 A. The CAISO isolated the relationship between the dependent variable (cost) and
9 independent variables by evaluating the contribution of time of day, day of the week,
10 season of the year, natural gas prices, wind and solar production, demand, and energy
11 and congestion costs. Finally, the CAISO modified statistical weights of select
12 independent variables (for example, time of day, day of week, season of year were not
13 adjusted) in the statistical model to identify how sensitive the model was to statistically
14 significant input variables. The CAISO increased each individual variable statistical
15 weight by 25 percent to observe the change in the dependent variable (cost). In
16 addition, the CAISO decreased each individual variable statistical weight by 25 percent
17 to observe the change in the dependent variable. The CAISO selected a value of 25
18 percent for the sensitivity analysis to approximate the range of the standard error for the
19 individual variables in the statistical model. In other words, the 25 percent sensitivity
20 represents an amount of error that is unexplained by the model and is a result of natural
21 variation of the input variables. Forecasts are not perfect and a sensitivity analysis
22 helps identify a range for the estimated value (*i.e.* cost). The CAISO used the maximum
23 upward and downward change in the dependent variable to determine the upper and
24 lower estimate of the cost of using regulation up capacity to provide frequency
25 response.

1 **Q. What assessment, if any, has CAISO made of the transferred frequency**
2 **response bids?**

3 A. The CAISO compared the cost of the bids received to the anticipated cost of
4 ensuring compliance with BAL-003-1.1 through the procurement of additional regulation
5 up. The CAISO used a two-part approach to estimate the costs of procuring this
6 additional capacity. The first step was to build a statistical model that estimates annual
7 increased market costs based on the increased hourly procurement requirements for
8 regulation up and additional contributing variables such as seasonality and natural gas
9 prices. The second step was to validate the model through day-ahead market reruns for
10 a subset of operating days. The results provided a range of costs to allow the CAISO to
11 estimate the cost of compliance with BAL-003.1.1 in the absence of securing transferred
12 frequency response from other balancing authorities. The CAISO determined that a
13 conservative estimate of ensuring compliance through regulation capacity procurement
14 would cost between ■■■ per MW to ■■■ per MW. This range reflects possible costs as
15 conditions might change. The CAISO used the lower end of this range as a benchmark
16 to assess the transferred frequency bids based on quantities offered and bid prices.
17 The CAISO selected bids that were clearly below the lower end of this range.

1 **Q. What is CAISO's assessment of the transferred frequency response bids?**

2 A. The CAISO determined whether the bids it received for transferred frequency
3 response were cost competitive in light of the range of estimated costs to procure
4 additional regulation up capacity and in comparison to other bids. The cost competitive
5 bids the CAISO received were equivalent to regulation prices of [REDACTED] per MW to [REDACTED]
6 per MW. Table 1 reflects the CAISO's cost comparison of bids versus the potential cost
7 to procure additional regulation up capacity.

8 [REDACTED]

9 [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
10 [REDACTED]			[REDACTED]
11			[REDACTED]
12 [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
13 [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
14 [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
15 [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
16 [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
17 [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
18 [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
19 [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
20 [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

21
22 **Q. Does this conclude your testimony?**

23 A. Yes.
24
25
26
27
28

**Attachment E – Form of Protective Agreement
Transferred Frequency Response Agreement between
City of Seattle, by and through its City of Light Department and
California Independent System Operator Corporation**

PROTECTIVE AGREEMENT

This Protective Agreement (“Agreement”) is entered into this ____ day of _____, 2016 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 [Intervenor] 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: _____